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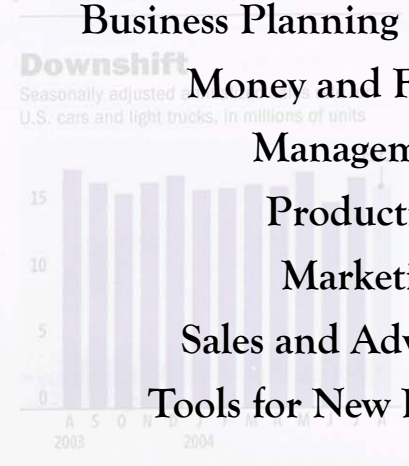
The last page of every article contains a link that allows you to return to either the table of contents containing the article you opened, or this main page. Likewise, using the Bookmarks on the left-hand side of the Adobe frame will allow you to jump to each topic page.

Choose from the topics listed below:

- Business Planning and Decisions
- Money and Finances
- Management
- Production
- Marketing
- Sales and Advertising
- Tools for New Businesses



year-to-year comparisons were skewed included in August last year, and weren't included in the latest results. Some car makers blamed Hurricane Charley for depressing sales in Florida.



But the decision to ratchet back production is a significant step, because the auto makers play a huge role in the country's manufacturing economy. GM said it will cut production at its North American factories by about 7% during the fourth quarter. Please Turn to Page A13, Column 1

Symbol	Price	Change	Symbol	Price	Change
SAP ADS	30.30		SAP	24e	7
SBC Comm	21.16		SBC	1.25	4.8
SG Carbon	2.82		SGG	1.59	47.8
SK Tele ADS	17.15		SKM	28e	1.3
SL Genlty	35.07		SLG	2.00	4.0
SLM Co	35.60		SLM x	7e	2.0
SPR Co	35.76		SPV	1.00	2.8
SRA Intl A	34.90		SRX		32
SabineRyl	25.81		TSB	2.57e	7.5
Sadln ADS	19.50		SDA	30	1.3
SafegrdSci	1.61		SRE		64
Safeway SWY	18.99		SWY		25
SagaCom A	16.50		SGA		25
SJoo Joe	31.10		JOE	5e	1.2
StJudeMed	51.40		STJ		34
StMaryLand	24.45		SM		10
StPaul Trvl	32.31		STV		2.25



BUSINESS PLANNING AND DECISIONS

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- BREAKING THE BARRIERS TO SMALL BUSINESS PLANNING
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That May Slow Midwest Economy

By LEE HAWKINS JR.

DETROIT—In moves that could slow the Midwest manufacturing economy particularly in election-year battleground states such as Michigan and Ohio—the two titans of the U.S. auto industry, General Motors Corp. and Ford Motor Co., said they will cut fourth-quarter vehicle production.

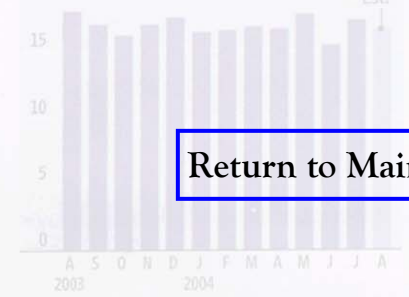
The announcement followed a disappointing August for auto makers, which saw American consumers steer clear of large, fuel-chugging sport-utility vehicles as oil prices surged. Sales of GM's big Chevrolet Suburban SUV fell 38%, amid a decline of 14% in overall sales, and Ford's large Expedition SUV slumped by 23%, despite discounts of as much as \$6,000 per vehicle, amid a 13% decline in overall sales.

Sales of Toyota Motor Corp.'s big Sequoia SUV plummeted 38.7% and the Japanese auto maker, which has been doing well against its U.S. rivals, saw overall sales decline by 10%. DaimlerChrysler AG's Chrysler Group said its monthly sales fell 6% from a year earlier.

GM and Ford executives played down the August declines in demand for large SUVs, saying the segment is volatile. But the abrupt decline is of deep concern for the industry, given the large profit margins on those models.

The monthly sales numbers were somewhat less alarming. August is historically a volatile month in the U.S. industry, and auto makers cautioned that the

ATTACKING BUSINESS DECISIONS WITH
 BREAKEVEN ANALYSIS



But the decision to ratchet back production is a significant step, because the auto makers play a huge role in the country's manufacturing economy. GM said it will cut production at its North American factories by about 7% during the fourth quarter.

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SMALL MARKETERS AIDS

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BID THE JOB--NOT THE MARKET

By *Bert E. Calvin*, Managing Associate,
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SUMMARY

Although accurate bidding is one of the keys to profits in contract-type work, some small businessmen use averages and other unrealistic methods when figuring a bid. They tend to bid the market rather than the job.

The Aid points out that working up a correct bid requires time, patience, careful attention to detail, and sometimes ingenuity. But even so, there are steps that even small contractors can use to ease the chore of arriving at accurate estimates.

Among these steps are: understanding the job, working in sections or phases, evaluating overhead, determining job duration, evaluating human relations, ruling out impulses, and determining the profit.

Accurate bidding is one of the chief keys to profits among small businessmen who compete for contracts. However, it is not always easy to arrive at a bid that carries a profit while meeting competition.

At best, bidding is a time-consuming job. It involves the studying of specifications, the gathering of information, and the evaluating of known facts and probable events.

Some small businessmen are discouraged by uncertain elements--such as whether a sub-contractor will deliver on schedule. Often their attitude toward bidding is unrealistic. "I do the best I can," they say, "and hope that everything will work out."

Or, just as unrealistic, some of these men bid the market rather than the job. For example, when there are more jobs than there are contractors bidding, prices tend to be relatively high. In lush times, many contractors become careless in figuring bids. Often they use shortcuts--such as various forms of unit pricing, unit costing, and arbitrary percentage for overhead and profit.

The danger in such shortcuts is: They don't provide for the peculiarities which any job contains.

This fact sometimes catches up with contractors, as it did, for example, in the school building business in one state. The contractors' costs were running about \$12 per square foot on standard-type schools.

So some of these contractors began to figure bids on footage rather than on a proper cost estimate for each individual job. Sub-contractors, such as electricians and plumbers, began to bid according to the number of fixtures or the feet of pipe.

The results were tragic. Several contractors went broke. Others lost money. The reason: Their construction costs were higher than their bids.

The results could have been different had these men used sound cost estimating to arrive at their selling prices.

Figuring a correct bid is hard work. It requires time, patience, careful attention to detail, and sometimes ingenuity.

However, by following certain steps a small businessman can ease the burden of using this important management tool. Those steps are: (1) understanding the job; (2) working in sections or phases, such as materials costs, labor costs, and equipment costs; (3) evaluating overhead; (4) determining job duration; (5) evaluating human relations; (6) ruling out impulses; and (7) determining the profit.

UNDERSTANDING THE JOB

The first step in figuring any bid--whether for a \$15,000 house, a \$500,000 public works job, a \$200 interior decorating job, or a \$75 automobile paint job-- is to be sure that you understand the job.

Do you understand what the customer wants? Are his plans and specifications clear to you?

Visit the job site or, in the case of equipment repair, inspect the machine. Don't take anything for granted.

Can you make a profit on the job? Do you have the men or are they available to do the job according to the customer's specifications? The equipment? The money? The

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Investigate the customer's financial strength. Can he pay for the job? If you are a subcontractor, investigate the financial reputation of the competing general contractors.

ELEMENTS INVOLVED IN THE BID

After you understand the job, you are ready to begin working up your bid. First, estimate the cost of the known elements such as: the cost of materials, labor, equipment, and other direct costs.

A good way to insure accuracy is the use of a precise recapitulation sheet for each bid. Supporting this sheet with back-up and take-off sheets can help you to avoid omissions or duplications. The back-up sheets also enable you to make unit cost comparisons and to verify material quantities.

• Complete Material Costs

In bidding a job, material take-off is fairly simple. If you use anything other than the true material cost, you are speculating. Include everything at realistic price levels.

Material cost is your actual raw material cost, but it includes freight and sales taxes. Determine it accurately by sequence of installation or use.

• Accurate Labor Costs

One electrical contractor, Bill Edge,¹ had fallen into the habit of using unit prices and other "average" methods when he estimated his labor costs. Over the years he had arrived at an estimate of 2 hours each for fixtures regardless of the size, number, or location. On a job calling for the replacement of 1,100 fixtures, Mr. Edge bid as follows:

2200 man hours at \$5 =	\$11,000
Cost of fixtures =	17,000
Other direct costs =	800
Total direct costs =	\$28,800

To this base figure he added overhead costs and profit to arrive at his bid (or selling) price.

Mack Worthmore was another bidder on this job. His cost for fixtures was the same as Mr. Edge's. But labor was another story.

Mr. Worthmore did not figure labor on assumptions. He studied the job to learn the most economical way it could be done.

He saw that two men could hang one fixture in 20 minutes. He then estimated that four men could do the work within a month at a labor cost of \$3,600.

Therefore, Mr. Worthmore's direct costs looked like this:

Labor =	\$ 3,600
Cost of fixtures =	17,000
Other direct costs =	800
Total direct costs =	\$21,400

Mr. Worthmore's bid (or selling) price was several thousand dollars lower than the one

submitted by Mr. Edge. Accurate labor costs made the difference.

Although both men used the same method of accounting for overhead and profit, Mr. Worthmore was working with a lower base--direct costs of \$21,400 against Mr. Edge's \$28,800.

The main controllable factor in a bid, then, is your estimated labor costs. Of course, you can use unit prices and "averages" to verify the labor costs you work up for a particular piece of work. But don't rely on them alone.

A good way to figure labor costs is to list the tasks of the job--by steps or phases. Each phase will require certain man hours or man days to perform. Your bid figure must be exactly what these man hours or days will cost you. Include what you will have to pay for: payroll taxes, workmen's compensation, vacations, and other benefits.

When you are figuring labor costs--whether it's shop labor, site labor, or labor in a customer's home--always look for more efficient ways to do the work. Improved efficiency here can help to make your bid more competitive.

• Comprehensive Equipment Costs

You also have to consider any equipment that you will use on a job. How you determine your actual cost of equipment will depend on whether you rent or own it.

Your problem is to work out a unit cost--in dollars per hour, day, week, or month--for each piece of equipment. If you own the equipment, depreciation is important. (For additional information see: *Small Marketers Aid* No. 68, "Depreciation Costs--Don't Overlook Them," available free from Small Business Administration, Washington 25, D.C.)

EVALUATING OVERHEAD

Before you can add a fair charge for overhead to a bid, you have to determine two things. First, what is overhead in your situation? Second, how much does overhead cost?

Stated briefly, overhead is the group of general, continuing costs which cannot be charged to any particular task or product. Overhead includes things such as insurance, taxes, rent, telephone, office personnel, and general management salaries--yours and those of estimators or general supervisors.

You should be able to determine the general level of overhead expenses from your records. Suppose, for example, that you spent \$24,000 last year for overhead items. Here your average monthly overhead last year was \$2,000.

Suppose further that your gross sales last year were \$160,000. On a percentage basis your overhead, in this example, amounted to 15 percent of gross sales.

Such ratios, as a percentage or a unit overhead figure (both based on past experience and historical records), make it easier for you to pro-rate overhead in terms of a short-range job. However, as with any ratios, these should be applied with judgment based on the facts of the current situation.

¹ All names in this *Aid* are disguised.

• **Charging Overhead to the Bid**

Various contractors use different methods for charging overhead to bids. Three most common ways are:

- (1) Adding on a standard percentage to direct costs.
- (2) Adding to direct costs an amount which represents what you think the market will take, and
- (3) Adding to direct costs an amount that represents a carefully worked out evaluation of the specific overhead (or management services) relating to the job.

Slavishly adding a flat percentage for overhead can be dangerous. John Highspeed is a case in point. A while back he decided that 15 percent of direct costs covered his overhead.

For instance, on a bid with direct costs of \$12,000 he added \$1,800 for overhead and lost the job. The winning bidder also used 15 percent as an overhead ratio. But he checked his against current conditions and came up with \$1,500 overhead for that job.

Tom Sharp bids the market when charging overhead. He wants the job so badly that he makes a deep cut in his overhead figure. For example, on direct costs of \$12,000 he might

add only \$900 in order to keep his selling price down.

Mr. Sharp wins a lot of bids, but he's losing on overhead. "I'm busy," he says, "but I'm barely breaking even." He's lucky because others have gone broke by bidding the market.

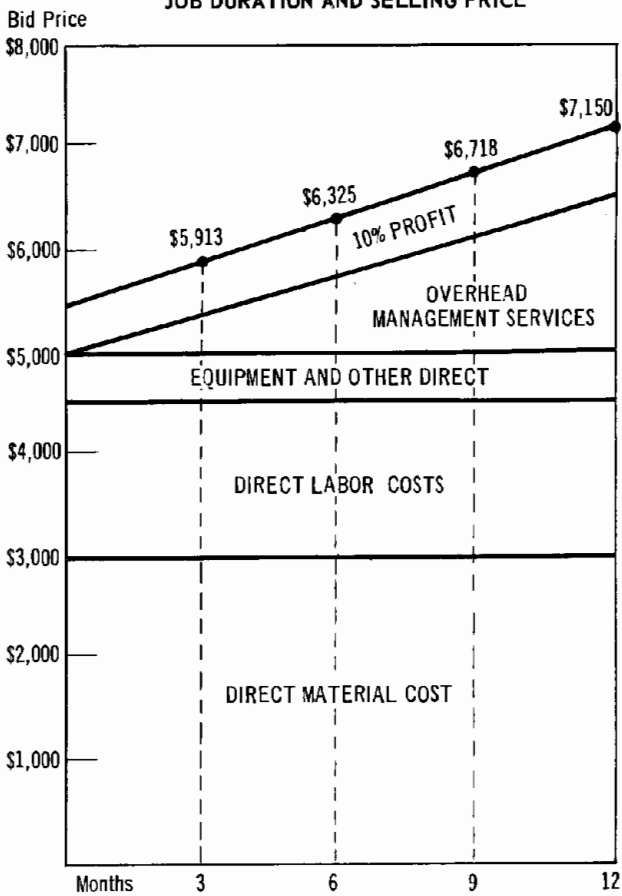
Bob Prudence uses the third method. He adds to direct costs an amount that represents the appropriate management services actually required for the job.

For example, on one job with direct costs of \$12,000, he figured \$2,000 for overhead. On another with direct costs of \$11,500, his overhead was \$3,000. The reason: It required more labor for a longer period than the first job.

Sometimes, Mr. Prudence's insistence on adding a realistic overhead figure means that he loses a bid. But as he says, "I try to keep up with what overhead costs me as of today, and then I try to make every bid pay its proper share."

In charging overhead, always charge the proper amount. If you charge too much, then your bids will be too high and out of line with your competitors. On the other hand, if you charge too little for overhead, you are cutting into your profit before you even win the bid.

JOB DURATION AND SELLING PRICE



The above graph depicts a job with direct costs of \$5,000, if 10 percent profit is to be enjoyed, a bid of \$7,150 would be required for a 12-month completion schedule. Bids of \$6,718, \$6,325, and \$5,913 would return the same profit with 9-months, 6-months, and 3-months schedules respectively.

JOB DURATION AFFECTS PRICE

Normally, DIRECT job costs do not vary regardless of the job duration. In practice, however, this may not be true. For instance, poor coordination, such as late shipments of materials or late completion by subcontractors, can stretch a job out.

Such events are always a bidding risk. The important point is to be aware of these possibilities when you plan the coordination of the various job elements.

As the chart on page 3 shows job duration affects your bid price--or selling price. Suppose you win a \$5,913 bid on a 3 months job. However, everything goes wrong--it's a jinx--and the job takes 6 months. You've lost \$412--the difference between \$6,325 and your 3-months bid price.

HUMAN RELATIONS AFFECT BIDDING

Some small marketers who bid for contracts are already aware of the importance of human relations. They know that good relations with two groups of people increase the chances for getting jobs completed at a profit.

The first group is the marketer's or contractor's employees. Satisfactory relations with them are essential.

As one small garage owner says, "My two men understand that people want their cars back in a hurry. And in a heavy week all three of us can pitch in and finish a lot of work by noon Saturday."

The second group with whom good relations are vital is outside the small marketer's or contractor's firm. Among those in this group are: bankers, architects, engineers, insurance

people, various public agencies, trade association people, trade union people, general contractors, subcontractors, and suppliers.

Good relations that result in proper coordination on the job are vital to finishing the work at a profit. As one woman who runs a small interior decorating firm says,

"I lost money on my first job because the supplier delivered the tiles 3 days late. He made me lose my place on the tile setter's schedule. Those 3 days set up a chain reaction that put my job a month behind." She solved her problem by getting a more dependable supplier.

BEWARE OF IMPULSES

Allowing certain psychological impulses to enter the bidding process can be dangerous. Watch out for things such as idle manpower, idle equipment, a heavy backlog of work, or no backlog.

Being impulsive about such items can throw a bid out-of-line. As the owner of a small grading company says, "Work was light so I put in a low bid. As it turned out I lost \$15 and had my equipment tied up at the very time I needed it on another job."

Owners of small contracting firms should also watch out for complacency. As one says about a certain type job, "I've bid on so many of them that I can do it with my eyes shut but I don't."

However, the impulses of your competitors can sometimes work to your advantage. Don't panic when you see them winning several jobs in a row with low bids.

When they are tied up with unprofitable jobs, they are less likely to be submitting realistic bids.

A good rule is: Always estimate each job when you are bidding. And check out impulses before you base a bid on them.

WHAT CAN YOU EARN?

How much profit you can earn depends, of course, on the kind of contracting firm you are operating. The important point is that every bid should contain some figure for profit.

Be very cautious about submitting a break-even-bid--one in which you'll expect to be trading dollars. Too often, enough of the unexpected can happen to increase costs and turn the job into a loss.

In trying to determine how much profit to include in a bid, remember the risks. Some firms, such as earthmovers, for instance, have greater risks than others. Among risk elements may be: unclear plans, unfamiliar area, weather, tight schedules, supervision, critical material movements, severe penalties, and dependence on others to maintain their schedules.

Consider these risks when estimating your bids. Maybe you can work around some of them. For instance, perhaps you can allow extra time for the specified material supplier who has a reputation for being late in deliveries.

The important thing is to be aware of all risks--no matter how small. Then do the best you can to allow for these risks as you arrive at a selling price that includes a profit for your firm.

FOR FURTHER INFORMATION

Businessmen interested in exploring further the subject of bidding the job may be interested in the references indicated below. This list is necessarily brief and selective. However, no slight is intended toward authors whose works are not included.

Building Construction Estimating, George H. Cooper, McGraw-Hill Book Co., Inc., 330 W. 42d St., New York 36, N. Y. 2d ed. 1959. \$8.25.

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U. S. Government Agency

MANAGEMENT AIDS

for small manufacturers

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BREAKING THE BARRIERS TO SMALL BUSINESS PLANNING

By Roger A. Golde

President, Golde Management Services, Cambridge, Massachusetts

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SUMMARY

Most small manufacturers do not use long-range planning even though they could gain much from it. Planning can, for example, help owner-managers to provide lead time for necessary actions and to use resources effectively. With such benefits in the offing, why do small business owners neglect this management tool?

In many instances, certain barriers get between owner-managers and long-range planning. Some do not plan because of fear of the future or because of the inexactness of the future. Others fail to think systematically about where their companies may be 2 or 3 years hence because of the lack of proper time and place for planning or because of the lack of planning knowledge.

This Aid discusses these barriers to small business planning and offers suggestions for overcoming them.

Many small business owners feel that they are doing enough planning when they use short-run sales forecasts, expense budgets, and other short-range planning tools. They shrug off the idea of long-range planning by saying, "That's for big companies."

Such owner-managers couldn't be more mistaken. Because of the rapid rate of change in today's world, present production methods may be totally inadequate next year or the year after next. Or present products may be dead or dying a few years from now.

In either case, which small company will have the best chance of survival -- the one whose owner-manager neglects planning because he is busy with today's crises? Or the one whose owner-manager tries to plan ahead?

Small companies need to plan as thoroughly if not more thoroughly than large ones. Few small firms have enough resources to overcome their future problems with aggressive financial force. Few can afford to underwrite the loss that can occur while adjusting to an unexpected change when they depend on a single product or on a few key customers.

Essentially, long-range planning is the process of systematically and consciously thinking about the future of an enterprise as an integrated whole. It, therefore, is a vital tool for competing effectively and for trying to reduce future crises.

BENEFITS FROM LONG-RANGE PLANNING

When an owner-manager systematically thinks about the future of his company, he stands to gain certain benefits. The planning process helps him: to provide lead time for necessary actions; to make decisions where there are long-term effects; to use resources efficiently; and to improve current operations.

• Lead Time. Doing things in business takes time. The owner-manager must anticipate not only the changes that his business will need but also the time required to make these changes.

For example, if you expect that one of your products will become obsolete, you probably couldn't think of trying to develop a new product, produce it, and market it in only 30 days' time. You know that a development project for a new product may take 1 or 2 years, or longer. Therefore, you start early-- while the product destined for obsolescence is still marketable--to develop its replacement.

Other examples of business activity that require lead time are: building a new plant; beefing up a sales force; and putting together a promotional program. With specific plans for such activities, you can see what actions will be needed and provide the lead time for getting them done on schedule.

• Long-Term Effects. Planning helps make decisions where there are long-term effects. Many management decisions involve investments, that is, expenditures of time, effort, or money in the present in order to achieve benefits over a number of years in the future. As automation and mechanization increase, the number of investment decisions is also increasing. If money is to be spent on a machine that will last for 5 years, it is vital to think about the 5-year future of your business to be

sure the purchase is really justified. Mistakes in investment policy are costly and difficult to rectify.

● Efficient Use of Resources. Planning can help you provide for the efficient use of your company's resources--an especially vital area when they are scarce. When money, personnel, or facilities are limited, you have to be careful in using them.

You have to make choices as to what will be done as well as to when it will be done. You have to consider alternatives and weigh their impact on the prosperity of your whole company. Planning is necessary if the best choices are to be made.

When you look at long-range planning as a matter of choices, it is an extension of an ordinary activity, such as scheduling a day's production. There you have to decide which orders should be first. Similarly, in planning for next year, the year after next, and so on, you have to decide what activities are most important. Then you have to schedule these activities in a way that produces the best possible results per dollar of expense.

● Improved Operations. Another benefit which you may get from planning is improved current operations. Because planning often involves making periodic evaluations of the company as a whole, it can show up areas which need improvement.

For example, you might discover that your salesmen spend too much time selling the product with the lowest profit margin. Or you might find that a slight cut in your cost of raw materials could increase profits more than the increase which could be made by hiring another salesman.

BARRIERS BLOCK PLANNING

Even though they are aware of the advantages of long-range planning, many small business owners fail to do it. In fact, most small companies do little, if any, long-range planning.

Why do most owner-managers neglect trying to look ahead--in an orderly and detailed fashion--for at least 2 years? Life being what it is, certain barriers tend to discourage them from planning.

Among these barriers which block attempts at long-range planning are: fear, inexactness, changeability, lack of proper time and place, and lack of planning knowledge.

OVERCOMING THE BARRIERS

Recognizing that such barriers exist is an important step in overcoming them and moving along toward some long-range planning. Keep in mind also that only one of the five barriers may by itself be enough to impede planning in a small company. For example, the barrier which blocks one owner's planning efforts may be the inexactness-of-2-years-from-now

while-fear-of-the-future is the barrier which bothers another.

● Fear. Even though most people don't talk about it, fear is a barrier to many kinds of activity. It is especially a roadblock to planning, and it may be the biggest hurdle for most owner-managers.

Fear, for example, causes some owner-managers to feel that careful thought about the future of their companies will bring to light a host of trouble. "I've got enough worries without trying to cross bridges ahead of time," is a normal reaction.

Somehow it seems easier to live with vague apprehensions about a fuzzy future than it does with reasoned expectations. When the owner-manager has no clear description of the problems and opportunities, he tends to feel that his company can get by with token measures.

Yet such token solutions are often just "whistling in the dark." They remind one of the story of the executive who snapped his fingers as he paced up and down outside his plant. Asked what he was doing, he replied, "I'm keeping away the lions."

"But there are no lions around here," an observer said.

The executive nodded, smiled, and proclaimed, "Then it looks as though I'm doing a good job, doesn't it?"

A ridiculous story, perhaps, but it does show what can happen when a person doesn't recognize fear for what it is. Fear is a natural reaction. Realizing this fact is important in overcoming fear as a barrier to planning. The events, the problems, and the opportunities of the future cannot be taken care of with a snap of the fingers. They have to be faced. And the real fear which the owner-manager should have is that of facing the future without a plan--without a set of alternatives to choose from when a possible event occurs.

● Inexactness. Another barrier to the planning process is inexactness. One small business owner sums up this barrier by saying, "Planning is so inexact that it doesn't seem worth doing. No matter how carefully I plan, things often do not work out according to the plan."

And what he says is true--to an extent. Planning is an uncertain thing because, among other reasons, the future is uncertain.

However, the important fact is to realize that business operates in a world where certainty is impossible but where probability is sufficient to govern action. Essentially businessmen are bettors trying to find out the best way to play the odds. The job is to make the best possible decision before a series of uncertain events, not after.

One way of illustrating long-range planning is to look at a die which carries the numbers "1 through 6." When you roll this die, the probability of any one number--for example, 4--coming up is only 1 out of 6.

Now suppose that you find a special die. Upon scrutinizing this die you find that the number "4" is on 5 of its sides and the number "2" is on the sixth side. When you roll this die, the probability is that the "4" will come up 5 times out of 6. However, you are not surprised if the number "2" comes up instead of a "4." In the long run, it is bound to happen 1 out of 6 times.

The important thing in this example is taking time to learn the odds--to determine what is likely to happen. And so it is in business. The problem is getting some idea of the odds. For example, what are the odds that more customers will need your type of product 2 years from now? Ten years from now?

You formulate that idea by planning--by developing a description of what will probably happen. Then you plan what you want to happen within the framework of those odds. If your plans do not materialize, does that necessarily mean you should not have made them? Does it mean you should not have taken the time to examine your company and its environment in order to discover how best to bet on its future?

● Changeability. Often small business men complain that plans and goals change too frequently to make planning worthwhile. "I no sooner make a plan than something happens, and I have to modify it. Or I have to make a completely new plan."

Of course, this can be a serious problem. However, the solution lies in the frequency and flexibility with which you plan, rather than in the rejection of planning altogether.

If the situation changes rapidly in your company, review your long-range plans periodically--and alter your original project to the changing situations. Perhaps you should not try to plan 5 years ahead but only 1 or 2 years in the future.

However, in most small businesses, the time scale of events demands that you look ahead at least a year or two. Rare is the industry where some significant change does not occur within a period of 1 or 2 years. It is also hard to find the company in which certain necessary projects do not require a year or more to be completed.

Part of overcoming the barrier of changeability lies in flexibility. Make flexible plans. Do not plan for one narrow set of possibilities. Rather, consider how you might alter plans if a change materializes. For example, in thinking about building a new plant you should consider: (1) What would I do if the demand for my product turns out to be substantially less than I expected? (2) What would I do if the demand turns out to be much greater than I had predicted?

● Lack of Time and Place. Many small business owners say that the lack of proper time and place is an obstacle to planning. Quite often, however, this statement is just a way

of avoiding a task which they do not really want to do.

Then, too, it is easy to let planning slide when you are busy. Many owner-managers do not plan because they feel that they cannot be spared from daily operations--from the day-to-day crises. They tend to forget that their plants and salesforces operate successfully when they are out sick for several days.

Like many other vital aspects of management, the owner-manager has to make a conscious effort to find the time and place for planning. In the normal run of affairs, the time for planning just will not turn up by itself.

Special conditions are needed for planning. You also need some peace and quite--some protection from continual interruptions.

Some owner-managers create an environment for their planning by doing it in the evening at the office or on Saturday. The president of one small company rents an office at the other end of town and uses it to get away from the daily crises of the plant.

Setting a schedule for planning is another way to help get it done. For example, you might decide to spend 1 hour every Wednesday evening on planning. Or you might set aside every other Saturday morning for thinking about your company's future.

● Lack of Knowledge. Lack of planning knowledge can be a most serious barrier to planning. Even when the owner-manager has a proper time and place, he must have some idea of how to go about planning in order to do it effectively.

One common approach to planning contains three steps: (1) set goals and objectives, (2) develop plans to achieve the goals, and (3) assess progress towards the objectives. Yet this approach is often confusing to the owner-manager who has never tried to plan.

Essentially, the important thing about planning in small business is getting started.

GETTING STARTED

If you've never planned, start by getting a complete picture of your operations. You may know some of the details individually, but the chances are you need more information to get the complete picture.

● Five Written Statements. Here's the type of information you need to stimulate your planning thought.

(1) A brief description of your company's present practices in all important areas such as products, purchasing, storage, quality control, labor relations, training, sales outlets, advertising, and research and development.

(2) A brief description of your present management procedures, reports, and organization (including informal job descriptions along with an organization chart).

(3) A list of the main factors exterior to your firm which affect your company the most. Areas to be considered include government, the

national economy, your competition, the community in which you do business, scientific advances, and overseas markets.

(4) A list of the changes you expect in any of these factors in the next few years.

(5) A list of the main strengths and weaknesses of your present operation (based on items 1 through 4).

It is essential that you write down your thinking because (1) getting something on paper is at the heart of any formalized kind of planning, (2) writing things down clarifies your own thought. Written plans are also helpful in conveying your ideas to others who will play a part in implementing them.

You probably noticed that several of the five items above refer to your business as it now exists. Planning for the future starts with the present. You have to have a clear idea of where you are before you can think about where you want to go. Only then can you select a few specific goals to work toward.

● The Right Frame of Mind. In trying to get started, remember that the right frame of mind is important. Most of the barriers to planning stem from one basic situation: Planning represents a vastly different type of activity and approach from the one you use in the day-to-day management of your company. Because long-range planning is so different from dealing with daily brush fires, the owner-manager needs to make a conscious effort to plan on a formal basis. Otherwise proper planning will not get done.

The owner-manager's attitude is important. It can make or break planning. In order to plan effectively, your attitude should be one that is unafraid of discovering what the present state of your business really is. It should also be one that is not afraid of trying to learn what the future might bring.

Such an attitude can help you to clarify problems and plot solutions. And once you have developed possible solutions, following through on your plans is largely a matter of management--of doing what is needed at the proper time. Keep in mind that a very important part of making plans work is reviewing periodically performance against plans.

FOR FURTHER INFORMATION

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Management Aids FOR SMALL MANUFACTURERS

Building Growth-Mindedness Into Your Business

By Harold B. Maynard
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SUMMARY

Growth is essential to the long-term success of any small business. The starting point for sustained growth lies in building growth-mindedness into the people in the business. The owner-manager can accomplish this in part by repeated stressing of the benefits to be gained from growth. He can discuss such benefits as greater profits, greater stability, stronger competitive position, and greater opportunities for advancement. He can emphasize the points likely to motivate most strongly each key person. He should include key people when planning for growth because "people support what they help create."

Certain activities lead almost inevitably to growth. These include reducing costs, improving product quality, engaging in creative marketing, planning to use new developments that contain opportunities for growth, and seeking growth through merger and acquisition.

Do you want your business to grow? Some people don't. They are satisfied with their earnings and they don't want the problems and greater work load which growth usually brings.

However, most owner-managers want their companies to grow. They recognize the benefits that stem from growth. Their concern is with HOW they should grow. Your starting point for sustained growth probably is in building growth-mindedness into your associates and employees.

Growth means change, and many people do not like change. You have to show them how they can benefit from growth before they will work enthusiastically for it.

WHY GROW?

You must have good reason for growth if your people are going to get excited about it. You should think through the reasons for growth. Write them down to clarify your own thinking. Then present them to your people in terms that will motivate them to work with you. Usually you will need to discuss your bright picture of the future several times and

perhaps many times with certain individuals, before they see it as crystal-clear as you do.

Different benefits of growth will appeal to different people. Here are some that you may wish to stress.

• Greater Profits.

Probably one of the factors which most strongly motivates your own desire for growth is the possibility of greater profits. The profit your company earns is one measure of your success as its owner-manager.

Your people may be motivated also by the prospect of larger profits, but don't count on it. However, most people do like to be on a winning team, and profits--one form of score keeping--may appeal to them from this standpoint. Of course, if you have a profit-sharing plan the profit motive will probably be fairly strong throughout your firm.

• Greater Stability.

Some people, particularly the ones who lived through the depression of the 1930's are more interested in steady employment than they are in the prospects for higher earnings. If your business growth will bring greater employment stability, you will find this a potent motivator in gaining employee support for your growth plans.

• Stronger Competitive Position.

If your company has the possibility of growing to be a leader in its field, then you have an exciting reason for growth. Your sales and marketing people in particular will quickly recognize the benefits they will gain as your competitive position becomes stronger. And your other employees should enjoy being on a winning team.

Your competitors will recognize this too and will not willingly let you surpass them. This situation, if you present it properly, can be as exciting to your employees as any baseball or football game. One company president did it for 5 years. He kept the attention of his people focused on growth by keeping everyone informed of their company's progress compared to that of its principal competitor. His company tripled in size during this period.

Caution: Be sure your facts are right if you use this device. The moral of the fable of the

boy who cried "Wolf" once too often still applies.

● Greater Opportunities for Advancement.

Your more able, ambitious people will welcome the opportunity for advancement into jobs of greater responsibility and pay. There are others, however, who will probably be frightened over the prospect.

● Other Reasons.

There are other reasons for growing such as increased ability to give better customer service, the prestige value of being larger, and so on. You can use them in building growth-mindedness into the thinking of your people. But practically all of them should be used with caution.

People are different in their reactions to change. What may appeal to one man as a valid reason for gladly facing the risks which change brings may to another be the very reason for wishing to keep things as they are.

Most of your people will at least give lip service to your plans. But lip service and genuine growth-mindedness are two different things. You will need all the help you can get from your people if you are to reach your growth goals.

It is important that you motivate each individual as strongly as possible. This means that you have to study each of your key people and show him the reasons for growth which will have the greatest appeal to him.

PLANNING FOR GROWTH

When properly presented, reasons for wanting to grow will help to gain intellectual acceptance of the idea of growing. But before an individual can really become growth-minded, he must accept the idea of growth EMOTIONALLY as well. He must come to want growth so intensely that he will go all out to do the things which will make growth possible.

● A Good Plan.

The president of a small manufacturing company wanted his firm to grow. He worked night after night developing his plans. He was enthusiastic about his plan. But his organization never shared his enthusiasm. His men agreed that growth was desirable but they never caught the spirit and fire needed for a winning team. So actual growth was slow and spotty.

The mistake this president made was that he did all the planning by himself. He overlooked one of the most important principles of managing, namely, "People support what they help create." As one business leader, Robert C. Hood, puts it, "Far and away the most powerful concept in our management philosophy is the idea that people support what they help create."

So, if you want to build growth-mindedness into your business, let your people help in the planning. Here are some areas in which you might ask them to work with you.

● The Long Look Ahead.

In planning for growth it is essential to take a long look ahead. No one has a crystal ball, but there are some things that you can foresee or at least estimate fairly accurately. The long look ahead will help you and your people to view your growth plans in proper perspective. It will also help you avoid "stop-and-go" management.

Stop-and-go management is often the result of living only from day to day so that a spurt in volume may cause over-expansion one day only to be followed by hitting the panic button when business falls off the next.

● Probable Customer Growth.

If your market is directly related to population, the projections of population growth in your area may present you with some interesting and profitable ideas.

Several years ago, for example, a newspaper publisher was planning for growth. He reviewed forecasts of population increase during the next 25 years, and did not believe the astronomical figures which were presented to him. So he scaled them down on the basis of his own judgment. Now it is evident that he will outgrow in 10 years his new plant which he thought would be adequate for 25 years.

Your market may be only indirectly related to population. For instance, the makers of printing presses will experience greater demand for their product as newspapers grow because of population growth. You will want to check the implications of population growth on your own business. Your operation may be tied in with population growth more closely than you have realized.

● Obsolescence and Innovation Factors.

Market growth alone is not a safe guide. You must also consider the likelihood of YOUR present products becoming obsolete as new products are introduced by yourself or by your competitors.

And what of your own new products? Do you have anything promising on the drawing board or at least in the back of your mind? If not, you may want to step up your research and development activity. It may be unwise to rely on only one product or on one major customer.

A study made of one small company by outside analysts showed that it was profitable, expanding, and at the same time DYING. The demand for its products was increasing at the moment, but they would soon be obsolete. The analysts recommended establishing a research and development activity.

● Establish Growth Objectives.

After taking the long look ahead and weighing the above factors and others that are pertinent to your own business, you should then set growth objectives. But keep one important point in mind. At all costs, AVOID WISHFUL THINKING.

The president of a small metal working company told his staff that next year's sales goal was to be 25 percent higher than this year's. He had not discussed this goal with his people in the planning stage nor did he consider that the company had never grown that fast. He merely picked a goal that appealed to him.

His people had not helped to set the goal and they did not believe it could be reached. This by itself might not have been serious, but all of the company's budgets were based on the higher anticipated volume. More money was budgeted for advertising, salesmen, promotional campaigns, and so on. And it was spent. When the company failed to reach its huge sales goal, it was in a serious loss position.

It may be better to have no formally established growth objectives at all rather than to have goals based on wishful thinking. It is usually better to err on the conservative side than to invite trouble by making plans on unwarranted optimism.

- Plan to Be Able to Handle Growth.

Even if you adopt a cautious attitude towards formal growth objectives, it is fairly certain your company will have some growth anyway. That is, it will grow somewhat if you have a growth-minded organization, if you manage well, and if you keep your product lines up-to-date. Include in your planning ways to handle the growth which will probably come your way.

Your plans should include: (1) facilities, (2) management personnel (including younger men), (3) plant personnel, (4) marketing, and (5) finances.

- Pacing Plans to Growth.

The main point to watch is that you plan conservatively and pace the rate at which you carry out your plans to the rate of your actual growth.

One small company which was growing steadily recognized that it would soon need more facilities. It bought a larger building and moved part of its crowded equipment into it. The result was inefficient operation with greatly increased fixed costs, and the company lost money for 3 years while its growth was catching up to its facilities.

Some owner-managers overlook the fact that they can go broke while growing rapidly even if no new facilities are needed. As volume increases, accounts receivable increase, inventories of raw materials become larger, and work in process usually increases.

More than one company has found that a period of rapid expansion has reduced its working capital to the point where it can no longer meet its cash demands. Borrowing may help for awhile, but sound financial planning is necessary if the company is to remain solvent.

You should try to anticipate the problems which growth brings and make plans for meeting them. If you get your people to help your chances will be good for developing plans that

will be sound and workable--and accepted by your people.

SOME METHODS OF ACHIEVING GROWTH

As pointed out previously, you do not grow by wishful thinking. Instead of setting growth goals which may or may not be realistic, you may want to concentrate on some of the things which almost invariably lead to growth.

By interesting your people in certain sub-objectives which they will accept and pursue enthusiastically, your business will probably grow even without the benefit of a planned growth program. The following paragraphs discuss some possible sub-objectives.

- Competitive Costs.

There is probably nothing which leads so inevitably to growth as costs that are low, controlled, and competitive. As one business leader, LeRoy A. Petersen, says, "Every company must, of necessity, have as its objective the reduction of its costs to the point where they are no higher than those of its most efficient competitor."

The goal of "having the lowest costs in our industry" is one which you may want to consider. Cost reductions of worthwhile magnitude require a sustained effort which many companies are not able to achieve. Many other problems distract a manager's attention from the routine task of cutting costs. Chances are that if you decide to concentrate on reducing costs, you can reach cost levels more favorable than all or at least the majority of your competitors.

- A Profit At Any Level.

Cost reduction techniques are sometimes called "scientific management." But they do pay off.

The president of a once small but now fairly sizeable company exclaimed recently, "We began 31 years ago to adopt the principles of scientific management and we have been in the black every year since. Recessions and even serious depressions no longer concern us. We know that we can earn a profit at any volume level."

This enviable position comes only from the CONSTANT, HARD-HEADED EFFORT to reduce costs through improved methods and processes, ingenious design, and, perhaps most important, the elimination of everything which causes unnecessary overhead expense.

- Quality.

High quality combined with low costs, and effective marketing can be a potent factor in achieving growth. People are becoming increasingly quality conscious. They are no longer buying goods just because they are cheap.

They are tired of products that need frequent repairs. The more alert companies are recognizing this and are designing their products to be as service-free as possible.

In your growth efforts, you may want to improve the quality of your product.

● Creative Marketing.

The day of the "hard sell" is here. Many people have been buying only what they need now.

If you keep selling only to your present markets you may find that you will have to work harder just to keep your present position. Perhaps you are not selling to other markets that could use your product. Or you may be able to develop new uses for your product. The story of selling refrigerators to Eskimos to keep their food from freezing is an example of creative marketing. A company which wants to grow should not ignore it.

● Planned Opportunism.

Our rapidly changing world presents almost daily opportunities for growing by doing something new. Keep your plans flexible so you can consider new opportunities and ideas.

Your company has certain skills, processes, markets, and so on which have made it successful. Encourage your people to find opportunities to use your present strengths in new ways.

● Growth by Acquisition and Merger.

You may want to consider growth by acquisition or merger. It has certain advantages. One industrial leader expressed it this way:

"One of the main advantages of the acquisition-and-merger process is the speed with which it enables the acquiring or surviving company to enter a new field, complete with plant facilities, marketing organization, management, and added financial resources and earning power. For it is often beyond the financial resources of the acquiring company to enter a new field on its own by building an organization from the beginning."*

● Growth Is Essential.

There are many ways to build growth-mindedness into your business. The ones you use will depend upon the nature of your business and the characteristics of your people.

But one thing is certain. Growth is ESSENTIAL for your long-term success.

If things are going well, you may be tempted to be complacent. You may be tempted to postpone doing anything about seeking to grow. However, this is usually fatal.

If your business and your ways of doing business do not change in an ever-changing world, you will eventually find that you have been left behind. Your best insurance is to PLAN to grow. Then you and your people will be keeping in touch with the future.

*Gordon H. Smith in Top Management Handbook.

FOR FURTHER INFORMATION

Readers who wish to explore further the subject of building growth-mindedness may be interested in the references indicated below. This list is necessarily brief and selective. However, no slight is intended toward authors whose works are not mentioned.

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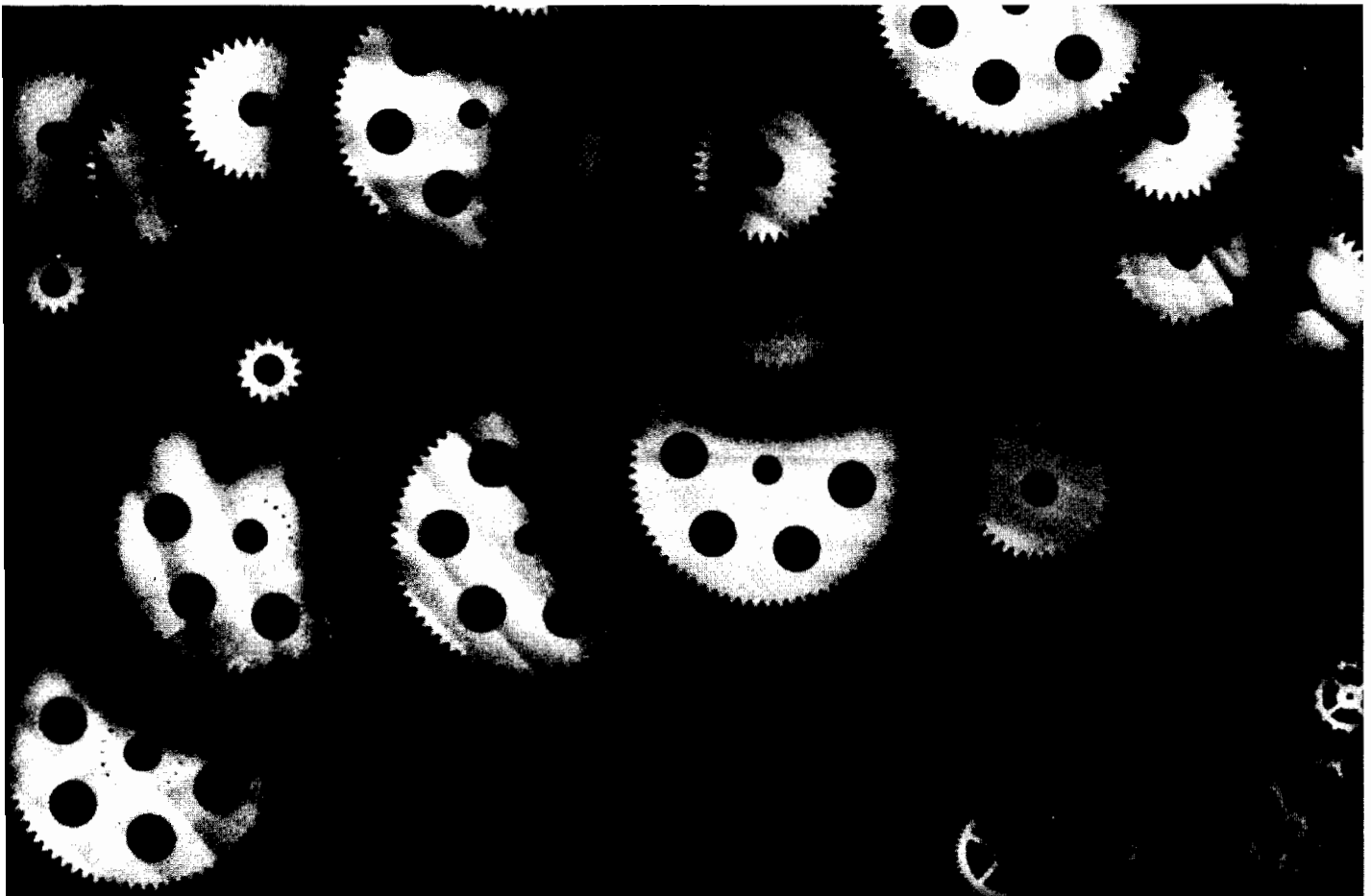
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the equipment replacement DECISION



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SUMMARY

The decision to replace a piece of equipment should be based on facts and figures. The judgment which the owner-manager of a small company makes should be the result of weighing the costs of keeping the old equipment against the costs of its replacement.

This *Aid* discusses the elements involved in making such a cost comparison. Examples are used to illustrate the gathering and use of the appropriate cost figures.

Sooner or later, you must decide whether you should keep an existing unit of equipment or replace it with a new unit. As time goes by, equipment deteriorates and becomes obsolete. Frequent breakdowns occur, defective output increases, unit labor costs rise, and production schedules cannot be met. At some point, these occurrences become serious enough to cause you to wonder whether you should replace the equipment.

The problem is that the new equipment costs money, and the question that comes to you is: Will the advantages of the new equipment be great enough to justify the investment it requires?

You answer this question by making a cost comparison. To recognize the better alternative you need to know the total cost of each alternative—keeping the old equipment or buying a replacement. Once these costs are determined, you can compare them and identify the more economical equipment. The paragraphs that follow discuss the individual costs which you must consider when computing the total costs of the old and new equipment.

DEPRECIATION

One of the costs connected with any type of equipment is depreciation. For cost comparison purposes, depreciation is simply the amount by which an asset decreases in value over some period of time. For example, if you bought a piece of equipment for \$20,000 and sold it for \$6,000 after seven years of service, you would say that the depreciation during the seven-year period was \$20,000

minus \$6,000, or \$14,000. This \$14,000 was one of your costs of owning the equipment for that period.

From this, it follows that when considering equipment replacement, you must calculate the future depreciation expense that you will experience with both the old and the new equipment.

Insofar as the new equipment is concerned, this calls for knowing certain things about the equipment. You need to know (1) its first cost, (2) its estimated service life, and (3) its expected salvage value. The difference between the first cost and the salvage value will represent the amount by which the equipment will depreciate during its life—that is, during the time you expect to use it.

You determine the depreciation expense for the old equipment in the same general way but for one important difference. This difference is due to the fact that no expenditure is required to procure the equipment because you already own it. However, a decision to keep it does require an investment at the present time. This investment is equal to the asset's market value—that is, to the amount of money the asset would bring in if it were replaced and sold. If this amount is not equal to the equipment's book value, the depreciation expense that was shown for accounting purposes is in error because it did not reflect the actual depreciation.

So to determine the actual future depreciation expense that will be experienced with the old equipment, you must know (1) its present market value, (2) its estimated remaining service life, and (3) its expected salvage value at the end of that life. The difference between the present market value and the future salvage value represents the amount by which the equipment will depreciate during its remaining life in your business.

To sum up, you must begin your cost comparison by determining the first cost of the new equipment and estimating its service life and salvage value. Also, you must determine the market value of the old equipment and estimate its remaining service life and future salvage value.

INTEREST

In addition to depreciation, every piece of equipment generates an interest expense. This expense occurs because owning an asset ties up some of your capital. If you had to borrow this capital, you would have to pay for the use of the money. This "out-of-pocket" cost is one of the costs of owning the equipment.

The story is the same even when you use your own money. In this case, the amount involved is no longer available for other investments which could bring you a return. This "opportunity cost" is one of the costs of owning the equipment.

To cite an example, suppose that the market value of an asset during a given year is \$10,000. Suppose also that at the same time, you are getting capital at a cost of 15 percent per year. On the other hand, suppose that if you converted the asset into cash, you could invest the money and realize a rate of return of 15 percent per year. In either case, a decision to own that asset during that year would be costing you 15 percent times \$10,000, or \$1,500 in interest.

Thus, in any comparison of equipment alternatives, you must take the cost of money into account. So, when determining whether existing equipment should be replaced, you must estimate what money is costing you in terms of a percent per year.

OPERATING COSTS

There is a third type of cost—the cost of operation—that is experienced with a piece of equipment. Typical operating costs are expenditures for labor, materials, supervision, maintenance, and power.

These costs must be considered because your choice of equipment affects them. You may find it convenient to estimate these costs on an annual basis. You can get figures for each unit of equipment by estimating its next-year operating costs as well as the annual rate at which these costs are likely to increase as wage rates rise and the equipment deteriorates.

For example, you might say that operating costs for the new equipment are likely to be \$16,000 during the first year of its life. You might also estimate that after the first year, the operating costs will increase at a rate of \$500 a year.

Or you can estimate average annual operating costs rather than year-by-year operating costs. In the above example, you might simply estimate average operating costs for the new equipment to be, say, \$19,000 a year.

You can simplify the problem of estimating these costs by either (1) ignoring those costs that are the same for the old and the new equipment or (2) estimating only the differences between the operating costs of the two units. With this simplification, the total costs which you calculate for each type of equipment will be understated by the same amount. Therefore, the difference between these total costs will remain the same, and you will still be able to recognize the more economical alternative.

REVENUES

Often, the revenues generated by the old and the new equipment will be the same. When this is true, revenues can be ignored for the same reason that you can ignore equal operating costs.

But if revenues are affected by the choice of equipment, they must be considered. For example, you might estimate that the higher quality of output from the new equipment will increase annual sales by \$1,200. You can handle this difference in revenues in either of two ways.

One way is to show the \$1,200 as an additional annual cost that will be experienced with the old equipment. The other way is to treat the \$1,200 as a negative annual cost and associate it with the new equipment. The total costs which you calculate will be affected by your choice of method, but the difference between these costs will remain the same.

AN ANNUAL AVERAGE COST

In brief, you can make the necessary cost analysis on the new and old equipment only after you have the proper data for each. For the new equipment, the data include its first cost, service life, salvage value, operating costs, and revenue advantage. For the old equipment, the data include its market value, remaining service life, future salvage value, and operating costs. In addition, for both alternatives, the cost of money must be stated in the form of an interest rate.

By using these data, you can determine the elements of the total costs. These elements consist of depreciation expense, interest expense, operating costs, and possibly lost revenues. Now, it so happens that these costs can be expressed in a variety of ways.

However, the simplest way for cost comparison purposes is to describe these cost elements in terms of an average annual cost. Doing so permits you to calculate and compare the total average annual costs of the old and new equipment and reach a decision.

How these costs can be computed is shown in the example that follows.

THE OLD EQUIPMENT

Look first at some facts about an old piece of equipment. It has a market value of \$7,000. If retained, its service life is expected to be four years, and its future salvage value is expected to be \$1,000. Next-year operating costs are estimated to be \$8,000 but will probably increase at an annual rate of \$200. The cost of money is 12 percent per year. With this set of figures, you can obtain the total average annual cost of the alternative of keeping this equipment.

ANNUAL DEPRECIATION EXPENSE. You begin by calculating the equipment's average annual depreciation expense. You do this by determining the total depreciation and dividing that amount by the asset's four-year life. Your answer is \$1,500 which you get as follows:

$$\text{Annual depreciation} = \frac{\$7,000 - \$1,000}{4} = \$1,500$$

ANNUAL INTEREST EXPENSE. Next, you calculate the average annual interest expense. The maximum investment in the equipment is \$7,000, its present market value. But as time goes by, the investment in the asset decreases because its market value decreases. The minimum investment is reached at the end of the equipment's life when it has a salvage value of \$1,000. The average investment will be the average of these maximum and minimum values. You calculate it as follows:

$$\text{Average investment} = \frac{\$7,000 + \$1,000}{2} = \$4,000$$

To determine the average annual interest expense, you multiply the average investment (\$4,000, in this example) by the annual interest rate of 12 percent. Doing so yields:

$$\text{Annual interest} = \$4,000 \times .12 = \$480$$

ANNUAL OPERATING COSTS. You can determine the average annual operating costs by computing the average of the individual annual operating costs. In this example, they are estimated to be \$8,000, \$8,200, \$8,400, and \$8,600. The average for these figures is \$8,300 which you obtain as follows:

$$\text{Annual operating costs} = \frac{\$8,000 + \$8,200 + \$8,400 + \$8,600}{4} = \$8,300$$

TOTAL AVERAGE ANNUAL COST. For the old equipment, the total average annual cost is simply the sum of the calculated average annual cost for: (1) depreciation, (2) interest, and (3) operating expenses. This sum is \$10,280, as shown below.

Item	Average annual cost
Depreciation	\$ 1,500
Interest	480
Operating costs	8,300
Total	<u>\$10,280</u>

THE NEW EQUIPMENT

Look now at the facts on a piece of new equipment which may be a replacement for the old equipment. The first cost of this new equipment is \$30,000. Its life is estimated to be ten years, and it will probably have a salvage value of \$6,000. Operating costs with this equipment are expected to average \$5,200 a year. Furthermore, it is estimated to have an annual revenue advantage of \$300 over the old equipment. The cost of money is 12 percent per year.

You use the same approach as you did for the old equipment to determine the total average annual cost of this new equipment.

ANNUAL DEPRECIATION EXPENSE. You start with the average annual depreciation expense and find it to be \$2,400, as follows:

$$\text{Annual depreciation} = \frac{\$30,000 - \$6,000}{10} = \$2,400$$

ANNUAL INTEREST EXPENSE. You multiply the average investment in this asset by the interest rate to obtain the average annual interest expense. The average investment is \$18,000 (one-half of the sum of the \$30,000 first cost and the \$6,000 salvage value). The average annual interest expense is \$2,160 obtained as follows:

$$\text{Annual interest} = \frac{1}{2} (\$30,000 + \$6,000) \times .12 = \$2,160$$

TOTAL AVERAGE ANNUAL COST. When you also take the estimated operating costs and revenue advantage into account, you find the total average annual cost to be \$9,460, as shown below.

Item	Average annual cost
Depreciation	\$2,400
Interest	2,160
Operating costs	5,200
	<u>\$9,760</u>
Less: Revenue advantage	300
	<u>\$9,460</u>

THE COMPARISON

When you have the total average annual cost for the old and the new equipment, you are ready to compare the two. In the example,

the calculated annual cost is \$10,280 for the old equipment and \$9,460 for the new. On the surface, the new equipment is more economical than the old. But is it?

You may argue that with the old equipment you are committing yourself for only four years, whereas with the new, your commitment is for ten years. This fact suggests a need for considering the kind of equipment that may be available for replacement purposes four years from now as compared with ten years from now. But no one can forecast that far into the future. It is best to ignore the nature of future replacements in your computations and assume that the replacement available four years from now will have the same annual cost as the one available ten years from now.

IRREDUCIBLE FACTORS

When your calculated annual costs show that the one unit of equipment has a decided advantage over the other, you can usually select the better alternative by comparing these calculated costs. But what do you do when the annual costs of the old and the new equipment do not differ greatly? In such a case, you should consider the fact that the estimates might contain errors and that there are things on which a dollar value cannot be placed.

So you may have to base your decision on irreducible factors—factors that cannot be reduced to dollars and cents.

A few examples will suggest the nature of such factors. First, if total average annual costs are about the same, you will probably favor the equipment that requires the smaller investment and has the shorter life. The same will hold true when you suspect that technological advances will result in more efficient equipment becoming available in the near future.

As another example, you will prefer the equipment which has such advantages as greater output capacity, safety, and reliability even though the value of these things is unknown.

And finally, when you suspect that interest rates and the price of new equipment will increase significantly, you will be inclined to invest in new equipment now rather than later.

Cut on this line.

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SMALL MARKETERS AIDS No.97

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STEPS IN MAKING A BUSINESS DECISION LIBRARIES

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SUMMARY

This Aid points out that making sound business decisions is the most important part of the small marketer's job. It also describes a logical procedure which may be helpful in making such decisions.

This procedure consists of seven steps: (1) state the problem, (2) determine goals and objectives, (3) determine and analyze the factors bearing on goals and objectives, (4) list possible solutions or courses of action, (5) compare the possible solutions, (6) choose the most logical solution, and (7) determine the specifics to fulfill the decision. As he works through the various steps, the small business owner will find it helpful to discuss the problem with his outside advisers who can provide specialized advice and assistance.

(4) List possible solutions or courses of action.

(5) Compare the possible solutions.

(6) Choose the most logical solution.

(7) Determine the specifics to fulfill the choice you made.

As you work through these seven steps, talk with your outside advisers, such as your accountant, commercial banker, attorney, real estate broker, and suppliers. These people and other advisers can provide specialized advice and help which should be useful to you as it was to John Boldso* when he used this seven step process to make a major business decision.

1--STATE THE PROBLEM

John Boldso's problem concerned growth and the possibility of relocating his firm, Boldso Sales and Repair Company. With the help of 15 employees, he sold and repaired household appliances.

The decision which he felt he needed to make was: Should I stay in this location? (He had started his firm there 20 years ago.) Or relocate? Should I continue to sell appliances? Or should I do only repair work?

Changing conditions made Mr. Boldso realize that his firm could not drift with events. His potential market for retail sales was limited because his location was in a declining area in the center of the city. Added to this trend was the fact that an expressway was to be built near his firm. It would cause further drastic changes in the traffic which passed Mr. Boldso's store.

Mr. Boldso spelled out his problem in detail by looking at the three parts which were involved. He took an objective look: (1) at himself, (2) at his firm, and (3) at the pertinent outside factors.

*Names of persons and firms are disguised in Aids.

Making effective decisions is the most important part of your job as a small marketer. You have to decide what is to be done, when, why, and by whom.

Some small marketers use a logical system for making decisions. Other small business owners try to be systematic but often overlook pertinent facts. And, of course, there are a few small business owners who "fly by the seat of their pants." These men often trust to luck in making their decisions.

SEVEN STEPS FOR SOUND DECISIONS

Seven logical steps can help you to rule the element of luck out of your business decisions. These seven steps are:

- (1) State the problem.
- (2) Determine goals and objectives.
- (3) Determine and analyze the factors bearing on your goals and objectives.

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• **Mr. Boldso**

He started by evaluating himself as an individual. He was 50 years old, his health was good, and he knew that he wanted to keep on working for himself. He was convinced that his experience and management knowledge would enable him to handle a larger business if he decided to expand.

Mr. Boldso then looked at his own financial requirements. They were around \$12,000 per year, but he knew that he would need more during the next 8 years in order to send his children to college. Most of his financial resources were tied up in his business so that the firm's earnings would have to increase in order to provide Mr. Boldso with more income.

• **His Firm As An Enterprise**

After looking at himself, Mr. Boldso examined his firm. It had a reputation for efficient service so that many of his customers would continue to deal with him even if he moved.

His employees were loyal and well-trained. However, none of them were managers.

All of the management decisions were made by Mr. Boldso, himself. He supervised all phases of the business. He had not provided for management succession, and his 18-year-old son did not seem interested in the business. These factors meant that if Mr. Boldso wanted to expand he would have to hire some managerial personnel.

The firm also would need additional working space, storage space, and equipment repair facilities whether it moved or remained in its present location. The firm had the financial resources for making such changes at the present location. Moreover, Mr. Boldso could get commercial bank credit for expanding or moving to another location.

His present building and land was worth \$30,000. An adequate building in another location would mean an investment of about \$120,000.

With these facts in mind, Mr. Boldso looked at growth prospects for his firm. He reasoned that growth would be hard to achieve in his present location. Although his growth rate had been good over the years, it had slowed down recently.

His excellent relations with customers, suppliers, and other business associates would not make up for the run-down neighborhood. Some women customers from outlying residential areas would stop trading in this "tough" neighborhood.

Competition was no problem in his present location, and Mr. Boldso could probably retain his competitive advantage--doing excellent repair work--if he moved to another spot in the metropolitan area.

• **External Factors**

Mr. Boldso looked at the external factors that were pertinent to his problem. He knew the date when expressway construction would start near his store. This construction did not favor his present location because it would reduce automobile and pedestrian traffic on his street.

Another factor which Mr. Boldso had to consider was rising land costs. Other businesses would be displaced by the expressway, and he already knew that the cost of land was increasing in the desirable outlying business districts.

2--DETERMINE GOALS AND OBJECTIVES

Mr. Boldso then made a list of the goals which he wanted for himself and for his business. His long-range goal was business growth so that his own income would increase to about \$16,000 a year. He wanted to achieve this goal in the same line of business and in the same general area. He and his family preferred to live in their present community.

Mr. Boldso listed the following needs which his business would have to provide for in the near future. He called them short-range objectives.

(1) Improvements in his facilities were needed even if he remained in his present location. (In fact, they were overdue.)

(2) The firm needed a manager to head up its largest activity--the repair department.

(3) The firm needed someone who could relieve Mr. Boldso of some of the administrative details. (This assistant, and perhaps the repairs manager, would have to be hired from the outside.)

(4) The firm needed to reduce its retail sales activities in order to take care of its excellent accounts with large department stores for warranty repairs.

(5) The firm should be re-organized so that its actual management did not depend entirely on Mr. Boldso.

3--DETERMINE AND ANALYZE FACTORS BEARING ON GOALS AND OBJECTIVES

In the third step, Mr. Boldso appraised many of the same factors which he had looked at in Step 1 (when he stated his problem). He needed to know, as nearly as possible, the effect these factors could have on his personal and business objectives.

Among the favorable factors were those relating to Mr. Boldso as an individual. Age,

health, experience, business knowledge, financial resources, and relations with others were all favorable. His willingness to consult with outside advisors, such as commercial bankers, real estate brokers and accountants, could also work to his advantage.

Most of the factors relating to his firm as a business enterprise were also favorable. However, there were four areas which presented problems. They were:

(1) The shortage of management personnel within the firm.

(2) Increased costs. Upgrading his present facilities or moving to another location would increase the firm's building occupancy costs. However, on the favorable side was the fact that suitable space was available for relocation.

(3) Any change in the firm's present way of doing business would increase operating expenses and invested capital.

(4) If changes were made, Mr. Boldso would have to expect a lower return on invested capital until the firm's volume increased.

Mr. Boldso reasoned that over the long pull, the economic climate of the metropolitan area would be improved by the expressway construction. However, he knew that he would lose business to outlying shopping areas as people moved to the suburbs. So, he reasoned that prospects were good for a well-managed household appliance repair service.

4--LIST POSSIBLE COURSES OF ACTION

In the third step, Mr. Boldso, in effect, made a study of the possibilities that were open to him. As he saw it, there were four possible courses of action:

Action Number 1: He could remain in his present location and sell and repair appliances.

Action Number 2: He could move to a more suitable location in an outlying area.

Action Number 3: He could stay where he was, concentrate on repairs, and set up pick-up stations near several outlying shopping centers.

Action Number 4: He could liquidate and reinvest in something quite different.

5--COMPARE THE POSSIBLE SOLUTIONS

In order to determine the best course of action, Mr. Boldso compared the four possibilities. First, he ruled out number 4, and then he weighed the advantages and disadvantages of each of the three remaining.

Remaining in his present location with improvements had the advantages of less in-

vested capital and lower operating costs. It was also a centralized location. On the other hand, growth--increased sales volume and increased profits--would be hard to achieve at his present location.

Moving to an outlying area and enlarging his facilities offered the possibility of growth. Yet such a move could cause some inconvenience to some of his present customers, such as hospitals, and hotels. He could expect to get more new customers from the suburbs, but his building occupancy costs would be significantly larger.

One of Mr. Boldso's competitive advantages was his complete inventory of replacement parts for all major lines of household appliances. This inventory required a large investment. It was a strong reason for doing business in only one location.

Another good reason for only one location was that he had only two well-trained salesclerks. These men could quickly determine for the customer (1) whether parts were available, (2) what the cost of repairs would be, and (3) when the repairs would be completed. This excellent customer relations advantage would be hard and expensive to duplicate in more than one location in a short period of time.

Concentrating on repair work and setting up pickup stations in outlying areas involved the greatest risk of invested capital. However, such action also offered the largest opportunity for growth.

One problem would be the shortage of management personnel. In two or more locations, Mr. Boldso would have to hire several managers and make some personnel shifts.

6--CHOOSE THE MOST LOGICAL SOLUTION

With the advantages and disadvantages of the three possibilities before him, Mr. Boldso was ready to choose the most logical solution to his problem.

First, he decided to stay in his present location. Next, he decided to stop selling appliances and concentrate on repair work. He would ask for more warranty repair business from the large appliance stores. He would enlarge his building and improve his facilities so that he could handle the work more efficiently.

He also decided to experiment by setting up pick-up and delivery facilities in three major shopping centers.

7--DETAILS FOR CARRYING OUT DECISIONS

Mr. Boldso's next step was that of determining the details that were needed in order to carry out his decision. First, he would need

financial assistance. He already knew that his bank would help him.

Next, Mr. Boldso discussed his building enlargement plans with an architect. He also contacted a real estate broker to help him find rental space for his pick-up and delivery stations.

Mr. Boldso arranged to buy a panel truck for picking up work from the branches and for delivery service to his big customers in the city.

A very important detail was that of better management tools. Mr. Boldso asked his accountant to develop new systems and procedures which would help him in managing the enlarged business.

In personnel, Mr. Boldso needed three men as managers of his pick-up stations. He trained them at his main location.

Over the long pull, Mr. Boldso needed: (1) someone to help him with the new administrative details and (2) someone to manage his repair service department. However, he decided to postpone action on these two persons.

On the long-range goal of re-organizing his firm, Mr. Boldso took his banker's advice--change the firm from a sole proprietorship to a closely held corporation. Mr. Boldso began to discuss the possible advantages of such a change with his attorney.

USING OUTSIDE ADVISERS

As you use the seven steps for making a business decision, keep in mind the importance of talking with outside advisers as did Mr. Boldso. As he studied the various parts of his problem, he talked, for instance, with his commercial banker about financial assistance.

Among other outside people with whom Mr. Boldso talked were: an architect, real

estate broker, an accountant, and city planners. All of them gave him assistance in specialized areas which were beyond his immediate knowledge.

PROBLEMS ARE THE SAME

The seven step procedure for making a business decision can be used by the small business owner regardless of the size of his firm. The underlying problems of the two-person shop are the same as those of a bigger store. For example, both types of firms have to find answers to the same questions when making decisions about merchandise:

What kinds of new items can I carry? Where can I get these items? How much stock should I carry? How will I pay for it?

Try using the seven steps. Like any management tool, they can help to make your job easier.

FOR FURTHER INFORMATION

Businessmen who wish to explore further the subject of making business decisions may be interested in the references indicated below. This list is necessarily brief and selective. However, no slight is intended toward authors whose works are not mentioned.

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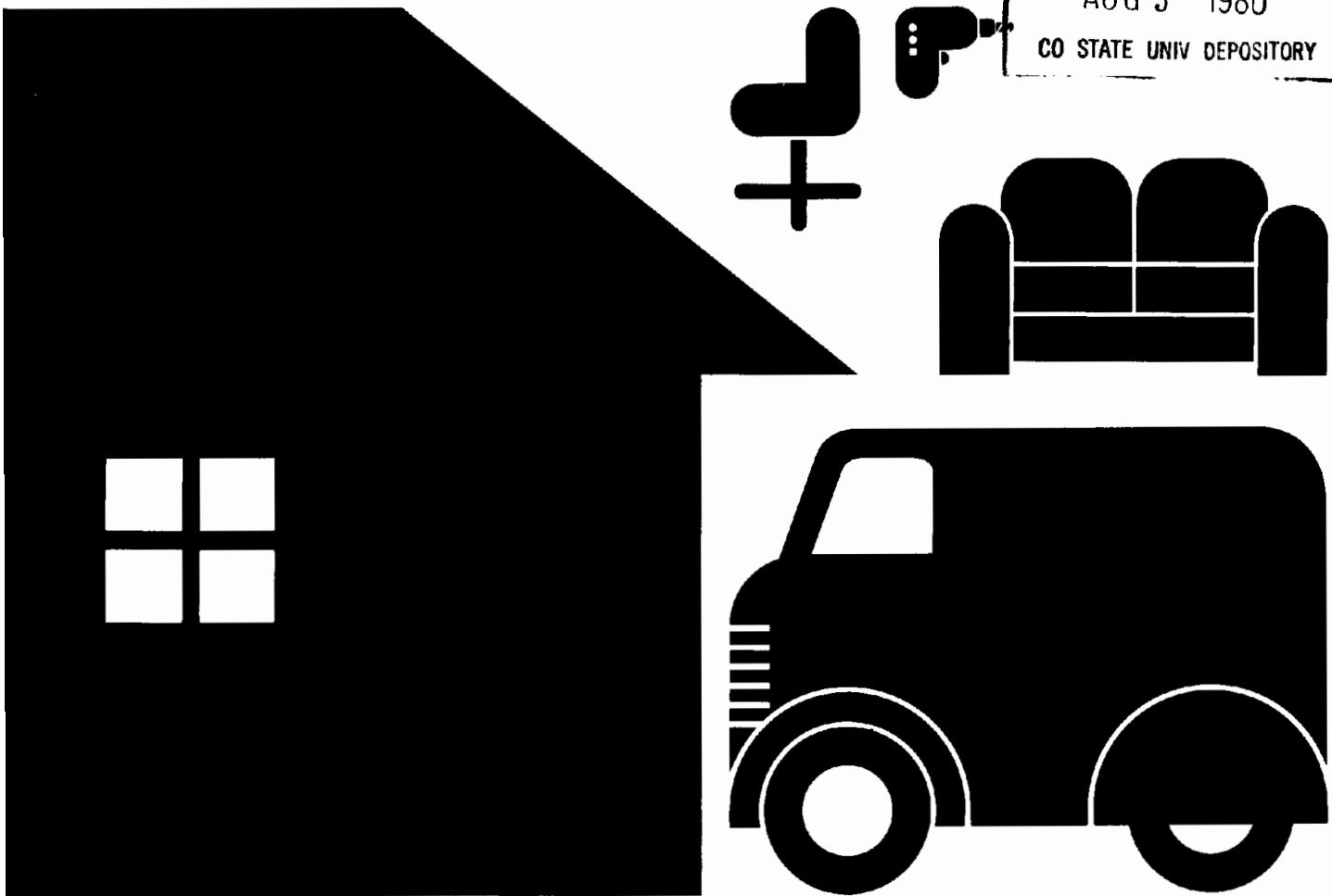
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Management Aids for Small Manufacturers
U.S. Small Business Administration

Should You Lease or Buy Equipment?

By Paul Lerman
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Summary

Small businesses have difficulty raising capital—that's no secret. This difficulty (among other reasons) has caused many to look at leasing as an alternative financing arrangement for acquiring the use of assets. All types of equipment leasing—from motor vehicles to computers, from manufacturing machinery to office furniture—have become more and more attractive.

This Aid describes various aspects of the lease/buy decision. It lists advantages and disadvantages of leasing and provides a format for comparing costs of the options.

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What Is a Lease?

A lease is a long term agreement to rent equipment, land, buildings, or any other asset. In return for most—but not all—of the benefits of ownership, the user (**lessee**) makes periodic payments to the owner of the asset (**lessor**). The lease payment covers the original cost of the equipment or other asset and provides the lessor a profit.

Types of Leases

There are three major kinds of leases: the financial lease, the operating lease, and the sale and leaseback.

Financial leases are most common by far. A financial lease is usually written for a term not to exceed the economic life of the equipment. You will find that a financial lease usually provides that:

- Periodic payments be made,
- Ownership of the equipment reverts to the lessor at the end of the lease term,
- The lease is noncancellable and the lessee has a legal obligation to continue payments to the end of the term, and
- The lessee agrees to maintain the equipment.

The **operating lease**, or "maintenance lease," can usually be cancelled under conditions spelled out in the lease agreement. Maintenance of the asset is usually the responsibility of the owner (lessor). Computer equipment is often leased under this kind of lease.

The **sale and leaseback** is similar to the financial lease. The owner of an asset sells it to another party and simultaneously leases it back to use it for a specified term. This arrangement lets you free the money tied up in an asset for use elsewhere. You'll find that buildings are often leased this way.

You may also hear leases described as net leases or gross leases. Under a **net lease** the lessee is responsible for expenses such as those for maintenance, taxes, and insurance. The lessor pays these expenses under a **gross lease**. Financial leases are usually net leases.

Finally, you might run across the term **full payout lease**. Under a full payout lease the lessor recovers the original cost of the asset during the term of the lease.

Kinds of Lessors

As the use of leasing has increased as a method for businesses to acquire the use of equipment and other assets, the number of companies in the leasing business has increased dramatically. Leasing is now a billion dollar industry.

Commercial banks, insurance companies, and finance companies do most of the leasing. Many of these organizations have formed subsidiaries primarily concerned with equipment leasing. These subsidiaries are usually capable of making lease arrangements for almost anything.

In addition to financial organizations, there are companies which specialize in leasing. Some are engaged in general leasing, dealing with just about any kind of equipment. Others specialize in particular equipment, such as trucks or computers, for example.

Equipment manufacturers are also occasionally in the leasing business. Of course, they usually lease only the equipment they manufacture.

Advantages of Leasing

The obvious advantage to leasing is acquiring the use of an asset without making a large initial cash outlay. Compared to a loan arrangement to purchase the same equipment, a lease usually:

- Requires no downpayment, while a loan often requires 25 percent down;
- Requires no restriction on a company's financial operations, while loans often do;
- Spreads payments over a longer period (which means they'll be lower) than loans permit; and
- Provides protection against the risk of equipment obsolescence, since the lessee can get rid of the equipment at the end of the lease term.

There may also be tax benefits in leasing. Lease payments are deductible as operating expenses if the arrangement is a true lease (and the Internal Revenue Service agrees it is). Ownership, however, usually has greater tax advantages through the investment tax credit and depreciation. Naturally, you need to have enough income and resulting tax liability to take advantage of those two benefits.

The investment tax credit may work to the benefit of the lessee as well as the lessor. The credit is a dollar for dollar reduction in federal income taxes, equal to 10 percent of the cost of the equipment in the year the equipment is put into use. While the lessor usually takes the tax credit, it

may pass part of the benefit on to the lessee in the form of a reduced lease payment.

Leasing has the further advantage that the leasing firm has acquired considerable knowledge about the kinds of equipment it leases. Thus, it can provide expert technical advice based on experience with the leased equipment.

Finally, there is one further advantage of leasing that you probably hope won't ever be of use to you. In the event of bankruptcy, claims of a lessor to the assets of a firm are more restricted than those of general creditors.

Disadvantages of Leasing

In the first place, leasing usually costs more because you lose certain tax advantages that go with ownership of an asset. Leasing may not, however, cost more if you couldn't take advantage of those benefits because you don't have enough tax liability for them to come into play.

Obviously, you also lose the economic value of the asset at the end of the lease term, since you don't own the asset. Lessees have been known to grossly underestimate the salvage value of an asset. If they had known this value from the outset, they might have decided to buy instead of lease.

Further, you must never forget that a lease is a long-term legal obligation. Usually you can't cancel a lease agreement. So, if you were to end an operation that used leased equipment, you might find you'd still have to pay as much as if you had used the equipment for the full term of the lease.

Federal Tax Treatment of Leases

Full lease payments are deductible as operating costs. You can make these deductions only if the Internal Revenue Service finds that you have a true lease. You cannot take a full deduction for a "lease" that's really an installment purchase.

Although each lease arrangement may be different, there are some general guidelines to meet:

- In no way should any portion of the payment be construed as interest.
- Lease payments must not be large compared to those that would be required to achieve ownership.
- Any renewal option at lease end must be on terms equivalent to what a third party would offer.
- Purchase options must be at amounts comparable with fair market value.

Accounting Treatment of Leases

Historically, financial leases were "off the balance sheet" financing. That is, lease obligations often were not recorded directly on the balance sheet, but listed in footnotes, instead. Not explicitly accounting for

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leases frequently resulted in a failure to state operational assets and liabilities fairly.

In 1977 the Financial Accounting Standards Board (FASB), the rule-making body of the accounting profession, required that capital leases be recorded on the balance sheet as both an asset and a liability. This was in recognition of the long-term nature of a lease obligation.

Cost Analysis of Lease v. Loan/Purchase

You can analyze the costs of the lease versus purchase problem through **discounted cash flow analysis**. This analysis compares the cost of each alternative by considering: the timing of the payments, tax benefits, the interest rate on a loan, the lease rate, and other special financial arrangements.

To make the analysis you must first make certain assumptions about the economic life of the equipment, salvage value, and depreciation. The assumptions for the sample problem in this *Aid* are shown in Figure 1. Figure 2 is the analysis of the lease alternative, and Figure 4 is an analysis of the borrow and buy option.*

* A straight cash purchase using a firm's existing funds will almost always be more expensive than the lease or loan/buy options because of the loss of use of the funds. Besides, most small firms don't have the large amounts of cash needed for major capital asset acquisitions in the first place.

Figure 1
Example Assumptions

Equipment Cost: \$60,000

Estimated Economic Life: 10 years

Lease Terms: 8 annual* payments of \$10,363.94 (Apr 10.5%). First payment due upon delivery. Investment tax credit to lessor. Lessee maintains equipment.

Loan Terms: 5 years, 75% financing at 10% (Apr). 5 annual* payments of \$11,870.89. First payment due at end of first year.

Taxes: Lessee tax rate 50%. Method of depreciation for tax purposes is straight line.

Other: Equipment needed for term of lease, 8 years. If firm purchases equipment, it can be sold at end of 8 years for book value. Average after tax cost of capital for lessee is 9%.

* Payments have been annualized to simplify calculations. Payments are usually made monthly.

Figure 2
Evaluation of Lease Cost

(1) End of Year	(2) Lease Payment	(3) (0.50×2) Tax Saving	(4) (2-3) Net Cash Outlay	(5) Discount Factor	(6) (4×5) Net Present Value
0	\$10,363.94	\$5,181.97	\$5,181.97	1.000	\$5,181.97
1	10,363.94	5,181.97	5,181.97	0.952	4,933.24
2	10,363.94	5,181.97	5,181.97	0.907	4,700.05
3	10,363.94	5,181.97	5,181.97	0.864	4,477.22
4	10,363.94	5,181.97	5,181.97	0.823	4,264.76
5	10,363.94	5,181.97	5,181.97	0.784	4,062.66
6	10,363.94	5,181.97	5,181.97	0.746	3,865.75
7	10,363.94	5,181.97	5,181.97	0.710	3,684.38
8	—	—	—	—	—
Net Present Value of Costs of Leasing					\$35,170.03

To evaluate a lease you must first find the net cash outlay (net cash flow) in each year of the lease term. You find these amounts by subtracting the tax savings (which in the example are 50 percent of the payment) from the lease payment (see column 3 of Figure 2). This

calculation gives you the net cash outlay for each year of the lease (column 4, Figure 2).

Each year's net cash outlay must next be discounted to take into account the time value of money. This discounting gives you the **present value** of each of the amounts.

The present value of an amount of money is the sum you would have to invest today at a stated rate of interest to have that amount of money at a specified future date. Say someone offered to give you \$100 five years from now. How much could you take today and be as well off?

Common sense tells you you could take less than \$100, because you'd have the use of the money for the five year period. Naturally, how much less you could take depends on the interest rate you thought you could get if you invested the lesser amount. For example, to have \$100 five years from now at six percent compounded annually, you'd have to invest \$74.70 today. At 10 percent, you could take \$62.10 now and have the \$100 at the end of five years.

Thus, the present value of the net outlay under the lease (\$5,181.97 after tax savings) at the end of year six of the lease term, for example, is something less than \$5,181.97. For the example in this *Aid* the appropriate interest rate for discounting the lease payment is the after tax cost (50 percent tax rate, remember) of the loan (set at 10 percent)—or five percent ($.50 \times 10\% = 5\%$).

This low rate of interest is used because of the certain nature (you know exactly what they'll be) of the payments under a lease contract. So, at an annually compounded five percent interest rate, you would have to invest \$3,865.75 today to have \$5,181.97 at the end of six years.

Fortunately there are tables (Figure 3 is a very modest example) which provide the discount factors for present value calculations. In Figure 3 you will note that the factor for the present value of \$1 six years from now at five percent is .746. This factor (.746) times the after tax net lease payment outlay (\$5,181.97) equals \$3,865.75, or exactly the amount you would have to invest today at five percent interest compounded annually to have \$5,181.97 six years hence. There are also relatively inexpensive special purpose pocket calculators programmed to make these calculations.

Figure 3
Present Value of \$1

Year*	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%
1	.990	.980	.971	.962	.952	.943	.935	.926	.917	.909
2	.980	.961	.943	.925	.907	.890	.873	.857	.842	.826
3	.971	.942	.915	.889	.864	.840	.816	.794	.772	.751
4	.961	.924	.889	.855	.823	.792	.763	.735	.708	.683
5	.951	.906	.863	.822	.784	.747	.713	.681	.650	.621
6	.942	.888	.838	.790	.746	.705	.666	.630	.596	.564
7	.933	.871	.813	.760	.711	.665	.623	.583	.547	.513
8	.923	.853	.789	.731	.677	.627	.582	.540	.502	.467
9	.914	.837	.766	.703	.645	.592	.544	.500	.460	.424
10	.905	.820	.744	.676	.614	.558	.508	.463	.422	.386

*Periods can be any time period; they do not have to be years.

Why bother with making these present value calculations? Well, you've got to make them to compare the actual cash flows over the time periods. You simply can't realistically compare methods of financing without taking into account the time value of money. It may seem confusing and complex at first, but if you work through the example, you'll begin to see that the technique isn't difficult—just sophisticated.

Figure 2 shows you the present value calculations over the full term of the proposed lease. The sum of the discounted cash flows, \$35,170.03, is called the **net present value of the costs of leasing**. It is this figure that will be compared with the final sum of the discounted cash flows for the loan and purchase alternative.

Evaluation of the borrow/buy option is a little more complicated because of the tax benefits that go with ownership through the investment tax credit, loan interest deductions, and depreciation. In Figure 4, the steps in the calculations are shown above each column head. The interest portion of each loan payment is found by multiplying the loan interest rate (10% here) by the outstanding loan balance for the preceding period.

Note that in the last three years of the analyzed period the cash flow is positive, coming from the tax saving on depreciation and, in the eighth year, from depreciation and the assumption that the asset could be sold for a salvage value of \$12,000. Since these amounts in the last three years are coming in, they are subtracted after discounting from the amounts in the first five years (cash flowing out) to get the **net present value of costs of purchasing**.

Figure 4
Evaluation of Loan Cost

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
End of Year	Payment	Interest	(2 - 3) Principal Repayment	(5 - 4) Outstanding Balance	Depreciation	$0.5 \times (6 + 3)$ Tax Savings	(2 - 7) Net Cash Flow	Discount Factor	(8 × 9) Net Present Value
0	\$15,000.00			\$45,000.00		\$6,000.00*	\$ 9,000.00	1.000	\$ 9,000.00
1	11,870.89	\$4,500.00	\$ 7,370.89	37,629.11	\$6,000.00	5,250.00	6,620.89	0.952	5,303.09
2	11,870.89	3,726.91	8,107.98	29,521.13	6,000.00	4,881.46	6,989.43	0.907	6,339.41
3	11,870.89	2,952.11	8,918.78	20,602.35	6,000.00	4,476.06	7,394.83	0.864	6,389.13
4	11,870.89	2,060.24	9,810.66	10,791.69	6,000.00	4,030.12	7,840.77	0.823	6,452.95
5	11,870.86	1,079.17	10,791.69		6,000.00	3,539.59	8,331.27	0.784	6,531.72
6					6,000.00	3,000.00	(3,000.00)	0.746	(2,238.00)
7					6,000.00	3,000.00	(3,000.00)	0.711	(2,133.00)
8	(12,000.00)**				6,000.00	3,000.00	(3,000.00)	0.677	(2,031.00)
							(12,000.00)	0.502***	(6,024.00)
Net Present Value of Costs of Purchasing									\$28,590.30

*Investment tax credit = $0.10 \times \$60,000 = \$6,000$.

**Salvage value = book value = $\$60,000 - 8 \times \$6,000 = \$12,000$.

***Discount factor using average after tax cost of capital.

As noted earlier, the salvage value is one of the advantages of ownership. It must be considered in making the comparison; however, it is discounted at a higher rate (the firm's assumed average cost of capital, 9%). This rate is used because the salvage value is not known with any certainty, as are the loan payments, depreciation, and interest payments.

When you compare the two alternatives, you see that, purely on the basis of the numbers, the borrow/buy option looks like the least cost approach. The major difference in cost, of course, comes from the salvage value. If you ignore that value (a highly conservative approach), the alternatives are very close in their net present value of costs. Naturally, it's possible that salvage costs in real life for real assets could be very high or be next to nothing. Salvage value assumptions need to be made carefully.

Thus, while this sort of analysis is useful, you can't make a lease/buy decision solely on cost analysis figures. The advantages and

disadvantages discussed earlier in this *Aid*, while tough to quantify, may outweigh differences in costs—especially if costs are reasonably close.

Look Before You Lease

A lease agreement is a legal document. It carries a long-term obligation. You must be thoroughly informed as to just what you're committing yourself to. Find out the lessor's financial condition and reputation. Be reasonably sure that the lease arrangements are the best you can get, that the equipment is what you need, and that the term is what you want. Remember, once the agreement is struck, it's just about impossible to change it.

The lease document will spell out the precise provisions of the agreement. Agreements may differ, but the major items will include:

- The specific nature of the financing agreement,
- Payment amount,
- Term of agreement,
- Disposition of the asset at the end of the term,
- Schedule of the value of the equipment for insurance and settlement purposes in case of damage or destruction,
- Who gets the investment tax credit,
- Who is responsible for maintenance and taxes,
- Renewal options,
- Cancellation penalties, and
- Special provisions.



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—President Jimmy Carter
February, 1980

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Management Aids FOR SMALL MANUFACTURERS

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RENOVATION-EXPANSION CHECKLIST

Compiled from Industry Sources by the Editorial Staff of Management Methods
 Division, Small Business Administration, Washington 25, D C.

SUMMARY

This Aid is designed to help small businessmen who face the problem of renovating or expanding their production facilities. All questions can be answered by checking "Yes" or "No."

The first section--What Weaknesses Are In Your Present Facilities?--should help owner-managers to determine what sort of renovations are needed. The next section--What Would A Renovation Plan Involve?--is designed to suggest specific improvements which owner-managers need to consider when drawing up renovation plans.

In some cases present facilities may call for an addition to the plant or other expansion rather than for renovation. Such expansion involves long-range investment and is called to the attention of small businessmen in the following sections:

What Would An Expansion Involve? Is the Necessary Land Available? What Is the Best Location? What About Trends in Your Industry? and Can You Pay for the Expansion?

Use this checklist as a starter. Consider each question as it applies to your situation. Before you omit a question, satisfy yourself that it does not apply to your plant.

WHAT WEAKNESSES ARE IN YOUR PRESENT FACILITIES?

(NOTE: An inspection of your present facilities should help to point up costly inefficiency that is caused by lack of space or by improper use of space. For example, one area may be infringing on another, thus tending to throw costs out of line in both places.)

	<u>Receiving</u>	<u>Yes</u>	<u>No</u>
1. Does lack of easy access for delivery trucks create a traffic bottleneck?		_____	_____
2. Are raw materials frequently congested on the loading dock causing damage and confusion?		_____	_____
3. Does such congestion often mean losses of raw materials because they had to be left out in the weather?		_____	_____
4. Do these facilities expose material handlers to inclement weather or to accident hazards?		_____	_____
5. Do shippers often complain about delays when unloading raw materials?		_____	_____
6. Has demurrage been a recurrent and expensive item?		_____	_____
7. Do crowded receiving and storing facilities cause difficult and time-consuming handling and re-handling?		_____	_____
8. Does cramped storage space make it difficult to keep accurate inventory of raw materials?		_____	_____
9. Does congested storage then mean that frequently you run short of certain raw materials?		_____	_____

Production Area

10. Do raw materials flow forward easily from one operation to the next?	_____	_____
11. Or do raw materials often backtrack through your production area?	_____	_____
12. Are there other time-consuming delays in the process flow?	_____	_____
13. Have you investigated ways to eliminate such delays and backtracking?	_____	_____
14. Are congested facilities helping to add unnecessary time to the actual processing time?	_____	_____

Production Area (Cont.)

Yes No

- 15. Is inadequate lighting, cooling, heating, or other conditions, helping to create poor-quality work? _____
- 16. Is the production floor cluttered with materials that are not actually in process? _____
- 17. Do narrow or crooked aisles create traffic congestion and accident hazards? _____
- 18. Do such aisles slow down the flow of materials to machines? _____
- 19. On the other hand, is space being wasted because present aisles are too wide? _____
- 20. Are congested inspection areas or stations slowing up production? _____

Shipping Area

- 21. Is your shipping area cluttered with products and packages waiting to be moved? _____
- 22. Do orders frequently get damaged through careless handling in this congestion? _____
- 23. Do orders frequently get misplaced, or lost, resulting in late delivery to customers? _____
- 24. Does lack of space prevent securing the shipping area to prevent theft? _____

Service Areas

- 25. Are first aid kits located near work stations? _____
- 26. Are you losing production time because toilets and other health and comfort facilities are located too far away from work stations? _____

Grounds

- 27. Are present driveways wide enough and located to facilitate the movement of trucks and other vehicles? _____
- 28. Are parking areas for customers and employees inadequate? _____
- 29. Have there been frequent falls or other personnel accidents because of poorly located or designed walks, ramps or steps? _____
- 30. Does the general appearance of grounds give passersby and visitors an unfavorable impression of your business? _____

WHAT WOULD A RENOVATION PLAN INVOLVE?

(NOTE: When you know the faults of present facilities, you should be better able to plan how to overcome them. You can use the following questions as a starting point for making up a plan for renovating your plant.)

- 31. Have you asked each key man to give his suggestions for improvements in his particular area? _____
- 32. Have you considered employee suggestions that might help to create a better working atmosphere? _____
- 33. Have you analyzed accident reports to see what in-process hazards might be eliminated? _____
- 34. Have you considered the possibility of using overhead space for storage? _____
- 35. If your kind of work demands frequent re-arrangement of equipment, can you allow enough extra space to prevent future congestion? _____
- 36. Have you considered how to improve scrap handling so as to cut down congestion? _____
- 37. Have you checked on the feasibility of providing for additional power requirements? _____
- 38. At small additional cost can you include surplus electrical capacity for the long-pull? _____
- 39. Can you re-arrange the boiler room to make storage space? _____
- 40. Have you considered the possibility of color-coding power conduits, water pipes, sprinkler systems, steam lines, and compressed air lines? _____
- 41. Have you considered the possibility of color engineering to create a better working atmosphere? _____
- 42. Have you considered the possibility of reducing worker fatigue by cutting down noise and vibrations? _____
- 43. Can certain storage tanks in your present building be placed underground? _____

- | | <u>Yes</u> | <u>No</u> |
|--|------------|-----------|
| 44. Can tool cribs, or rooms be re-located nearer the workers who use them? | _____ | _____ |
| 45. Can you re-arrange in order to create surplus space to ensure that finished products won't bottleneck back into the production area? | _____ | _____ |
| 46. Have you considered using conveyors for moving products and packages through the shipping area? | _____ | _____ |
| 47. Can you provide better protection from weather and accidents on the loading dock? | _____ | _____ |
| 48. Could you install in-plant eating facilities if your layout were re-arranged? | _____ | _____ |
| 49. Have you considered using food and beverage vending machines? | _____ | _____ |
| 50. Can you re-arrange to include a first-aid room with a bed? | _____ | _____ |
| 51. Can you re-arrange locker and wash rooms to allow for employment expansion? | _____ | _____ |
| 52. Can you locate such facilities near an area that might be used for further expansion within the next several years? | _____ | _____ |
| 53. Do you need to provide an employment office with its own entrance? | _____ | _____ |
| 54. Have you considered air-conditioning for the office? | _____ | _____ |
| 55. Can you re-arrange the office and create space to take care of peak workloads without crowding regular office workers? | _____ | _____ |
| 56. Can you include surplus space to cover possible office expansion? | _____ | _____ |
| 57. Have you considered re-arranging your own office to improve your efficiency? | _____ | _____ |
| 58. Can you provide private offices for key men who now share an office? | _____ | _____ |
| 59. Can you include surplus parking space for customers and employees to prevent crowding in the future? | _____ | _____ |
| 60. Do you need a garage for your truck or other motor equipment? | _____ | _____ |
| 61. If so, can you locate it away from the main driveway and parking area? | _____ | _____ |
| 62. Have you considered putting power and other utility lines underground in order to improve the building's appearance? | _____ | _____ |
| 63. Do you need to light the parking area? | _____ | _____ |
| 64. Have you considered outdoor lighting for the front of the building as a nighttime advertisement? | _____ | _____ |
| 65. Have you considered asking the State Department of Safety representative to look over your plans? | _____ | _____ |

WHAT WOULD AN EXPANSION INVOLVE?

(NOTE: Renovation expenditures might run no higher than five figures, but an expansion project could easily start at the lower end of six figures. Therefore, the following questions are designed to help you determine whether your growth possibilities will support the long-range investment involved in an expansion.)

- | | | |
|---|-------|-------|
| 66. Do you have more orders than your present plant can make? | _____ | _____ |
| 67. Is this backlog of orders on all products? | _____ | _____ |
| 68. Or is the overload only on certain products? | _____ | _____ |
| 69. Do sales records indicate a strong growth trend over the past several years? | _____ | _____ |
| 70. Is this growth trend likely to continue for the next several years? | _____ | _____ |
| 71. Have you considered adding a work-shift to handle the overload? | _____ | _____ |
| 72. Have you considered subcontracting part, or all, of your overload? | _____ | _____ |
| 73. Do new products demand additional equipment and larger plant layout? | _____ | _____ |
| 74. Are present space limitations affecting product quality adversely? | _____ | _____ |
| 75. Do quality rejects show a mounting trend over the past year? | _____ | _____ |
| 76. Have you checked unit costs to see if expansion can help to cut them? | _____ | _____ |
| 77. Have you considered the tax aspects of plant expansion and compared their effects with other solutions to the problem? | _____ | _____ |
| 78. Will expansion create administrative problems which you are ill-equipped to face? | _____ | _____ |
| 79. Have you tried to determine whether the expansion will strengthen your business over the long-pull (the next 10 to 15 years)? | _____ | _____ |

IS THE NECESSARY LAND AVAILABLE?

- | | | |
|--|-------|-------|
| 80. If an additional building is needed, will your yard hold it? | _____ | _____ |
| 81. If you expand into your present parking lot, will this affect your ability to attract employees? | _____ | _____ |

- | | <u>Yes</u> | <u>No</u> |
|--|------------|-----------|
| 82. If you don't already own land adjoining your present site, can you buy such land at a reasonable price? | _____ | _____ |
| 83. If adjacent land is not available, or is expensive, can you expand on land in the neighborhood of your factory? | _____ | _____ |
| 84. Do you already own such land or can you buy it at a reasonable price? | _____ | _____ |
| 85. If neighborhood land is not available, or expensive, will it be economically feasible to relocate some portion of your operations? | _____ | _____ |

WHAT IS THE BEST LOCATION?

(NOTE: Even if neighborhood land is available, you may want to examine other areas too. Your decision should be a better one when you investigate all possibilities.)

- | | | |
|---|-------|-------|
| 86. Are there tax advantages or financing benefits in other areas that could strengthen your expansion? | _____ | _____ |
| 87. Have you checked advantages which Government (Federal, State, or both) may offer for expanding in areas federally designated for redevelopment? | _____ | _____ |
| 88. Would another area offer a different variety of employee skills, training facilities, or other work-force advantages? | _____ | _____ |
| 89. Can your present community match the financial, tax, or work-force advantages offered by another area? | _____ | _____ |
| 90. Could your raw material costs be reduced in another area? | _____ | _____ |
| 91. Could you serve your customers less expensively from a new area? | _____ | _____ |
| 92. Can a new area provide such things as: better freight forwarder service, access to a better airport, or better climate? | _____ | _____ |

WHAT ABOUT TRENDS IN YOUR INDUSTRY?

- | | | |
|---|-------|-------|
| 93. Do you know what new trends in your industry might mean in terms of building and equipment in the next several years? | _____ | _____ |
| 94. Have you considered such effects in your expansion plans? | _____ | _____ |

CAN YOU PAY FOR THE EXPANSION?

- | | | |
|--|-------|-------|
| 95. Do you know within 2 or 3 percent what the expansion will cost? | _____ | _____ |
| 96. Do you already have all, or part of, the necessary money? | _____ | _____ |
| 97. If you borrow, do you know how long it will take to repay the loan? | _____ | _____ |
| 98. Have you broken the cost down into the unit cost of your product? | _____ | _____ |
| 99. Have you discussed your plans and costs with your banker? | _____ | _____ |
| 100. Have you considered the possibility of financing with equity capital? | _____ | _____ |

(NOTE: For additional related management information see SBA 115A and SBA 115B.)

FILING CLASSIFICATION: COMPETITIVE STRATEGY

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PLANT LOCATION FACTORS FOR SMALL INDUSTRY

By *Ronald M. Reifler*, Plant Location Consultant, Fantus Factory
Locating Service, Chicago, Illinois.

SUMMARY

The biggest single mistake that small business managers make in selecting new locations for plants is in overlooking important information about the area under consideration - - information which bears on their future success. One way to avoid this error is to use a pre-developed list of items to be investigated. With such a list, costly mistakes can usually be prevented. Some analytical methods simply itemize the factors to be considered by the small plant owner, without attempts at interpretation. Others, in seeking to be exhaustive, list 700 to 1,000 items - - too many for feasible use by most small business operators. Consequently, the purpose of this article is to develop a brief but workable checklist of significant plant location items to be investigated along with suggestions on interpretation of the data gathered.

DETERMINE REASONS FOR PROPOSED MOVE

Do you wish to lower operating costs, improve manufacturing efficiencies, or tap a new market? If you can pin-point the reason for moving, you are in a better position to judge properly the acceptable areas.

WRITE DOWN YOUR EXACT REQUIREMENTS FOR YOUR NEW PLANT

• **Your Needs in Terms of Labor.** Male or female, skilled or unskilled, young or old, full time or part time, and so on? What is your current hourly wage classification structure? What fringe benefits do you currently offer? Are you willing to pay the same or are you looking for a lower-wage-cost area? To what extent are you willing to train workers? What employees are to be transferred to the new area? What are their personal and family living requirements? How about adequate housing facilities in the new location?

• **Your Own Personal and Family Requirements.**

Do you require such big city activities as private clubs, museums, fine restaurants and hotels, lectures, symphonies, professional sports, and the like? Do your children require special schools? Would your wife be content to live in a city with limited shopping facilities? Do you like knowing your neighbors well or do you prefer the anonymity of the larger city? If you decide on the answers to such questions at the start, you can avoid a sizeable amount of needless searching.

• **Your Raw Material Requirements.** What do you buy and from whom do you currently buy these goods? Are alternate sources available? How are the goods delivered? Is speed of delivery an important consideration? Are you a hand-to-mouth purchaser or do you stock inventory for production runs?

• **Geographic Area You Currently Serve.** To what extent do you think you can tap a larger market with a new location? How do you ship (carload lots, less-than-carload lots, trailer lots, less-than-trailer lots, air freight, barge, parcel post, and so on)? Where are your principal competitors located? What locational advantages over your operation do they currently enjoy? Must your customers have over-night, or second-morning delivery? What percentage of your total costs is in freight? (Even if your customers pay the freight, consider this as your own "cost of production," for it will influence your sales to those customers.)

• **Your Utility Requirements.** Have you any unusual power requirements such as sudden peaks or a need for standby electric generators? Is water used for cooling purposes? What temperature is preferred? Is soft water a necessity and, if so, have you considered the cost of a water-treating plant? Are you willing to dig your own wells? Are you willing to provide your own sewage disposal facilities via septic tanks? What is the chemical composition of any wastes from your production? Are you presently observing local laws regulating the disposal of chemical waste? Is gas used for processing? How much? Are you willing to provide auxiliary oil burning equipment as required

in many areas?

● **Your Present Tax and Workmen's Compensation Load.** What is the cumulative effect of your existing State franchise tax, State corporate income tax, State gross receipts tax, local real estate tax, local personal property tax on machinery and inventory, State Unemployment Compensation tax, and your Workmen's Compensation Insurance?

● **Your Exact Building and Site Requirements?** How many square feet are required? Has thought been given to expansion needs in the future? Any special floor loads? What kind of construction? Any rail sidings, truck loading docks, overhead cranes, and the like? How many cars will be parked near the plant?

● **Nuisance Problems.** Do you have any special "nuisance" problems such as smoke, noise, odors, or smog-creating substances? Have you installed any controls over these factors at your present location?

SELECT THE GENERAL AREA

In the interests of economy, it is exceedingly important to narrow the search to a general area within which operating costs and problems tend to be at a minimum. While this varies from firm to firm, a study of markets and labor balanced by governmental and tax considerations will assist in the narrowing process.

● **Freight.** Decide whether you are going to use your *present* or your *potential* distribution pattern as the basis for the location decision. Select one place as the reference point for freight. It should be one area where you think that freight costs will be close to or at the minimum. Compute total freight costs from this point. By trial and error select another location 50 miles distant, compute freight costs and see whether total costs rise or fall. Move around the map until a *general* region of freight-cost minimization is established (within plus or minus 5-10 percent of the lowest figure).

● **Labor.** Obtain general labor costs in manufacturing for representative cities from publications of the Bureau of Labor Statistics. While available only for larger cities, this information represents an excellent starting point. Circle those areas which have the most attractive wage scale in manufacturing. Compare these labor rate figures with your computed area of freight cost minimization. But remember that labor costs tend to be higher in metropolitan areas than in non-metropolitan areas. A labor cost saving of at least 10 percent may sometimes be possible within a given region, by locating outside of a metropolitan area. In any case, adjust wage estimates downward by 2-4 percent if labor is in great supply. Adjust them upward by at least 4 percent if you are considering a labor-tight area.

● **Taxes and Government.** Inquire about the tax load on corporations and individuals in each State.

In addition, determine if the State government has a record of being anti-industry, pro-industry or merely neutral toward industry. If the general consensus is that industry is penalized severely in a given locality, it is wise to avoid the area.

NARROW THE SELECTION TO THE FINAL CITIES TO BE STUDIED

● **Metropolitan vs. Non-Metropolitan Area Locations.** Decide at this point whether your firm belongs in a metropolitan area or in a less densely populated place. As a guide in planning, it is useful to know the characteristics of firms that tend to indicate either metropolitan or non-metropolitan areas. Note that each characteristic is separate and distinct. Rarely would one firm possess all of the characteristics discussed here.

Firms which can best profit by being in non-metropolitan smaller areas tend to be those which:

- (1) Require fewer skills at the outset;
- (2) Are willing to train a large part of their work force;
- (3) Are more oriented to the assembly of purchased parts rather than to the fabrication of those parts;
- (4) Are faced by necessity with low profit margins in their industry and hence must keep out-of-pocket labor costs down;
- (5) Use mostly catalogue-ordered or standard raw materials;
- (6) Are able to keep inventories on hand for production runs, rather than relying upon hand-to-mouth purchasing;
- (7) Deliver to customers largely at either end of the one or two main rail, truck, water, or air routes which serve the town;
- (8) Have customers who do not normally visit the plant;
- (9) Have utility requirements which are not unusual in any way;
- (10) Do not find it necessary to have professional men such as engineers, physicists, and mathematicians attached closely to the manufacturing facilities (major exception: a university town);
- (11) Can profitably sign up for a long-term lease or a lease-purchase program; and
- (12) Prefer the benefits of hiring employees who live closer to their work and who have more free time than can be provided in the large city.

While no firm would exactly match these specifications, they can give you a working profile of the types which do best in smaller cities. But how about the other end of the scale? What sorts of firms are best suited to a metropolitan area? Broadly speaking, they are those which:

- (1) Employ 1,000 or more people and need the big labor pools of a metropolitan area for proper staffing of the plant;

- (2) Require skilled workers at the outset;
- (3) Have customers who must have easy access to their plant;
- (4) Require varied or unusual forms of shipment (particularly air freight or barge shipments);
- (5) Require significant numbers of technical people (big cities may not be breeding grounds, but are points of concentration);
- (6) Require detailed technical advice from suppliers;
- (7) Must ship to a large proportion of customers who are within the metropolitan area switching district;
- (8) Use equipment which requires frequent technical service;
- (9) Rely upon inventory buying (some firms locate next door to the wholesaler's warehouse in an effort to cut inventory costs);
- (10) Use the physical presence of the plant to generate sales to a large proportion of the population;
- (11) Require a short-term lease or may wish to consider re-selling their building within a few years;
- (12) Require manufacturing to be next door to engineering, sales, and top executives;
- (13) Require large-scale financing (on amounts over \$1,000,000 the big city is an easier place to find the funds on an attractive basis); and
- (14) Wish to avoid being the "biggest frog in the civic pond" (do not want to be the main target for charity or civic improvement drives, or bear the chief blame for unemployment if workers have to be laid off, or be exposed to the common charge that "the company controls the town").

● **Written Contact with Probable Locations.** At this point in the study you should write to the local Chamber of Commerce in each of the cities being considered asking for their industrial brochures, and for site and building data. Also consult regional development councils and State planning and development departments where they exist. Find out, with the help of the Office of Technical Services, U. S. Department of Commerce, whether "organized industrial districts" have any advantage for you.

(1) **Weighing the Desirability of Anonymity.** Many firms dread the thought of having a local representative call on their receptionist asking to "talk to the president about his inquiry for plant sites in city B." Plant re-location rumors can be costly in terms of labor turn-over and lowered worker morale. Premature disclosure of location plans can reduce the competitive advantage of the move. If the name of the company is known in the city being considered, this can touch off a flurry of real estate speculation, thus driving land prices up. Most firms, therefore, conduct initial inquiries anonymously. Methods range from hiring a post

office box to asking a lawyer or an outside consultant to handle the contacts with community representatives.

(2) **Examining Community Brochures.** After receiving the community data, study them carefully. Each hour spent learning the facts in these booklets can, in many cases, replace a day of travel. Reading the brochures will allow you to eliminate some cities. But, in any case, to verify key points and to form an objective picture of the locality, check the claims with independent sources. Determine the extent to which build-and-lease-back funds are available locally.

What is the extent of rail and truck service in the areas? How new are their schools? When were zoning laws passed? What is the state of their parks and municipal recreation program? How close to their debt limit are they? What other firms are in the areas? Do you want to be their neighbors?

Each of these clues can allow you to screen localities in advance. Once you have narrowed the search to, say, 6 or 8 communities (and no more), you are ready to travel.

ANALYZE THE CITIES

● **Primary Contacts.** In your travels, let your primary contact be with either a State or a local Chamber of Commerce executive, a utility executive, or an industrial representative of the railroad. Your contact man will help you to gather information about his area and he can be trusted to keep your file confidential. However, there is a natural tendency on the part of anyone selling his home area not to mention derogatory or bad circumstances unless specifically asked. That means that the burden of detailed questioning falls upon you. Unless you ask about *all* conditions, you run a big risk.

● **Following Up.** You can extend your search by talking to some or all of the other manufacturers in town. Remember, however, that one man may be hesitant to admit a location error. Another may be on the industrial committee and, hence, will paint a rosy picture to attract a new industry. Still others, trying to protect a low wage level, may try to tell you how poor the area is. Talk to all, but try to recognize men's motives when listening to opinions about an area.

● **What You Should Ask a Manufacturer.** Be sure to make your appeal very personal. Ask him what he would do if he were in your shoes. Ask him what he would do if he were considering investing \$200,000 or so of his own money in this area. Would he be willing to do it? If not, why not?

● **Important Sources of Errors in Community Analysis.** (1) Don't concentrate solely upon hourly wage rates. Watch out for fringe benefit patterns, too. And try to get some idea of workers' attitudes and productivity. If there is an anti-management attitude in the area consider avoiding the region.

(2) Be sure there will be enough job applicants

to staff your firm adequately. Ideally, you should have three to four job applicants applying for each position in order to achieve adequate selectivity.

(3) What about supporting facilities? Are supplies and raw materials available quickly? Are nearby plants for forging, plating, and heat treating available? Are tool and die shops around? Will it be possible to get rapid repair of machinery and equipment? Will suppliers provide technical service often enough in this location? Is it necessary to stock large inventories in order to have an adequate production flow?

(4) Do not forget the importance of taxes. It is most important to consider the *total* tax bill. While State and local corporate income taxes may be high, real estate taxes may be exceedingly low. Also do not forget the following: State franchise taxes, State corporate income taxes, State gross receipts taxes, local real property and personal property taxes, unemployment compensation and workmen's compensation insurance premiums. It is not fair to judge a given location except on the basis of the company's total tax bill rather than on the one item that everyone complains about. And look at the services rendered for the tax dollar. Low taxes may represent either fewer services, some of which are essential, or a temporary postponement of inevitable expenditures.

(5) Be sure to look at the personal income tax load. It is important to understand that a move from a non-income-tax State into a personal-income-tax State may make your employees feel that they would be taking a cut in pay if they made the move. Find out, therefore, if other levies such as sales taxes are lower and would offset the personal income tax load. Try to estimate the *total tax bill* for the individual before making a final decision.

(6) There are literally hundreds of other factors to be considered. Each plays a role in any location study. These include such items as schools, parks, playgrounds, hospitals, physicians, lawyers, banks, newspapers, churches, and charities. Decide how important they are to your operation and include

them in your questions.

SELECTING THE ACTUAL SITE

Finally, be sure that the site itself is adequately checked. It is here that expensive mistakes are so often made. Is the ground solid enough for building purposes? Have you the results of local tests made by civil engineers to determine the load bearing capacity of the soil in tons per square foot? Is the area zoned properly (this is highly important)? What about the drainage and the direction of the slope? Will trucks be able to come in and out? Will bus lines be willing to extend their services to this plant? Will proper utilities be available? Remember that re-zoning takes many months, and that bringing in utilities can be very costly if the property is not adjacent to existing city utilities.

FOR FURTHER INFORMATION

Businessmen interested in exploring further the subject of plant location may wish to consult the following publications. Other good material, of course, is available in libraries; however, in keeping with the format of this series the present list is brief and selective. No slight is intended towards authors whose works are not included.

Plant Location, by Leonard Yaseen. American Research Council, 2 East Avenue, Larchmont, N. Y. 1956. \$10.00.

"Plant Location - - 1965," by Maurice Fulton, *Harvard Business Review*, Soldiers Field, Boston 63, Mass. Issue of March-April 1955. \$2.00 per copy.

"How to Estimate Wage Rates," by Ronald M. Reifler, *Industrial Development*, Conway Publications, Conway Building, North Atlanta 19, Ga. Issue of Sept. 1957. \$3.00 per year.

Standards of Industrial Analysis (a checklist of plant-location factors). Fantus Factory Locating Service, 1820 Prudential Plaza, Chicago 1, Ill. 1956. Free.

GPO : 1958 O-488324

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Management Aids for Small Manufacturers
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Planning and Goal Setting for Small Business

By **Raymond F. Pelissier**
Management Consultant
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Arlington, Virginia

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Summary

Many authorities on business management identify five functions of management: planning, organizing, directing, controlling, and coordinating. The planning and controlling functions often get less attention from owner-managers of small business than they should. One way to strengthen both of these functions is through effective goal setting.

Long range goals for sales, profits, competitive position, development of people, and

industrial relations must be established. Then, goals are set for the current year which will lead towards the accomplishment of the long range goals.

This Aid presents Management by Objectives to the owner-manager of a small manufacturing company for use in this type of planning and goal setting. MBO includes goal setting by all managers down to the first level of supervision. Their goals are tied to those of the company.

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Traditionally, people have worked according to job descriptions which list the *activities* of the job. The Management by Objectives (MBO) approach, on the other hand, stresses *results*.

Let's look at an example. Suppose that you have a credit manager and that his or her job description simply says that the credit manager supervises the credit operations of the company. The activities of the credit manager are then listed. Under MBO, the credit manager could have five or six goals covering important aspects of the work. One goal might be to increase credit sales enough to support a 15 percent increase in sales.

The traditional job description for a personnel specialist might include language about conducting the recruiting program for your company. Under MBO, the specialist's work might be covered in five or six goals—one of which could be "recruit five new employees in specified categories by July 1."

Thus, MBO looks for results, not activities. With MBO, you view the job in terms of what it should achieve. Activity is never the essential element. It is merely an intermediate step leading to the desired result.

What Business Am I In?

In making long range plans, the first question you ought to think about is "what business am I in?" Is the definition you have of your business right for today's market? Are there emerging customer needs which will require a changed definition of your business next year?

For example, one owner-manager considered himself in the business of making metal trash cans. When his sales began to fall off, he was forced to reexamine his business. He was able to regain lost sales and continue to grow when he redefined his product as metal containers and developed a marketing plan for that product.

How you view your business will provide the framework for your planning with respect to markets, product development, buildings and equipment, financial needs, and staff size.

Your long range objectives for your business will be the cornerstone in the MBO program for your company. At a minimum, they must be clearly communicated to your managers; however, for a truly vital program your managers should have a part in formulating these long range goals. Your managers will base their short range goals on these objectives. If they have had a role in establishing the long range objectives, they will be more committed to achieving them.

The Complete MBO Program

Management by Objectives may be used in all kinds of organizations. But not everyone has had the same degree of success in using this concept. From examining those MBO programs that failed, it is clear that the programs were incomplete.

The minimum requirements for an MBO program are:

1. Each manager's job includes five to ten goals expressed in specific, measurable terms.
2. Each manager reporting to you proposes his or her goals to you in writing. When you both agree on each goal, a final written statement of the goal is prepared.
3. Each goal consists of the statement of the goal, how it will be measured, and the work steps necessary to complete it.
4. Results are systematically determined at regular intervals (at least quarterly) and compared with the goals.
5. When progress towards goals is not in accordance with your plans, problems are identified and corrective action is taken.
6. Goals at each level of management are related to the level above and the level below.

Goal Setting

Goals for each of your managers are the crucial element in any MBO system. Goals at middle levels of management must be consistent with those at top levels. Goals of first line supervisors must relate to those at middle levels. Goals prepared by the manager responsible for certain steps in a large processing operation must tie in with those of managers responsible for other steps in the processing. And all goals must relate to and support your long range objectives for the company.

When all these goals are consistent, then an MBO system will be developed. Until then, there will be many like the middle manager of a research and development company who exclaimed in a seminar, "How can I set my goals when I don't know where top management wants to go?"

Each manager will probably find between five and eight goals enough to cover those aspects of the job crucial to successful performance. These are the elements which you will use to judge his or her performance. Of course, other duties which do not fall into the above goals should not be neglected. But they are of secondary importance.

When you first start your MBO program, your managers will undergo a learning period. They must learn how to prepare a goal which will make them stretch but is not beyond their capabilities. They must learn to develop ways to effectively measure their performance. They must learn to anticipate real problems which threaten the achievement of the goals and then take steps to cope with the problems.

During this learning period, your managers should first set a few goals. Then as they learn how to develop and achieve goals, the coverage and number of goals can be extended.



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The Miniature Work Plan

Your managers may find the miniature work plan, shown in figure 1, useful. On this work plan the manager can show each of the major work steps (sub-goals) necessary to reach the goal. Then, if each work step is performed

by the indicated date, the goal will be reached when the last work step is completed.

You may also use this form to discuss goals with your manager. By looking at this form, you can see not only the goal but also the plan for reaching that goal. This will allow you to ask questions about the work steps and

A Manager's Goal

figure 1

Instructions for Completing Form

Management by Objectives provides for the establishment of four to ten goals by each manager. You should set up goals in each of several important areas in your job. You might try to establish at least one in each of these categories: Regular, Problem Solving, Innovative, and Development. By following this approach you will be more likely to see the full range of possibilities open to you through goal setting.

Develop each goal as a miniature work plan. The steps that follow will result in goals which are complete and useful to both you and your boss.

Goal (Be specific and concise)

Measurement (The bench mark that tells you that you have achieved the goal, should be expressed in quantitative terms)

Major Problems Anticipated

Work Steps (List three or four most essential steps, give completion dates for each)

Superior's Goal (Give goal at next higher level to which your goal relates)

anticipated problems, as well as question how the goal will be measured. By pointing out the relationship between the manager's goal and your goal, you'll be helping each of your managers to understand how his goals relate to those of the company.

Whenever a problem is listed on the work plan, the manager should include a work step to deal with it. For example, suppose the head of your supply department set a goal to deliver all packages within one day of when they were received. He thought he might have difficulty in getting his people to follow the new procedures. So, he included a work step to teach these procedures before the new program went into effect.

Kinds of Goals

When your managers begin to set their goals, they may want to know what areas are suitable for goal setting. What are the really important aspects of their jobs rather than that part which is most visible to them? How can they be sure that their program is balanced for the long haul, rather than just reacting to immediate, pressing problems? How can they set goals which are most likely to help them control their jobs?

It might be useful for them to have a classification of goals that suggests areas of opportunity. Generally, each manager should have between five and eight goals. One or two goals in each of these areas should be helpful:

1. Regular work goals.
2. Problem solving goals.
3. Innovative goals.
4. Development goals.

Regular work refers to those activities which make up the major part of the manager's responsibilities. The head of production would be primarily concerned with the amount, quality, and efficiency of production. The head of marketing would be primarily concerned with developing and conducting the market research and sales programs. Each manager should be able to find opportunities to operate more efficiently, to improve the quality of the product or service, and to expand the total amount produced or marketed.

Problem solving goals will give your managers an opportunity to define their major problems. Then, they may set a goal to eliminate each one. There is no danger of anyone ever running out of problems. New problems or new versions of old problems always seem to replace those overcome.

Innovative goals may be viewed the same way. A goal for innovation may apply to an actual problem. But, some innovation may not deal with a problem. For example, the head of building management sets a goal to invigorate the employee suggestion program by putting five suggestions into effect during the next four months. There was no specific problem to be solved, the manager was just trying to do the best job possible.

The development goal recognizes how important the development of your employees is to your business. Your managers can be encouraged to develop their people just as they are to produce more effectively. Every manager must be to some extent a teacher and coach; each manager must plan for the employees' continued growth in both technical areas and in working together effectively.

By asking your managers to set at least one goal in the four areas listed above, you may open their eyes to possibilities they had not seen before. The goal setting process can be a very useful educational step, even for those who are primarily specialists.

Progress Reports

An MBO program without provision for regular reports on progress is worthless. That is why some articles and books on MBO call the concept MBO/R. The "R" refers to results. Nothing is accomplished by setting goals or objectives unless the program calls for a regular review of progress towards results.

A large organization issued nearly 100 pages of goals prepared by many of its managers. Most of the goals were well developed. The document was very impressive. But there was absolutely no provision for a reporting system of any kind. It is easy to imagine the reaction of those who set goals for the first year when they were asked the following year to draw up new goals.

A monthly or quarterly review of progress towards goals will help you determine where progress is below expectations. For example, suppose that one of your goals calls for a reduction of overtime by 50 percent this year, and the first quarter reduction is only 15 percent. A special effort must be exerted in the succeeding quarters to regain the lost ground or the goal will not be achieved by the end of the year. When progress is below expectations, the problem or problems holding back progress should be identified and assigned to someone, usually the manager, for resolution. Make these assignments part of the company MBO files so that responsibility for correcting the problem areas cannot be evaded.

Performance Evaluation

You will have to evaluate the performance of every person working for you in some way, either formally or informally. When your managers are working to achieve a full set of five to eight goals, their ability to get results on each goal can be a good, objective measure of performance.

Traditional performance evaluation systems have been strongly criticized because they deal with subjective matters such as leadership qualities, rather than the more objective measure of results. Evaluating performance by MBO, while objective, is a complex task, which must be undertaken with care by someone who fully understands MBO. Failure to reach goals can be a result of setting the wrong objectives in the first place, the existence of organizational restrictions not taken into account, inadequate or improper measures of goal achievement, personal failure, or a combination of factors.

Installing MBO

In installing an MBO program, many owner-managers have found it best to start by asking their managers to define their jobs. What are their major responsibilities? Then, for each responsibility, the manager and the boss decide how they will measure performance in terms of results.

The result of this exercise may surprise you. Often managers and their bosses do not even agree on the manager's major responsibilities. Also, you may find that no one is performing some of the functions that you consider important.

As the owner-manager, you must appreciate what the system will do. You have to show interest in the concept from the beginning. You have to set the example for your subordinate managers, if the MBO system is to be a success.

The education of your managers may be a formidable task. They have probably thought in terms of specific functions—managing a sales department, directing a credit office—rather than in terms of goals which contribute to the organization.

It might be best to start with a seminar of six to nine hours in a classroom. This ought to be enough to introduce MBO to the managers who will be setting goals. Either you or a consultant might conduct the seminar. (If you choose a consultant, be sure that you are there for the entire seminar).

Provide enough time so that your managers can express their doubts, reservations or opposition to MBO. It is best to get their feelings out into the open as soon as possible. Other participants can help them deal with their concerns.

A very useful part of such a seminar is the preparation of an actual

goal by each participant. In small group sessions, your managers can help each other by reviewing work plans and offering suggestions to improve each others plans.

Working with goal setting, periodic review of goals, and other aspects of MBO will be a learning experience for most managers. If they set annual goals, it may take three to four years before good results from this new system of managing appear. MBO may look simple on the surface, but it requires experience and skill to make it work effectively.

Threats to the MBO System

Not all MBO programs are successful. Some of the leading reasons why past programs failed to reach their potential are:

1. Top management did not get involved.
2. Corporate objectives were inadequate.
3. MBO was installed as a crash program.
4. It was difficult to learn the system because the nature of MBO

was not taught.

It is hard to get people to think in terms of results rather than activities relating to their work. However, it can be done. The sequence of steps one owner-manager uses may not work for another. It is often an individual matter. Results are what count.

If you feel that you are ready to introduce MBO to your company, why not set this as a goal for yourself. Turn back to figure 1 and follow through with the work plan. List your goal, measurement, anticipated problems, and the work steps necessary to get your company managing by objectives.

For Further Information

Small business owner-managers who want to explore the subject of management by objectives may wish to consult the following references. This list is necessarily brief and selective. No slight is intended to authors whose works are not mentioned.

Management Aid No. 179, "Breaking the Barriers to Small Business Planning." Available free from your nearest Small Business Administration Office.

A Practical Approach to Organization Development Through MBO by Arthur C. Beck, Jr. and Ellis D. Hillman. 1972. Addison-Wesley Publishing Company, Inc., Jacob Way, Reading, MA 01867.

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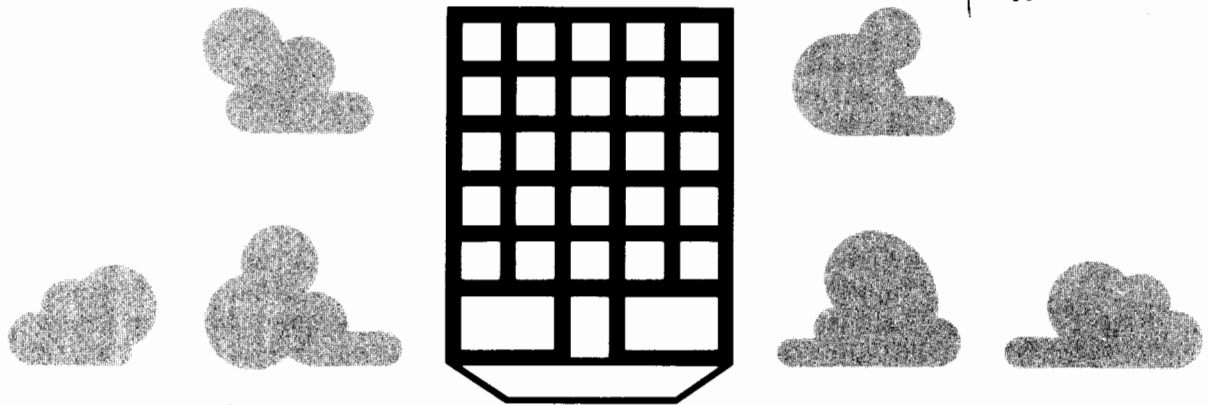
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Management Aids for Small Manufacturers
U.S. Small Business Administration

Locating or Relocating Your Business

By Fred I. Weber, Jr., Ph.D.,
Manager, Economic Development & Research
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Summary

Several factors must be considered when locating or relocating a small plant. Among them are the company's market, the available labor force, transportation, raw materials, and available buildings and/or building sites.

This *Aid* discusses such factors and provides a score sheet that should be helpful in evaluating sites. It also points out that because of innovations in an industry, an old plant can become inefficient and have a competitive disadvantage. Owner-managers should check periodically to determine whether or not a relocation is necessary for growth.

Revised July 1979

Location of the plant is vital to success in a small manufacturing company. Sometimes a business that might otherwise be only marginal makes a good profit because of an excellent location. On the other hand, a poor location can often drag down a good business. It can affect sales adversely and help decrease the company's profit by adding to its cost.

An owner-manager must reassess his situation regularly to determine if his present site is an advantage or a disadvantage. A location that suited your needs even 3 years ago might not be a prudent one today.

Beware of Personal Preferences

Amazingly, many location decisions are based on the personal preferences of the owner-manager of the small plant. Such preferences can mean anything from locating the business within walking distance of his home to buying a building from a friend merely because that friend wants to sell. In choosing a location, your first consideration should be to eliminate personal preferences which are emotional rather than rational. You do want to make it convenient for yourself by placing the business near your home *but consider* such a move only if you will gain more than personal ease.

You should begin your location consideration by asking yourself: Do I need a specialized building, or can I be satisfied with an available existing facility? Would an existing building be just as profitable as constructing a new facility?

If you feel an existing facility will serve you, then the next step is locating available, suitable buildings. A real estate broker who specializes in industrial property can assist you.

Building Your Own Facility

If, on the other hand, you must build your own facility, then you will need to consider the following factors. Some of them may involve more study if you are considering a move some distance from your present location rather than in or near your present community.

1. **Your Market.** Perhaps the most important consideration in any location is *being able to satisfy your market*. You must study your market and determine who is interested in buying your product. Your plant must be located with convenient access to *all* of your customers, present and potential, and the customers must have convenient access to you. A good method for evaluating this factor is to mark the location of your customers with pins on a large map. It might also be desirable to indicate the locations of your major competitors. By examining the scatter of customers, you can usually determine the center of your market area and the location that will best serve your customers.

Keep in mind that you already know about the customers who are represented by the pins. You may need additional information before you plot the location of your prospective customers.

2. **Your Labor Force.** Your next consideration is *where* your labor force will come from. Although labor is more mobile today than it was fifteen or twenty years ago, some areas do not always have an adequate group of people to draw on. One rule of thumb is that the ideal site is in an area that can provide ten persons for consideration for each one to be hired. Furthermore, prevailing wage rates in the area must be in line with your competitors' in other areas. Small towns generally have lower labor wage rates than large cities.

If you find the present supply of labor inadequate or marginal, consider whether or not the living conditions of the area are conducive to attracting new people. Certain climates have constant appeal. In other areas, the climate makes it difficult for employers to attract people whom their companies need. Unskilled people, in general, will move more readily than skilled people. Skilled people, particularly professionals, will not move unless they find amenities they consider important such as good schools, libraries, and theaters.

A number of firms considering relocating to another city have tested the labor market by advertising for prospective help in the local paper to determine the number of respondents. These people are interviewed and from the interviews many ideas can result. Firms have found in many cases the labor supply was different than the population and employment figures indicated.

In inflationary times, the cost of living can vary greatly between cities. Obviously, this has a bearing on the wages you must pay. Look at the cost-of-living data as an indicator of your costs.

3. **Transportation.** Transportation is another factor in relocating your business. Radical changes in the past ten years make for flexibility when locating or relocating a factory. The growth of air shipping makes sites near airports more attractive. Interstate highways have increased the popularity of trucks as a method of moving goods. More pipeline facilities are available. Railroads are indispensable for certain products.

Have a transportation expert furnish shipping rates and delivery times for your major customers via the various modes of transportation. You may discover the preferable method of shipment to be different from what you had expected.

In addition to determining what mode of transportation is important for your present needs, you should consider what will be vital in the *next ten years*. Look at access to freeways, available rail service, barge and deep water transportation, and the possibilities of using or expanding upon air shipments.

Consider the *landed* (delivered) cost to your customer as a significant point. If you have a low-value, high-weight item such as concrete, then your location decision is weighted heavily by the transportation cost while for electronic parts transportation would not be so significant. Bear in mind also your customer's preferences for service. If your customers require 3-hour deliveries, that is important to your transportation plans.

4. **Raw Materials.** Mark the sources of your raw materials with pins on a large map. If they all come from one area, you should consider what advantages a competitor located adjacent to the source has over a more remote facility. It may be more important to be closer to raw materials than to your customer, or vice versa. Are there facilities to bring the raw materials in rapidly and economically? Can you always be assured of a supply regardless of the season? Does the supply of raw materials from the area seem assured in the foreseeable future? Or should you plan on an alternate source which might affect your planned location? Will the cost of raw materials from the present source change dramatically in the future?
5. **Suitable Site.** Is a suitable site available in the general area in which you have decided to locate or relocate? You have to consider whether or not the terrain is suitable and the foundations (the natural underlying base, such as limestone) are adequate. Is needed rail or highway transportation available in the area? Can the zoning be obtained? Is adequate water available? Adequate sewer service?

In recent years, problems in securing proper zoning have been more intense. Delays have become unbelievably long and, in more than a few instances, zone changes have never been granted. As a result, most firms are no longer even considering a site that is *not now* ready to build.

Lastly, be sure to buy sufficient land for expansion. Don't just buy for present needs.

6. **Community Interest.** Whether or not the community or area you are considering wants your business is important. Some areas aggressively seek development. They are eager to welcome new industry and therefore eliminate many of the small problems that arise. Other communities' attitudes for development range from passivity to open hostility. Obviously, you should avoid the city or region that does not want industry. Concentrate on

areas that show enthusiasm for you and your business.

In gathering information, check out the facilities of various communities. Find out what services the local government offers. You also need information about available housing, schools, libraries, and recreational facilities.

Evaluate the Factors

As you obtain information on various areas, *do not* limit yourself to data from only one source. Ask the same questions of many people, and compare the answers. Some localities and developers may tend to distort the picture of their areas. You may find too late that the realities are quite different than what you had anticipated. An excellent way to obtain the facts is by talking with business owners who are established in the area you are considering.

Consider the Future

Finally, you should look ahead; try to picture your situation ten years from now. Try to determine whether or not the general area can support you as your business expands. Take labor for example.

Although a new location may provide the employees you need initially, will it be able to furnish five or six times that many eight or ten years from now when your company has grown? Also you must consider whether or not a site that fills your present needs will allow for future expansion to your plant. If you have to move a second time and the distance is great, you are apt to lose the majority of your employees and have to train a new group.

Use a Score Sheet

As you consider the factors relevant to your location decision, it is vital that you have some type of "score sheet" that you can use to evaluate sites. See the "Rating Sheet on Sites," at the end of the *Aid*. This rating sheet, when completed for each site you are considering, will help you see its strengths and weaknesses. It also helps you eliminate the factors that may be equal in all the sites.

As you tally the sheet, some factors may be more important to you than to people in other businesses. For example, if you are in the apparel business, the availability of qualified labor may be far more important than any other factor. It would be wise to assign some weight to those factors that are abnormally important because of the nature of your business.

Overemphasized Factors

When making location decisions, many small business owners overemphasize certain considerations. One is the initial cost of the property. Remember that this is a one-time charge, and if you are buying a small site (under ten acres), an additional \$1000 per acre may not be significant when it is amortized over the years you plan to remain at that site. Also a lesser-

priced property is not a bargain if the costs of operation from that site are much higher than at a plant built at a more expensive property.

Another overemphasized factor is tax considerations. Between states, tax considerations have tended to level off. Whereas some states have gross volume taxes and others have income taxes, the net collected from most businesses tends to be nearly the same. On rare occasions, some significant differences occur because of the peculiarities of the companies, but these are not necessarily permanent and successive legislatures can change regulations at will. Look also at your personal burden—some states tax companies heavily and individuals less, or vice versa.

While some owner-managers find it economical to expand and extensively remodel their present facilities, other owner-managers find such remodeling to be temporary and costly. Before embarking on an expensive renovation and expansion of your present plant, weigh the cost of renovation against the cost of a new plant.

A study by *Factory Magazine* indicates that some location considerations are increasing in importance while others are decreasing.

Among those that are *increasing in importance* are labor considerations, market considerations, and financing arrangements. Among those that are *decreasing in importance* are tax considerations, unionization, and raw material access.

Energy costs are increasing but also are tending to level off around the country. For most industries (except primary metal refining and a few others) energy costs are less than three percent of manufacturing costs. Thus, whether they are a little more or a little less in one location or another is not that important.

Buy or Lease?

A final consideration in locating or relocating a plant is whether you should lease or buy the facility you are considering. Your decision should be based on these factors:

1. Are your requirements going to change rapidly over the next few years? If they are, you should probably consider leasing.
2. Do you find yourself in very short supply of capital? Can you use your available money better if it is not tied up in a building? What return can you expect from your funds if they are invested elsewhere? If your capital is tight, leasing may be preferable.
3. Can you secure a favorable lease from the owner of the building with an option to purchase? Because of tax considerations, a property owner may prefer to lease his property rather than sell it. In such a case, he is apt to make the lease price more attractive than the selling price. You should explore this possibility.
4. Your accountant can advise you on the financial aspects of how leasing or purchasing might affect your financial picture. If you can buy property at a favorable price and the purchase does not cause a shortage in your working capital, then purchasing may be indicated.

5. Consider resale. Is the building one that will be readily resold? If so, to purchase may be wise. On the other hand, leasing may be better if there is something about the building (for example, little or no adjacent land for parking or a plant addition) that would limit resale of the property.
6. Some states have revenue bonding programs, tax forgiveness, and other assistance. You might check your state or local economic development group to determine what help is available.

Relocate for Growth?

Sometimes an owner-manager should consider relocating even though the need for it is not apparent because his present space seems adequate and he is serving his customers without undue complaints.

But what about technological improvements? Have you ever thought that, if you move, you could take advantage of the technological improvements that have come along in your industry since your present facility was built? If your facility has become a competitive liability because of such innovations, moving to another building may be the most economical way to become competitive again.

The owner of a furniture factory in the West recently decided that the firm could no longer afford the luxury of an old plant even though the location was good and the space adequate. This conclusion was based on a study showing that a move from a highly inefficient multi-story plant to a new single-story plant would enhance profits by about twenty-five percent per year.

You should keep in mind the danger of putting off relocating because you "can't afford it now." Some owner-managers find that, as time goes by and their competitive position worsens, they can afford relocating even less. They learn the hard way that if a company stays too long in a location it can die in that location.

The company that prospers is the one in which the owner-manager chooses the best possible site and remains there only until the factors dictating that location no longer outweigh the advantages to be gained by moving. With ever faster changing technology and more efficient machinery and plant layouts, the most expensive cost in a business can be an inefficient plant.

When your roots are in a community, look there first. The move to bringing your plant up to date may be to a site just down the road from your present building.

Help in Choosing a Site

You can get local assistance in choosing a site and securing data from a number of sources. Your electric, gas, or telephone utility may have a person who is designated to help companies in their location decisions. Some banks and insurance companies also provide such service. In addition, real estate agents who specialize in commercial and industrial sales and the industrial development department of your local Chamber of Commerce, as well as industrial development departments of railway companies, can be of help. State governments usually provide agencies which specialize in providing facts for those considering location or

relocation. Generally, there is no charge for the services of the above group. If you are unable to secure satisfactory data from any of these, you might consider hiring a professional consultant or a college professor who specializes in the field.

Rating Sheet on Sites

Grade each factor: 1 (lowest) to 10 (highest)

Weight each factor: 1 (least important) to 5 (most important)

Factors	Grade	Weight
1. Centrally located to reach my market.	_____	_____
2. Raw materials readily available.	_____	_____
3. Quantity of available labor.	_____	_____
4. Transportation availability and rates.	_____	_____
5. Labor rates of pay/estimated productivity.	_____	_____
6. Adequacy of utilities (sewer, water, power, gas).	_____	_____
7. Local business climate.	_____	_____
8. Provision for future expansion.	_____	_____
9. Taxation burden.	_____	_____
10. Topography of the site (slope and foundation).	_____	_____
11. Quality of police and fire protection.	_____	_____
12. Housing availability for workers and managers.	_____	_____
13. Environmental factors (schools, cultural, community atmosphere).	_____	_____
14. Estimate of quality of this site in years.	_____	_____
15. Estimate of this site in relation to my major competitor.	_____	_____

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RETURN TO BUSINESS PLANNING AND DECISIONS

RETURN TO TOOLS FOR NEW BUSINESSES

RETURN TO MAIN MENU



Management Aids FOR SMALL MANUFACTURERS

KEEPING OVERHEAD COSTS IN LINE

By George J. Tasso

Resident Partner, Ernst & Ernst, New York, N. Y.

Small plants have been known to fail because overhead got too far out of line. The responsible executives did not understand what overhead costs were made up of, or how to control them. This Aid is designed to help meet that problem. In applying it to their own companies, managers will want to work closely with their accounting people. Confusion on terms, methods, or policies can be cleared up promptly with proper teamwork. The most effective overhead-cost-control program provide for essential records, timely reports to management, realistic analyses before fixed assets are bought, income and expense budgets, special studies on out-of-line expense items, and an active cost-reduction committee.

Overhead may be broadly defined as all expenses of a business other than direct production labor and direct production material. It is a collective term covering all indirect and general expenses.

WHAT IS OVERHEAD?

Included in the overhead of a manufacturing firm are the following items: (1) Management and supervision, (2) Material procurement expenses (purchasing activities), (3) Labor procurement expenses (personnel activities), (4) Indirect factory labor--wages paid to material handlers, helpers, janitors, stockmen, (5) Supplementary costs of labor--including vacations, holidays, payroll taxes, pensions, insurance, (6) Tools, supplies, and utilities, (7) Equipment and building maintenance, (8) Technical-staff costs--such as product engineering, research, industrial engineering, quality control, (9) Selling, marketing, and distribution expenses, (10) Clerical and paperwork expenses (other than production), (11) Communications (telephone, telegraph, postage), (12) Outside professional aid, (13) Asset ownership or rental--such as insurance, depreciation, rent, and (14) Taxes.

Frequently, for reporting purposes, these overhead expenses are classified as manufacturing overhead, selling expense, and general or administrative expense.

● **Background on Overhead.** There is no one overall approach which is suitable for controlling all overhead functions. As you have noticed in the above list, it is a mixture of many small dissimilar functions and types of expenses. Some expenses are relatively fixed and uncontrollable on a short-term basis (insurance). Other expenses are controllable in varying degrees on a current operating basis (outside professional aid). In addition, many of the services provided by overhead functions are of a nonroutine nature, or the benefits from their activities are intangible or delayed. This complicates overhead performance measurement and evaluation.

The current trend towards increased mechanization of factory operations, coupled with increased paperwork and technical-staff requirements, is greatly increasing the relative importance of overhead. You can expect this trend to continue in the future. The overhead expenses of owning and maintaining equipment, clerical functions, technical staffs, and management functions are becoming the major part of manufacturing conversion costs.

WHY OVERHEAD INCREASES

The increasing importance of overhead expenses requires management to exercise a tighter and more effective control over them. This is true both in times of prosperity and economic growth as well as in leveling-off periods. Some people get careless of overhead items in good profit years. The result is sometimes an unconscious development of spendthrift management. Businessmen letting overhead expenses rise during prosperous periods often find that, in a more competitive market, those expenses cannot easily or quickly be reduced.

● **A Need For Caution.** Overhead expenses during business growth periods have a tendency to be extremely variable. They can increase with an increase in volume, or, in many cases rise even faster. Several factors account for this:

Optimism as to future growth and continued prosperity may be greater than is justified.

Overhead includes many small items. Each one alone may not be of major importance. Collectively, however, they can become very significant. When profits are good, there is a natural tendency to become somewhat careless with the many small overhead items. They are not subjected to the same scrutiny and justification as they are during less prosperous periods.

In many instances, overhead expenses which were considered variable as the business expanded are found to be fairly fixed in a decline and not easily reduced without painfully drastic measures.

●Everything Under Control? How do you guard against such profit-drainage? There has to be rather strict overhead control.

In many small companies, the owner-manager personally originates or reviews major requests for personnel, supplies, or equipment. He is familiar with the status of most areas of his company from personal observation.

But minor routine purchases and personnel changes are usually authorized automatically. Major nonroutine purchases and personnel additions usually require verbal or written justification on the part of one of the key executives. This is a basic method of expense control which is essential.

The sole use of the owner-manager's personal observation of activities and his day-to-day review of transactions has certain deficiencies as an expense control technique. Why? When you review individual requests made by one of your department heads, it may be extremely difficult to visualize their impact upon present or future profits. Individually, the various purchases and personnel increases may appear to be justified and not too significant. Yet, when reflected on your financial statements, the impact on profits may be considerable.

"FIRE ALARM" EXPENSE CUTS

Quite frequently, in companies where there are no formal expense controls and no satisfactory periodic accounting reports during the year, an unfavorable profit picture on the year-end financial statements or a dwindling cash balance stir up belated excitement in management. This often induces the owner-manager to undertake drastic, haphazard "fire alarm" expense reductions without proper planning and thought of consequences.

●Overhead Crisis. He soon realizes that he faces a far-from-easy task. Where, indeed, he wonders, can he cut overhead quickly and in amounts large enough to make a dent in his fixed expenses?

Making a fast survey of such expenses, his eyes fall on personnel. Can he afford to cut his staff? Can he, somehow, cut down on salaries? But, unless he has over-hired during the prosperous period the answer may well be No.

He now looks critically at such items as plant insurance (can he cut it down without losing too much protection?), inventory (can it be reduced?), and his warehousing facilities (do they cost him too much, and is there a cheaper way of storing merchandise?). He even instructs his employees to be sure to turn off water taps when they are not in use, extinguish the flood light at the gate except during minimum evening hours, and cancel plans for painting part of the building.

These are desperation measures--the result of lack of a suitable long-term control method.

TOWARD OVERHEAD CONTROL

An adequate program for keeping your overhead costs in line is obviously needed. Such a long-term program would supplement the day-to-day informal controls and help to eliminate the "fire alarm" type of economy drives. It should include:

(1) Realistic advance studies prior to fixed asset acquisitions or long-term expense commitments,

(2) An adequate system of accounting for overhead expenses,

(3) Timely management reports (delayed information may be useless),

(4) Profit planning and budgetary controls,

(5) Cost control through a cost reduction committee, and

(6) Special overhead expense studies.

●Advance Studies. Your overhead expense control should begin, before any expenditures are made, with the advance planning of the fixed-asset requirements of your business. These include machinery, equipment, buildings--to name just the most important ones. Similarly, control should start before expenses connected with the use of assets (such as depreciation, taxes, insurance, maintenance, rentals,) become permanent recurring charges against future periods. Although termed fixed and uncontrollable on a short-range basis, current-period building occupancy and machinery expenses are a result of decisions made in prior periods when the related fixed assets were acquired. Similarly, the stream of such expenses in the future will be the result of current decisions.

You should make a thorough study in advance of any significant fixed asset acquisition or long-range expense commitment. This study should realistically consider such factors as:

(1) Requirement for a new asset (building or machines)--can existing facilities be utilized, or can the work requiring the facilities be subcontracted?

(2) Alternative makes and models available.

(3) Alternative methods of obtaining the asset--purchase, construction, lease.

(4) Full cost of asset under each alternative--including installation and start-up costs.

(5) Volume of business and utilization of asset anticipated.

(6) Full operating costs under each alternative.

(7) Anticipated percentage return on the added fixed asset investment--(net annual cost savings over present or alternative method ÷ added investment).

(8) Pay-off time (length of time it will take for accumulated cost savings to equal the added investment).

There are many formulas available to bring together and evaluate the mathematical portion of the data relating to fixed asset acquisitions. These include the Machinery and Allied Products Institute "MAPI" formula, the National Machine Tool Builders Association method, the "Cash Payback" formula, and so on. The important thing is that either you or your representative (employee, accountant, or consultant) realistically make such a study prior to any commitment.

●Adequate Accounting System. The once-a-year summarization of expenses on financial statements provides a cumulative effect. But it is too late and usually not sufficiently detailed to be of value to you in controlling your fixed expenses.

To keep your overhead expenses in line, it is essential that you know on a current basis what your cumulative actual expenses are (by type), and where they are being incurred (by function or department). This requires an accounting system to classify and accumulate expenses in an orderly manner.

Your accounting system, set up by yourself or an accountant, should be based upon a chart of accounts, developed specifically for your company. A chart of accounts is a formal set of accounting codes and rules to facilitate a consistent and uniform classification of financial transactions into meaningful categories for financial reporting and internal management control.

Your overhead expenses should be broken down sufficiently to identify their nature clearly, relate them to the responsible departments, and facilitate meaningful comparisons with prior periods.

Your accounting system should also provide prompt management reports and financial statements periodically throughout the year. Adequate cost accounting does not have to be complicated or expensive to provide current management control information. Usually, such a system can be designed around your (1) basic purchases, (2) cash disbursements record, and (3) payroll clerical records. Often it will require only slightly additional effort than is generally expended on these essential records.

•**Management Reports.** For very basic control of overhead expenses, the management reports prepared from the accounting records should include a monthly profit and loss statement and a listing of actual overhead expenses for the month by type of expense and department or function. To assist you in properly evaluating the monthly performance, these overhead reports should reflect the total amount of each expense, its ratio to sales or direct labor, and a comparison with planned results or prior period actual expenses.

The comparison of the actual current expenses with those of prior periods will enable you to spot unsatisfactory overhead changes or trends. By further analysis and discussions with persons responsible for the expense increases, you can determine the causes and start corrective action.

BUDGETARY CONTROL

A more advanced technique for controlling overhead expenses is the use of budgets to plan your operations in advance and to measure actual results.

This technique calls for specific forecasts of how much will be spent for each item during a given month, quarter, or year. Actual bills are compared with estimates. The reasons for the differences, if any, are then sought. Where actual results are worse than the forecasts corrective actions can be taken.

Budgets can be merely expense projections, or they can be complete profit plans, which include projections of sales, expenses and profits. The complete profit plan is the more effective tool.

Budgeting can help you by: (1) establishing profit and expense objectives, (2) drawing up a coordinated plan to achieve these objectives, (3) measuring actual progress toward them, and (4) providing information for advance evaluation of the effect upon profits of sales trends, expense trends, and various management plans. Unfavorable projected results can be anticipated and steps taken to correct or, at least, modify them.

The development of the budget should be a management team effort with all your supervisors helping in it.

•**Sales Forecast.** The first step in developing a budget is to work out a sales forecast for a specific period (usually a year in advance). This forecast is developed by reviewing your past sales, general or industry economic forecasts, and other pertinent data. Your sales budget should reflect your best judgment as to what your sales will be in the coming year.

•**Direct Labor and Materials Budget.** The next step is to budget your costs and expenses for the year ahead. Reference data for these budgets are detailed breakdowns of your costs and expenses for several years back. Budgeted direct labor and direct material costs are developed by applying your anticipated unit costs or ratio to sales to the forecasted sales.

•**Overhead Expense Budgets.** Your overhead expense budgets should then be developed based upon the budgeted sales volume. If the organization of your company breaks down the responsibility for overhead expenses between several individuals, your expense budgets should also be broken down accordingly.

Each overhead expense item should be analyzed individually by reviewing its past history and noting its trends and relationship to the volume of sales. As part of this, expenses should be classified as to their variability in relationship to the sales volume or direct labor.

Those expenses which stay at a constant level regardless of changes in sales volume (such as insurance, taxes, depreciation, and certain salaries) are classified as fixed expenses. Those expenses which fluctuate with changes in sales volume or direct labor are identified as variable expenses. This classification of expenses by degree of variability facilitates the projection of budgeted overhead expenses at varying sales volumes, both for planning purposes and for measurement of actual expenses.

In developing the overhead expense budget, questions should be asked about each expense: Is the expense necessary? Is the historical level and trend of the expense justified? Can it be cut down or eliminated in the future? Are future increases in the expense required? What is a reasonable target figure for the expense based upon the forecasted sales volume?

The overhead expenses applicable to each function or department should then be totalled and evaluated. They should answer the following three questions: Is the function providing services which warrant the expenses associated with it? Are increases in expenses justified by increased workload services or

prices? What would be the impact of a reduction of the function?

Your overhead expense budgets should be realistic. If the budget for any expense is set at a figure lower than that during a given past period, all your supervisors should agree that the target can be met.

The thorough review of expenses during the annual budget development process, although complex and time consuming, will pay dividends. The annual preparation of the overhead budgets provides a good check point to back off from the day-to-day operations and take stock of your company.

MAKING BUDGETS WORK

The budgeting procedure outlined here will help to keep overhead expenses in line only if sincere efforts are made to attain the budget objectives. This requires a day-to-day vigilance and awareness of these objectives by each of your supervisors. It also requires a sound accounting and reporting system to record progress and measure results.

Budget Details. Each month financial reports should be prepared comparing actual results with the budgets. A profit-and-loss statement should be prepared each month, comparing the overall sales, cost of sales and profits with the budgeted profit and loss data. An overhead expense report should also be prepared each month, comparing in detail actual expenses to budget allowances by type of expense, and, if the budget was departmentalized, by department or function. The budget allowances against which the actual overhead expenses are measured should be flexible; that is, the basic expense budget adjusted to the month's activity.

These monthly reports should clearly point out the items or areas of your company where good progress has been made as well as those which require attention. Each month's results should be reviewed with your supervisors. Large unfavorable differences between actual experience and the budget should be thoroughly investigated. Corrective action should be taken promptly.

Cost Control Committee. It is often worthwhile to establish a cost control and cost reduction committee. The committee should spearhead the development of the budgets, review the actual results monthly, make recommendations for cost reductions, and review cost reduction proposals. This committee should be composed of your top executives and key supervisors, and should meet at least once a month.

Such a committee may find areas where it is desirable to have specific detailed studies made to reduce costs, improve procedures, or provide better control data. These studies may include the review of: (1) paper work, (2) equipment, and (3) materials handling.

FOR FURTHER INFORMATION

Readers interested in pursuing further the subject of overhead costs will find additional information in the publications mentioned below. In keeping with the editorial policy of this series, this list has been kept brief and selective. No slight is intended toward authors whose works are not included.

"*Cost Accountants Handbook*," T. Lang, Editor. Ronald Press Company, 15 East 26th Street, New York 10, N. Y. Revised 1953. \$7.00.

"*Industrial Accountants Handbook*," by W. Fisk and J. Beckett, Prentice-Hall, Inc., Englewood Cliffs, N. J. 1954. \$13.50.

"*Budgeting: Profit Planning and Control*" by G. Welsch, Prentice-Hall, Inc., Englewood Cliffs, N. J. 1957. \$10.40.

"*Responsibility Accounting Can Pay Dividends*" by Martin N. Kellogg, Management Aid No. 112. Available from the Small Business Administration. March 1960. Free.

Part II, Chapter 9 in *Management Aids for Small Business*, Annual No. 1. Available from the Superintendent of Documents. January 1955, Revised 1958. 65 cents.

Part II, Chapter 7 in *Management Aids for Small Business*, Annual No. 2. Available from the Superintendent of Documents, 1956, Revised 1958. 55 cents.

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Charles J. Woelfel



(1)



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The author of *Guides for Profit Planning* is Dr. Charles J. Woelfel, Professor of Accountancy at Southern Illinois University—Carbondale. Dr. Woelfel is also a Certified Public Accountant and has published widely in major accounting and educational journals. His experience in teaching and counseling small business owner-managers is reflected in the step-by-step approach he presents as a means of getting common sense meaning out of the figures available in business records. Dr. Woelfel has specifically designed this booklet to introduce the small businessperson to four basic guides in profit planning and control: break-even point, gross profit analysis, rate of return on investment, and capital budgeting.

Guides for Profit Planning is issued as part of the management publications program of SBA's Office of Management Information and Training.

Chapter 1

PROFITS OF THE BUSINESS ENTERPRISE

IN OUR FREE ENTERPRISE SYSTEM of economic organization, businesses are usually established and operated for the purpose of making a profit. Although the term "profit" has many different definitions, it is usually considered by the businessperson to be earnings on the capital that he and others may have invested in the business. Accounting terminology generally refers to *net income* as the result of operations after deducting from revenue all related costs and expenses. It is in this same sense and terminology that we shall refer to profit in this booklet.

Regardless of what definition you use, profit is a major motivating force in your business. To be sure, some businesses make a profit without planning. But these are the exceptions. And even then, such businesses probably do not realize their full potential. To operate successfully, you need planning based on reliable information and proven techniques. Planning is your most effective method for obtaining the best possible results.

In this booklet, four tools or techniques are suggested to you to measure the profit goals that you have established for your firm. They are:

1. break-even analysis;
2. gross profit analysis;
3. return on investment analysis;
4. discounted-cash-flow analysis.

These analytical techniques are merely tools. They should never be considered as substitutes for managerial judgment. However, a knowledge of these tools should prove beneficial if you know their uses and limitations.

Break-Even Analysis

The term "break even" refers to a level of operations at which you neither make a profit nor sustain a loss. At this point, your revenue is just sufficient to cover expenses. Break-even analysis facilitates the solving of many complicated business problems arising out of the relationship of volume, costs, and revenue.

Gross Profit Analysis

Gross profit analysis attempts to explain the causes of variations in gross profit (i.e., net sales minus cost of goods sold). Once these causes have been isolated, you are usually in a better position to set your priorities and goals for more satisfactory results. Favorable factors affecting gross profit can be studied so that you can take full advantage of them in future operations. Unfavorable influences are identified and can be carefully scrutinized so that corrective measures can be applied.

Return on Investment Analysis

Rate of return on investment (or capital employed) analysis provides you with a basis for comparing profits with assets employed in your business under current economic conditions. With this type of analysis, you can evaluate your operations and plans in relation to predetermined standards. You can use it to compare current operating performance with your past experience. Return on investment analysis can measure the profitability of your products, departments, divisions, and plants. It can help you set the selling price of your products and volume targets. It can provide a comparison of your profits with those of your competitors, as well as those of well-managed companies.

Discounted Cash Flow Analysis

Capital budgeting for long-term projects or investments requires careful analysis. Rule-of-thumb procedures are usually unreliable for making long-term decisions. Various techniques have been developed to provide management with a systematic and rational approach to

evaluating major alternatives and opportunities that can affect the profitability of the firm over an extended period of time. The discounted cash flow method of capital budgeting is one such technique.

Some Benefits of This Booklet

Armed with a knowledge of all four types of analysis discussed in this booklet, you can predict with some confidence your future profits under a variety of circumstances. Moreover, you can decide your own short-term and long-term profit goals. A series of relatively simple calculations will tell you the amount of sales you need to meet your expenses, how much extra sales volume you need to increase your profit a specified percent, what your cost and volume requirements will be if you expand your facilities, and similar matters. Furthermore, these calculations will help you decide whether your profits are sufficient compared to other businesses and whether the money you have invested is bringing you a proper return.

CALCULATION OF THE BREAK-EVEN POINT

THE BREAK-EVEN POINT of an enterprise or venture may be calculated by means of mathematical formulas. In all such calculations, however, you must keep in mind that revenue and expense information often does not develop according to expectations. Break-even calculations are usually made with certain conditions gratuitously assumed, i.e., (1) a change in sales volume will not affect the selling price per unit; (2) fixed expenses remain constant for all volume levels; and (3) variable expenses change in direct proportion to sales.

Formula Components

Two components of a mathematical formula to determine the break-even point are: (1) variable expenses, and (2) fixed expenses. Variable expenses are those expenses that change in direct proportion to the change in volume of sales or production—e.g., direct materials, direct labor, commissions. On the other hand, fixed expenses are those that do not vary as the volume of sales or production changes. They remain constant at any relevant volume range within the existing plant capacity. Property taxes, insurance, depreciation, executive salaries, and rent are usually fixed expenses.

Examples of variable and fixed expenses of a hypothetical company—the Small Business Specialties Co.—are found in figure 1 which presents a condensed income statement of that company, supporting schedules, and a classification of expenses. These data will be used

in this and the following chapters to illustrate the discussion. Following are typical examples of each type of expense used in a break-even computation:

VARIABLE EXPENSE—Commissions. The Small Business Specialties Co. sold 60,000 units on which commissions of \$2 per unit were earned. Total commissions amounted to \$120,000. If sales increased to 90,000 units—a 50-percent increase—commission expense would increase 50 percent to \$180,000 in direct proportion to the increase in sales.

FIXED EXPENSE—Rent. If the Small Business Specialties Co. rents its plant for \$60,000 per year, this expense will remain constant at this amount regardless of the volume of production or sales.

Some expenses, however, do not fall neatly into a pattern of variable and fixed expenses. They contain a fixed as well as a variable element. Often they are controlled by business policy rather than by volume. Such expenses are termed "semivariable expenses" and are defined as those expenses which change with increases or decreases in sales or production but not in direct proportion to such changes. Advertising, communications, and utilities are often examples of semivariable expenses. If sales should drop to zero, some part of these expenses would still be incurred. For example:

SEMIVARIABLE EXPENSES—Telephone service. Regardless of the amount of sales or production, the Small Business Specialties Co. would have expenses of \$3,000 for its telephone facilities and service charges. However, when sales are increased to 60,000 units, the number of outlets, toll, and other charges increases so that this expense amounts to a total of \$7,000. This \$4,000-increase, obviously, is not in the same proportion as the sales increase.

Graphic Presentation of Expenses

The nature of variable and fixed expenses can be demonstrated visually by the use of charts. (Similarly, the fixed and variable elements of a semivariable expense can be separated by the use of a chart. One of the techniques that is used to do this is described in the next section of this chapter.) For purposes of illustration, the horizontal axis of a chart of this type will represent units sold; the vertical axis will represent the expense that is being described.

THE SMALL-BUSINESS SPECIALTIES CO.

Condensed Income Statement

For year ending Dec. 31, 19--

Net sales (60,000 units @ \$20 per unit).....	\$1,200,000
Less cost of goods sold:	
Direct material.....	\$195,000
Direct labor.....	215,000
Manufacturing expenses (Schedule A).....	300,000
Total.....	710,000
Gross profit.....	490,000
Less operating expenses:	
Selling expenses (Schedule B).....	\$200,000
General and administrative expenses (Schedule C).....	210,000
Total.....	410,000
Net Income.....	\$ 80,000

Supporting Schedules of Expenses Other Than Direct Material and Labor

	Total	Schedule A manufacturing expenses	Schedule B selling expenses	Schedule C general and administrative expenses
Rent.....	\$ 60,000	\$ 30,000	\$ 8,000	\$ 22,000
Insurance.....	11,000	9,000	1,000	1,000
Commissions.....	120,000	10,000	1,000	1,000
Property tax.....	12,000	1,000	5,000	1,000
Telephone.....	7,000	70,000	5,000	5,000
Depreciation.....	80,000	100,000	10,000	20,000
Power.....	100,000	30,000	50,000	160,000
Light.....	60,000	50,000	200,000	\$ 210,000
Officers' salaries.....	260,000	\$ 300,000	\$ 200,000	\$ 210,000
Total.....	\$ 710,000	\$ 300,000	\$ 200,000	\$ 210,000

Classification of Expenses

	Total	Variable	Fixed
Direct material.....	\$ 195,000	195,000
Direct labor.....	215,000	215,000
Manufacturing expenses.....	300,000	100,000	\$200,000
Selling expenses.....	200,000	50,000
General and administrative ex- penses.....	210,000	60,000	150,000
Total.....	\$1,120,000	\$720,000	\$400,000

Figure 1

The variable commission expense of the Small Business Specialties Co., as noted above, was \$2 per unit. In figure 2, point A represents 30,000 units sold at a cost of \$60,000 in commissions. Point B represents 60,000 units on which \$120,000 in commissions would be paid.

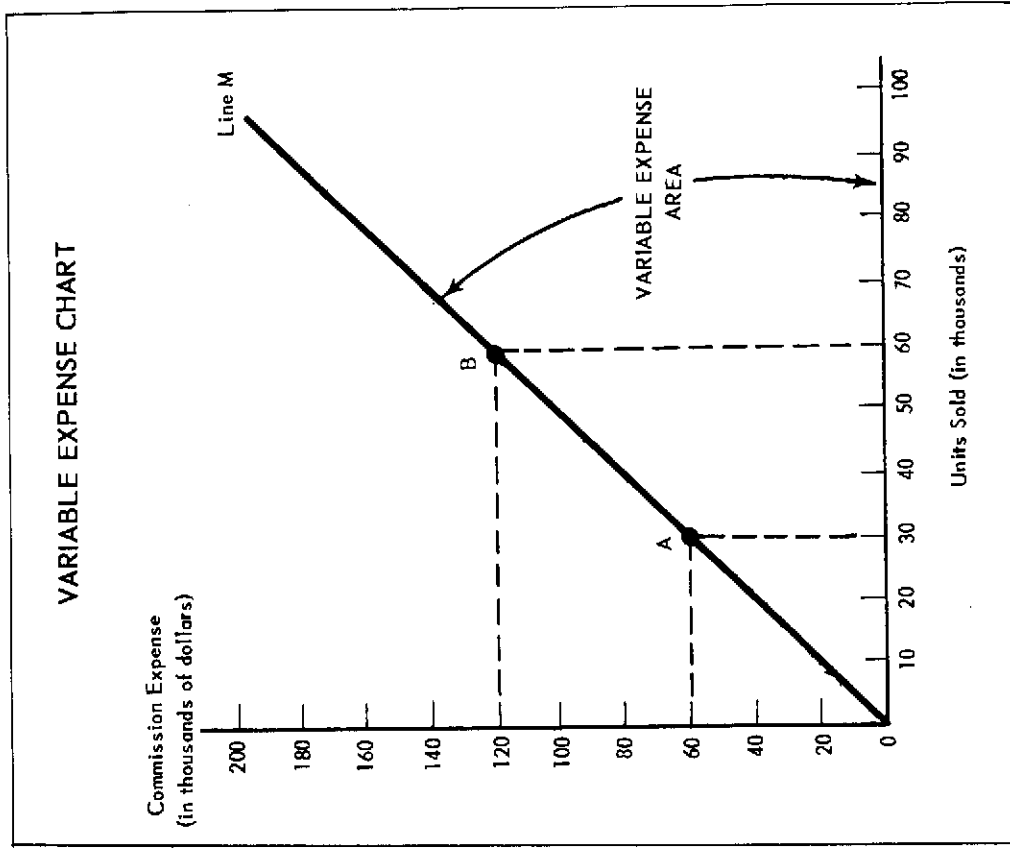


Figure 2

Line M, drawn to pass through point A and point B, can now be used to determine the amount of commissions at any volume of sales by reading up from the horizontal axis at a given amount of units sold to line M and then across to a point on the vertical axis. (See broken lines on chart.)

One of the fixed expenses of the Small Business Specialties Co., as noted above, is rent. When presented graphically (see figure 3), rent expense—\$60,000 a year—forms a straight line parallel to the

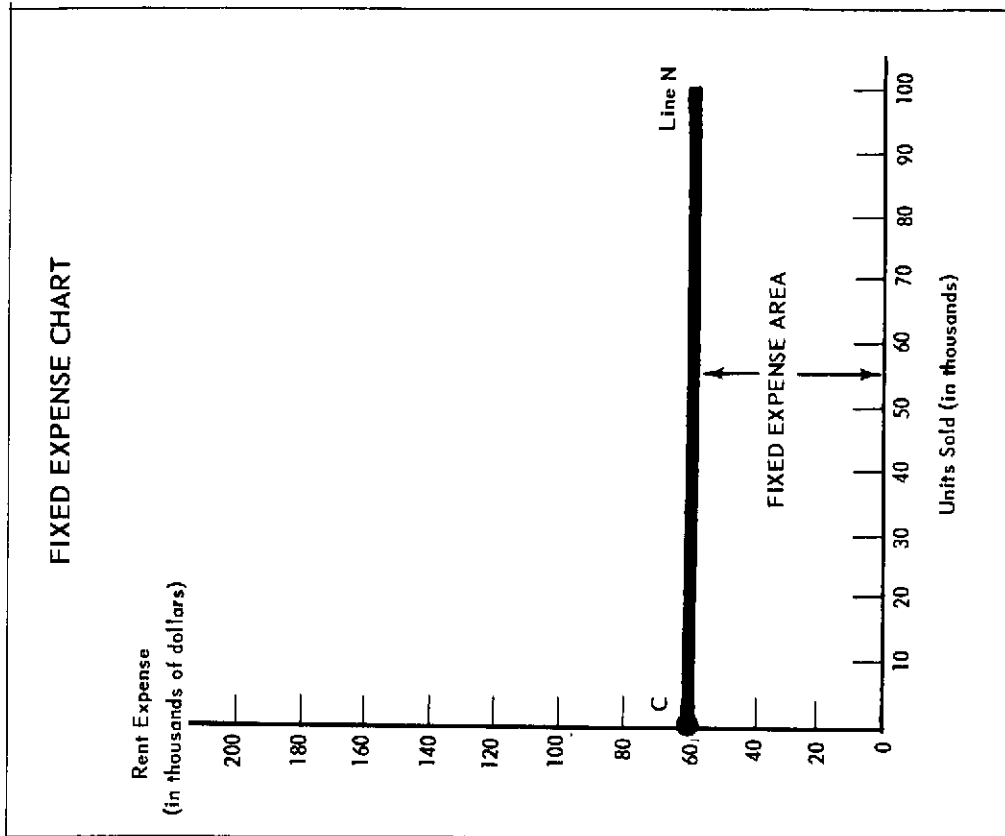


Figure 3

horizontal axis. If zero units are sold, rent expense will be \$60,000; if 30,000 units are sold, it remains the same. In figure 3, line N, running parallel to the horizontal axis at point C (\$60,000), represents the rent expense.

Figure 4 shows how a semivariable expense appears on a graph. The fixed and variable elements of a semivariable expense are plotted on a chart in the same manner as described above. Therefore, a semivariable expense will indicate both elements. For example, in

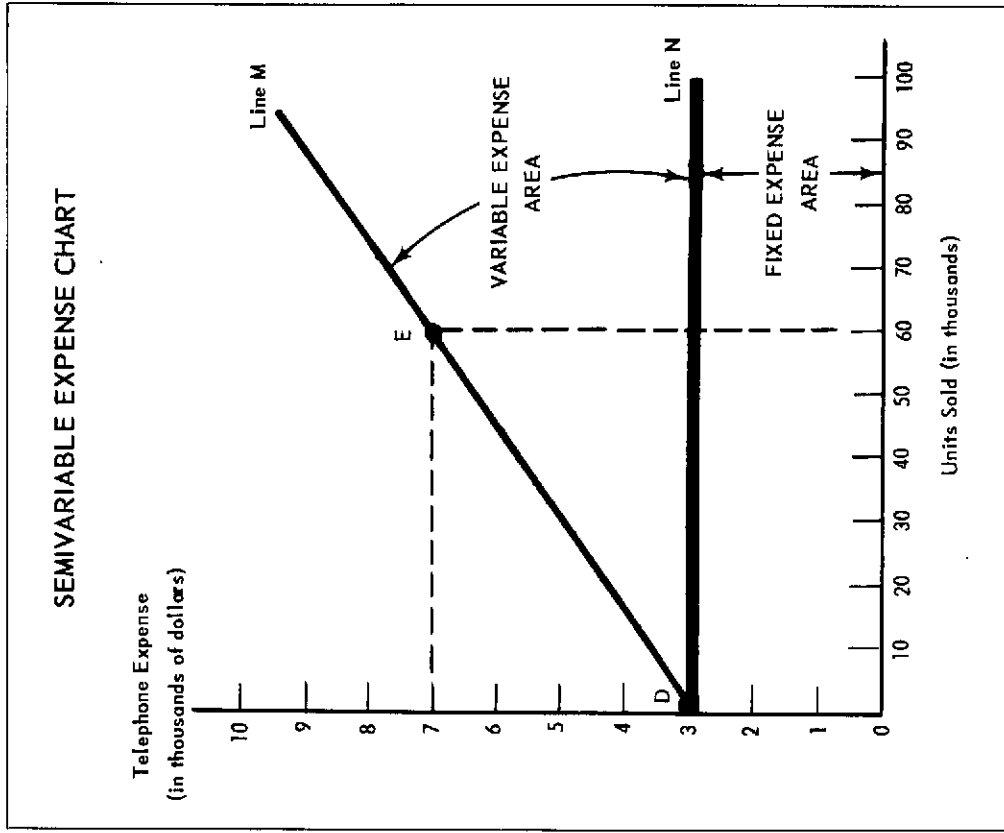


Figure 4

the case of the Small Business Specialties Co., \$3,000 of its \$7,000 telephone expense is fixed and will parallel the horizontal line—line N. Line M is formed by a straight line extending from point D (fixed expense, regardless of the number of units sold) through point E, which is the telephone expense (\$7,000) when 60,000 units are sold.

Separation of Semivariable Expense Elements

Before the break-even point can be calculated, all semivariable expenses must be separated into their fixed and variable components. Various methods are available for doing this. The scatter diagram method will be described in this discussion. In a scatter diagram, a relationship is set up between the semivariable expense and another variable, i.e., the production or sales controlling variable. The semivariable expense is scaled on the vertical axis; the other variable, on the horizontal axis. The paired values of the two series are plotted on these scales on a time or other basis in the following steps:

Step 1. Collect information concerning the expense—for example, light expense—on a time basis. Relate this expense data to some other factor such as direct labor hours, direct labor costs, units of sales, percent of capacity, as follows:

Periods of time	Plotted point of figure 5	Direct labor hours (in thousands)	Light expense (in thousands of dollars)
1st 10 weeks	A	1	8
2d 10 weeks	B	2	9
3d 10 weeks	C	3	15
4th 10 weeks	D	4	11
5th 10 weeks	E	5	17
Total		15	60

Step 2. Plot the information obtained in Step 1 on a chart. (See figure 5.) Draw a straight line Q so that it comes as close as possible to all the points plotted on the chart. Some points will be above the line, some below, and some may fall on the line. The idea is to get the best average fit that you can using a straight line. Theoretically, the line should be drawn so that the variation of plotted points above and below the line are the same.

Where line Q intersects the vertical axis at \$6,000, draw line R parallel to the horizontal axis. The area between line R and the horizontal axis represents the fixed part of the semivariable expense. The distance between line Q and line R represents the variable element contained in this expense.

By using the completed chart, it now can be determined that—

1. The fixed expense portion of the light expense is \$6,000 per 10-week period, or \$30,000 each year (\$6,000 for five 10-week periods).
2. The variable expense portion of the light expense when sales are \$1,200,000 is therefore \$30,000—the difference between the total

light expense of \$60,000 (see figure 1, supporting schedules) and the fixed portion of this expense of \$30,000.

The variable expense per unit of sales can be calculated as follows:

$$\frac{\text{Units of sales } 60,000}{\text{Variable expense } \$30,000} = 50 \text{ cents per unit.}$$

Light expenses consists of \$30,000 fixed expense and a variable element of 50 cents per unit of sales.

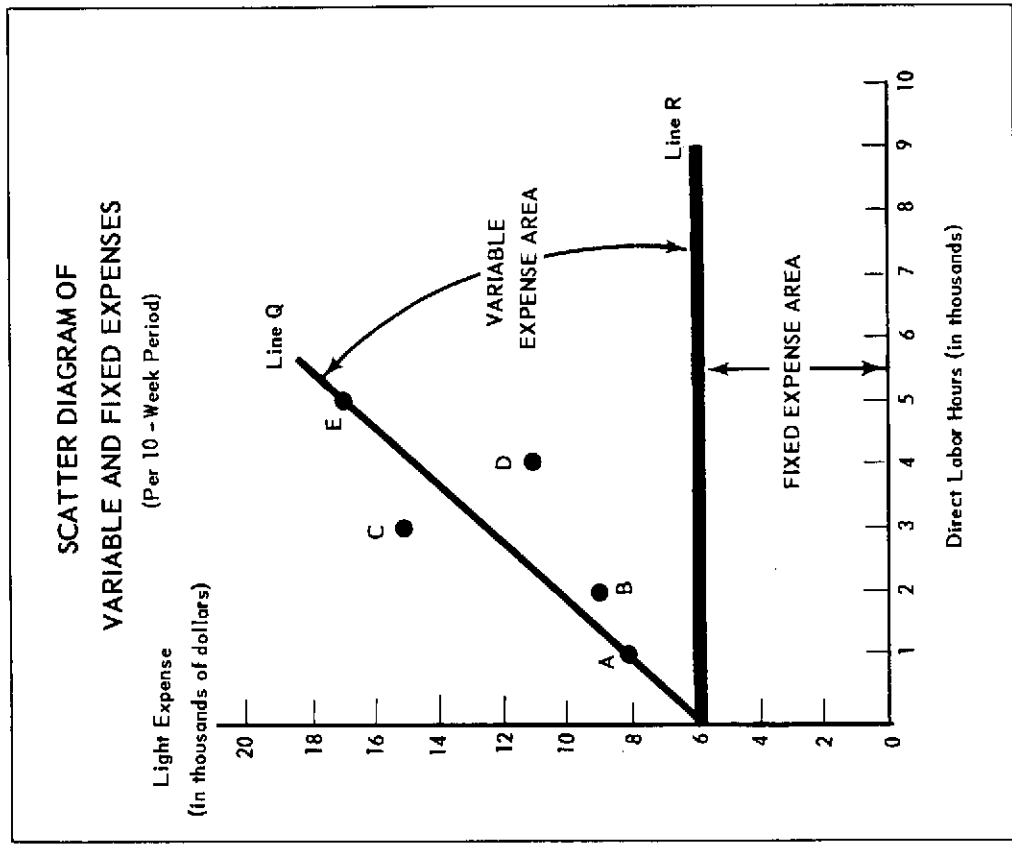


Figure 5

Calculation of the Break-Even Point

The following steps can be used to calculate the break-even point:

- Step 1.** Obtain a list of expenses incurred by a company.
- Step 2.** Separate the expenses listed in Step 1 into either a variable or a fixed expense classification. (See figure 1, classification of expenses.)
- Step 3.** Express the variable expenses as a percentage of sales. In the condensed income statement (figure 1) of the Small Business Specialties Co., net sales were \$1,200,000. In Step 2, variable expenses were found to amount to \$720,000. Therefore, variable expenses are 60 percent of net sales ($\$720,000 \div \$1,200,000$). This means that 60 cents of every sales dollar are required to cover variable expenses. The remainder—40 cents of every dollar—is available for fixed expenses and profit.
- Step 4.** Substitute the information gathered in the preceding steps in the following basic break-even formula to calculate the break-even point:

$$S = F + V$$

where S = Sales at the break-even point;
 F = Fixed expenses;
 V = Variable expenses expressed as a percentage of sales.

This formula states that when sales equal the fixed expenses and variable expenses, there will be neither profit nor loss. At this point, revenue from sales is just sufficient to cover the fixed and the variable expenses. This is the break-even point.

For the Small Business Specialties Co., you can calculate the break-even point (using the basic formula and data from figure 1) as follows:

$$\begin{array}{r}
 S = \$400,000 + 0.60S \\
 10S = \$4,000,000 + 6S \\
 10S - 6S = \$4,000,000 \\
 4S = \$4,000,000 \\
 S = \$1,000,000
 \end{array}$$

Proof of this calculation is as follows:

Sales at break-even point per calculations	\$1,000,000
Less variable expenses (60 percent of sales)	600,000
Marginal income	\$ 400,000
Less fixed expenses	400,000
Equals neither profit nor loss	\$ 0

The basic break-even formula can be modified to show the dollar sales required to obtain a certain amount of net income. In this case, let S mean the sales required to obtain a certain amount of net income, say \$80,000. The formula then reads as follows:

$$\begin{array}{l}
 S = F + V + \text{Net income} \\
 S = \$400,000 + 0.60S + \$80,000 \\
 S = \$1,200,000.
 \end{array}$$

Break-Even Point in Units

Occasions may arise when you will want to calculate the break-even point in terms of units to be sold instead of sales dollars. If so, the following formula may be used for this purpose where S means units to be sold to break even:

$$\begin{array}{l}
 S = \frac{\text{Fixed expenses}}{\text{Unit sales price} - \text{Unit variable expenses}} \\
 S = \frac{\$400,000}{\$20 - \$12} = \frac{\$400,000}{\$8} \\
 S = 50,000 \text{ units.}
 \end{array}$$

The Small Business Specialties Co. must sell 50,000 units at \$20 per unit to break even under the assumptions contained in the illustration. The sale of 50,000 units at \$20 each equals \$1 million—the break-even sales volume in dollars calculated in the basic formula. This formula says that there is \$8 per unit of sales that can be used to recover the \$400,000 fixed expense. Then \$400,000 divided by \$8 gives the number of units required to break even.

This formula can be modified to show the number of units required to obtain a certain amount of net income. In this case, let S mean the number of units required to obtain a certain amount of net income, say \$80,000. The formula then reads as follows:

$$\begin{array}{l}
 S = \frac{\text{Fixed expenses} + \text{Net income}}{\text{Unit sales price} - \text{Unit variable expense}} \\
 S = \frac{\$400,000 + \$80,000}{\$20 - \$12} = \frac{\$480,000}{\$8} \\
 S = 60,000 \text{ units.}
 \end{array}$$

Break-Even Point as a Percent of Capacity

The break-even point may also be expressed in terms of percent of capacity instead of sales dollars or units of sale. Assume that the

products sold, your break-even point may move up or down depending upon the decrease or increase in sales of wider-margin items as a percentage of total sales.

Small Business Specialties Co. has a capacity of 75,000 units and that it is known from the above calculation that 50,000 units represent the break-even point in terms of units. The break-even point in terms of capacity then is $66\frac{2}{3}$ percent ($50,000 \text{ units} \div 75,000 \text{ units}$).

Advantages and Limitations of Break-Even Analysis

Break-even analysis can provide you with (1) a flexible set of revenue and expense projections under assumed conditions and (2) alternative managerial programs. It enables you to study information concerning volume, selling prices, expenses, and product mix in an integrated manner. Through the application of break-even analysis to budgeting, expenses can be more closely controlled. Furthermore, break-even analysis permits a more realistic determination of selling prices, since it can be used to illustrate the effects of alternative pricing proposals. Your decisions relating to plant expansion and to other capital outlays can be carefully considered when studied within the framework of break-even analysis. Moreover, the graphic presentation of break-even analysis provides you with an easy-to-read reporting device which summarizes data contained in various income statements, or illustrates the effects of alternate proposals involving capital expenditures.

To a great extent, the limitations of break-even analysis are related to (1) the difficulties encountered in obtaining reliable estimates of revenue and expenses, (2) the assumptions made in carrying out the analysis, and (3) competitive conditions in which the modern firm operates. Break-even analysis assumes that your expenses are known. It further assumes that you can segregate them into "fixed" or "variable" classifications. This presents a difficulty because accepted accounting practice ordinarily does not accumulate expenses in these classifications. Moreover, fixed expenses have the unfortunate habit of not remaining fixed, and variable expenses sometimes refuse to vary in proportion to sales to the extent that break-even analysis usually assumes them to respond.

Although break-even analysis is a good yardstick for evaluating profit goals, it must be recognized that certain assumptions usually must be made to complete the analysis. One of these assumptions is a typical projection of revenue is that selling price is held constant over a relevant range. This is often an oversimplification of a complex situation. Changes in list prices, product mixes, concessions, distribution channels, and so forth, can throw such an assumption out of line with reality. For example, as you change the mix of

PREPARATION OF A BREAK-EVEN CHART

THE BREAK-EVEN CHART presents a visual representation of sales volume, capacity, or output when expenses and revenues are equal; i.e., a volume level at which revenue equals expenses. It is a diagram of the short-run relation of total expenses and total revenue to output or volume. Besides permitting a visual determination of the break-even point, it provides a form from which you can read off multiple income statements. Its flexible projection of the impact of output upon expenses, revenue, and net income makes the break-even chart a useful tool for profit planning and control.

Constructing a Conventional Break-Even Chart

The conventional break-even chart assumes that over a relevant range (1) selling prices do not change, (2) total fixed expenses remain the same, and (3) variable expenses increase or decrease in direct proportion to sales. Following are the steps in constructing a break-even chart, using revenue and expense data from figure 6.

Step 1. On the horizontal axis, mark off a scale in terms of dollar sales volume, units sold, percent of capacity, direct labor hours, or some other measure of volume. Sales dollars are used in the illustration in this chapter. (See figure 7.) This unit of measurement is often more convenient because, in contrast to other units of measurement, it is common to all product lines, divisions, and departments.

THE SMALL BUSINESS SPECIALTIES Co.		
Condensed Income Statement		
For year ending Dec. 31, 19—		
Net sales (60,000 units @ \$20 per unit)		\$1,200,000
Less costs and expenses:		
Direct material	<i>Variable</i>	<i>Fixed</i>
Direct labor	\$195,000
Manufacturing expenses	215,000
Selling expenses	100,000	\$200,000
General and administrative ex- penses	150,000	50,000
	60,000	150,000
Total	\$720,000	\$400,000
Net profit before Federal income taxes		\$ 80,000

Figure 6

On the vertical axis, mark off a scale in terms of dollars for the revenue and expense items. Draw fixed expense line N on figure 7 so that it is parallel to the horizontal axis and intersects the vertical axis at point A which equals \$400,000 of fixed expenses. The area between line N and the horizontal axis represents the fixed expenses incurred at various levels of sales. The fact that the line is drawn parallel to the baseline shows that at all levels of volume fixed expenses remain unchanged.

Step 2. Plot point B and draw line M starting at point A and extending through point B. Point B is determined by total (fixed and variable) expenses on the vertical axis (\$1,120,000) and total sales volume on the horizontal axis (\$1,200,000). The area between line M and the fixed expense line N discloses the amount of variable expenses at different volumes of sales. The area between line M and the horizontal axis represents the total expenses incurred at various levels of sales. Line M may therefore be considered a total expense line, since total expenses for various volumes of sales can be readily determined from it. You can do this by starting at any point on the horizontal sales volume scale and measuring upward to the total expense line M and across to the vertical scale where the dollar amount of total expense can be read.

Step 3. Plot point C and draw revenue line P starting at zero through point C. Point C describes total sales volume and total revenue; i.e., \$1,200,000 on both scales. The break-even point is at point D where the total expense line M intersects revenue line P. The

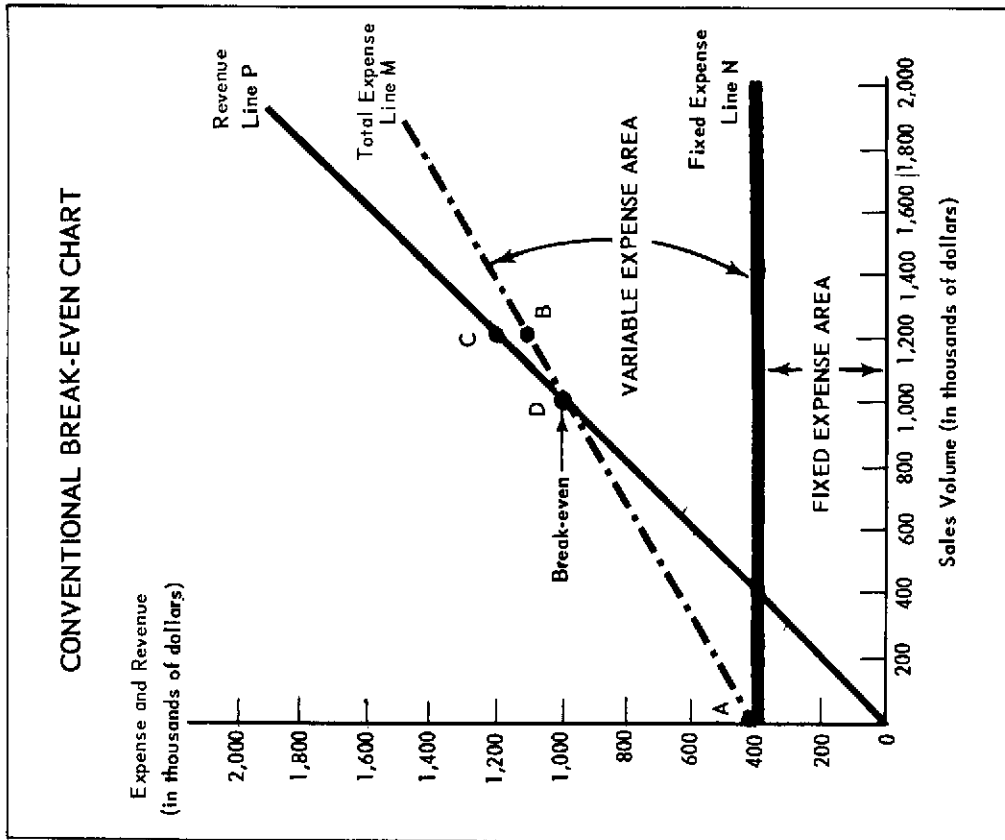


Figure 7

sales volume (\$1 million) needed to break even is obtained by reading down from this point to the horizontal axis or across to the vertical axis for sales revenue (\$1 million). The Small Business Specialties Co. will break even when it has sales amounting to \$1 million.

A closer examination of this chart, after removing the fixed expense line, shows that a profit area and a loss area can be detected. (See figure 8.) The profit area in the chart lies to the right of break-even point D; i.e., where revenue line P is above the total expense line M.

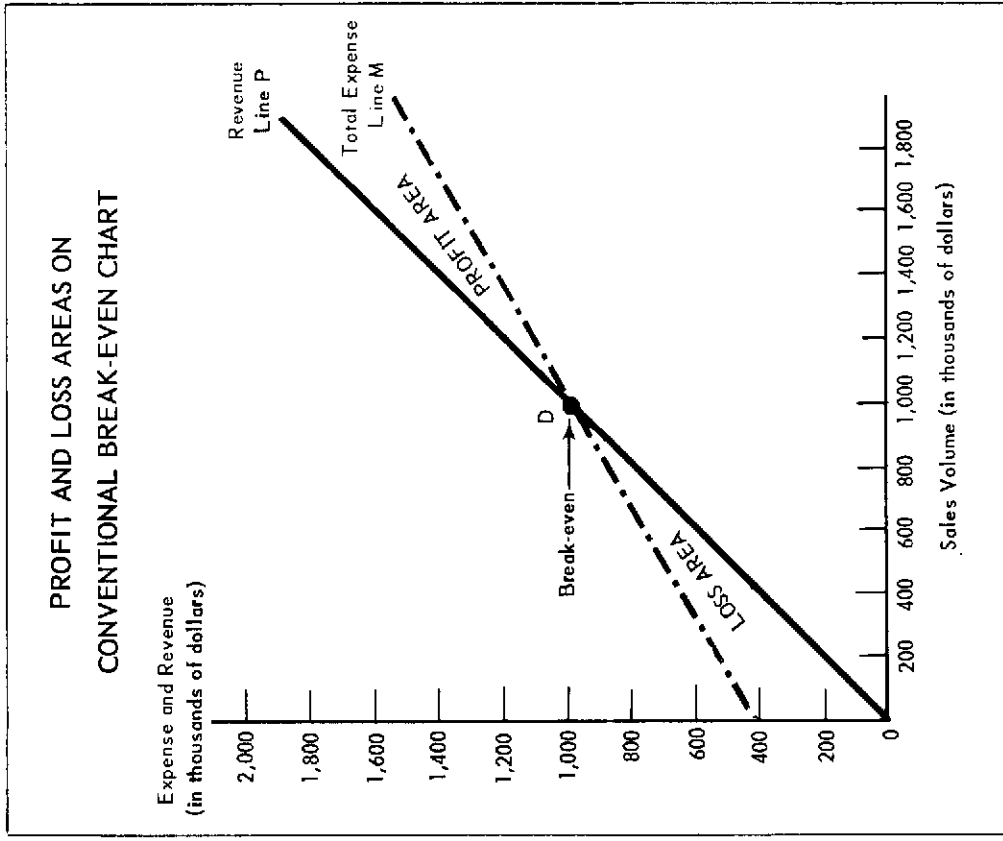


Figure 8

Revenue is greater than expenses above the break-even point. The loss area in the chart lies to the left of the break-even point D; i.e., where the total expense line M is above the revenue line P. Expenses are greater than revenue below the break-even point D.

Nonconventional and Alternate Forms

Nonconventional break-even analysis does not assume static conditions with regard to selling prices, total fixed expenses, and variable expenses. Therefore, in comparing its graphic presentation (see figure 9) to that of conventional break-even charts, you will note that—

1. The revenue line is a curve because it indicates that the selling price per unit is not constant at all volumes.
2. The fixed expense line is stepped up instead of horizontal because it indicates changes over various ranges of volume and 100-percent capacity.

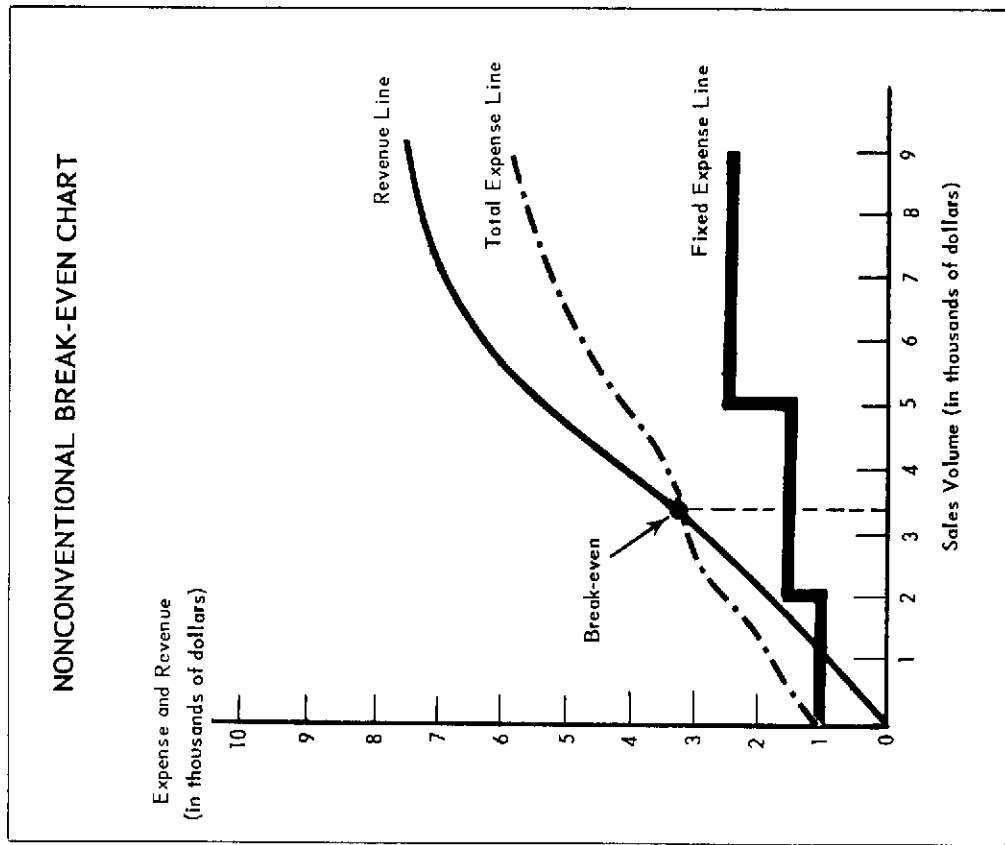


Figure 9

3. The total expense line is curved at different volumes to indicate departures from the direct-proportion-to-sales-changes usually assumed.

An alternate method of drawing the fixed expense, variable expense, and revenue data may be used in a break-even chart. (See figure 10.) If this procedure is adopted, the break-even point of the Small Business Specialties Co. would be charted in the following steps:

Step 1. Draw the variable expense line Q on a chart starting at zero and extending to \$720,000 on the vertical axis at sales of \$1,200,000 on the horizontal axis.

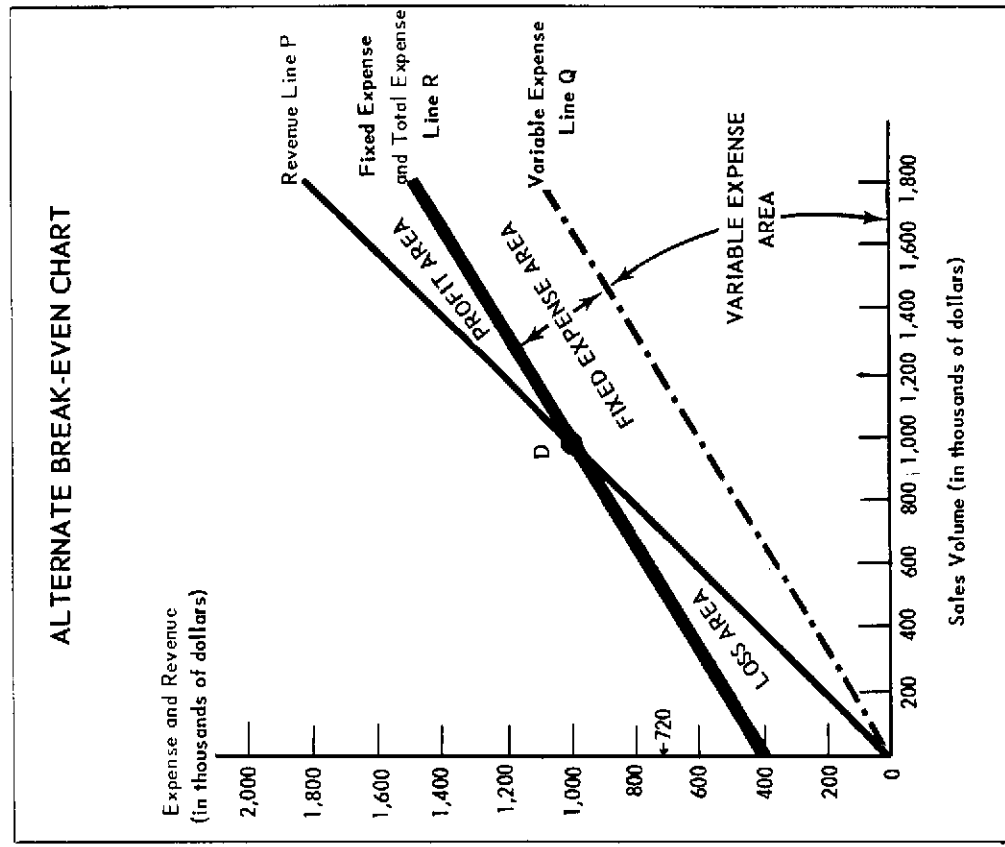


Figure 10

Step 2. Draw the fixed expense line R parallel to the variable expense line Q. The area between line R and line Q represents the amount of fixed expenses (\$400,000). The area between fixed expense line R and the horizontal axis represents the amount of total expenses.

Step 3. Draw the revenue line P as described previously in this chapter from the point where the horizontal and vertical axes intersect; i.e., from zero. The break-even point D shows where revenue line P and total expense line R intersect. Read down to the horizontal axis from break-even point D to determine the amount in terms of sales dollars—in this illustration, \$1 million.

It may be useful at times to employ other measures of volume on the horizontal axis, instead of sales volume in dollars. Figure 11 uses units of sales (right) and percent of capacity (left) on the baseline. In these illustrations, the break-even point when read from the horizontal axis will be in terms of units of sales or percent of capacity. In constructing these charts, the general rules described in this chapter may otherwise be used after allowance is made for the change in the measure of volume indicated on the horizontal axis.

BREAK-EVEN CHARTS WITH ALTERNATE BASE LINES

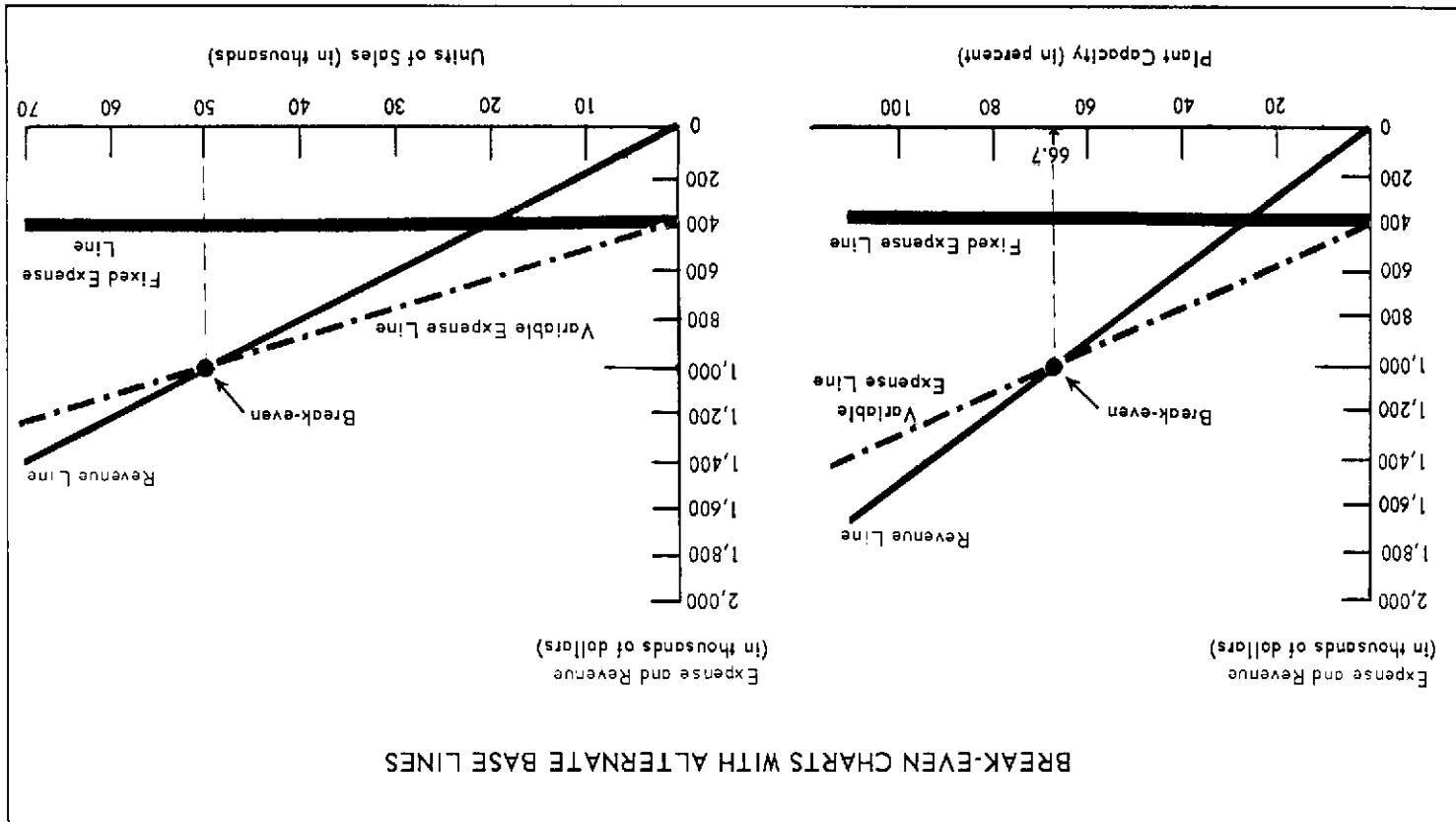


Figure 11

Preparation of a Profit-Volume Chart

A profit-volume chart can be prepared according to the following procedures:

Step 1. Construct a chart with (1) a horizontal sales revenue line that divides the chart into a profit area and a loss area and (2) a vertical profit and loss scale. (See figure 12.)

Step 2. Plot point A representing the \$400,000 fixed expenses on the vertical axis below the revenue line. Plot point B representing the \$80,000 net income on the vertical profit scale and the \$1,200,000 sales volume on the revenue line. Connect point A and point B with

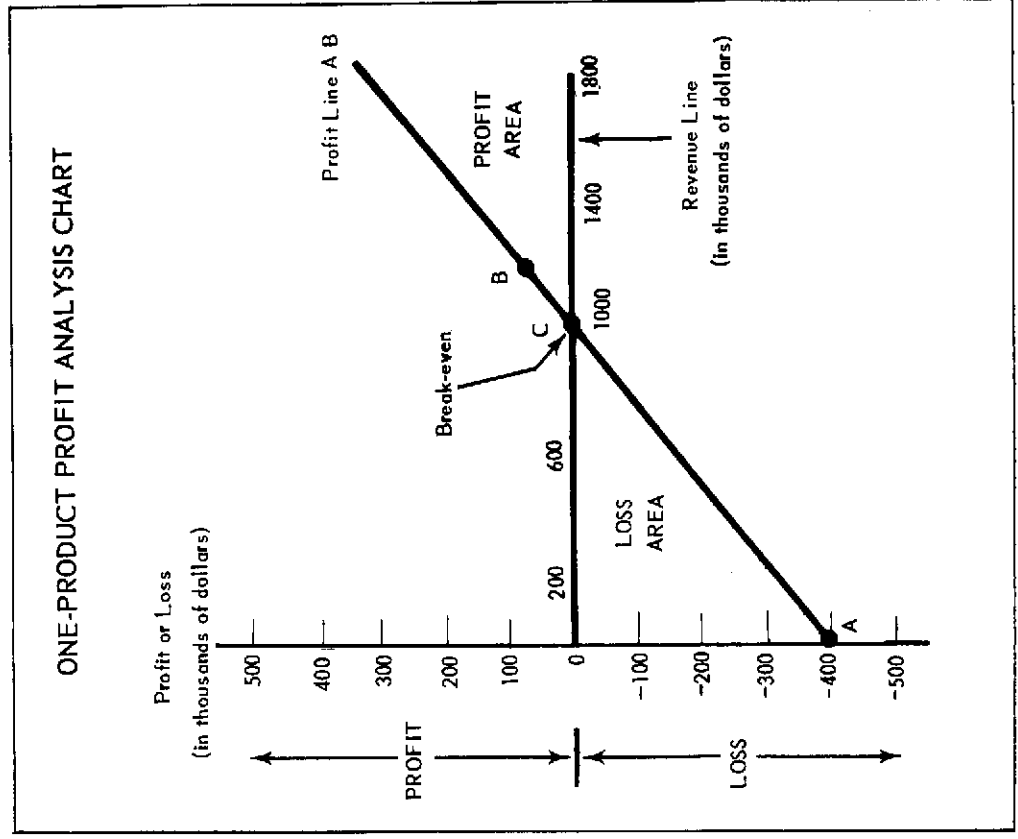


Figure 12

PROFIT-VOLUME ANALYSIS

THE PROFIT-VOLUME (P/V) ratio refers to the relationships of marginal income (sales less variable expenses) to sales volume. Marginal income is sometimes referred to as contribution margin because it indicates the dollars of sales revenue after variable expenses have been deducted that are available to recover fixed expenses and provide net income. Net income can vary as a result of changes in sales price, volume, variable and fixed expenses, and product mix. Therefore, it is important that you have a measure or guide that will help you obtain the profit goal that you have established. The profit-volume ratio is one such guide.

Profit-volume analysis will help you answer such questions as: Which products are the most profitable? Which are the least profitable? What effect will changes in selling price, volume, expenses, and sales mix have upon net income? What is the effect of changing business conditions on the break-even point and the margin of safety?

The profit-volume analysis chart is a tool that has been developed as an alternative to the break-even chart. The following data from the Small Business Specialties Co. will be used to illustrate the preparation of a P/V chart and to indicate how it serves you as a managerial device:

Sales	\$1,200,000
Less variable expenses	720,000
Marginal income (or contribution margin)	\$ 480,000
Less fixed expenses	400,000
Net income	\$ 80,000

3. *To compute fixed expenses.* Subtract the net income to sales ratio (net income \div sales) at a given level of sales from the P/V ratio. Multiply the result by a known amount of sales.

$$\begin{aligned} \text{Fixed expenses} &= (\text{P/V ratio} - \frac{\text{Net income}}{\text{Sales}}) (\text{Sales}) \\ &= (40 \text{ percent} - \frac{\$80,000}{\$1,200,000}) (\$1,200,000) \\ \text{Fixed expenses} &= (40 \text{ percent} - 6.66 \text{ percent}) (\$1,200,000) \\ \text{Fixed expenses} &= (33.34 \text{ percent}) (\$1,200,000) \\ \text{Fixed expenses} &= \$400,000. \end{aligned}$$

4. *To compute net income or loss at various volume levels.* If the P/V ratio, sales, and amount of fixed expenses are known, multiply the P/V ratio by sales, from which subtract the fixed expenses.

$$\begin{aligned} \text{Net income} &= (\text{P/V ratio} \times \text{Sales}) - \text{Fixed expenses} \\ \text{Net income} &= (40 \text{ percent} \times \$1,200,000) - \$400,000 \\ \text{Net income} &= \$480,000 - \$400,000 \\ \text{Net income} &= \$80,000 \end{aligned}$$

Similarly, if sales are \$800,000, the loss can be computed.

$$\begin{aligned} \text{Net loss} &= (40 \text{ percent} \times \$800,000) - \$400,000 \\ \text{Net loss} &= \$320,000 - \$400,000 \\ \text{Net loss} &= \$80,000 (\text{loss}) \end{aligned}$$

Alternate Forms of P/V Analysis

The P/V ratio may vary among products, territories, and classes of customers. For the maximum usefulness as a profit planning tool, it should be computed as a separate ratio for each of the classifications in your business. If you know the various P/V ratios, it often becomes extremely profitable for you to concentrate your selling effort on those products, territories, or customers with the highest P/V ratio.

Profit-volume analysis on a product basis is useful because it indicates the contribution of each product to the total marginal income. You can use this analysis to help you decide which of your products you should drop because their sales revenue is less than their variable expenses. The same reasoning applies to analysis of territories or classes of customers.

The P/V chart can show you the contribution of each product, product line, territory, class of customer, and similar classifications to total net income. The plotting is done on a cumulative basis. Figure 13 illustrates the method using sales and profit data on different

a straight line AB. The break-even point—\$1 million in sales—occurs at point C where line AB crosses the horizontal revenue line.

When sales are \$1 million, the profit line AB intersects the revenue line at zero (as is shown by reading across to the vertical scale), indicating neither profit nor loss. When sales are \$1,200,000, profits equal \$80,000 on the vertical scale as indicated when reading across from line AB. Profit at various sales levels above the break-even point can be read from this in a similar manner. At zero sales, there are no variable costs, and so the \$400,000 loss indicated at zero sales is equal to the fixed expenses. As revenue from sales moves horizontally from zero and approaches the break-even point, the loss becomes smaller. This may be seen by selecting some point on the horizontal line, reading down to the sloping profit line AB, and then across to the vertical axis.

Application of the Profit-Volume (P/V) Ratio

The P/V (or contribution margin) ratio is a measure of the margin of profit that exists between the selling price and variable expenses. For the Small Business Specialties Co., the formula for the P/V ratio is as follows:

$$\begin{aligned} \text{P/V ratio} &= \frac{\text{Marginal income}}{\text{Sales}} = \frac{\$480,000}{\$1,200,000} \\ \text{P/V ratio} &= 40 \text{ percent.} \end{aligned}$$

After this ratio has been computed, it is possible to use it in many additional computations. For example:

1. *To compute the break-even point in dollars.* Divide fixed expenses by the P/V ratio.

$$\begin{aligned} \text{Sales at the break-even point} &= \frac{\text{Fixed expenses}}{\text{P/V ratio}} = \frac{\$400,000}{0.40} \\ \text{Sales at the break-even point} &= \$1 \text{ million.} \end{aligned}$$

2. *To compute variable expenses at any volume of sales.* Subtract the P/V ratio from 100 percent to get the relationship of variable expenses to sales.

$$\begin{aligned} \text{Variable expenses} &= 100 \text{ percent} - \text{P/V ratio} \\ \text{Variable expenses} &= 100 \text{ percent} - 40 \text{ percent} \\ \text{Variable expenses} &= 60 \text{ percent of sales.} \end{aligned}$$

Therefore, if sales are \$1,200,000, variable expenses are \$720,000; if sales are \$1,500,000, variable expenses are \$900,000.

products of the same company. The following steps will facilitate the preparation of a P/V chart in which the contribution of each product is presented. This illustration assumes that a company has four products. The sales and variable expenses for these four products are shown along with \$600,000 fixed expenses. The company had net income of \$300,000.

Step 1. List the products so that the one with the largest P/V ratio is first. Prepare a table similar to that shown below.

Product	Sales [in thousands of dollars]	Variable expense [in thousands of dollars]	Marginal income ¹ [in thousands of dollars]	P/V ratio [in percent]	Fixed expense [in thousands of dollars]	Cumulative	
						Sales	Marginal income ²
A.....	500	200	300	60.0	600	500	(-300)
B.....	1,500	800	700	46.6		2,000	400
C.....	600	600	0	0		2,600	400
D.....	400	500	(-100)	(-25.0)		3,000	300

¹ Total marginal income is \$900,000; if fixed expenses of \$600,000 are subtracted from this amount, the result is a net income of \$300,000.

² Cumulated from a fixed expense of \$600,000.

NOTE.—Data in the cumulative columns determine the location of the plotting: sales for the vertical axis and marginal income for the horizontal axis.

Step 2. Plot two points and draw a total profit line on a conventional P/V chart. The first point plotted is fixed expenses of \$600,000 in the loss area when the revenue as reflected on the revenue line is at zero sales. The second point is plotted to show \$300,000 profit in the profit area when sales revenue is \$3,000,000.

Step 3. Plot the cumulative individual products profit line by plotting the profit of each product beginning at the fixed expense point (\$600,000) and extending to a sales volume point corresponding to the sales and marginal income of each product. (Data for plotting are in the last two columns of the table.) For example, Product A extends to a point that corresponds to sales of \$500,000 at a \$300,000 loss (\$600,000 fixed expenses minus \$300,000 marginal income). This plotting indicates that \$300,000 of the total fixed expenses have now been recovered. Product B continues the line to a point that corresponds to sales of \$2 million and cumulated marginal income less fixed expenses of \$400,000. This plotting indicates that the remaining \$300,000 of fixed expenses have been recovered and a cumulated \$400,000 income has been made. The remaining products are plotted in like manner.

If a product does not contribute marginal income (e.g., Product C), the product line does not slope. If a product has a negative marginal income (e.g., Product D), the slope of the product line is downward. Such movements are indicated on figure 13. In this manner, sales effort is measured by the contribution of each product to net income.

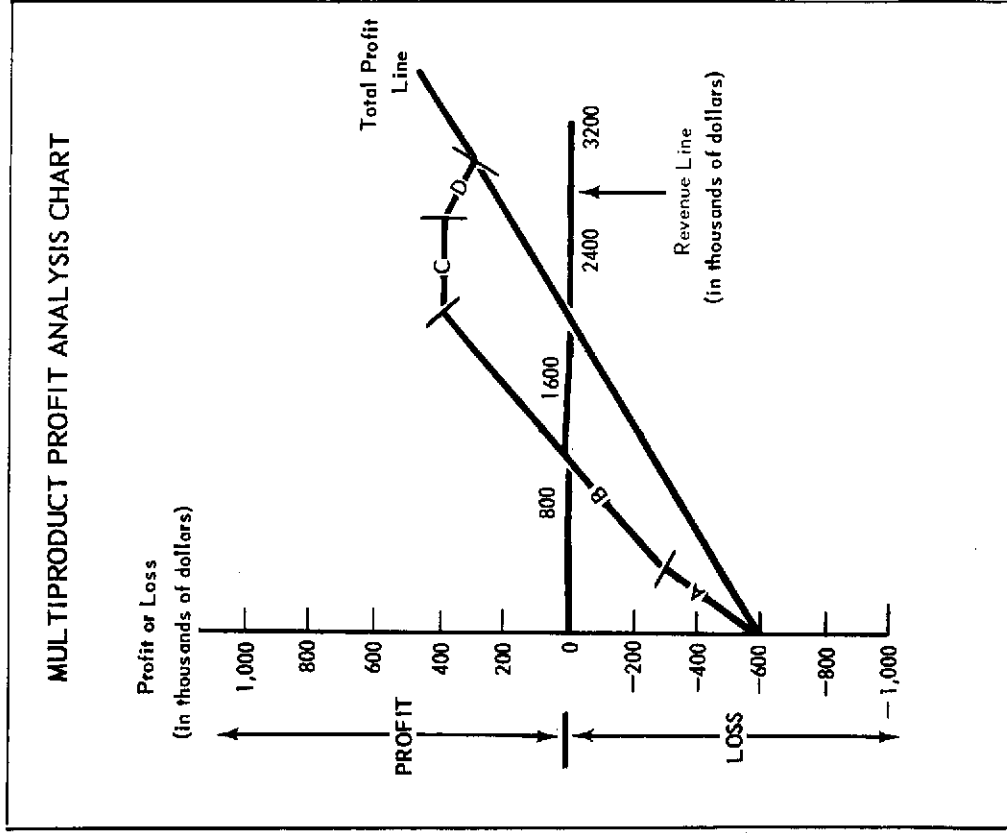


Figure 13

Margin of Safety

The margin of safety (M/S) is the difference between the break-even sales and net sales at the current operating level. Margin of safety may also be expressed as a percentage of sales. The M/S indicates to what extent sales may decline before the firm begins to operate at a loss.

When the sales of the Small Business Specialties Co. were \$1,200,000 and its break-even point was \$1 million, its margin of safety was \$200,000, or 16 $\frac{2}{3}$ percent ($\$200,000 \div \$1,200,000$). A high margin of safety generally indicates a relatively sound operating position. The Small Business Specialties Co. could absorb 16 $\frac{2}{3}$ -percent decline in sales before reporting a loss.

CASE STUDIES OF BREAK-EVEN AND PROFIT-VOLUME ANALYSIS

ONCE THE BASIC mathematical and graphic break-even concepts are understood, you should proceed with a study of situations involving the use of this information. While break-even and profit-volume analyses are hardly ever sufficient of themselves to provide final answers to business problems, they do shed light upon basic relationships which, when considered with other factors, make your decisions more reliable.

Break-Even Analysis and Plant Expansion

The following condensed income statement of the Small Business Specialties Co. will be used to illustrate cases involving break-even analysis and plant expansion:

Net sales	\$1,200,000
Less expenses:	
Fixed expenses	\$400,000
Variable expenses	720,000
Total	1,120,000
Net income	\$ 80,000

Case 1. Management is considering the expansion of its plant facilities which in turn will increase fixed expenses from \$400,000 to \$800,000 per year. The variable expenses will remain at 60 percent of sales. What will happen to the break-even point if the plant expansion is carried out?

Basic formula:

Sales at break-even point = Fixed expenses + variable expenses expressed as a percentage of sales

$$\text{Substituting data: } S = \$800,000 + 0.60S$$

$$0.40S = \$800,000$$

$$S = \$2,000,000.$$

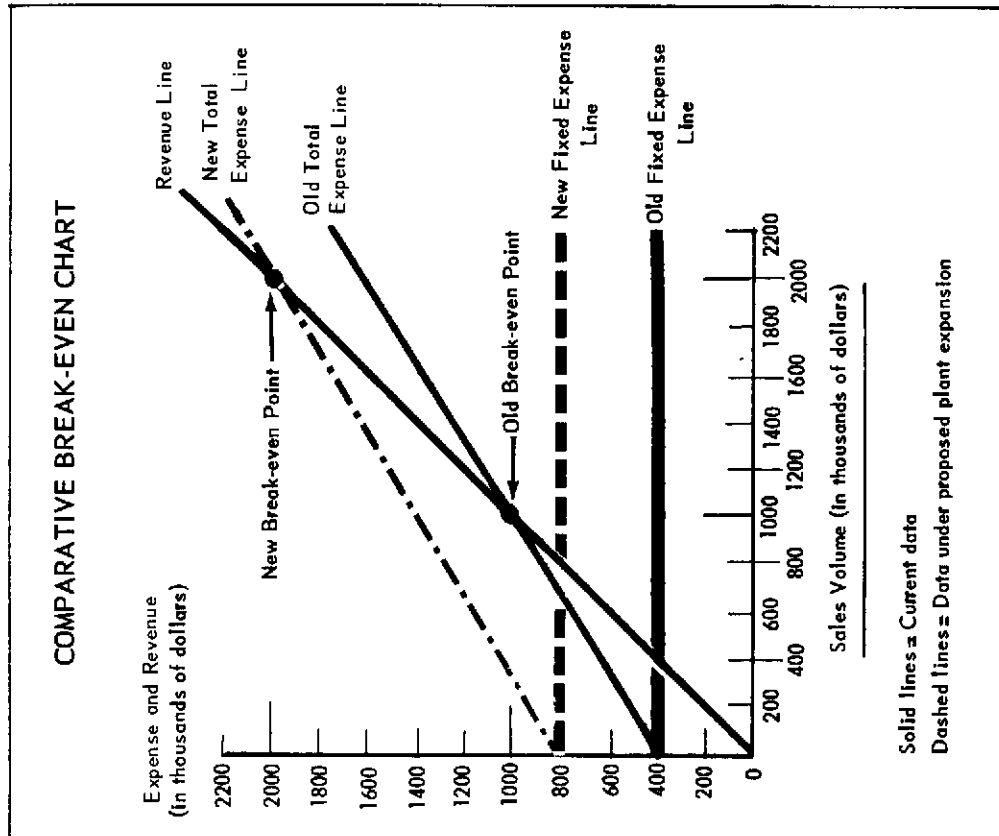


Figure 14

Under the proposed plan of plant expansion, the new break-even point is \$2 million. Before the proposed plant expansion, it took sales of \$1 million to break even. In figure 14, a comparative graphic presentation of this case is made showing current data and data under the proposed plant expansion plan.

Case 2. Management would like to know how much sales are required to make the same net income (\$80,000) after plant expansion as was made before. To solve this problem, we modify the basic break-even formula to show sales required to make \$80,000 when fixed expenses are \$800,000. Let S equal sales required to make the desired net income under the proposed plan.

$$S = \text{Fixed expenses} + \text{Variable expenses expressed as a percentage of sales} + \text{Net income}$$

$$S = \$800,000 + 0.60C + \$80,000$$

$$S = \$800,000 + 0.60C + \$80,000$$

$$0.40S = \$800,000 + \$80,000$$

$$S = \$2,200,000.$$

Case 3. Management is interested in knowing the maximum net income that can be made with and without plant expansion. Assume that the present plant, if worked to capacity, would permit sales of \$1,500,000. The additional plant facilities would permit sales to increase so that the firm could make sales of \$2,800,000. In this case, the unknown quantity is net income; maximum sales—a known factor—replaces break-even sales in the formula as follows:

$$\text{Maximum sales} = \text{Fixed expenses} + \text{Variable expenses expressed as a percentage of sales} + \text{Net income}$$

or

$$\text{Maximum sales} - (\text{Fixed expenses} + \text{Variable expenses expressed as a percentage of sales}) = \text{Net income}$$

For the present facilities, the formula reads as follows:

$$\$1,500,000 - (\$400,000 + 0.60S) = \text{Net income}$$

$$\$1,500,000 - (\$400,000 + \$900,000) = \text{Net income}$$

$$\$200,000 = \text{Net income}$$

For the proposed plan of plant expansion, the formula reads as follows:

$$\$2,800,000 - (\$800,000 + 0.60S) = \text{Net income}$$

$$\$2,800,000 - (\$800,000 + \$1,680,000) = \text{Net income}$$

$$\$320,000 = \text{Net income}.$$

Conclusion. With this information, management knows that if the proposed plan of plant expansion is adopted—

1. its break-even point in sales will increase from \$1 million to \$2 million;
2. the sales volume needed to produce the same net income made before the plant expansion will increase from \$1,200,000 to \$2,200,000;
3. the net income that can be made will increase from \$200,000 to \$320,000 if maximum sales are made.

Cost-Volume-Profit Analysis Cases

Profit planning requires the establishment of an appropriate profit goal. It also assumes a knowledge of the means available for the attainment of the established goal. Proposals made by management should be subjected to careful scrutiny so that their effect on expenses, revenue, volume, and net income can be estimated before they are adopted or rejected.

Cost-volume-profit relationships are the result primarily of the interaction of (1) selling prices, (2) volume of sales, (3) variable expenses, (4) fixed expenses, and (5) sales or product mix. You may use various combinations of these five forces in an attempt to establish and achieve a desired level of profit. Variations in these relationships will have an effect upon net income, break-even point, return on investment, the net income to sales ratio, as well as upon other significant managerial guides.

The accompanying table (see figure 15) illustrates eight different examples of these varying relationships using data from the following condensed income statement of the Small Business Specialties Co.:

Sales (60,000 units @ \$20 each)	\$1,200,000
Less variable expenses (60,000 units @ \$12 each)	720,000
Marginal income	\$ 480,000
Less fixed expenses	400,000
Net income	\$ 80,000

Cases A through F show the effects of changes in selling price, volume, and variable expenses, where such changes occur in one of these factors without changing the others. Cases G and H show the effects of simultaneous changes in selling prices, volumes, and variable expenses. In all cases, fixed expenses are assumed to remain unchanged. Cases A through H show the effect of various specific changes as follows:

Cost-volume-profit analysis under conditions of changing sales price, volume, and variable expenses

Sales	\$20 per unit	\$18 per unit	\$20 per unit	\$20 per unit	\$18 per unit	\$20 per unit	\$18 per unit
Sales	60,000	60,000	60,000	60,000	60,000	60,000	60,000
Less Variable expenses:	60,000 @ \$12 per unit	60,000 @ \$12 per unit	60,000 @ \$12 per unit	60,000 @ \$12 per unit	60,000 @ \$12 per unit	60,000 @ \$12 per unit	60,000 @ \$12 per unit
	\$720,000	\$720,000	\$720,000	\$720,000	\$720,000	\$720,000	\$720,000
Marginal income	480,000	480,000	480,000	480,000	480,000	480,000	480,000
Less Fixed expenses:	400,000	400,000	400,000	400,000	400,000	400,000	400,000
Net income	80,000	80,000	80,000	80,000	80,000	80,000	80,000
Net income (loss)	80,000	80,000	80,000	80,000	80,000	80,000	80,000
Net income (loss) %	6.67	6.67	6.67	6.67	6.67	6.67	6.67
P/V ratio ² (in percent)	40	40	40	40	40	40	40
Break-even sales ¹ (in percent)	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000
Percent change in net profit ³	(4)	(4)	(4)	(4)	(4)	(4)	(4)
Percent change in net profit	150	150	150	150	150	150	150
1. Net income divided by sales.	20	20	20	20	20	20	20
2. Marginal income divided by sales.	(-4)	(-4)	(-4)	(-4)	(-4)	(-4)	(-4)
3. Assuming an investment of \$1 million.	0.667	0.667	0.667	0.667	0.667	0.667	0.667
4. Fixed expenses divided by profit-volume ratio.	8	8	8	8	8	8	8
5. Actual equals 100 percent.	15.2	15.2	15.2	15.2	15.2	15.2	15.2
6. Actual equals 100 percent.	12.8	12.8	12.8	12.8	12.8	12.8	12.8
7. Actual equals 100 percent.	9.7	9.7	9.7	9.7	9.7	9.7	9.7
8. Actual equals 100 percent.	40	40	40	40	40	40	40
9. Actual equals 100 percent.	33.33	33.33	33.33	33.33	33.33	33.33	33.33
10. Actual equals 100 percent.	12.8	12.8	12.8	12.8	12.8	12.8	12.8
11. Actual equals 100 percent.	46	46	46	46	46	46	46
12. Actual equals 100 percent.	34	34	34	34	34	34	34
13. Actual equals 100 percent.	12.8	12.8	12.8	12.8	12.8	12.8	12.8
14. Actual equals 100 percent.	60	60	60	60	60	60	60
15. Actual equals 100 percent.	60	60	60	60	60	60	60
16. Actual equals 100 percent.	12.8	12.8	12.8	12.8	12.8	12.8	12.8
17. Actual equals 100 percent.	8	8	8	8	8	8	8
18. Actual equals 100 percent.	15.2	15.2	15.2	15.2	15.2	15.2	15.2
19. Actual equals 100 percent.	46	46	46	46	46	46	46
20. Actual equals 100 percent.	34	34	34	34	34	34	34
21. Actual equals 100 percent.	12.8	12.8	12.8	12.8	12.8	12.8	12.8
22. Actual equals 100 percent.	40	40	40	40	40	40	40
23. Actual equals 100 percent.	33.33	33.33	33.33	33.33	33.33	33.33	33.33
24. Actual equals 100 percent.	12.8	12.8	12.8	12.8	12.8	12.8	12.8
25. Actual equals 100 percent.	46	46	46	46	46	46	46
26. Actual equals 100 percent.	34	34	34	34	34	34	34
27. Actual equals 100 percent.	12.8	12.8	12.8	12.8	12.8	12.8	12.8
28. Actual equals 100 percent.	60	60	60	60	60	60	60
29. Actual equals 100 percent.	60	60	60	60	60	60	60
30. Actual equals 100 percent.	12.8	12.8	12.8	12.8	12.8	12.8	12.8
31. Actual equals 100 percent.	8	8	8	8	8	8	8
32. Actual equals 100 percent.	15.2	15.2	15.2	15.2	15.2	15.2	15.2
33. Actual equals 100 percent.	46	46	46	46	46	46	46
34. Actual equals 100 percent.	34	34	34	34	34	34	34
35. Actual equals 100 percent.	12.8	12.8	12.8	12.8	12.8	12.8	12.8
36. Actual equals 100 percent.	40	40	40	40	40	40	40
37. Actual equals 100 percent.	33.33	33.33	33.33	33.33	33.33	33.33	33.33
38. Actual equals 100 percent.	12.8	12.8	12.8	12.8	12.8	12.8	12.8
39. Actual equals 100 percent.	46	46	46	46	46	46	46
40. Actual equals 100 percent.	34	34	34	34	34	34	34
41. Actual equals 100 percent.	12.8	12.8	12.8	12.8	12.8	12.8	12.8
42. Actual equals 100 percent.	60	60	60	60	60	60	60
43. Actual equals 100 percent.	60	60	60	60	60	60	60
44. Actual equals 100 percent.	12.8	12.8	12.8	12.8	12.8	12.8	12.8
45. Actual equals 100 percent.	8	8	8	8	8	8	8
46. Actual equals 100 percent.	15.2	15.2	15.2	15.2	15.2	15.2	15.2
47. Actual equals 100 percent.	46	46	46	46	46	46	46
48. Actual equals 100 percent.	34	34	34	34	34	34	34
49. Actual equals 100 percent.	12.8	12.8	12.8	12.8	12.8	12.8	12.8
50. Actual equals 100 percent.	40	40	40	40	40	40	40
51. Actual equals 100 percent.	33.33	33.33	33.33	33.33	33.33	33.33	33.33
52. Actual equals 100 percent.	12.8	12.8	12.8	12.8	12.8	12.8	12.8
53. Actual equals 100 percent.	46	46	46	46	46	46	46
54. Actual equals 100 percent.	34	34	34	34	34	34	34
55. Actual equals 100 percent.	12.8	12.8	12.8	12.8	12.8	12.8	12.8
56. Actual equals 100 percent.	60	60	60	60	60	60	60
57. Actual equals 100 percent.	60	60	60	60	60	60	60
58. Actual equals 100 percent.	12.8	12.8	12.8	12.8	12.8	12.8	12.8
59. Actual equals 100 percent.	8	8	8	8	8	8	8
60. Actual equals 100 percent.	15.2	15.2	15.2	15.2	15.2	15.2	15.2
61. Actual equals 100 percent.	46	46	46	46	46	46	46
62. Actual equals 100 percent.	34	34	34	34	34	34	34
63. Actual equals 100 percent.	12.8	12.8	12.8	12.8	12.8	12.8	12.8
64. Actual equals 100 percent.	40	40	40	40	40	40	40
65. Actual equals 100 percent.	33.33	33.33	33.33	33.33	33.33	33.33	33.33
66. Actual equals 100 percent.	12.8	12.8	12.8	12.8	12.8	12.8	12.8
67. Actual equals 100 percent.	46	46	46	46	46	46	46
68. Actual equals 100 percent.	34	34	34	34	34	34	34
69. Actual equals 100 percent.	12.8	12.8	12.8	12.8	12.8	12.8	12.8
70. Actual equals 100 percent.	60	60	60	60	60	60	60
71. Actual equals 100 percent.	60	60	60	60	60	60	60
72. Actual equals 100 percent.	12.8	12.8	12.8	12.8	12.8	12.8	12.8
73. Actual equals 100 percent.	8	8	8	8	8	8	8
74. Actual equals 100 percent.	15.2	15.2	15.2	15.2	15.2	15.2	15.2
75. Actual equals 100 percent.	46	46	46	46	46	46	46
76. Actual equals 100 percent.	34	34	34	34	34	34	34
77. Actual equals 100 percent.	12.8	12.8	12.8	12.8	12.8	12.8	12.8
78. Actual equals 100 percent.	40	40	40	40	40	40	40
79. Actual equals 100 percent.	33.33	33.33	33.33	33.33	33.33	33.33	33.33
80. Actual equals 100 percent.	12.8	12.8	12.8	12.8	12.8	12.8	12.8
81. Actual equals 100 percent.	46	46	46	46	46	46	46
82. Actual equals 100 percent.	34	34	34	34	34	34	34
83. Actual equals 100 percent.	12.8	12.8	12.8	12.8	12.8	12.8	12.8
84. Actual equals 100 percent.	60	60	60	60	60	60	60
85. Actual equals 100 percent.	60	60	60	60	60	60	60
86. Actual equals 100 percent.	12.8	12.8	12.8	12.8	12.8	12.8	12.8
87. Actual equals 100 percent.	8	8	8	8	8	8	8
88. Actual equals 100 percent.	15.2	15.2	15.2	15.2	15.2	15.2	15.2
89. Actual equals 100 percent.	46	46	46	46	46	46	46
90. Actual equals 100 percent.	34	34	34	34	34	34	34
91. Actual equals 100 percent.	12.8	12.8	12.8	12.8	12.8	12.8	12.8
92. Actual equals 100 percent.	40	40	40	40	40	40	40
93. Actual equals 100 percent.	33.33	33.33	33.33	33.33	33.33	33.33	33.33
94. Actual equals 100 percent.	12.8	12.8	12.8	12.8	12.8	12.8	12.8
95. Actual equals 100 percent.	46	46	46	46	46	46	46
96. Actual equals 100 percent.	34	34	34	34	34	34	34
97. Actual equals 100 percent.	12.8	12.8	12.8	12.8	12.8	12.8	12.8
98. Actual equals 100 percent.	60	60	60	60	60	60	60
99. Actual equals 100 percent.	60	60	60	60	60	60	60
100. Actual equals 100 percent.	12.8	12.8	12.8	12.8	12.8	12.8	12.8

Case

Change

- A 10-percent increase in selling price.
- B 10-percent decrease in selling price.
- C 10-percent increase in variable expenses.
- D 10-percent decrease in variable expenses.
- E 10-percent increase in volume.
- F 10-percent decrease in volume.
- G 10-percent decrease in selling price, 10-percent decrease in variable expenses, and a 5-percent increase in volume.
- H 10-percent increase in selling price, 10-percent increase in variable expenses, and a 5 percent decrease in volume.

The managerial information presented at the bottom of the table reveals the type of data which an alert staff can supply. A multitude of conclusions can be drawn from this form of analysis. For example, a 10-percent price increase (Case A) indicates the possibility of increasing net income to \$200,000— an increase of 1½ times. If variable expenses can be reduced 10 percent (Case D), net income would increase to \$152,000—a 90 percent increase over actual. If these two possibilities are not practical, the management of the Small Business Specialties Co. might consider the advisability of increasing sales volume. Net income would rise from \$80,000 to \$128,000—a 60 percent increase—if sales volume were raised 10 percent (Case E). You should carefully examine the change in the data provided at the bottom of the table for each case before you reach a final decision. When this information is combined with data derived from other sources, you should have helpful figures to guide the company to maximum profit making.

GROSS PROFIT ANALYSIS

GROSS PROFIT IS DETERMINED by subtracting the cost of goods sold from net sales. Variations in this profit figure from one period to another (or from budgeted or standard data to actual) should be carefully examined so that you can determine the causes and take steps to remedy unfavorable situations.

Variations in Gross Profit

Changes in gross profit from period to period may be due to any one of a combination of the following variables:

1. Changes in sales caused by changes in selling price (sales price variance) and/or changes in volume of goods (sales volume variance).
2. Changes in cost of goods sold caused by changes in unit cost (cost price variance) and/or changes in volume of goods sold (cost volume variance).

The two volume changes may be further analyzed into a change in sales mix (sales mix variance) and/or a change in final sales volume (final sales volume variance).

The following information is taken from the records of the Small Business Specialties Co. and will be used to illustrate the variance computations in this chapter:

Current year's units sold at current year's cost	\$710,000
Current year's units sold at last year's cost	390,000
Unfavorable cost price variance	<u>\$320,000</u>

Note that current units are kept constant and costs are variable in this computation. The increase in the unit cost for goods sold caused a \$320,000 increase in the cost of goods sold. This has an unfavorable impact on gross profit.

Cost-volume variance. The cost-volume variance points out changes in the cost of goods sold from one period to another due to changes in the number of units sold, i.e., volume. It is computed as follows:

Last year's units sold at last year's cost	\$650,000
Current year's units sold at last year's cost	390,000
Favorable cost volume variance	<u>\$260,000</u>

Note that last year's cost is kept constant and the units sold are variable in this computation. Because of the 40,000 decrease in units sold this year, the cost of goods sold would have been \$260,000 less in the current period than they would have been in the last period. This has a favorable impact on gross profit.

Recapitulation

The \$140,000 increase in gross profit of the Small Business Specialties Co. between the current year and last year may be attributed to the variances computed in this chapter. Following is a recapitulation of these computations.

	Sales	Cost of Goods Sold	Gross Profit
Current year	\$1,200,000	\$710,000	\$490,000
Last year	1,000,000	650,000	350,000
Difference	<u>\$ 200,000</u>	<u>\$ 60,000</u>	<u>\$140,000</u>
Changes attributable to—			
Sales price variance	\$600,000		\$600,000
Sales volume variance	(—400,000)		(—400,000)
Cost price variance		\$(-320,000)	(—320,000)
Cost volume variance		260,000	260,000
Total	<u>\$200,000</u>	<u>\$(-60,000)</u>	<u>\$140,000</u>

	Last year	This year	Change
Number of units sold	100,000	60,000	(—40,000)
Sales price per unit	\$10.00	\$20.00	\$10.00
Cost per unit	\$6.50	\$11.8333	\$5.33

Condensed income statements

Net sales	\$1,000,000	\$1,200,000	\$200,000
Cost of sales	650,000	710,000 ¹	60,000 ¹
Gross profit	<u>\$ 350,000</u>	<u>\$ 490,000</u>	<u>\$140,000</u>

¹Data have been rounded.

Variance Computation

Sales price variance. The sales price variance indicates the change in sales dollars due to changes in sales price from one period to another. It is computed as follows:

Current year's units at current year's sales prices	\$1,200,000
Current year's units at last year's sales prices	600,000
Favorable sales price variance	<u>\$ 600,000</u>

Note that in this computation, the current units are kept constant and that sales prices are variable. The increased sales price contributed \$600,000 to sales revenue (and therefore to gross profit) despite a 40,000-unit decrease. This reflects a favorable sales price variance.

Sales volume variance. The sales volume variance discloses changes in sales dollars due to changes in the number of units sold from one year to another. It is computed as follows:¹

Last year's units sold at last year's prices	\$1,000,000
Current year's units sold at last year's prices	600,000
Unfavorable sales volume variance	<u>\$ 400,000</u>

Note that last year's sales prices are kept constant and that units sold are variable in this computation. With no change in sales price, sales would have decreased \$400,000 because of the decrease in volume. This decrease in revenue would have an unfavorable effect on gross profit.

Cost-price variance. The cost-price variance explains changes in the cost of goods sold from one period to another because of changes in cost. It is computed as follows:

¹These computations apply to a one-product firm. In a multiproduct company, sales prices and costs would have to be averaged. See discussion on volume variances for multiproduct firms later in this chapter.

Graphic Presentations

Figures 16 and 17 illustrate graphically the calculations used in this chapter to analyze gross profit. Figure 16 shows the effect of changes in sales price and volume on revenue from sales. On this

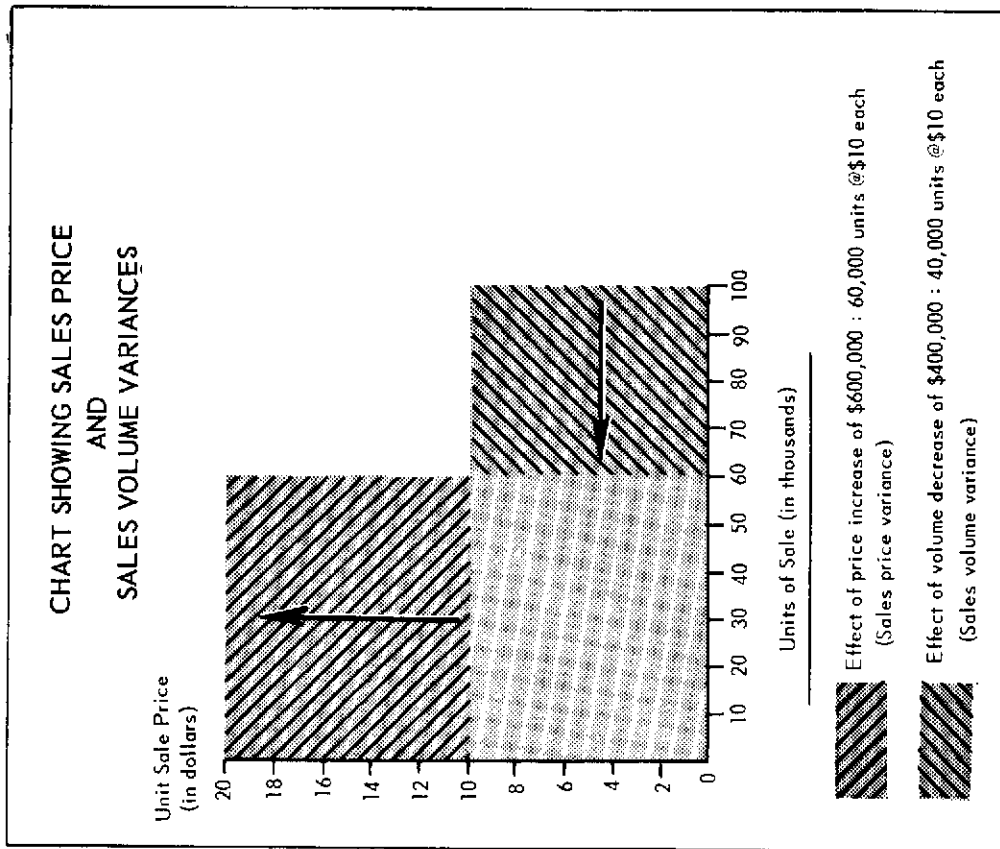


Figure 16

chart, last year's sales are plotted (100,000 units at \$10). This year's sales are also plotted (60,000 units at \$20). The sales price variance and the sales volume variance can be read from the chart. Figure 17 shows the effect of changes in cost of goods sold due to the cost price variance and the cost volume variance.

Analysis by Commodity

An analysis of the gross profit of individual products of a company provides information about the contribution that each product makes toward total gross profit and the reasons for variations in gross profit

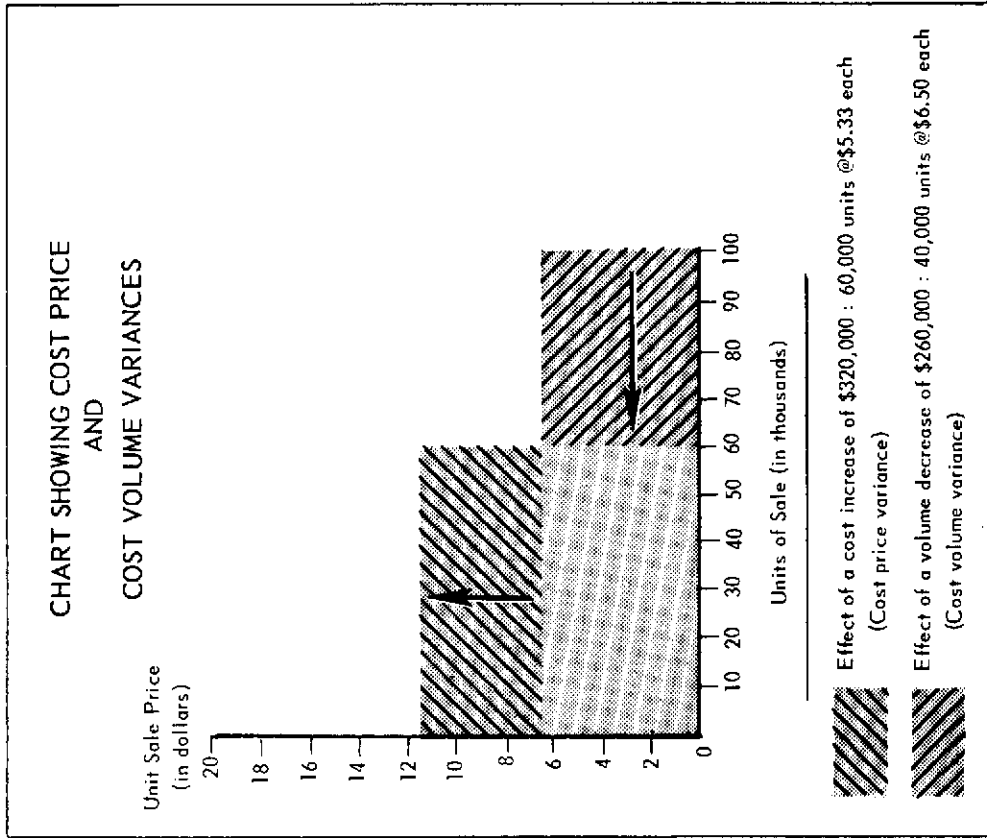


Figure 17

of each product from period to period. In the illustrations of variances in this chapter, the data were assumed to be for a one-product firm or a multiproduct company for which an average selling price and an average cost price had been computed. You can use the same basic techniques that were applied to such situations to compute variances

on a commodity basis. Instead of using totals (for a one-product firm) or average (for a multiproduct firm), you use sales and cost information for each product.

Sales Mix and Final Sales Volume Variances

The two volume variances computed in this chapter—sales volume variance and cost volume variance—are not specially meaningful for a multiproduct firm because a shift in the selling prices, costs, and gross profit of individual products will ordinarily influence total gross profit. The change in gross profit attributable to such shifts is called sales mix variance. Similarly, the change in total sales dollars attributable to changes in the number of units of each product making up the total is called the final sales volume variance. The computation of both these volume variances involves the use of an average gross profit rate for an earlier period—in the following illustration, last year.

To calculate these volume variances, you must first determine the average gross profit rate earned last year as follows:

$$\text{Average gross profit rate on units sold last year} = \frac{\text{Gross profit on last year's sales}}{\text{Total units sold last year}}$$

By multiplying this rate by the number of units sold in the current year, you obtain the gross profit that would have been made this year at last year's average rate. Now you are ready to compute the two variances.

Sales mix variance. To obtain the sales mix variance, you subtract current sales volume at last year's average prices from current sales volume at last year's costs. This difference is the gross profit that would have been made with this year's volume and no change from last year's average sales price reduced by last year's costs. This gross profit figure is compared with a gross profit figure computed by applying last year's average gross profit rate to current sales volume. If current units sold at last year's average gross profit is smaller than the computed difference, a favorable sales mix variance prevails; otherwise, it is unfavorable.

Final sales volume variance. The final sales volume variance is computed by multiplying the current sales volume by last year's average gross profit rate and comparing the results with last year's gross profit. If the result of the multiplication is larger, the final sales volume variance is favorable; otherwise, it is unfavorable.

RETURN ON INVESTMENT ANALYSIS

THE RATE OF RETURN ON INVESTMENT (or capital employed) is determined by a simple formula. However, its application is probably one of the most important and its concepts one of the most complex of all management guides for profit planning. You can use the rate of return on investment (ROI) for intercompany and inter-industry comparisons; pricing, cost, inventory, and investment decisions; as measures of efficiency and profitability. In its use, you must always be sure that you are consistent in making your comparisons. The same definitions of net income, sales, and capital employed should be applied in all your computations to validate your comparisons.

Basic Formula

The basic formula for the ROI rate contains two components—capital turnover and percentage of net income on sales (i.e., margin). These components can be formulated as follows:

1. Capital turnover = $\frac{\text{Sales}}{\text{Capital employed}}$
2. Percentage of net income on sales = $\frac{\text{Net income}}{\text{Sales}}$

In the basic ROI formula, capital turnover is a measurement of movement of assets in relation to sales during a period of time. It is

a gauge of the general efficiency of management because the larger the volume of sales that you can do on a given investment, the more efficient you are. Net income when divided by sales provides a description of your earnings expressed as a percent of sales.

The basic formula for a rate of return on investment (ROI rate) can be expressed as follows:

$$\text{ROI rate} = \text{Capital turnover} \times \text{Percentage of net income on sales}$$

or

$$\text{ROI rate} = \frac{\text{Sales}}{\text{Capital employed}} \times \frac{\text{Net income}}{\text{Sales}}$$

The basic ROI-rate formula takes into consideration most of the items that appear on a balance sheet and income statement. Figure 18 presents graphically a structural outline of the relationship of these items to rate of return on investment and to each other.

Application of Basic Formula

The following data of the Small Business Specialties Co. will be used to illustrate the use of the basic ROI formula.

Sales (net)	\$1,200,000
Less: Costs and expenses	1,120,000
Net income	\$ 80,000
Working capital	\$ 400,000
Fixed assets	600,000
Total capital employed	\$1,000,000

The data provided above can be substituted in the basic ROI formula as follows:

$$\text{ROI rate} = \frac{\text{Sales}}{\text{Capital employed}} \times \frac{\text{Net income}}{\text{Sales}}$$

$$\text{ROI rate} = \frac{\$1,200,000}{\$1,000,000} \times \frac{\$80,000}{\$1,200,000}$$

$$\text{ROI rate} = \frac{\$80,000}{\$1,000,000}$$

$$\text{ROI rate} = 8 \text{ percent.}$$

RELATIONSHIP OF BALANCE SHEET ITEMS AND ROI FORMULA

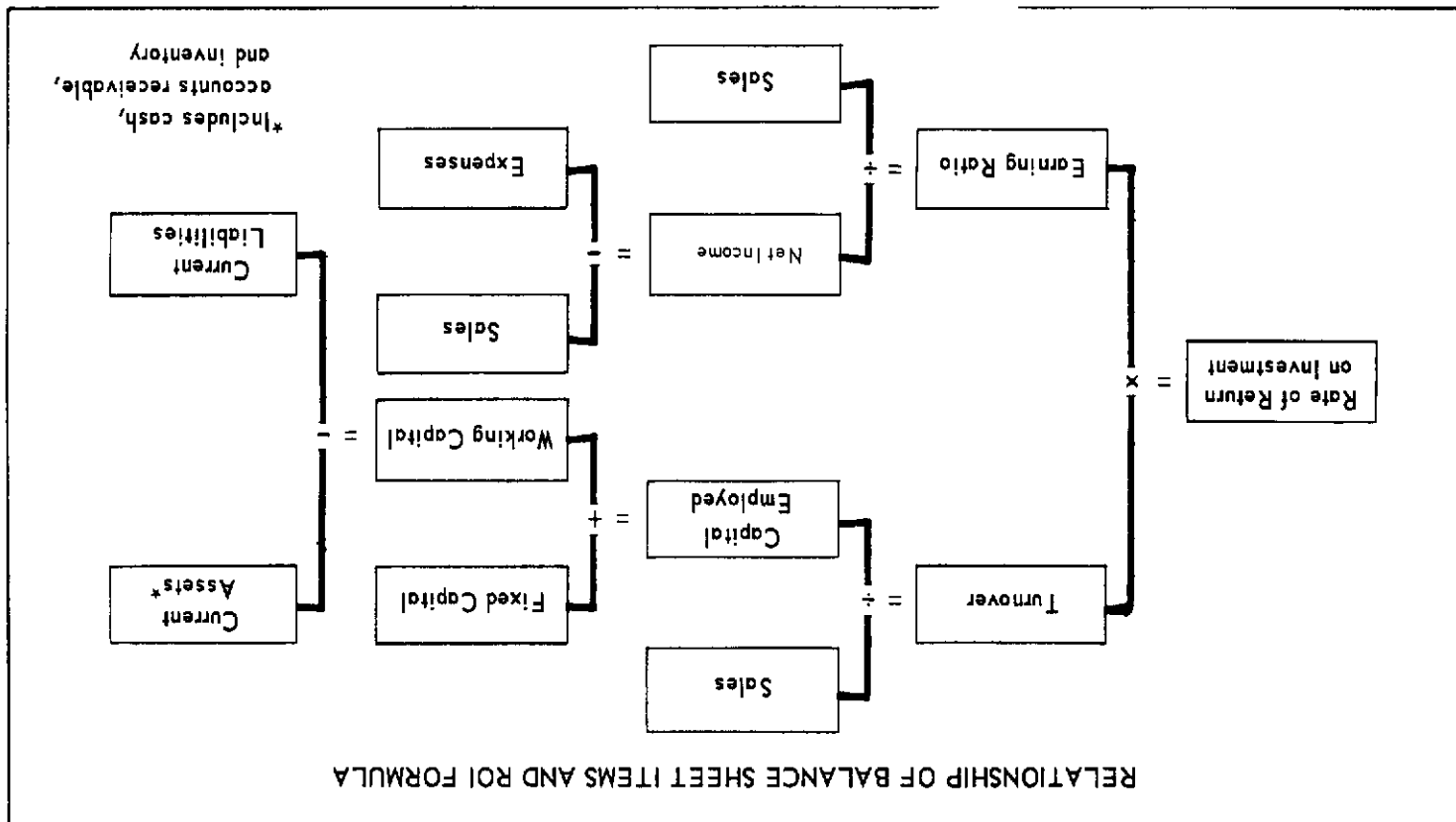


Figure 18

The basic ROI formula can be modified to read as follows if sales in both parts of the formula are eliminated:

$$\text{ROI rate} = \frac{\text{Net income}}{\text{Capital employed}}$$

While the answer obtained by the short formula is identical with that obtained by the basic formula, the short method ignores the fact that the return on investment is influenced by the relationship of capital to sales and of net income to sales. Both of these relationships are important because they help localize the sources of change in return on investment. A company should attempt to increase sales while improving its operating income and simultaneously employing its resources in such a manner that it consistently increases its earnings on capital employed. The basic formula emphasizes this dual movement.

Concepts

The basic formula for return on investment places three items of business data—sales, net income, and capital employed—in their proper relationships. While no general agreement among managers and accountants exists concerning the precise meanings of these terms, it is imperative to express them consistently when calculations involving comparisons are made.

Sales. The term “sales” in the basic formula usually means either billed sales or net sales (gross sales less discounts, returns, allowances and other charges). You can use either but not both of these terms in your computations.

Net income. “Net income” in the formula is ordinarily taken to denote net income after taxes. When taxes are deducted, they are considered an expense of the company just as any other business expense. Occasionally, “net income before taxes” is used in the basic formula to eliminate the effect of changes in tax rates. This usage may be advisable in instances where rates of return are being compared during a period of fluctuating tax rates. Other refinements in the use of the “net income” figure include (1) net income before depreciation or depletion charges; (2) net income before interest charges; and (3) average net income for a number of accounting periods.

Capital employed. The most significant area of differing opinions with respect to the components of the ROI formula is found when an attempt is made to define “capital employed.” The differences

arise primarily from two problems: (1) Which assets should you consider as capital employed? (2) What valuation basis should be placed on these assets?

Among the various opinions concerning what should be included in the basic ROI formula as “capital employed,” three are most generally considered acceptable:

1. Total assets, including those that are current (i.e., cash, receivables, and inventory) and those that are permanent capital (i.e., plant, property, and equipment).
2. Total assets less current liabilities. Those who accept this concept combine what is generally referred to as net working capital (current assets minus current liabilities) with permanent capital (fixed assets). This interpretation stresses the importance of long-term debt and stockholders' equity as the investment upon which a return is to be based. However, management is expected to employ all assets profitably; therefore the deduction of current liabilities from current assets is perhaps not completely justified.
3. Stockholders' equity. If ROI is to be interpreted as the return on an amount invested by stockholders, capital employed in the formula can be defined as stockholders' equity in the company. This approach excludes investments by creditors.

Conclusive criteria for the valuation of assets to be included as capital employed are practically impossible to set forth. Many ROI analysts, however, use the following general guidelines:

Current or working capital assets:

- (a) use only amounts of cash and securities to satisfy the normal requirements of conducting business and exclude excessive amounts of this type of asset;
- (b) use either gross or net (after provision for estimated uncollectibles) accounts receivable;
- (c) use the balance sheet valuation of inventory.

Fixed assets: use either original cost, or cost less depreciation, or estimated replacement value.

Comparison of ROI Figures

Where the ROI rate is to be used for intercompany and inter-industry comparisons, the selection of net assets as a valuation base will usually provide the most satisfactory data. Financial information which is available to the public generally is reported on a net basis.

For example, the National Industrial Conference Board publishes statistics on percent return on sales and percent return on net assets. Published financial statements of well-managed companies are another source from which ROI rates may be calculated for comparative purposes. Such comparisons are useful only as long as consistency in calculations is maintained. You should remember that companies often use different accounting policies for depreciation, inventory pricing, estimating bad debts, and so forth. Such practices can distort comparisons of returns on investments.

ROI Rates by Department, Division, or Product

To determine rates of return on investment for departments, divisions, or products, it is necessary to treat each of these classifications as though each were a separate business. Net income, sales, and capital employed for each classification must be applied in the basic formula. Sales by departments, divisions, or products can usually be ascertained without difficulty. Reclassification of net income requires the allocation of expenses. Certain expenses can be directly assigned to particular departments, divisions, or products. Other expenses must be allocated in a rational and systematic manner. This is often difficult to accomplish. In allocating capital employed among departments, divisions, or products, a base for making the allocation must be selected. The following bases have been used for allocating various assets to their respective classifications:

<i>Asset</i>	<i>Base</i>
Cash	(1) Sales; (2) cost of sales; (3) manufacturing cost less noncash items such as depreciation; (4) operating cash requirements for various levels of operations. (Excess cash is usually excluded.)
Securities	(1) Sales; (2) cost of sales.
Accounts receivable	(1) Sales; (2) gross sales for average number of days adjusted for significant differences in credit terms of each classification.
Inventories	(1) Direct allocation (reference to detailed inventory records); (2) for raw materials: average usage basis; (3) for processed items: direct allocation.
Machinery and equipment	(1) Direct allocation: (2) direct labor hours, amount of floorspace occupied, or other basis for such assets which are jointly used by more than one classification.
Deferred charges and prepaid expenses	(1) Direct allocation; (2) same as that used for cash.

Case Studies Using ROI Analysis

At the beginning of Chapter 7, the Small Business Specialties Co. is shown as having an 8 percent ROI rate. We will now develop a series of cases to illustrate profit-planning opportunities associated with the use of ROI analysis by this company. Let us summarize the basic financial information of the Small Business Specialties Co.

Sales (60,000 units @ \$20)	\$1,200,000
Less: Variable expenses (60,000 @ \$12)	720,000
Marginal income	\$ 480,000
Less: Fixed expenses	400,000
Net income	\$ 80,000

$$\text{ROI} = \frac{\$1,200,000 \text{ sales}}{\$1,000,000 \text{ capital employed}} \times \frac{\$80,000 \text{ net income}}{\$1,000,000 \text{ sales}}$$

$$\text{ROI} = 8 \text{ percent}$$

The management of the Small Business Specialties Co. wants to increase its ROI from 8 percent to 10 percent. It considers various possibilities listed in the following cases.

Case 1. Assume that the company's capital employed of \$1 million cannot be increased. Therefore, if the ROI is to be 10 percent, it must earn \$100,000 net income. Either sales (volume or prices) or net income (revenue minus expenses) must be increased from \$80,000 to \$100,000. Management wants to know what sales volume is required to earn the 10 percent ROI if sales prices remain at \$20 per unit and variable expenses of \$12 per unit cannot be changed. Fixed expenses cannot be reduced. The company is currently selling 60,000 units.

$$\text{Let } S = \text{Sales to make } \$100,000 \text{ net income.}$$

$$S = \frac{\text{Fixed expenses} \times \text{Net income}}{\text{Marginal income per unit (i.e., sales price - variable expenses)}}$$

$$S = \frac{\$400,000 + \$100,000}{\$8 \text{ per unit}}$$

$$S = 62,500 \text{ units required to make } \$100,000 \text{ net income.}$$

Case 2. Management decides that it expects to sell 70,000 units next year. It sets a goal of 10 percent ROI. What sales price must be used to achieve this 10 percent ROI goal (i.e., net income of

\$100,000)? Other variables remain unchanged from the original illustration.

Let S = Sales to make \$100,000 net income when 70,000 units are sold

$$\begin{aligned} S &= \text{Variable expenses} + \text{Fixed Expenses} + \text{Net income} \\ S &= (70,000) (\$12) + \$400,000 + \$100,000 \\ S &= \$1,340,000. \end{aligned}$$

To make sales of \$1,340,000 when 70,000 units are sold, the sales price per unit is \$19.14 (rounded) per unit. This sales price could be determined directly by formula if we let S equal the sales price per unit required to make net income of \$100,000.

$$\begin{aligned} (S) (70,000) &= (70,000) (\$12) + \$400,000 + \$100,000 \\ 70,000S &= \$1,340,000 \\ S &= \$19.14 \text{ (rounded)} \end{aligned}$$

Case 3. Management claims that the sales price and volume cannot be changed and that the amount of capital invested will remain the same. Then to achieve a 10 percent ROI on its invested capital, net income must change. Then what change in net income is required to obtain an increase in ROI from 8 percent to 10 percent? While the answer is obviously \$100,000, refer to the basic formula and solve for net income:

$$\begin{aligned} \text{Desired 10\% ROI} &= \frac{\$1,200,000 \text{ sales}}{\$1,000,000 \text{ capital employed}} \times \frac{\text{Net income}}{\$1,200,000 \text{ sales}} \\ 10\% &= \frac{(\$1,000,000) (\text{Net income})}{\$1,200,000} \\ \text{Net income} &= (\$1,000,000) (10\%) \\ \text{Net income} &= \$100,000. \end{aligned}$$

The Small Business Specialties Co. must increase net income from \$80,000 to \$100,000 without changing sales volume or price and capital employed. Recall that net income is the result of sales minus expenses (variable and fixed). In this case, net income must be increased without changing sales. This requires that expenses must be reduced. Management should look into the possibility of cutting expenses. Perhaps fixed expenses can be reduced \$20,000 to increase net income from \$80,000 to \$100,000. Variable expenses would have to be reduced by 33 cents per unit (rounded), i.e., \$20,000 increase in net income divided by the 60,000 units currently sold. Perhaps a reduction of fixed and variable expenses is possible. In any event, expenses must be reduced in this case to increase net income \$20,000.

Case 4. Management claims that expenses cannot be reduced and that sales volume and price cannot be changed. This means that net income of \$80,000 cannot be changed. How can the ROI be increased from 8 percent to 10 percent? If you recall the basic ROI formula, then you would answer that capital employed must be reduced to achieve the desired result. To solve our problem, let us use the short ROI formula:

$$\text{ROI} = \frac{\text{Net income}}{\text{Capital employed}}$$

Currently, the ROI formula contains the following data:

$$8\% = \frac{\$80,000 \text{ net income}}{\$1,000,000 \text{ capital employed}}$$

What amount of capital employed is required to obtain the desired 10 percent ROI if net income cannot be changed? Substituting the available data in our short ROI formula, we see that---

$$\begin{aligned} \text{Desired 10\% ROI} &= \frac{\$80,000}{\text{Capital employed}} \\ \text{Capital employed} &= \frac{\$80,000}{10\%} \\ \text{Capital employed} &= \$800,000 \end{aligned}$$

The Small Business Specialties Co. must reduce its capital employed from \$1 million to \$800,000. To reduce capital employed, the company must look to the possibility of reducing working capital (cash, receivables, inventory) or its investment in fixed assets. In this case, management focuses attention on capital turnover rather than on margin.

Additional Measures of Efficiency and Profitability

Besides the ROI rate, there are other techniques available to determine the adequacy of profits. Instead of considering "capital employed" in terms of assets or resources available to a company, it is sometimes helpful to conceptualize ROI as a return on (1) total liabilities and stockholders' equity; (2) fixed liabilities and stockholders' equity. Formulas for these calculations take items from the balance

sheet and generally use an average for the period covered by the income statement which also provides data.

1. ROI on total liabilities and stockholders' equity:

$$\frac{\text{Net income} + \text{interest expense} + \text{income taxes}}{\text{Total liabilities and stockholders' equity}}$$

This ratio serves as an index of productivity of total capital employed and is a measure of earning capacity as well as of operating efficiency.

2. ROI on invested capital:

$$\frac{\text{Net income} + \text{interest expense} + \text{income taxes}}{\text{Fixed liabilities and stockholders' equity}}$$

This ratio can be used as a measure of the earning power of long-term debt and stockholders' investment in the company.

3. Rate of dividends on common stock equity:

$$\frac{\text{Common stock dividends}}{\text{Common stock equity}}$$

or

$$\frac{\text{Common stock dividend per share}}{\text{Market value per share of common stock}}$$

The first of these ratios indicates the desirability of common stock as a source of income. The second is a measure of the current yield on an investment in a particular stock.

LONG-RANGE PROFIT PLANNING

THE DECISION TOOLS discussed earlier in this booklet are primarily designed to deal with short-term business problems. Different techniques are available for use when certain long-range problems arise.

Long-range planning by business is a necessary element of profit planning. Planning for the long run is often related to replacement of machinery, acquisition of improved facilities, the construction of a new plant, the development of new products, and similar projects. Such decisions usually involve large commitments of company resources for long periods which can affect the company's profit over an extended number of years. A rational and systematic approach for making these decisions is capital budgeting. One method of capital budgeting used successfully by business is the discounted-cash-flow method. Before explaining this method of long-range planning, you must first understand the meaning of the concept "present value."²³

The Meaning of Present Value

A dollar today is worth more than a dollar in the future. Assuming no change in the price level, you would obviously prefer to have \$10 today instead of \$10 a year from today when you consider the interest possibilities associated with money. Money does have time value.

The present value of 1. The present value of a dollar is the amount that must be invested now to produce a dollar at a specific

time in the future. Present value tables are available for determining present values of future amounts. A selection from such a table is shown here:

Period	Present Value of \$1 at Compound Interest			
	Compound Rate			
	4%	6%	8%	10%
1	0.962	0.943	0.926	0.909
2	0.925	0.890	0.857	0.826
3	0.889	0.840	0.794	0.751
4	0.855	0.792	0.735	0.683
5	0.822	0.747	0.681	0.621

To illustrate the meaning of this table, you can determine that the present value (i.e., the value today) of \$1 two years in the future discounted at 10 percent is \$0.83 (rounded). The present value of \$100 two years in the future discounted at 10 percent is \$82.60 (rounded). How much must one invest today at 10 percent if he desires to accumulate a fund of \$100 two years in the future? The answer is the present value of \$100 two years in the future discounted at 10 percent, i.e., \$82.60.

The present value of an annuity of 1. An annuity is a series of equal amounts to be received or paid at equal intervals. A Present Value of an Annuity of 1 Table gives the present value of a future series of equal amounts at equal intervals at various rates of interest. A selection from a Present Value of an Annuity of 1 Table appears as follows:

Period	Present Value of an Annuity of \$1 Table		
	Compound Rate		
	6%	8%	10%
1	0.943	0.926	0.909
2	1.833	1.783	1.736
3	2.673	2.577	2.487
4	3.465	3.312	3.170
5	4.212	3.993	3.791

To illustrate the use of this table, you can say that the present value of an annuity of \$1 for three years at 6 percent is \$2.67 (rounded). The present value of an annuity of \$100 for three years at 6 percent is \$267.30 (rounded). How much must you invest today at 6 percent to receive \$100 at the end of each of the next three years? The answer is the present value of an annuity of \$100 at 6 percent for three years, i.e., \$267.30.

Discounted-Cash-Flow Method

Now that you understand the meaning of "present value," you can study the discounted-cash-flow method of capital budgeting which uses present value techniques. The discounted-cash flow method measures the discounted expected future cash inflows and outflows related to a long-range project. This method can be summarized by the following statement:

Present value of net Present value of the
 Net present value = cash inflows expected — cost of the project
 from a project (or investment)

Net cash inflow is the difference between the present value of cash inflows and cash outflows expected from a project. A decision rule can now be drawn up for the disconnected-cash-flow method:

If the net present value of the project is positive (i.e., the present value of net cash inflows expected from the project exceeds the present value of the cost of the project), the project is considered acceptable. If the net present value is negative, the project is rejected.

Case 1. The management of the Small Business Specialties Co. needs some new equipment for its manufacturing process. The machine costs \$110,000 and has an expected useful life of five years. At the end of the five years, the equipment has a disposal value of \$10,000. A minimum acceptable rate of return on an investment for this company is considered to be 8 percent. The equipment will reduce cash operating costs \$30,000 a year for the next five years. Should management purchase the equipment? (Ignore income tax implications.)

In the solution to Case 1 shown on page 56, the dollar amounts of the cash inflows (cash operating savings and disposable value of the equipment) and cash outflow (project cost) are recorded in a table that shows year columns, discount factors, and total present value. Cash outflows are shown as negative amounts in parenthesis. Appropriate present value discount factors are related to each line item. In our illustration, the table is completed as follows:

1. The present value of the \$110,000 investment today is \$110,000 (i.e., $\$110,000 \times 1.000$).
2. The cash inflow resulting from operating savings can be viewed as an annuity, i.e., a series of equal amounts over equal intervals of time. The present value of an annuity of \$1 at 8 percent for five

periods is 3.993 (see Present Value of an Annuity Table). Therefore, the present value of an annuity of \$30,000 at 8 percent for five periods is \$119,790.

3. The disposal value of the equipment is discounted using a discount factor taken from the Present Value of 1 Table. Therefore, the present value of the \$10,000 disposal value of equipment is \$6,210.

4. When the present value column is totalled, the net present value is a positive \$16,000. The decision rule states that when the present value of cash inflows exceeds the present value of the cash outflows, the investment is acceptable. The investment in the equipment will earn a return larger than the minimum 8 percent required.

When income taxes are taken into consideration, the problem is complicated somewhat. Some basic relationships can be stated to show the income tax effect on certain cash outflows (expenses) and cash inflows (revenues):

$$\text{Cash outflow from expenses} = \text{Cash expenses} \times (1 - \text{Income-tax rate})$$

$$\text{Cash inflow from revenues (and savings)} = \text{Cash revenues} \times (1 - \text{Income tax rate})$$

Cash outflow for expenses will be reduced because the income taxes payable decreases when expenses are incurred and deducted for tax purposes. Cash inflow from revenues and savings will be reduced when you realize that a portion of such revenues or savings results in increased taxable income.

When an investment decision involves a depreciable asset, the yearly depreciation allowed for tax purposes results in a cash inflow (i.e., a savings) through a reduction of income taxes. This effect can be viewed as follows:

$$\text{Cash savings from tax effect of depreciation} = \text{Depreciation expenses} \times \text{Income-tax rate}$$

Case 2. Assume the same information as in Case 1 except that (1) the company pays income taxes at a 40 percent rate on its net income and (2) the depreciable asset is being depreciated over a five year life on the straight line basis.

In Case 2, the net present value is a positive \$28. The investment in the equipment is desirable.

Case 1 Calculation		Case 2 Calculation	
Discount Factor	Present Value	Discount Factor	Present Value
1.000	\$ (110,000)	1.000	\$ (110,000)
3.993	119,790	3.993	71,874
0.621	6,210	0.621	6,210
	<u>\$ 16,000</u>		<u>\$ 28</u>

Case 1 Calculation		Case 2 Calculation	
Cash Flow at End of Period	Initial cost of equipment	Cash Flow at End of Period	Initial cost of equipment
0	(110,000)	0	110,000
1	30,000	1	18,000
2	30,000	2	18,000
3	30,000	3	18,000
4	30,000	4	18,000
5	10,000	5	10,000
	Cash operating savings		Cash operating savings less tax effect:
	Net present value (positive)		Disposal value
			Tax savings from depreciation (\$20,000 × .40)
			Net present value

FOR FURTHER INFORMATION

IN THIS BOOKLET, you have been introduced to the rudimentary tools which can make your profit planning more effective. They can provide you with an objective at which to shoot and a yardstick to measure your efforts. In recent years, they have received considerable attention in business magazines and textbooks. Following are some, but by no means all, of the sources for further information on profit planning. Most of the listed references should be available in libraries.

Professional and Business Associations

- American Accounting Association, 653 S. Orange Ave., Sarasota, Fl. 33577.
- American Institute of Certified Public Accountants, 666 Fifth Ave., New York, N.Y. 10019
- American Institute of Management, 125 East 38th Street, New York, N.Y. 10016
- American Management Association, 135 West 50th St., New York, N.Y., 10020.
- Institute of Internal Auditors, 5500 Diplomat Circle, Orlando, Fl. 32810.
- National Association of Accountants, 919 3rd Ave., New York, N.Y. 10022.
- National Society of Public Accountants, 919 18th Street, NW, Washington, D.C. 20006

Books

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- Bierman, Harold, and Drebin, Allan R. *Managerial Accounting: An Introduction*. The Macmillan Company, New York, 1968.
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SBA Publications

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RETURN TO BUSINESS PLANNING AND DECISIONS

RETURN TO MAIN MENU



SMALL BUSINESS ADMINISTRATION • JOHN E. HORNE, Administrator
U. S. Government Agency

SMALL MARKETERS AIDS No.92

Washington 25, D. C.

June 1963

CREATIVE THINKING: A COMMONSENSE APPROACH

By Bruce Goodpasture

Management Publications Division, Small Business Administration, Washington 25, D.C.

SUMMARY

Small Marketers can teach themselves to use a commonsense approach to creative thinking. Many of them already possess four of the necessary traits: alertness, curiosity, adaptive skill, and constructive dissatisfaction.

Four steps are involved in using these traits in creative thinking about retail, wholesale, and service situations. They are: (1) being receptive to new ideas, (2) keeping your information reservoir full, (3) training yourself to capture stray thoughts, and (4) thinking an idea through in concrete terms.

The Aid suggests ways in which small marketers can practice a commonsense approach to creative thinking in their firms. It also points out that the small businessman must be willing to risk the money that is necessary to put his ideas into practice.

Some small businessmen miss opportunities because they fail to use a commonsense approach to creative thinking. Others feel that creative thinking is beyond them.

"That's for writers and artists," one small marketer says.

"I'm no thinker," another says, "I had to give up plans for college and go to work when my father died."

Still others try, but get discouraged. "Every time I think I have a good idea, I read in the newspaper that another company is already using it."

Often the men who feel they can't develop creative thoughts are amazed at the new concepts which some competitors keep injecting into their businesses.

"They're always pulling off something new," one says, "I don't understand how they do it."

FOUR KEY TRAITS

A closer look at the kinds of people who come up with new concepts can help you to understand better what's involved. Usually the people who produce new ideas have certain traits which help them to develop these thoughts.

• Alertness

One trait that most creative thinkers have in common is alertness. They are alert to what's going on and to what it might mean. For example, some say that the discoverer of lithography, a playwright, stumbled on this principle of printing when he wrote a shopping list with a crayon on a piece of sandstone.

"Stumbled" in a sense, perhaps. But it was his alertness which made him think of future applications when he accidentally printed a duplicate list from the stone. Later he refined and used this method to reproduce copies of his plays. Today, the same principle is used in offset printing.

Another example of alertness is shown by a realtor in a metropolitan area. To most people, the rapid growth of high school bands meant music and pagentry at ball games. He saw in it a chance to improve his public relations.

He hired a retired bandmaster of wide reputation and offered his services free to leaders of high school and college bands. "Let him help you build your band," reads the realtor's advertisements. The public relations impact of his action boosted sales.

• Curiosity

Another trait common to men and women who develop creative thoughts is curiosity. This means the mental approach of looking below the obvious surface details. It means wanting to dig down to get at the "whys" of events and activities.

One pioneer in advertising is a case in point. Most people saw the hustle to eat breakfast and get to work as "a rat race." He looked behind the surface of this hectic routine and prompted the commercialization of a now-familiar product--orange juice. The creative combination of convenience and healthful nourishment led to a new commercial product and, indeed, a new industry.

• Adaptive Skill

A third trait common to people who create new ideas is their skill at making adaptations. They fit and tailor what they see, read, and hear to their own situations.

For instance, one small businessman, Bob Waller,* turned a casual glance at a French poodle into a new item for his line. As the dog walked down the street, the sunlight on his fluffy fur made Mr. Waller think of a pile fabric which his factory used.

He began to study the dog more closely. Its legs reminded Mr. Waller of the tapered legs he put on his tables.

After further thought, Mr. Waller used pile fabric to make a removable cover for a small cocktail table. He then added a head and tail and called the result a poodle bench.

Still another example of adaptive skill is that of Steve Ditz, sales manager of a wholesale company that specialized in raincoats. Business had dried up. Retail stores were overstocked because of a succession of droughts and duststorms.

No one needed raincoats. Yet Mr. Ditz found a way to sell his.

First, he listed the good qualities of his coats. In addition to being rainproof, they looked like a topcoat. They were also cold-proof, windproof, and dustproof.

Mr. Ditz began advertising them as all-weather topcoats--a new concept in those days. A few months later people were wondering "How do they sell so many raincoats in such dry weather?" The answer: By applying adaptivity to create thought.

• Constructive Dissatisfaction

A fourth trait common in creative people is the desire for something better. It has been called "constructive dissatisfaction." It is closely related to curiosity. There are two results: One is increased range of knowledge. The other is objectivity--keeping an open mind.

One retailer tells how he applies constructive dissatisfaction to the problem of distribution. "I criticize my suppliers," he says.

"I list everything they are doing that I don't like. I list things I would change if I could. Then I try to come up with ideas which my supplier could use to put these changes into practice.

He then discusses his suggestions with suppliers. "Most of them are pretty good

people," he says. "They want to help me if they can."

He keeps an open mind on his own operations by examining the way he treats his customers. "What am I doing that they don't like?" he asks. "Can I remove these sources of irritation? How?"

TEACHING YOURSELF

You can teach yourself to develop a creative line of thought. There is no magic in it. By and large, it is a commonsense approach. Four steps are involved: (1) being receptive to new ideas, (2) keeping your information reservoir full, (3) training yourself to capture stray thoughts, and (4) thinking an idea through in concrete terms.

• 1-Being Receptive to New Ideas

Tom Sargent, a neighborhood grocer, often closed his mind to new things. He felt that his actions were limited by meager resources.

Then one day, a salesman of newspaper advertising space gave him an idea about exploiting his small advertising budget. He suggested that Mr. Sargent use a small insertion 5 days a week instead of the customary larger advertisement on Thursdays.

Tom Sargent took the advice. Each insertion promoted an item that nearly all homes need: eggs. Housewives came to feel that Mr. Sargent was a specialist in eggs--and, in a way, he was.

Encouraged by this success, Mr. Sargent began to look around for new merchandising ideas whenever he had the chance. Of course, he couldn't develop all of them, but gradually his creative batting average improved as he kept his mind open.

• 2-Keeping Your Information Reservoir Full

Stocking your information reservoir is an essential step in a commonsense approach to creative thinking. It means putting useful knowledge--facts, figures, and opinions--into your mind. You do this by looking, listening, and reading.

All three are important, but reading is perhaps the best way of stocking your mind. The amount of information you can cover is limited only by your reading speed and the amount of time available for reading.

As one writer says, if you know how to read, you have the power to enlarge yourself and multiply the ways in which you exist.

• 3-Training Yourself to Capture Stray Thoughts

"Thoughts often get away from me," some small marketers say. "Usually I forget the idea before I get time to do anything about it."

One wholesaler prevents this by capturing new thoughts while they are hot. He jots them down as they pop into his head. "I scribble on the back of envelopes, sales tickets, or whatever is handy," he says.

* Names are disguised in this Ald.

Get your ideas on paper--any kind--as soon as you can. Stop what you are doing and put down whatever is necessary to jog your memory. If one word does it, fine. The goal is to capture the thought before it evaporates.

• 4-Thinking An Idea Through In Concrete Terms

Thinking an idea through in concrete terms involves self-discipline and work. Most people have to make themselves do it.

No one can tell you exactly how to think through an idea in concrete terms. But you might want to try this suggestion: Set aside a definite time to review the notes you jotted down as you captured stray thoughts. Pick out a good one. Then begin thinking about it in terms of step-by-step action you could take.

One retailer, John Latoure, sorts out his idea notes at bedtime. "I can think better than early in the mornings," he says.

He suggests a helpful technique. He takes pictures of his store and uses them as a thinking tool.

"They were especially helpful when I was trying to think through a creative approach to rearranging display counters," he says. "The pictures showed things I had been overlooking because I was so used to seeing the merchandise."

As an aid to thinking through an idea in concrete form, you might want to take pictures of your back room, for example. What do they show? Wasted space? Damaged cartons because of crowding? Such questions can start a train of creative thought.

PRACTICE IMPROVES YOUR SKILL

Most people who use a commonsense approach to creative thinking emphasize one thing: Make time for concentrated, directed thinking. It's hard work, but practice makes results come easier.

The experience of others may be helpful as you work out your own method. In terms of business, two successful techniques are: (1) thinking about what customers want, and (2) thinking about improvements in your own operations.

• What Customers Want

Joe Morgan, a food retailer, says he thinks about what customers want by starting with a general proposition such as: People like parties. Then he asks himself related questions.

What does this fact suggest to me? What kinds of people like parties? Why? What do they do at parties? What do they need at parties? What does this mean for my business? Does it suggest party items which I can promote more intensely? Does it suggest new items which I can stock?

Joe says, "In a way, I brainstorm because I jot down every answer--no matter how silly--that pops into my head."

Another way to think about what customers want might be to start from a fact out of your information reservoir. Bill Barnes, a small hardware dealer, is a case in point.

He read that an artificial lake was to be built in his county. He began thinking about what the lake might mean to customers in general.

He reasoned that people would be swimming more, boating, water skiing, camping, and building cottages on the lake. Some might even build houseboats.

These conclusions led Mr. Barnes to read about lakes in other areas. This information helped him to come up with thoughts which he adapted to his hardware store. A year before the lake was ready he was planning his lines and getting his stock set up for a boom in merchandise related to water recreation.

• Operating Improvements

Some businessmen practice creative thinking by focusing on ways to improve their own operations. Many ideas come to them as a result of trying to find a solution to a specific problem.

For example, George Paige, the president of one small company had a personnel problem: How to keep from losing several brilliant but restless young assistants. All had reached "the top"--at least in the Paige Company itself.

As he sought a solution to this problem, he came up with a novel expansion idea for his organization. He encouraged and helped his key men to start "their own businesses." How? They could, and did, make his product under a license arrangement. In doing so they became independent owner-managers.

Another example is that of florists who sell by telegraph. The florists association had been working on the problem of how to get more people to buy flowers by wire. Among other facts, they learned that customers were anxious about what sort of flowers the person on the receiving end of the telegram would get. To relieve that anxiety, the idea of using a catalog was developed. Listing standard floral arrangements by price and number, the catalogue approach helped to boost telegraph sales of flowers because much of the worry and uncertainty was removed.

Milt Runson uses several of his employees to help solve problems. He gives them freedom to explore all areas of his firm's activities. He calls them "my creative workshop" on the theory that alert, creative individuals can--and do--generate profitable ideas even outside their own jobs. "Results are excellent," he says, "Especially in ideas for cutting operating expenses."

Creative thinking in your own situation might be stimulated by focusing on problems such as those described in a recent study. In it, more than 250 small retailers listed six major problem areas. They are: (1) personnel

(2) financial management, (3) physical facilities, (4) distribution, (5) recordkeeping, and (6) public relations.

A springboard session could start with one of these areas. Suppose you decide to concentrate on, say, personnel. First, make a list of your main manpower problems. Next, sort out these problems. Put the most troublesome ones at the top.

Then, whenever you can take a few minutes, give some thought to solutions for those specific problems. Jot down ideas as they come to you.

Later, sit down and review your notes. Put aside any ideas that seem impractical--but don't throw them away. They might spark other useful thoughts later.

The longer you drill yourself in a systematic process of creative thinking, the clearer one thing should become: You need your own, individual method for coming up with new thoughts which you can adapt to your business.

ACTING UPON YOUR THOUGHTS

Whether you act on one of your creative thoughts depends on at least two things: One is how strongly you feel about the workability of your idea. The other is your willingness to risk the necessary money.

You'll want to test each idea before you start acting upon it. A sensible first step is to put it aside for awhile. Let it ripen. Then examine it again. Does it still look sound?

If so, test it further with the help of someone else you can trust. Criticize it. See how many holes can be punched in it. Then see if, and how, you can plug up those holes.

Now put the proposal aside a second time. Rethink it later on and, if it still checks out as sound, see if you can find a way of trying it out on a limited scale so as to gauge the acceptance of employees and customers. If objections are raised they should be met squarely and overcome if possible.

Suppose that at this point you are satisfied that you have a thought which is good enough for general application in your firm. Suppose, further, that putting it in effect will cost you

money--perhaps \$1,000. At that point, many small marketers drop out of creative thinking.

They feel that they can't risk their money. Their fear of the cost of new things often robs them of the flexibility which is one of the strengths of small business.

So be prepared to spend at least some money if you want to improve your ability for creative thinking. Part of commonsense is being willing to act upon your ability--upon the thoughts which you develop for your firm.

Remember that some ideas will fail even though you test them before putting them into action. Often, however, a creative idea that fails is not a complete loss.

In many instances, that experience can spark a highly successful, off-shoot idea. Therefore, it is wise to look at creative thinking as a long-pull investment. To make money, you don't have to be right every single time. Over the years, you will use your ideas, if you average out, with more success than failure.

FOR FURTHER INFORMATION

Businessmen interested in exploring further the subject of creative thinking may be interested in the following references. This list is brief and selective. However, no slight is intended toward authors whose works are not mentioned.

How To Be A More Creative Executive by Joseph G. Mason, McGraw-Hill Book Co., Inc., 330 W. 42d St., New York 36, N.Y. 1960. \$5.95.

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The Backbone of Retailing by Jane Cahill. Fairchild Publications, Inc., 7 East 12th St., New York 3, N.Y. 1960. \$6.50.

Innovation In Marketing: New Prospectives for Profit and Growth by Theodore Levitt. McGraw-Hill Book Co., Inc., 330 W. 42d St., New York 36, N.Y. 1962. \$5.95.

"Understanding Why They Buy." *Small Marketers Aid* No. 73. November 1961. Small Business Administration, Washington 25, D.C. Free.

"Why Not Use Everyone's Good Ideas?" *Management Aid* No. 145. October 1962. Small Business Administration, Washington 25, D.C. Free.

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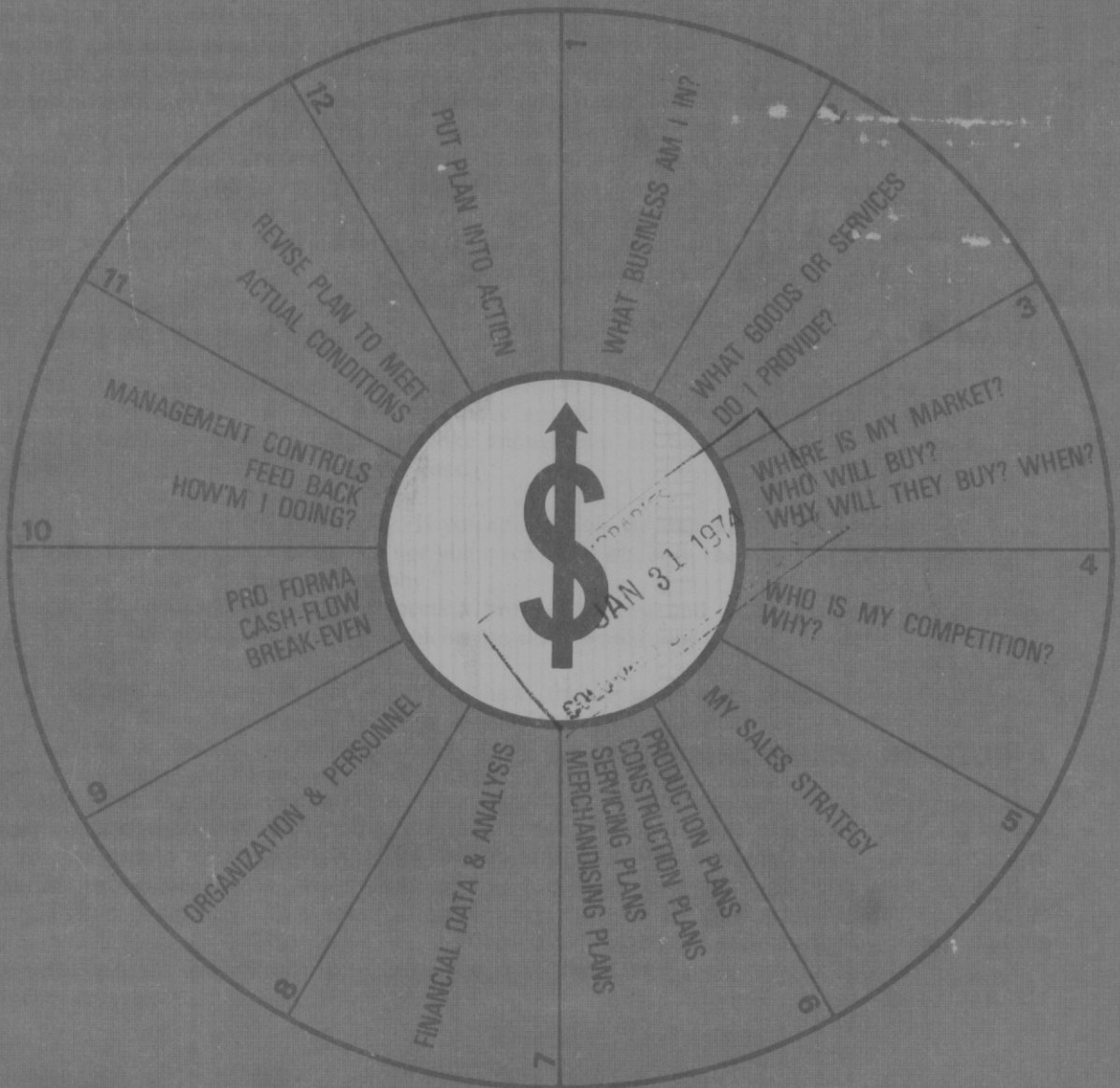


MANAGEMENT AID
For Small Manufacturers

SMALL BUSINESS
ADMINISTRATION

No. **218**

BUSINESS PLAN FOR SMALL MANUFACTURERS



By Staff Members, Education Division, Office of Management Assistance, Small Business Administration

SUMMARY

A business plan can provide the owner-manager or prospective owner-manager of a small manufacturing firm with a pathway to profit. This *Aid* is designed to help an owner-manager in drawing up his business plan.

In building a pathway to profit you need to consider the following questions: What business am I in? What goods do I sell? Where is my market? Who will buy? Who is my competition? What is my sales strategy? What merchandising methods will I use? How much money is needed to operate my company? How will I get the work done? What management controls are needed? How can they be carried out? When should I revise my plan? Where can I go for help?

No one can answer such questions for you. As the owner-manager you have to answer them and draw up *your* business plan. The pages of this *Aid* are a combination of text and workspaces so you can write in the information you gather in developing *your* business plan—a logical progression from a commonsense starting point to a commonsense ending point.

FIRST PRINTING:

JULY 1973

A NOTE ON USING THIS AID

It takes time and energy and patience to draw up a satisfactory business plan. Use this *Aid* to get your ideas and the supporting facts down on paper. And, above all, make changes in your plan on these pages as that plan unfolds and you see the need for changes.

Bear in mind that anything you leave out of the picture will create an additional cost, or drain on your money, when it unexpectedly crops up later on. If you leave out or ignore enough items, your business is headed for disaster.

Keep in mind, too, that your final goal is to put your plan into action. More will be said about this step near the end of this *Aid*.

WHAT'S IN THIS FOR ME?

Time was when an individual could start a small business and prosper provided he was strong enough to work long hours and had the knack for selling for more than the raw materials or product cost him. Small stores, grist mills, livery stables, and blacksmith shops sprang up in many crossroad communities as Americans applied their energy and native intelligence to settling the continent.

Today this native intelligence is still important. But by itself the common sense for which Americans are famous will not insure success in a small business. Technology, the marketplace, and even people themselves have become more complicated than they were 100, or even 25, years ago.

Common sense must be combined with new techniques in order to succeed in the space age. Just as one would not think of launching a manned space capsule without a flight plan, so one should not think of launching a new small manufacturing business without a business plan.

A business plan is an exciting new tool which the owner-manager of a small business can use to plot a "course" for his company. Such a plan is a logical progression from a commonsense starting point to a commonsense ending point.

To build a business plan for his company, an owner-manager needs only to think and react as a manager to questions such as: What product is to be manufactured? How can it best be made? What will it cost me? Who will buy the product? What profit can I make?

WHY AM I IN BUSINESS?

If you're like most businessmen, you're in business to make money and be your own boss. But, few businessmen would be able to say that those are the only reasons. The money that you will make from your business will seldom seem like enough for all the long hours, hard work, and responsibility that go along with being the boss.

Then, why do so many stay in business?

This is hardly the time for philosophy. If you're starting or expanding a business, you have enough to think about. But, whether or not you even think about it, the way you operate your business will reflect your "business philosophy."

Consider this. An owner-manager inspects a production run and finds a minor defect. Even though in nine out of ten cases the user of his product would not notice the defect, the owner decides to scrap the entire run.

What does this tell about his philosophy? It shows that he gets an important reward from doing what he feels is the right thing—in this case, providing a quality product.

The purpose of this section is not to play down the importance of making a profit. Profits are important. They will keep your business going and attract additional capital into your business. But you should be aware that there are other rewards and responsibilities associated with having your own business.

In your planning, you might give some thought to your responsibilities to your employees, your community, your stockholders, your customers, your product, and profit. Jot these down. Later, when you've lined-up your management team, discuss this subject with them. This type of group thinking will help everyone, including yourself, understand the basic purposes for each day's work.

Even though you won't advertise it throughout your market, the way you operate your business will reflect your business philosophy.



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WHAT BUSINESS AM I IN?

In making your business plan, the next question to consider is: What business am I really in? At first reading, this question may seem silly. "If there is one thing I know," you say to yourself, "it is what business I'm in." But hold on. Some owner-managers go broke and others waste their savings because they are confused about the business they are really in.

The experience of an old line manufacturing company provides an example of dealing with the question: What business am I really in? In the early years of this century, the founder of the company had no trouble answering the question. As he put it, "I make and sell metal trash cans." This answer held true for his son until the mid-1950's when sales began to drop off. After much thought, the son decided he was in the container business.

Based on this answer, the company dropped several of its lines of metal trash cans, modified other lines, and introduced new products, such as shipping cartons used by other manufacturers and Government agencies.

What business am I in? (Write your answer here) _____

Asking questions like: What does my product do for my customer? Why? When? Where? How? What doesn't it do? What should it do later but doesn't now? can lead to the ultimate conclusion on what business you're in and possibly direct you to new lines of products or enterprises.

MARKETING

When you have decided what business you're really in, you have just made your first marketing decision. Now you must face other marketing considerations.

Successful marketing starts with you, the owner-manager. You have to know your product, your market, your customers, and your competition.

Before you plan production, you have to decide who your market is, where it is, why they will buy your product, whether it is a growth or static market, if there are any seasonal aspects of the market, and what percentage of the market you will shoot for in the first, second, and third year of operation. Your production goals and plans must be based on and be responsive to this kind of fact finding (market feasibility and research).

The narrative and work blocks that follow are designed to help you work out a marketing plan. Your objective is to determine what needs to be done to bring in sales dollars.

In some directories, marketing information is listed according to the Standard Industrial Classification (SIC) of the product and industry. The SIC classifies firms by the type of activity they're engaged in, and it is used to promote the uniformity and comparability of statistical data relating to market research. When you begin your market research, you may find it useful to have already classified your products according to this code. (The *Standard Industrial Classification Manual* is available from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402, for \$4.50. It may also be available at your local library.)

Product

SIC No.

1. _____
2. _____

MARKET AREA. Where and to whom are you going to sell your product. Describe the market area you will serve in terms of geography and customer profile:

WHO ARE YOUR COMPETITORS? List your principal competitors selling in your market area, estimate their percentage of market penetration and dollar sales in that market, and estimate their potential loss of sales as a result of your entry into the market

Name of Competitor and Location	% Share of Market	Estimated Sales	Estimated Sales He Will Lose Because of You
1. _____	_____	\$ _____	_____
2. _____	_____	\$ _____	_____
3. _____	_____	\$ _____	_____

HOW DO YOU RATE YOUR COMPETITION? Try to find out the strengths and weaknesses of each competitor. Then write your opinion of each of your principal competitors, his principal products, facilities, marketing characteristics, and new product development or adaptability to changing market conditions.

Have any of your competitors recently closed operations or have they withdrawn from your market area? (State reasons if you know them):

ADVANTAGES OVER COMPETITORS. On what basis will you be able to capture your projected share of the market? Below is a list of characteristics which may indicate the advantages your product(s) enjoy over those offered by competitors. Indicate those advantages by placing a check in the proper space. If there is more than one competitor, you may want to make more than one checklist. Attach these to the worksheet.

Analyze each characteristic. For example, a higher price may not be a disadvantage if the product is of higher quality than your competitor's. You may want to make a more detailed analysis than is presented here. If you wish to spell out the specifics of each characteristic and explain where your product is disadvantaged and how this will be overcome, attach it to this worksheet. Also, the unique characteristics of your product can be the basis for advertising and sales promotion.

Remember, the more extensive your planning, the more your business plan will help you.

Product(s)	Product No. 1	Product No. 2
Price _____	()	()
Performance _____	()	()
Durability _____	()	()
Versatility _____	()	()
Speed or accuracy _____	()	()
Ease of operation or use _____	()	()
Ease of maintenance or repair _____	()	()
Ease or cost of installation _____	()	()
Size or weight _____	()	()
Styling or appearance _____	()	()
Other characteristics not listed:		
_____	()	()
_____	()	()
_____	()	()
_____	()	()
_____	()	()
_____	()	()
_____	()	()

What, if anything, is unique about your product? _____

DISTRIBUTION. How will you get your product to the ultimate consumer? Will you sell it directly through your own sales organization or indirectly through middle-men, such as manufacturer's agents, brokers, wholesalers, and so on. (Use the blank to write a brief statement of your method of distribution and/or manner of sales):

What will this method of distribution cost you? _____

Do you plan to use special marketing, sales, or merchandising techniques? Describe them here:

List your customers by name, the total dollar amount they buy from you, and the amount they spend for each of your products.

Names of Principal Customers	Total Purchasing Volume	By Products	% of Your Sales
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

MARKET TRENDS. What has been the sales trend in your market area for your principal product(s) over the last 5 years? What do you expect it to be 5 years from now? You should indicate the source of your data and the basis of your projections.* Industry and product statistics are usually indicated in dollars. Units, such as numbers of customers, numbers of items sold, etc., may be used, but also relate your sales to dollars.

Product	Source of Data	Sales 5 Years Ago	Current Sales	Projected Sales in 5 Years
1. _____	_____	_____	_____	_____
2. _____	_____	_____	_____	_____

* This is a marketing research problem. It will require you to do some digging in order to come up with a market projection. Trade associations will probably be your most helpful source of information. The Bureau of Census publishes a great deal of useful statistics (see For Further Information on page 23). There are also the following free SBA publications to help you get started: MA187, "Using Census Data in Small Plant Marketing;" MA 192, "Profile Your Customers to Expand Industrial Sales;" SBB9, "Marketing Research Procedures;" and SBB13, "National Directories for Use in Marketing."

List the name and address of trade associations which serve your industry and indicate whether or not you are a member.

List the name and address of other organizations, governmental agencies, industry associations, etc., from which you intend to obtain management, technical, economic, or other types of information and assistance.

SHARE OF THE MARKET. What percentage of total sales in your market area do you expect to obtain for your products after your facility is in full operation?

Products or Products Category	Local Market (%)	Total Market (%)
_____	_____	_____
_____	_____	_____
_____	_____	_____

SALES VOLUME. What sales volume do you expect to reach with your products?

	Total Sales	Product(s) 1	Product(s) 2
First Year	\$ _____	\$ _____	\$ _____
Units	_____	_____	_____
Second Year	\$ _____	\$ _____	\$ _____
Units	_____	_____	_____
Third Year	\$ _____	\$ _____	\$ _____
Units	_____	_____	_____

PRODUCTION

Production is the work that goes on in a factory that results in a product. In making your business plan, you have to consider all the activities that are involved in turning raw materials into finished products. The work blocks which follow are designed to help you determine what production facilities and equipment you need.

MANUFACTURING OPERATIONS. List the basic operations, for example, cut and sew, machine and assemble, etc., which are needed in order to make your product.

RAW MATERIALS. What raw materials or components will you need, and where will you get them?

Material/Component	Source	Price	Comments (location, delivery, financing, etc.)
_____	_____	\$ _____	_____
_____	_____	\$ _____	_____
_____	_____	\$ _____	_____
_____	_____	\$ _____	_____
_____	_____	\$ _____	_____

What amount of raw materials and/or components will you need to stock? _____

Are there any special considerations concerning the storage requirements of your raw materials? For example, will you use chemicals which can only be stored for a short time before they lose their potency?

EQUIPMENT. List the equipment needed to perform the manufacturing operations. Indicate whether you will rent or buy the equipment and the cost to you.

Equipment	Buy	Rent	Your Cost
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Your equipment, facilities, and method of operation must comply with the Occupational Safety and Health Act of 1970. You may obtain a copy of *Standards for General Industry* from the Superintendent of Documents, U. S. Government Printing Office, Washington, D. C. 20402, or a field office of the Occupational Safety and Health Administration for 20 cents.

LABOR SKILLS. List the labor skills needed to run the equipment:

Skill Classification	Number of Persons Needed	Pay Rate	Availability
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

List the indirect labor, for example material handlers, stockmen, janitors, and so on, that is needed to keep the plant operating:

Skill Classification	Number of Persons Needed	Pay Rate	Availability
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

If persons with these skills are not already on your payroll, where will you get them?

SPACE. How much space will you need to make the product? Include restrooms, storage space for raw material and for finished products, and employee parking facilities if appropriate. Are there any local ordinances you must comply with?

Do you own this space?	Yes_____	No_____
Will you buy this space?	Yes_____	No_____
Will you lease this space?	Yes_____	No_____
How much will it cost you?	_____	

OVERHEAD. List the overhead items which will be needed in addition to indirect labor and include their cost. Examples are: tools, supplies, utilities, office help, telephone, payroll taxes, holidays, vacations, and salaries for your key men (sales manager, plant manager, and foremen).

HOW MUCH MONEY IS NEEDED?

Money is a tool you use to make your plan work. Money is also a measuring device. You will measure your plan in terms of dollars, and outsiders, such as bankers and other lenders, will do the same.

When you determine how much money is needed to start (or expand) your business, you can decide whether to move ahead. If the cost is greater than the profits which the business can make, there are two things to consider. Many businesses do not show a profit until the second or third year of operation. If this looks like the case with your business, you will need the plans and financial reserves to carry you through this period. On the other hand, maybe you would be better off putting your money into stocks, bonds, or other reliable investments rather than taking on the time consuming job of managing a small business.

If you are like most businessmen, your new business or expansion will require a loan. The burden of proof in borrowing money is upon the borrower. You have to show the banker or other lender how the borrowed money will be spent. Even more important, he needs to know how and when you will repay the loan.

To determine whether your plan is economically feasible, you need to pull together three sets of figures:

- (1) Expected sales and expense figures for 12 months.
- (2) Cash flow figures for 12 months.
- (3) Current balance sheet figures.

Then visit your banker. Remember, your banker or lender is your friend not your enemy. So, meet with him regularly. Share all the information and data you possess with him. If he is to really help you, he needs to know not only your strengths but also your weaknesses.

EXPECTED SALES AND EXPENSE FIGURES. To determine whether your business can make its way in the market place, you should estimate your sales and expenses for 12 months. The form which follows is designed to help you in this task.

CASH FLOW FIGURES. Estimates of future sales will not pay an owner-manager's bills. Cash must flow into the business at the proper times if bills are to be paid and a profit realized at the end of the year. To determine whether your projected sales and expense figures are realistic, you should prepare a cash flow forecast for the 12 months covered by your estimates of sales and expenses.

The form that follows was designed to help you estimate your cash situation and to get the appropriate figures on paper.

PROJECTED STATEMENT OF

	TOTAL	JAN	FEB
A. Net Sales			
B. Cost of Goods Sold			
1. Raw Materials			
2. Direct Labor			
3. Manufacturing Overhead			
Indirect Labor			
Factory Heat, Light, and Power			
Insurance and Taxes			
Depreciation			
C. Gross Margin (Subtract B from A)			
D. Selling and Administrative Expenses			
4. Salaries and Commissions			
5. Advertising Expenses			
6. Miscellaneous Expenses			
E. Net Operating Profit (Subtract D from C)			
F. Interest Expense			
G. Net Profit before Taxes (Subtract F from E)			
H. Estimated Income Tax			
I. Net Profit after Income Tax (Subtract H from G)			

* Format adapted from SBMS No. 15, *A Handbook of Small Business Finance*.
 See "For Further Information," page 23 of this *Aid*.

ESTIMATED CASH FORECAST

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
(1) Cash in Bank (Start of Month)												
(2) Petty Cash (Start of Month)												
(3) Total Cash (add (1) and (2))												
(4) Expected Accounts Receivable												
(5) Other Money Expected												
(6) Total Receipts (add (4) and (5))												
(7) Total Cash and Receipts (add (3) and (6))												
(8) All Disbursements (for month)												
(9) Cash Balance at End of Month in Bank Account and Petty Cash (subtract (8) from (7))*												

* This balance is your starting cash balance for the next month.

CURRENT BALANCE SHEET FIGURES. A balance sheet shows the financial conditions of a business as of a certain date. It lists what a business has, what it owes, and the investment of the owner. A balance sheet enables you to see at a glance your assets and liabilities. Use the blanks below to draw up a current balance sheet for your company.

CURRENT BALANCE SHEET

for

_____ (name of your company)

as of

_____ (date)

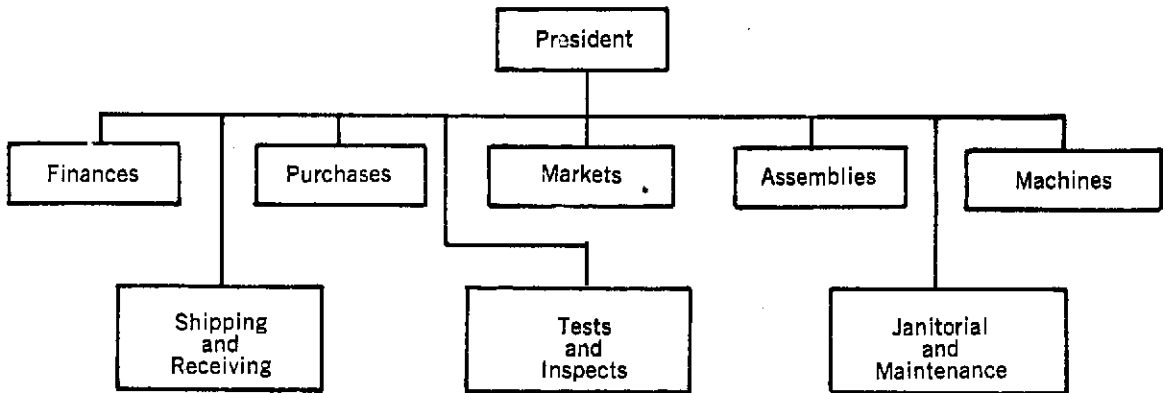
ASSETS		LIABILITIES	
CURRENT ASSETS		CURRENT LIABILITIES	
Cash	\$ _____	Accounts Payable	\$ _____
Accounts Receivable	_____	Accrued Expenses	_____
Inventory	_____	Short Term Loans	_____
FIXED ASSETS		FIXED LIABILITIES	
Land	\$ _____	Long Term Loan	\$ _____
Building	\$ _____	Mortgage	_____
Equipment	_____		
Total	_____	NET WORTH	\$ _____
Less			
Depreciation	_____ \$ _____		
TOTAL	_____	TOTAL	\$ _____

GETTING THE WORK DONE

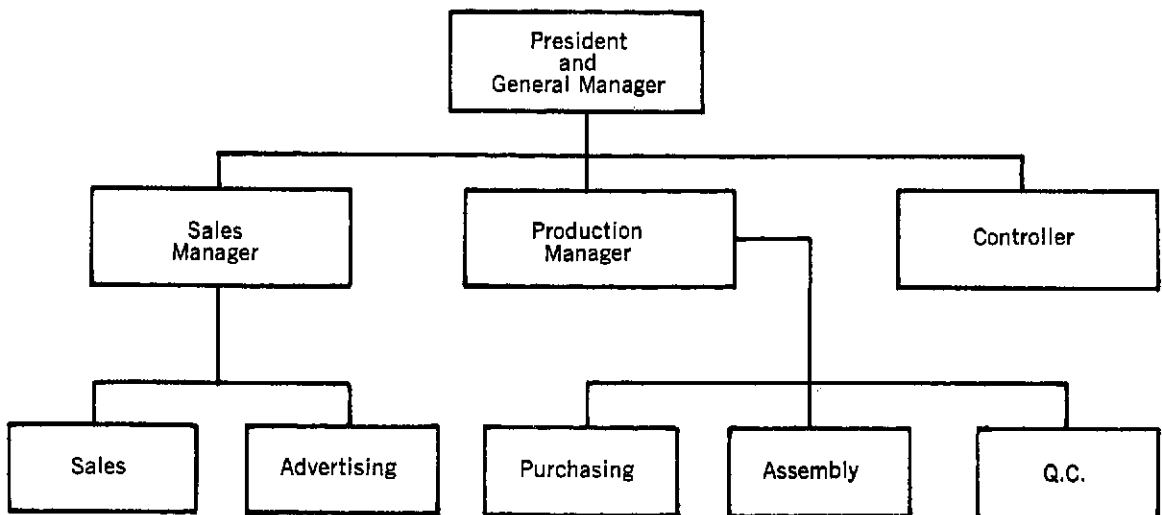
Your manufacturing business is only part way home when you have planned your marketing and production. Organization is needed if your plant is to produce what you expect it to produce.

Organization is essential because you as the owner-manager probably cannot do all the work. In which case, you'll have to delegate work, responsibility, and authority. A helpful tool in getting this done is the organization chart. It shows at a glance who is responsible for the major activities of a business. However, no matter how your operation is organized, keep control of the financial management. Examples are given here to help you in preparing an organization chart for your business.

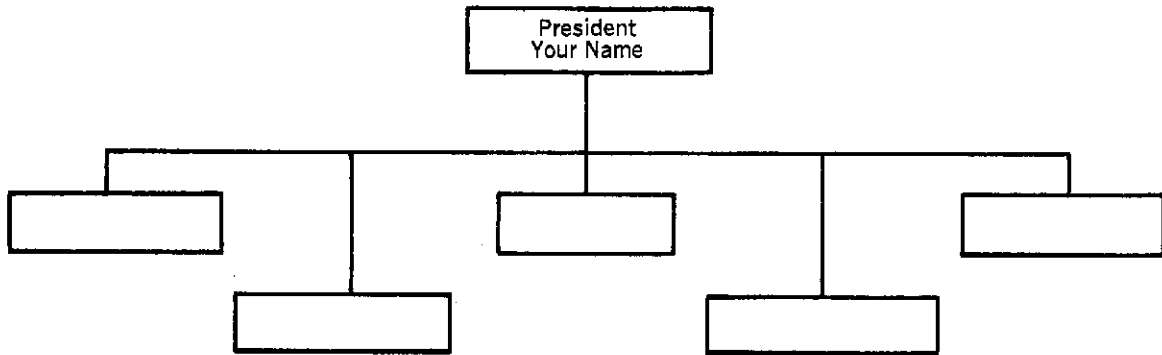
In the beginning, the president of the small manufacturing company probably does everything.



As the company grows to perhaps 50—100 employees, the organization may begin to look something like the chart below.



In the space that follows or on a separate piece of paper, draw an organization chart for your business.



It is important that you recognize your weaknesses early in the game and plan to get assistance wherever you need it. This may be done by using consultants on an as-needed basis, by hiring the needed personnel, or by retaining a lawyer and accountant.

The workblock below lists some of the areas you may want to consider. Adapt it to your needs and indicate who will take care of the various functions. (One name may appear more than once.)

Manufacturing _____

Marketing _____

Research and Technical Backup _____

Accounting _____

Legal _____

Insurance _____

Other: _____

MAKING YOUR PLAN WORK

To make your plan work you will need feedback. For example, the year end profit and loss statement shows whether your business made a profit or loss for the past 12 months.

But you can't wait 12 months for the score. To keep your plan on target you need readings at frequent intervals. A profit and loss statement at the end of each month or at the end of each quarter is one type of frequent feedback. However, the P and L may be more of a *loss* than a profit statement if you rely only on it. In addition, your cash flow projection must be continuously updated and revised as necessary. You must set up management controls which will help you to insure that the right things are being done from day to day and from week to week.

The management control system which you set up should give you precise information on: inventory, production, quality, sales, collection of accounts receivable, and disbursements. The simpler the system, the better. Its purpose is to give you and your key people current information in time to correct deviations from approved policies, procedures, or practices. You are after *facts* with emphasis on *trouble spots*.

INVENTORY CONTROL. The purpose of controlling inventory is to provide maximum service to your customers. Your aim should be to achieve a rapid turnover on your inventory. The fewer dollars you tie up in raw materials inventory and in finished goods inventory, the better. Or, saying it in reverse, the faster you get back your investment in raw materials and finished goods inventory, the faster you can reinvest your capital to meet additional consumer needs.

In setting up inventory controls, keep in mind that the cost of the inventory is not your only cost. There are inventory costs, such as the cost of purchasing, the cost of keeping inventory records, and the cost of receiving and storing raw materials.

PRODUCTION. In preparing this business plan, you have estimated the cost figures for your manufacturing operation. Use these figures as the basis for standards against which you can measure your day-to-day operations to make sure that the clock does not nibble away at profits. These standards will help you to keep machine time, labor man-hours, process time, delay time, and down time within your projected cost figures. Periodic production reports will allow you to keep your finger on potential drains on your profits and should also provide feedback on your overhead expense.

QUALITY CONTROL. Poorly made products cause a company to lose customers. In addition, when a product fails to perform satisfactorily, shipments are held up, inventory is increased, and a severe financial strain can result. Moreover, when quality is poor, it's a good bet that waste and spoilage on the production line are greater than they should be. The details—checkpoints, reports, and so on—of your quality control system will depend on your type of production system. In working out these details, keep in mind that their purpose is to answer one question: What needs to be done to see that the work is done right the first time? Will you have to do extensive quality control on raw materials? This is an added expense you must consider.

SALES. To keep on top of sales, you will need answers to questions, such as: How many sales were made? What was the dollar amount? What products were sold? At what price? What delivery dates were promised? What credit terms were given to customers?

It is also important that you set up an effective collection system for "accounts receivable," so that you don't tie up your capital in aging accounts.

DISBURSEMENTS. Your management controls should also give you information about the dollars your company pays out. In checking on your bills, you do not want to be penny-wise and pound-foolish. You need to know that major items, such as paying bills on time to get the supplier's discount, are being handled according to your policies. Your review system should also give you the opportunity to make judgments on the use of funds. In this manner, you can be on top of emergencies as well as routine situations. Your system should also keep you aware that tax moneys, such as payroll income tax deductions, are set aside and paid out at the proper time.

BREAK EVEN. Break-even analysis is a management control device because the break-even point shows about how much you must sell under given conditions in order to just cover your costs with NO profit and NO loss.

In preparing to start or expand a manufacturing business you should determine at what approximate level of sales a new product will pay for itself and begin to bring in a profit.

Profit depends on sales volume, selling price, and costs. So, to figure your break-even point, first separate your fixed costs, such as rent or depreciation allowance, from your variable costs per unit, such as direct labor and materials.

The formula is

$$\text{break-even volume} = \frac{\text{total fixed costs}}{\text{selling price} - \text{variable cost per unit}}$$

For example, Ajax Plastics has determined its fixed costs to be \$100,000 and variable costs to be \$50 per unit. If the selling price per unit is \$100, then Ajax's break-even volume is

$$\text{break-even volume} = \frac{\$100,000}{\$100 - \$50} = 2000 \text{ units}$$

On page 9 of this *Aid* you estimated your expected sales for each product and total sales. In the space below, compute the break-even point for each.

Product 1: _____ Product 2: _____ Total Sales: _____

For additional information on break-even points, see SBMS No. 15, *A Handbook of Small Business Finance* in "For Further Information," page 23 of this *Aid*.

KEEPING YOUR PLAN UP TO DATE

The best made business plan gets out of date because conditions change. Sometimes the change is within your company, for example, several of your skilled operators quit their jobs. Sometimes the change is with customers. Their desires and tastes shift. For example, a new idea can sweep the country in 6 months and die overnight. Sometimes the change is technological as when new raw materials and components are put on the market.

In order to adjust a business plan to account for such changes, an owner-manager must:

(1) Be alert to the changes that come about in his company, in his industry, in his market, and in his community.

(2) Check his plan against these changes.

(3) Determine what revisions, if any, are needed in his plan.

You may be able to delegate parts of this work. For example, you might assign your shop foreman the task of watching for technical changes as reported in trade journals for your industry. Or you might expect your sales manager to keep you abreast of significant changes that occur in your markets.

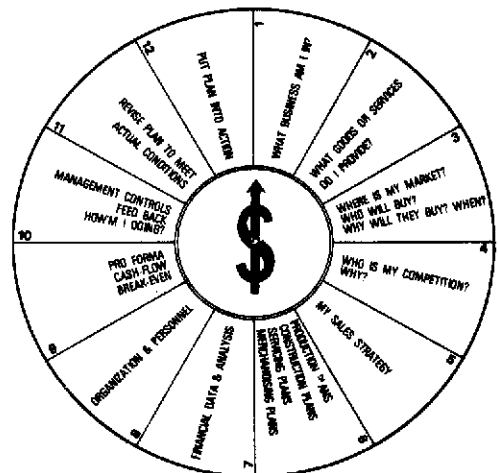
But you cannot delegate the hardest part of this work. You cannot delegate the decisions as to what revisions will be made in your plan. As owner-manager you have to make those judgments on an on-going basis.

When judgments are wrong, cut your losses as soon as possible and learn from the experience. The mental anguish caused by wrong judgments is part of the price you pay for being your own boss. You get your rewards from the satisfaction and profits that result from correct judgments.

Sometimes, serious problems can be anticipated and a course of action planned. For example, what if sales are 25 percent lower than you anticipated, or costs are 10 percent higher? You have prepared what you consider a reasonable budget. It might be a good idea to prepare a "problem budget," based on either lower sales, higher costs, or a combination of the two.

You will also have to exercise caution if your sales are higher than you anticipated. The growth in sales may only be temporary. Plan your expansion. New equipment and additional personnel could prove to be crippling if sales return to their normal level.

Keep in mind that few owner-managers are right 100 percent of the time. They can improve their batting average by operating with a business plan and by keeping that plan up to date.



FOR FURTHER INFORMATION

The following references provide additional information about the various aspects of a business plan. This list is necessarily brief and selective. However, no slight is intended towards authors whose works are not mentioned.

Financial Statements of Small Business. S. B. Costales, 18 Ventura Drive, Danielson, Conn. 06239. \$6.50.

Annual Statement Studies. The Robert Morris Associates, Philadelphia National Bank Building, Philadelphia, Pa. 19107.

Key Business Ratios. Dun & Bradstreet, Inc., 99 Church St., New York, N. Y. 10008 (usually available in local Dun & Bradstreet offices).

Up Your Own Organization. Dible, Donald. 1971. \$14.95. The Entrepreneur Press, Mission Station, Drawer 2759, Santa Clara, Calif. 95051.

Thomas' Register of American Manufacturers. Annual (8 vols. and index). Thomas Publishing Company, 461 Eighth Ave., New York, N. Y. 10001.

OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION

Standards for General Industry. Available from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402, or a field office of the Occupational Safety and Health Administration for 20 cents.

BUREAU OF THE CENSUS

The Bureau of the Census issues a catalog listing of their many publications. The catalog is issued quarterly, with monthly supplements, available from the Superintendent of Documents, Washington, D. C. 20402. Ask for *Bureau of Census Catalog*. Annual subscription, \$2.25.

SMALL BUSINESS ADMINISTRATION

The following booklets are published by the Small Business Administration. They can be examined in the nearest SBA office or ordered from the Superintendent of Documents, Washington, D. C. 20402. The price is listed after each title.

A Handbook of Small Business Finance. SBMS No. 15, 7th ed. 1965. 45 cents.

Ratio Analysis for Small Business. SBMS No. 20, 3d ed. 1970. 35 cents.

Management Audit for Small Manufacturers. SBMS No. 29, 2d ed. 1971. 35 cents.

The following *Management Aids* and *Small Business Bibliographies* are published by the Small Business Administration and are available free from the nearest SBA office:

"Designing Small Plants for Economy and Flexibility." MA No. 169.

"Numerical Control for the Smaller Manufacturer." MA No. 181.

"Progressive Automation of Production." MA No. 184.

"Using Census Data in Small Plant Marketing." MA 187.

"Should You Make Or Buy Components?" MA No. 189.

"Delegating Work and Responsibility." MA No. 191.

"What Is The Best Selling Price?" MA No. 193.

"Profile Your Customers To Expand Industrial Sales. MA 192.

"Marketing Planning Guidelines." MA No. 194.

"Are Your Products And Channels Producing Sales?" MA No. 203.

"Keep Pointed Toward Profit." MA No. 206.

"Pointers On Scheduling Production." MA No. 207.

"The Equipment Replacement Decision." MA No. 212.

"Marketing Research Procedures," SBB 9.

"National Directories for Use in Marketing," SBB 13.

RETURN TO BUSINESS PLANNING AND DECISIONS

RETURN TO MAIN MENU



Management Aids for Small Manufacturers

Washington 25, D. C.

February 1958

WISHING WON'T GET PROFITABLE NEW PRODUCTS

By Austin W. Fisher, Jr., Manager, New England Office, Arthur D. Little, Inc.,
Cambridge, Massachusetts

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SUMMARY

Successful new products, as a rule, result from a carefully - reasoned development policy, plus the time of qualified men, plus money. The "mix" of these ingredients varies, of course, but each is needed. New product plans should fit in with existing company strengths. Physical, human, and financial capabilities must be understood and over-confidence avoided. Useful ideas can come from books, articles, and from trade and professional meetings, but the best ones often come from within the company itself. Whatever the source, ideas are fragile since most people are reluctant to invite criticism. A negative management attitude can kill off creative thinking and, consequently, it is important to remember that the wild-est ideas may have value to others by outright sale or on a royalty basis. New product programs seem to work best when supervised by one key official. Under his direction proposals can be sized-up and acted upon in a careful and coordinated way.

All that is necessary for success is wishing, according to some songs which catch the popular fancy. Some managers seem to believe that this reasoning also applies when it comes to creating a new item for their company's line. However, the high mortality rate among new products indicates that "you can't get something for nothing."

Successful product development work requires willingness to provide three ingredients: A sound policy, time of qualified men, and money. While the relative importance of each may vary widely, none of them can safely be avoided. The gamble in trying to sidestep any of these requirements is great even for large concerns; small firms may be risking their very business lives.

The responsibility for success in a diversifica-

tion program based on developing new products must be borne by management. Decisions on long-range planning, assignment of key men, and commitment of funds can be made only by the chief officers and directors (if the concern is a corporation). Furthermore, little accomplishment can be expected on the part of middle-level executives unless their superiors clearly support and encourage their participation in a definite program. Creativity and drive towards new product objectives will not flourish unless the top man's attitude is favorable.

WHY A NEW PRODUCTS POLICY?

A guiding policy is essential. Much has been said about the need for new products. Among the worthwhile discussions of the subject are the booklets by G. E. Larson and A. A. Smith (see page 4, under "For Further Information") in which excellent bibliographies are included. Therefore, suffice it to say here, that while the need for new and improved products varies for different industries - - and even for individual companies in the same field - - attention to the *future business* of a company is vital.

• **Getting the Facts Straight.** The experience of experts working with companies of all sizes shows that successful new products require a well-planned development program. Such plans vary from fairly broad rules to quite detailed "road maps" of the course of action ahead. They should not, of course, be based on the whims of the boss or on the off-hand preconceptions of an executive committee. Rather, they should be organized to avoid areas of weakness in the company, and to capitalize on resources - - physical and human as well as financial.

The importance of planning is dramatically brought out in Peter Hilton's *New Product Introduction for Small Business Owners* (see also page 4). Over-all, he estimates that only one product of

every 50 placed on the market will be successful 2 years later. A study of 200 companies that were relatively large, well established, and experienced found success in only one out of five new product introductions. The odds can probably be made better if the program is skillfully handled. But it is impossible to eliminate risk altogether.

The failure rates mentioned above apply to products actually offered for sale. Nevertheless, much money can also be wasted on ideas that are abandoned before commercialization. A sound plan can save substantial amounts by resulting in earlier rejection of impractical proposals.

• **Avoiding Overconfidence.** To many it may seem over-cautious to spend time and money on developing and applying a plan when intuition suggests going ahead with what seems to be a good idea. Nevertheless, it has been found that the commonest mistakes underlying new product failures are impatience and insufficient planning; lack of understanding of the market for the product; and too little time, manpower, and money to put it across. Every unsuccessful product is money down the drain with no return -- except experience to use next time. Even that can be worthless if the executives involved repeat errors two or three times, as some do, without learning from mistakes.

Why, indeed, have a sound new product policy? The reply is about the same as the answer to the question: Why insure your plant against fire? By spending a modest amount you can minimize the chances of a really big loss.

WHAT'S INVOLVED IN A NEW PRODUCT POLICY?

Experience shows clearly that, to be successful, a new product must fit somehow into the existing company. In developing a sound policy, the human and physical assets and liabilities of the company should be listed and studied.

• **A Policy Checklist.** A partial checklist of important areas is given below. It suggests the kinds of topics which are significant in deciding what kinds of products can be logically considered. Lack of strength in a given area is not necessarily a criticism of current operation. It is rather a reason for avoiding products which depend for success on strength in that particular area.

- (1) Desires of stockholders and directors
- (2) Management abilities, interests, and experience
- (3) Technical skills
- (4) Types of current production operations
- (5) Quality and availability of labor
- (6) Sales and distribution arrangements and background
- (7) Plant location with respect to markets

- (8) Reputation with consumers
- (9) Product philosophy (specialty or mass production, high or low price ranges, and so on)
- (10) Financial condition
- (11) Raw materials -- availability, cost, location
- (12) Transportation
- (13) Site utilization
- (14) Special competitive factors

Through a searching, objective study based on this sort of checklist you can uncover a number of limitations on the kinds of new products that you should consider at all. For example, a company with an outstanding reputation for high quality specialties would be ill-advised to get into the mass production of a cheap item. A well-established and successful sales organization suggests that new products be suited to this strong resource. Sometimes, a study will suggest that a company should put its present operations in order before considering any new activities at all. Always remember that diversification is not a substitute for good day-to-day management of the existing business.

• **Assistance from Outside.** Some small plant owners have done excellent, objective jobs of analyzing their own companies and establishing a sound policy on new products. Often, however, it is tough going when routine problems keep everyone more than busy. Sometimes agreement among members of management is all but impossible.

Some managers feel, therefore, that the most useful place for retaining outside consultants is in making the analysis on which the firm's new product policy will be based. The recommendations of such an impartial group may not always be pleasant, they say, but may provide a sounder base than can be gained from an internal study. For one thing, the outsider is able to devote his full attention to the job, with no prejudices or traditional approaches to a company's problems. For another thing, and perhaps most important, a good outside specialist will have had a lot of experience in this kind of work. Ultimately, of course, when the policy is established and some evaluation methods have been set up, the company can often handle the processing of product ideas efficiently with its own management and staff.

GIVEN A NEW PRODUCT POLICY - WHAT THEN?

A product policy does not, in itself, provide new products although ideas are frequently generated in the developing of it. Policy is primarily a set of standards against which ideas can be measured. It is still necessary to bring in new ideas, and preferably a large number of them.

• **Preliminary Size-Up.** Before any substantial

amount of work is done on new ideas, each should be given a preliminary evaluation against the policy. Only those which are "in the ball park" should be given any further attention. Priorities should be assigned to those which are kept so that research and development work can be concentrated on the most important ones.

Usually a small company can afford to do justice only to perhaps two to five projects in various stages of development. Furthermore, the expense of actually getting new products onto the market usually restricts the frequency at which they can be introduced and, consequently, the practical level of the overall development effort.

● **Active Development.** Development must be a series of investigations and evaluations, increasingly detailed and critical, so that the practicality of the idea has to pass more and more exacting tests. Marketing information is particularly important. Among the major questions are: Who will be the customers for the new product? How many customers are there? Where are they located? How much and when will they buy? What will they pay? Where will they want to make purchases? Will they want credit? Will they need service? What will it cost to sell the product? What competition will be faced?

Evaluation should be made by key executives or by a new product committee which includes representation from top management. The information needed should be compiled by your technical, marketing, and financial people. Rejection of an idea should occur as soon as it is evident that your company will not benefit by continuing the work. If an idea meets all the tests, the next steps are to design the actual product and the manufacturing process, to estimate capital needs, to make a final projection of manufacturing and marketing costs, and to build up a forecast of sales and profits.

A decision to go ahead is *not* the end of the job, however. Many pitfalls come during the period just before the item is introduced, and during the first few months of its commercial life. All of your development work and projections were *based on estimates* of demand and competition. Many a worthwhile product has died because a company was not alert enough to overcome an unexpected obstacle or make a change necessary to ensure customer acceptance. Such changes may be needed in products, sales technique, distribution system, advertising, packaging, or a combination of several things.

● **Ideas Outside Company Scope.** It may be helpful to say just a word about ideas turned down because they are beyond your sphere of interest. Some of them may be worth a lot to someone else. Many companies have been able to profit from turning such ideas over to others either by outright

sale or on a royalty basis. Patents are helpful in such cases but not essential.

Recently, a small machine shop developed a new tool for use in making one of its own products. This equipment was much better than anything available. But not wanting to go into the machine tool business, the company decided to license the idea to concerns in a position to make use of it. This was done and once the modest cost of working out the licensing arrangements had been paid back, the royalties were a welcome addition to profits.

HOW IS ALL THIS DONE?

As a new products program is carried out, there is a lot of thought and "spade work" necessary. Most companies which are successful assign the responsibility for new product activities to one key man, often a member of top management.

● **Responsible Official.** Having a good man heading up your new products program is important. To supervise the details of collecting ideas, evaluating, developing, and launching them requires constant attention. Much useful information has already been published. More is being released all the time. Many worthwhile books and articles are either of general help or aimed specifically at your particular industry or type of product. New professional studies appear regularly and are presented or reviewed in trade and business magazines. Someone in your company should be responsible for keeping on top of this material so that your firm can take advantage of the knowledge and experience of others.

● **Bringing in the Ideas.** Getting good ideas is probably the most intangible part of the whole process. They can, of course, be obtained outside from books and periodicals and from trade and professional meetings. The best ideas, however, may well come from within the company. Whatever their source, however, ideas are fragile. Most people have a lot of them, but are reluctant to submit them to criticism. The manager who complains that no one in his company ever has a new idea should look at himself to see if he is blocking the flow.

Ideas are not limited to the research man or the new products committee. They can come from the shop, from salesmen, from customers, from competitors, even from the office force. The popular technique of "brainstorming" has proved that the greater the total number of ideas considered, the greater the number of good ones which result. Sometimes the wildest idea will show the way to a sound solution. Another conclusion from brainstorming experience is that it is easy to kill a good idea if the climate is negative.

● **Following Through.** The actual development process varies widely with the type of product. But

the basis of evaluation is common to all - - acceptable profitability within the limits of the company's new product policy. As important new information is developed the projections of market potential, sales price, cost of manufacture, and profit should be revised and the results reviewed by management against the basic policy. The value of this periodic evaluation is not limited to the decision to continue or reject. It shows the way to those remaining problems that are most critical.

IN THE LAST ANALYSIS

When you add up the implications for small plant managers of what has been said here, you come out with three basic points:

- (1) Successful new product development is inevitably the direct responsibility of top management.
- (2) Successful new product development requires a planned program based on objectives which are clear, specific and realistic, and which are accepted and supported by management.
- (3) Successful new product development depends on a willingness on the part of the top man to allocate adequate time of qualified men, plus adequate funds for study and evaluation prior to the decision to launch a new product.

FOR FURTHER INFORMATION

Readers who wish to explore further the subject of new product development and introduction may be interested in the references indicated below. Other good material, of course, could have been cited. However, in keeping with the editorial policy of this series the present listing is necessarily brief and selective. No slight is intended towards authors whose works are not mentioned.

Technology and Your New Products, by A. A.

Smith. Small Business Administration. 1956. Available from the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C. 25 cents.

Successful Commercial Chemical Development, by H. M. Corley. John Wiley & Sons, Inc., 440 Fourth Avenue, New York 16, New York. 1955. \$7.75.

New Product Introduction for Small Business Owners, by Peter Hilton. Small Business Administration. 1955. Available from the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C. 30 cents.

Developing and Selling New Products, (2nd Ed.) by G. E. Larson. Small Business Administration and U. S. Department of Commerce. 1955. Available from the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C., 40 cents.

"Reducing the Risks in Product Development," by F. L. Roberts. No. 82 in *Management Aids for Small Manufacturers*. Small Business Administration, Washington 25, D. C. April 1957. Free.

"Got a New Product? Check These Points." In *Chemical Engineering* for November 1954. McGraw-Hill Publishing Co., 330 West 42nd Street, New York 36, New York. Single copies \$1.

"Fine Points in a Product Development Program," by G. Kendall. In *Product Engineering* for January 1953. McGraw-Hill Publishing Co., 330 West 42nd Street, New York 36, New York. Single copies 50 cents.

"Market Survey of New Products," by G. D. Bieber. In *Chemical Engineering Progress* for December 1952. American Institute of Chemical Engineers, 25 West 45th Street, New York 36, New York. Single copies 75 cents.

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RETURN TO BUSINESS PLANNING AND DECISIONS

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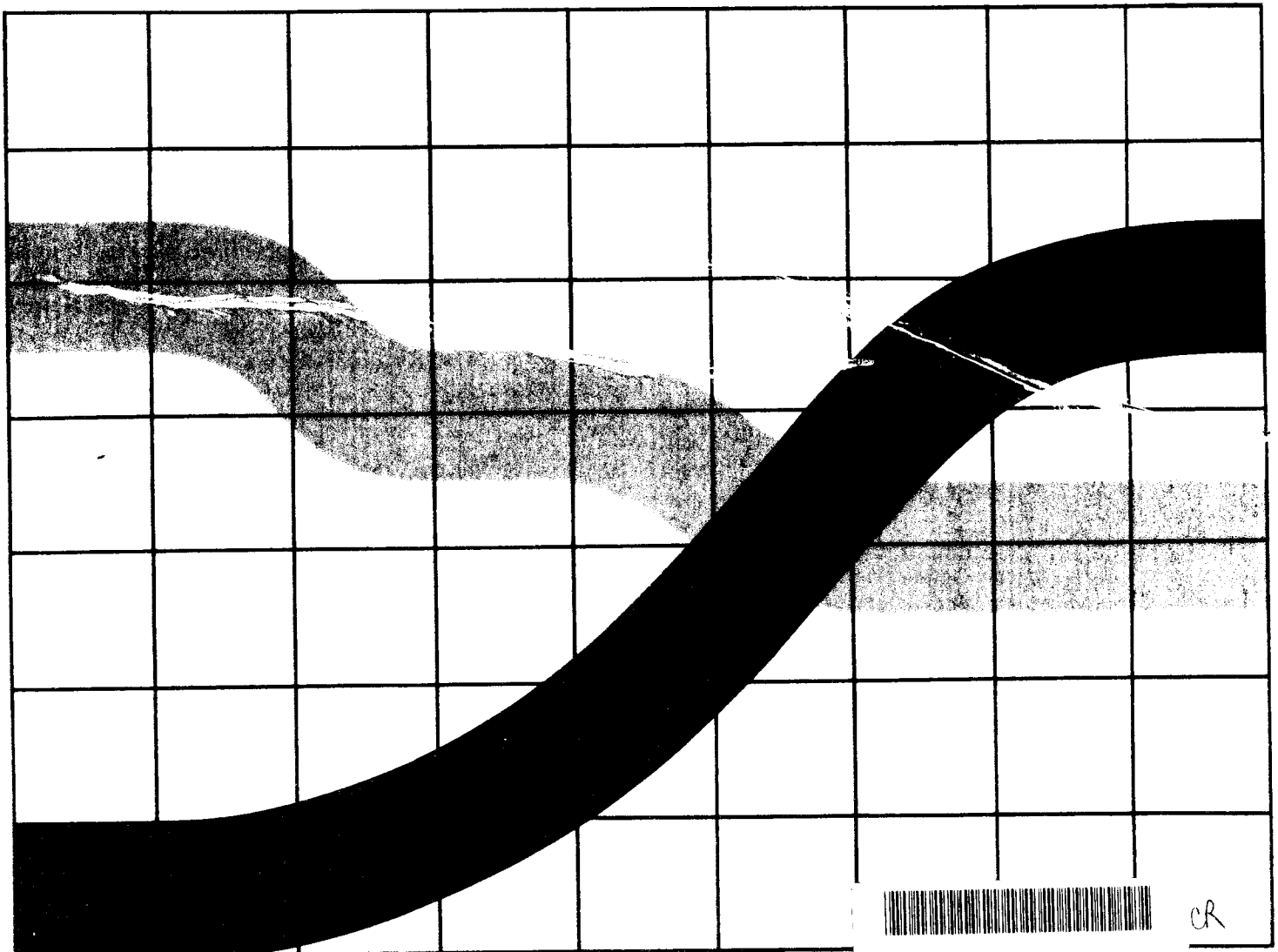
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Attacking Business Decision Problems With Breakeven Analysis

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Summary

Breakeven analysis can be more than a simple tool. It can be an approach for dealing intelligently with uncertainty. There are always difficulties in estimating uncertain variables such as demand, but by specifying the levels of other variables like costs or profit that affect the income of a firm, a required—or minimum—level can be found for the unknown quantity. Any problem requiring income estimation can be set up so that the most difficult variable to estimate is isolated for solution.

This Aid illustrates ways in which breakeven analysis can be applied to sales, profit, cost, and selling price problems and how it can be used to help make sound decisions for employing idle plant capacity, planning advertising, granting credit, and expanding production.

Breakeven analysis is not a panacea. It's only one of the many tools available to the business decision maker. But it's a good tool with which to begin to approach decision problems.

Imagine a firm, the Acme Company. Acme has a vacant plant equipped sufficiently to produce a number of new products. Fixed costs for this facility are \$250,000. Acme is looking at a potential new product for production in this plant. The product, an electric fork, will sell for \$10 apiece and has variable cost for materials, labor, overhead, and other items of \$7.50 per unit.

At present management feels certain that the market for this product is 2 million units per year. The physical capacity of the plant is 15,000 units per month or 180,000 per year.

Simple Breakeven Analysis

Should Acme make electric forks in its vacant plant? To begin to answer we need to find the contribution margin (CM) for the product. Contribution margin is simply what's left of revenue to cover fixed costs and profits after direct out-of-pocket costs have been subtracted; that is:

$$\text{CM} = \text{Revenue} - \text{Variable Costs (VC)}$$

When you subtract fixed costs (FC) from the contribution margin, you get earnings (before interest and taxes).

You can then calculate the breakeven level by dividing fixed costs by CM. If CM is expressed on a per unit basis, the breakeven volume will be expressed in units. If it's expressed as a percent of revenue, the breakeven volume will be in dollars.

Let's look at Acme's electric fork project to see how this works.

Contribution on a Per Unit Basis

$$\begin{aligned}\text{CM} &= \text{Revenue (Price)} - \text{Variable Cost (VC)} \\ &= \$10 - \$7.50 \\ &= \$2.50\end{aligned}$$

$$\begin{aligned}\text{Breakeven volume} &= \frac{\text{Fixed Costs (FC)}}{\text{CM}} \\ &= \frac{\$250,000}{\$2.50} \\ &= 100,000 \text{ units}\end{aligned}$$

Contribution as a Percent of Revenue

$$\begin{aligned}\text{CM \%} &= \frac{\text{Price} - \text{VC}}{\text{Price}} \\ &= \frac{\$10 - \$7.50}{\$10} \\ &= \frac{\$2.50}{\$10} \\ &= 25\%\end{aligned}$$

$$\begin{aligned}\text{BE} &= \frac{\text{FC}}{\text{CM \%}} \\ &= \frac{\$250,000}{25\%} \\ &= \frac{\$250,000}{.25} \\ &= \$1,000,000\end{aligned}$$

Note that you can get the breakeven dollar total by multiplying the breakeven volume in units by the selling price or the number of units by dividing total revenue dollars at breakeven by price.

What's the answer to Acme's question? Well, the simple answer is that it should go ahead with the project. To breakeven they need to capture only 100,000 units worth

or 5% of the estimated market of 2 million units per year. Second, they'll be operating well under the plant's physical capacity of 180,000 units per year at breakeven. Acme ought to be able to make a good profit using the vacant facility, if they can capture more than 5% of the market. With production and sales at capacity it looks like they'd make a profit of \$200,000 before taxes (80,000 units x \$2.50 = \$200,000), since all fixed costs will be covered at the 100,000 unit level.

Unfortunately, this is the *simple* answer. There are some difficulties with this easy as pie approach to Acme's product question.

Some Shortcomings of Breakeven Analysis

The major problem is that no project really exists in isolation. There are alternative uses for the firm's funds in every case. For example, in Acme's case the vacant plant could be leased to another company for some return. It could also be used for another product. We must, therefore, always consider not only the value of an individual project, but how it compares to other uses of the funds and facilities.

Nor does breakeven analysis permit proper examination of cash flows. It's generally accepted in basic financial theory that the appropriate way to make investment or capital decisions is to consider the value of a proposed project's anticipated cash flows. If the discounted value of the cash flows exceeds the required investment outlay in cash, then the project is acceptable.

There are other objections. Breakeven makes many restrictive assumptions about cost-revenue relationships; in normal use it's basically a negative technique, defining constraints rather than looking at benefits; and it's essentially a static tool for analyzing a single period. What all this theory boils down to is that breakeven analysis is too simplistic a technique to be used to make *final investment decisions*.

You might well ask then: If that's true, what is breakeven good for?

Some Basic Uses for Breakeven

1. It's a cheap screening device. Discounted cash flow techniques require large amounts of expensive-to-get data. Breakeven can tell you whether or not it's worthwhile to do more intensive (and costly) analysis.

2. It provides a handle for designing product specifications. Each design has implications for cost. Costs obviously affect price and marketing feasibility. Breakeven permits comparison of possible designs before the specifications are frozen.

For Example, in many small businesses a new product with an uncertain volume is often more feasible if it's made with temporary hand tools and jigs rather than with expensive production tooling. The first method typically has higher variable costs, but lower fixed costs. This often results in a lower breakeven for the project — and lower risks and potential profits. The more automated approach, on the other hand, raises the breakeven, but also raises the risks and profit potential for the company. Breakeven lets you examine these trade-offs.

3. It serves as a substitute for estimating an unknown factor in making project decisions. In deciding whether to go ahead on a project or to skip it, there are always variables to be considered: demand, costs, price, and miscellaneous factors. When most expenses can be determined, only two missing variables remain, profit (or cash flow) and demand. Demand is usually tougher to estimate. By deciding that profit must at least be zero (the breakdown point), you can then fairly simply find the demand you must have to make the project a reasonable undertaking.

You still have to compare the demand figure at breakeven with the market share you think you can capture to judge the worthiness of the project, and you'll have to use your business sense here. But breakeven gives you a way to attack uncertainty, to get onto the target if not into the bull's-eye. Let's look at some examples.

Breakeven Applied to Uncertainty

Profit Margin. The typical breakeven approach develops the volume needed for producing no profit. What if you think you're in business to make a profit?

Using the Acme example, let's say we'd like a 10% profit margin on the project. The original contribution margin for the electric fork was 25%, but that was at zero profit. In effect, our 10% profit acts like a variable cost, so we must adjust CM% accordingly: 25% - 10% = 15%. Now we can calculate breakeven (BE) using the percent of revenue approach:

$$BE = \frac{FC}{CM \%}$$

$$= \frac{\$250,000}{15\%}$$

$$= \mathbf{\$1,666,667}$$
 (or 166,667 units at \$10 each)

This is still below plant capacity. Acme can now look at the market and make a judgment on the probability of selling that many electric forks.

Dollar Profit. What if Acme wants a fixed dollar profit of \$150,000? Here we treat the profit as a fixed cost, so we've got to add it to the fixed cost established for the plant: \$150,000 + \$250,000 = \$400,000. We can now calculate the breakeven volume using the per unit approach:

$$BE = \frac{FC}{CM}$$

$$= \frac{\$400,000}{(\$10 - \$7.50)}$$

$$= \frac{\$400,000}{\$2.50}$$

$$= \mathbf{160,000 \text{ units}}$$
 (or \$1,600,000)

Again this is below capacity. And again somebody has to make a judgment on the likelihood of selling this many units.

Maximum Out-Of-Pocket Cost. Suppose Acme's management can forecast sales with a degree of assurance. They judge that they can sell 150,000 of the new electric forks each year. What out-of-pocket expenses can they incur and still breakeven? First, We've got to change the breakeven formula around a little:

$$BE_{VOL} = \frac{FC}{CM}$$

$$BE_{VOL} \times CM = FC$$

$$CM = \frac{FC}{BE_{VOL}}$$

Now we can find the CM for these circumstances:

$$CM = \frac{\$250,000}{150,000 \text{ units}}$$

$$= \mathbf{\$1.67}$$

Subtracting the CM of \$1.67 from the selling price of \$10, we get \$8.33, the variable cost Acme can incur on each unit and still break even. Similarly, if a \$200,000 profit is desired at the proposed volume, we find that the contribution margin equals \$450,000 divided by 150,000 units or \$3. At this level of desired profit, variable costs must be held to \$7/unit.

This example shows how to use breakeven analysis to help set product specifications. By isolating the *allowed* cost structure, the right product structure restrictions can be determined and the product engineered to the cost requirements or abandoned.

Selling Price. Assume again that variable costs for producing the fork are \$7.50/unit and there are \$250,000 in fixed costs. Add to those data the known sales volume of 150,000 forks and a desire to make a profit of \$100,000 per year. What's the selling price?

$$CM = \frac{FC}{BE_{VOL}}$$

$$= \frac{\$250,000 + \$100,000}{150,000 \text{ units}}$$

$$= \frac{\$350,000}{150,000}$$

$$= \mathbf{\$2.33}$$

The price must equal variable cost plus fixed cost: \$7.50 + \$2.33 = \$9.83. This \$9.83 selling price can now be compared to the existing market price to determine if the Acme fork has a good chance of selling or if the specifications must be altered to get the price down. This approach works well for bidding.

Advertising Decisions. Advertising is essentially a fixed cost. Any added fixed costs raise a firm's breakeven point and thus require added revenue (or lowered variable costs) to pay for them. The money for fixed costs comes from the contribution margin.

In the Acme electric fork example CM % is 25% . Thus, four additional dollars of revenue are required to cover each additional dollar of fixed cost: \$1 ÷ 25% = \$4. (If the Acme project's CM % were 40% , it would take \$2.50 to cover each additional fixed cost dollar, \$10 if the CM % were 10%.)

So, if Acme is considering a \$2500 expenditure for an ad, it knows it will need 4 × \$2500 or \$10,000 in extra sales just to cover the cost of the ad. Here management isn't trying to guess how much in sales they'll get from the ad. Instead, they know how much they must get to be only as well off as they would be without any advertising. This approach provides a built-in standard for judging the results of advertising. If after an appropriate period added sales aren't enough to justify the cost of the ad, it can be abandoned as an approach.

Granting Credit. Suppose Acme is examining a prospective electric fork distributor as a potential credit customer. The distributor expects to buy 500 units per month from Acme. Terms will be net 30 days and it's

conservatively estimated the account will turn over eight times per year. What should Acme do?

First of all, when a new account is taken on, the potential loss for the supplier of credit is the variable cost of the balance carried. In addition, the creditor incurs the costs of carrying and administering the account. Assume in this case that carrying costs amount to 10% of the average balance and administrative costs are fixed at \$500 per year for the new account. The average expected balance is found by taking total sales and dividing by turnover.

$$\begin{aligned}
 \text{Average expected balance} &= \frac{500 \text{ units} \times \$10 \text{ per unit} \times 12 \text{ months}}{8 \text{ times}} \\
 &= \frac{\$60,000}{8} \\
 &= \$7500
 \end{aligned}$$

Fixed costs for taking on this account are, therefore, 10% of this average balance plus the administrative cost: $FC = (\$7500 \times 10\%) + \$500 = \$1250$.

To these fixed costs must be added the variable cost of the average balance, 75% of \$7500 in this instance. (That's the \$7.50/unit variable cost divided by the \$10 price—Acme incurs the \$2.50/unit fixed cost up to breakeven regardless of granting credit or, indeed, selling forks.) So, the potential total cost, including possible loss of the outstanding balance, is:

$$\begin{aligned}
 \text{Total cost} &= (\$7500 \times 75\%) + \$1250 \\
 &= \$5625 + \$1250 \\
 &= \$6875
 \end{aligned}$$

Taking into account that with the fork's CM% of 25%, \$4 of revenue is needed to cover \$1 of additional cost:

$$\begin{aligned}
 BE_{\text{account}} &= \$6875 \times 4 \\
 &= \$27,500
 \end{aligned}$$

Thus, Acme needs \$27,500 in sales to the distributor to insure that the account at least breaks even. Since expected yearly sales are \$60,000, the account should hit that volume in under six months. Again, we've reached the point that managerial judgment must be brought into play.

This is not the most sophisticated approach to credit granting ever proposed, but it does show the expected exposure to loss the account would add. The smaller the

contribution margin and the slower the turnover, the higher the risks will be. Knowing the financial circumstances of the firm seeking credit, management can usually judge easily whether or not that firm can pay its bills for six months or whatever the breakeven period turns out to be. This is the creative treatment of risk analysis.

Labor Costs. So far the examples have been simple and straightforward. Business life, alas, isn't. In the traditional version of breakeven analysis variable costs generally include items such as material, labor, and overhead. In reality, however, some of these costs may not be variable over the operating range of the company.

Here are the figures from the original Acme example in more detailed form:

Product Price		\$10.00/unit
Variable Costs		\$ 7.50/unit
From:	Material	\$4.50/unit
	Overhead & Other	\$.50/unit
	Labor	\$2.50/unit
Fixed Costs		\$250,000/year

The labor cost is based on five crews of five people each at \$10,000 per person per year with each crews producing 20,000 forks annually.

For simplicity we assumed originally that at any level of production total variable costs were \$7.50/unit. People, however, cannot in reality be shifted that smoothly. Thus, in a narrow range of production some labor costs become fixed in effect. This fact can change the breakeven point of the firm. It also affects the contribution margin and pricing, promotion, and similar decisions.

Using the traditional approach it looked as though the breakeven point was 100,000 units. It also appeared that, if another 10,000 units were made and sold, Acme would make a profit of \$25,000 (10,000 unit \times \$2.50 contribution margin per unit). In reality, however, the original breakeven represents the effective capacity of the firm. An extra 10,000 units could be produced only if a new crew is put on at a cost of \$50,000. At the 110,000 unit level we actually find:

Sales: 110,000 units @ \$10/unit	\$1,100,000
Less: Material @ \$4.50/unit	495,000
Overhead @ \$.50/unit	55,000
Labor: 6 crews	300,000
Fixed Costs	250,000
Profit	0

The firm is merely breaking even.

Here, labor has essentially become a fixed cost; overhead and material costs are the only true variable expenses. The CM for the product has changed:

$$\begin{aligned}\text{CM} &= \text{Price} - \text{VC} \\ &= \$10 - (\$4.50 + \$0.50) \\ &= \mathbf{\$5.00/\text{unit}} \text{ (or } 50\% \text{)}\end{aligned}$$

Fixed costs are the facility costs plus the labor costs for six crews: $\text{FC} = \$250,000 + (6 \times \$50,000) = \$550,000$. So now,

$$\begin{aligned}\text{BE}_{\text{VOL}} &= \frac{\text{FC}}{\text{CM}} \\ &= \frac{\$550,000}{\$5.50} \\ &= \mathbf{110,000 \text{ units}} \text{ (or } \$1,100,000\text{)}\end{aligned}$$

Where does that get us? In general, it tells us that the important thing to keep in mind when using breakeven analysis is the true nature of the firm's cost structure. Some firms have a flexible labor force and standard analysis works well.

In many service businesses, however, such as restaurants where idle labor cannot be manipulated smoothly, management must treat such costs differently. In many small businesses certain skilled workers can't be laid off without being lost to competitors. A small printing company with a good press operator or typesetter, for example, can't afford to lay off these key people when business is slow without the risk of losing them permanently. The key to success is to increase revenue to help cover their costs. Pricing these necessary extra sales and making sound advertising and promotion decisions can be greatly aided by using the variations of breakeven analysis discussed.

Breakeven analysis requires *above all* realistic definition of costs, both in amount and type. For many small businesses nearly all costs are fixed. Key people can become fixed costs. To deal with slow periods owner-managers must try to get new business by pricing favorably—marginally. Their products can be sold at a small margin over variable costs, offsetting some fixed costs.

If Acme in the example above were to produce the 10,000 additional forks for which it has available labor capacity and sell them at something above the \$5/unit variable costs, it would make a profit. As long as new business is added to an existing vacancy in capacity, any contribution to covering fixed costs will increase profits or at least reduce losses.

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RETURN TO MAIN MENU

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But the decision to ratchet back production is a significant step, because the auto makers play a huge role in the country's manufacturing economy. GM said it will cut production at its North American factories by about 7% during the fourth quarter.

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**SMALL BUSINESS
ADMINISTRATION**

MANAGEMENT AID
For Small Manufacturers

No.

220

basic budgets

**for
profit
planning**

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SUMMARY

Because he is doing well, sometimes the owner-manager of a small manufacturing company does not take full advantage of proven management techniques that could further increase his profits. One such valuable management tool is a comprehensive budget system.

The purpose of this Aid is to set forth a simple framework of various budgets. Taken together, these budgets can lay out for you the information you need to compile reports, compare figures, analyze data, and be in a good position to plan future production and profits.

Today, most owner-managers recognize the various advantages of budgeting. Briefly, budgeting requires you to consider your basic objectives, policies, plans, resources, and so forth. It requires you to make sure your company is properly organized. It requires you and your key people to undertake a coordinated, comprehensive, and informative effort to achieve common objectives. It helps you insure that proper controls and evaluative procedures are established throughout your company. It encourages and motivates everyone concerned to put forth a good effort. It provides a plan so that all of you know where you are going—as well as why, how, when, and with whom. In short, the budgeting process is a valuable tool in planning for profits.

You can prepare a budget to cover practically any period of time. Usually a 1-year budget is developed. In most cases it is projected on a quarterly basis, with each quarter detailed in months (sometimes even in weeks). Of considerable importance is the possibility that you can also prepare budgets for 2, 3, 5, and 10 years. Or even longer.

The series of simplified examples in this *Aid* will give you a good idea of the various interrelations developed in the budgeting process. (These figures are relative to one given set of values. Of course, different volumes of business would determine different costs and thus affect the realizable profits.) Using these concepts as a framework, you and your staff can set up your own comprehensive profit-planning budget.

In preparing a comprehensive budget picture, you start with the sales budget. Other budgets are related directly or indirectly to this budget. The following is a sales forecast in units:

Sales Budget—Units
For the Year Ended December 31, 19-1

Territory	Total	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
East	26,000	5,000	6,000	7,000	8,000
West	11,000	2,000	2,500	3,000	3,500
	<u>37,000</u>	<u>7,000</u>	<u>8,500</u>	<u>10,000</u>	<u>11,500</u>

Assume you sell a single product and the sales price for it is \$10. Your sales budget in terms of dollars would look like this:

Sales Budget—Dollars
For the Year Ended December 31, 19-1

Territory	Total	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
East	\$260,000	\$50,000	\$60,000	\$70,000	\$80,000
West	110,000	20,000	25,000	30,000	35,000
	<u>\$370,000</u>	<u>\$70,000</u>	<u>\$85,000</u>	<u>\$100,000</u>	<u>\$115,000</u>

Say the estimated per unit cost of the product is \$1.50 for direct material, \$2.50 for direct labor, and \$1.00 for manufacturing overhead. By applying unit costs to the sales budget in units, you would come out with this budget:

Cost of Goods Sold Budget
For the Year Ended December 31, 19-1

	Total	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
Direct material	\$ 55,500	\$10,500	\$12,750	\$15,000	\$17,250
Direct labor	92,500	17,500	21,250	25,000	28,750
Mfg. overhead	37,000	7,000	8,500	10,000	11,500
	<u>\$185,000</u>	<u>\$35,000</u>	<u>\$42,500</u>	<u>\$50,000</u>	<u>\$57,500</u>

Later on, before a cash budget can be compiled, you will need to know the estimated cash requirements for selling expenses. Therefore, you prepare a budget for selling expenses and another for cash expenditure for selling expenses (total selling expenses less depreciation):

Selling Expenses Budget
For the Year Ended December 31, 19-1

	Total	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
Commissions	\$46,250	\$ 8,750	\$10,625	\$12,500	\$14,375
Rent	9,250	1,750	2,125	2,500	2,875
Advertising	9,250	1,750	2,125	2,500	2,875
Telephone	4,625	875	1,062	1,250	1,437
Depreciation—office	900	225	225	225	225
Other	22,225	4,150	5,088	6,025	6,963
	<u>\$92,500</u>	<u>\$17,500</u>	<u>\$21,250</u>	<u>\$25,000</u>	<u>\$28,750</u>

Selling Expenses Budget—Cash Requirements
For the Year Ended December 31, 19-1

	Total	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
Total selling expenses	\$92,500	\$17,500	\$21,250	\$25,000	\$28,750
Less: depreciation expense— office	900	225	225	225	225
Cash requirements	<u>\$91,600</u>	<u>\$17,275</u>	<u>\$21,025</u>	<u>\$24,775</u>	<u>\$28,525</u>

Basic information for an estimate of administrative expenses for the coming year is easily compiled. Again, from that budget you can estimate

cash requirements for those expenses to be used subsequently in preparing the cash budget.

**Administrative Expenses Budget
For the Year Ended December 31, 19-1**

	Total	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
Salaries	\$22,200	\$4,200	\$5,100	\$ 6,000	\$ 6,900
Insurance	1,850	350	425	500	575
Telephone	1,850	350	425	500	575
Supplies	3,700	700	850	1,000	1,150
Bad debt expense	3,700	700	850	1,000	1,150
Other expenses	3,700	700	850	1,000	1,150
	<u>\$37,000</u>	<u>\$7,000</u>	<u>\$8,500</u>	<u>\$10,000</u>	<u>\$11,500</u>

**Administrative Expenses Budget—Cash Requirements
For the Year Ended December 31, 19-1**

	Total	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
Estimated adm. expenses ..	\$37,000	\$7,000	\$8,500	\$10,000	\$11,500
Less: bad debt expense ...	3,700	700	850	1,000	1,150
Cash requirements	<u>\$33,300</u>	<u>\$6,300</u>	<u>\$7,650</u>	<u>\$ 9,000</u>	<u>\$10,350</u>

Now, from the information budgeted so far, you can proceed to prepare the budget income statement. Assume you plan to borrow \$10,000 at the end of the first quarter. Although payable at maturity of the note, the interest appears in the last three quarters of the year. The statement will resemble the following:

**Budgeted Income Statement
For the Year Ended December 31, 19-1**

	Total	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
Sales	\$370,000	\$70,000	\$85,000	\$100,000	\$115,000
Cost of goods sold	185,000	35,000	42,500	50,000	57,500
Gross margin	<u>\$185,000</u>	<u>\$35,000</u>	<u>\$42,500</u>	<u>\$ 50,000</u>	<u>\$ 57,500</u>
Operating expense:					
Selling	\$ 92,500	\$17,500	\$21,250	\$ 25,000	\$ 28,750
Administrative	37,000	7,000	8,500	10,000	11,500
Total	<u>\$129,500</u>	<u>\$24,500</u>	<u>\$29,750</u>	<u>\$ 35,000</u>	<u>\$ 40,250</u>
Net income from operations	\$ 55,500	\$10,500	\$12,750	\$ 15,000	\$ 17,250
Interest expense	450		150	150	150
Net income before income taxes	\$ 55,050	\$10,500	\$12,600	\$ 14,850	\$ 17,100
Federal income taxes ..	27,525	5,250	6,300	7,425	8,550
Net income	<u>\$ 27,525</u>	<u>\$ 5,250</u>	<u>\$ 6,300</u>	<u>\$ 7,425</u>	<u>\$ 8,550</u>

Estimating that 90 percent of your account sales are collected in the quarter in which they are made, that 9 percent are collected in the quarter following the quarter in which the sales were made, and that 1 percent of account sales are uncollectible, your accounts receivable budget of collections would look like this:

**Budget of Collections of Accounts Receivable
For the Year Ended December 31, 19-1**

	Total (net)	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
4th Quarter Sales 19-0 ..	\$ 6,000	\$ 6,000			
1st Quarter Sales 19-1 ..	69,300	63,000	\$ 6,300		
2nd Quarter Sales 19-1 ..	84,150		76,500	\$ 7,650	
3rd Quarter Sales 19-1 ..	99,000			90,000	\$ 9,000
4th Quarter Sales 19-1 ..	103,500				103,500
	<u>\$361,950</u>	<u>\$69,000</u>	<u>\$82,800</u>	<u>\$97,650</u>	<u>\$112,500</u>

Going back to the sales budget in units, now prepare a production budget in units. Assume you have 2,000 units in the opening inventory and want to have on hand at the end of each quarter the following quantities: 1st quarter, 3,000 units; 2nd quarter, 3,500 units; 3rd quarter, 4,000 units; and 4th quarter, 4,500 units.

Production Budget—Units
For the Year Ended December 31, 19-1

	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
Sales requirements	7,000	8,500	10,000	11,500
Add: ending inventory requirements	3,000	3,500	4,000	4,500
Total requirements	10,000	12,500	14,000	16,000
Less: beginning inventory	2,000	3,000	3,500	4,000
Production requirements	<u>8,000</u>	<u>9,000</u>	<u>10,500</u>	<u>12,000</u>

Next, based on the production budget, prepare a budget to show the purchases needed during each of the four quarters. Expressed in terms of dollars, you do this by taking the production and inventory figures and multiplying them by the cost of material (previously estimated at \$1.50 per unit). You could prepare a similar budget expressed in units.

Budget of Direct Materials Purchases
For the Year Ended December 31, 19-1

	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
Required for production	\$12,000	\$13,500	\$15,750	\$18,000
Required for ending inventory	4,500	5,250	6,000	6,750
Total	\$16,500	\$18,750	\$21,750	\$24,750
Less: beginning inventory	3,000	4,500	5,250	6,000
Required purchases	<u>\$13,500</u>	<u>\$14,250</u>	<u>\$16,500</u>	<u>\$18,750</u>

Now suppose you pay 50 percent of your accounts in the quarter of the purchase and 50 percent in the following quarter. Carryover payables from last year were \$5,000. Further, you always take the purchase discounts as a matter of good business policy. Since purchases net (less discount) were figured into the \$1.50 cost estimate, purchase discounts do not appear in the budgets. Thus your payment on purchases budget will come out like this:

Payment on Purchases Budget
For the Year Ended December 31, 19-1

	Total	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
4th Quarter—19-0	\$ 5,000	\$ 5,000			
1st Quarter—19-1	13,500	6,750	\$ 6,750		
2nd Quarter—19-1	14,250		7,125	\$ 7,125	
3rd Quarter—19-1	16,500			8,250	\$ 8,250
4th Quarter—19-1	9,375				9,375
Payments by Quarters ..	<u>\$58,625</u>	<u>\$11,750</u>	<u>\$13,875</u>	<u>\$15,375</u>	<u>\$17,625</u>

Taking the data for quantities produced from the production budget in units, calculate the direct labor requirements on the basis of units to be produced. (The number and cost of labor hours necessary to produce a given quantity can be set forth in supplemental schedules.)

Direct Labor Budget—Cash Requirements
For the Year Ended December 31, 19-1

	Total	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
Quantity	39,500	8,000	9,000	10,500	12,000
Direct labor cost	\$98,750	\$20,000	\$22,500	\$26,250	\$30,000

Now outline the items that comprise your factory overhead, and prepare a budget like the following:

**Manufacturing Overhead Budget
For the Year Ended December 31, 19-1**

	Total	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
Heat and power	\$10,000	\$1,000	\$2,500	\$ 3,000	\$ 3,500
Factory supplies	5,300	1,000	1,500	1,800	1,000
Property taxes	2,000	500	500	500	500
Depreciation	2,800	700	700	700	700
Rent	8,000	2,000	2,000	2,000	2,000
Superintendent	9,400	2,800	1,800	2,500	4,300
	<u>\$39,500</u>	<u>\$8,000</u>	<u>\$9,000</u>	<u>\$10,500</u>	<u>\$12,000</u>

Figure the cash payments for manufacturing overhead by subtracting depreciation, which requires no cash outlay, from the totals above, and you will have the following breakdown:

**Manufacturing Overhead Budget—Cash Requirements
For the Year Ended December 31, 19-1**

	Total	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
Production—units	39,500	8,000	9,000	10,500	12,000
Mfg. overhead expenses ...	\$39,500	\$8,000	\$9,000	\$10,500	\$12,000
Less: depreciation	2,800	700	700	700	700
Cash requirements	<u>\$36,700</u>	<u>\$7,300</u>	<u>\$8,300</u>	<u>\$ 9,800</u>	<u>\$11,300</u>

Now comes the all important cash budget. You put it together by using the Collection of Accounts Receivable Budget; Selling Expenses Budget—Cash Requirements; Administrative Expenses Budget—Cash Requirements; Payment of Purchases Budget; Direct Labor Budget—Cash Requirements; and Manufacturing Budget—Cash Requirements.

Take \$15,000 as the beginning balance, and assume that dividends of \$20,000 are to be paid in the fourth quarter.

**Cash Budget
For the Year Ended December 31, 19-1**

	Total	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
Beginning cash balance ..	\$ 15,000	\$15,000	\$ 3,850	\$ 13,300	\$ 25,750
Cash collections	361,950	69,000	82,800	97,650	112,500
Total	<u>\$376,950</u>	<u>\$84,000</u>	<u>\$86,650</u>	<u>\$110,950</u>	<u>\$138,250</u>
Cash payments					
Purchases	\$ 58,625	\$11,750	\$13,875	\$ 15,375	\$ 17,625
Direct labor	98,750	20,000	22,500	26,250	30,000
Mfg. overhead	36,700	7,300	8,300	9,800	11,300
Selling expense	91,600	17,275	21,025	24,775	28,525
Adm. expenses	33,300	6,300	7,650	9,000	10,350
Federal income tax ..	27,525	27,525			
Dividends	20,000				20,000
Interest expense	450				450
Loan repayment	10,000				10,000
Total	<u>\$376,950</u>	<u>\$90,150</u>	<u>\$73,350</u>	<u>\$ 85,200</u>	<u>\$128,250</u>
Cash deficiency					(\$6,150)
Bank loan received	10,000				10,000
Ending cash balance	<u>\$ 10,000</u>	<u>\$ 3,850</u>	<u>\$13,300</u>	<u>\$ 25,750</u>	<u>\$ 10,000</u>

Now you are ready to prepare a budget balance sheet. Take the account balances of last year and combine them with the transactions reflected in the various budgets you have compiled. You will come out with a sheet resembling this:

**Budgeted Balance Sheet
December 31, 19-1**

Assets		19-1	19-0
Current assets:			
Cash		\$ 10,000	\$ 15,000
Accounts receivable		11,500	6,666
Less: allowance for doubtful accounts		(1,150)	(666)
Inventory:			
Raw materials		6,750	3,000
Finished goods		22,500	10,000
Total current assets		\$ 49,600	\$ 34,000
Fixed assets:			
Land		\$ 50,000	\$ 50,000
Building		148,000	148,000
Less: allowance for depreciation		(37,000)	(33,300)
Total fixed assets		\$161,000	\$164,700
Total assets		\$210,600	\$198,700
 Liabilities and Shareholders' Equity			
Current liabilities:			
Accounts payable		\$ 9,375	\$ 5,000
Shareholders' equity:			
Capital stock (10,000 shared; \$10 par value)		\$100,000	\$100,000
Retained earnings		101,225	93,700
		\$201,225	\$193,700
Total liabilities and shareholders' equity		\$210,600	\$198,700

In order to make the most effective use of your budgets to plan profits, you will want to establish reporting devices. Throughout the time span you have set, you need periodic reports and reviews on both efforts and accomplishments. These let you know whether your budget plan is being attained and help you keep control throughout the process. It is through comparing actual performance with budgeted projections that you maintain control of the operations.

Your company should be structured along functional lines, with well-identified areas of responsibility and authority. Then, depending upon the size of your company, the budget reports can be prepared so as to correspond with the organizational structure of the company.

Two typical budget reports are shown below to demonstrate various forms these reports may take:

**Report of Actual and Budgeted Sales
For the Year Ended December 31, 19-1**

	Actual sales	Budgeted sales	Variations from budget (under)	
			Quarterly	Cumulative
	\$	\$	\$	\$
1st Quarter				
2nd Quarter				
3rd Quarter				
4th Quarter				

**Budgeted Report on Selling Expenses
For the Year Ended December 31, 19-1**

Budget This Month	Actual This Month	Variation This Month	Budget Year to Date	Actual Year to Date	Variations Year to Date	Remarks

FOR FURTHER INFORMATION

Readers who wish to explore various ways to use budgeting for profit planning, may be interested in the references below. The list is necessarily brief and selective; however, no slight is intended toward authors whose works are not mentioned. (Prices are subject to change.)

Budgeting: Profit Planning and Control by Glenn A. Welch. 3d ed. 1971. \$17.80. Prentice-Hall, Inc., Englewood Cliffs, N.J. 07632

The Capital Budgeting Decision by Harold Bierman, Jr., and Seymour Smidt. 3d ed. 1971. \$8.95. Macmillan Company, 866 Third Avenue, New York, N.Y. 10022

Cost Accounting: A Managerial Emphasis by Charles T. Horngren. 3d ed. 1971. \$13.95. Prentice-Hall, Inc., Englewood Cliffs, N.J. 07632

Cost Accounting: Principles and Practice by John J. W. Neuner and Samuel Frumer. 8th ed. 1972. \$11.95. Richard D. Irwin, Inc., 1818 Ridge Road, Homewood, Ill. 60430

Financial Statements of Small Business by S. B. Costales. 1970. \$6.50. S. B. Costales, 18 Ventura Drive, Danielson, Conn. 06239

The following booklets are published by the Small Business Administration in the *Small Business Management Series*. They may be examined in your nearest SBA office or ordered from the Superintendent of Documents, Washington, D.C. 20402:

Cost Accounting for Small Manufacturers, 2d ed., SBMS No. 9, 75 cents

Handbook of Small Business Finance, 7th ed., SBMS No. 15, 45 cents

Ratio Analysis for Small Business, 3d ed., SBMS No. 20, 35 cents

Guides for Profit Planning, SBMS No. 25, 35 cents

The following SBA management assistance publications are available free at your nearest SBA office:

"What Is the Best Selling Price?" *Management Aid* No. 193

"Budgeting in a Small Service Firm" *Small Marketers Aid* No. 146

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Management Aids for Small Manufacturers

Washington 25, D. C.

July 1959

WATCH YOUR CASH

By John Paul Jones, President, John Paul Jones Associates, Inc., San Francisco, California.

SUMMARY

Busy small-firm managers often neglect the job of financial planning. Then the business runs into difficulties. It finds itself short of cash. It can't pay its bills. Cash management is essential if a business is to operate successfully. You must have money to meet *all* your commitments — including withdrawals and dividends. Your cash position at any given time is a significant index of your concern's ability to grow. Even though other assets may be in good condition, they are no substitutes for cash. You can't pay off obligations with accounts receivable, nor with inventory, nor with new orders, nor with any capital asset. Many small plant managers overlook the fact that in times of prosperity and expansion they have to watch their cash more carefully than ever. Many put off studying their cash needs because they think it will be difficult and costly. Effective cash management, however, is often neither difficult nor costly. This Aid offers some practical suggestions on control and planning.

Watching, planning, managing, and conserving cash can be both simple and direct. To start off, you need to understand clearly two facts about cash. One has to do with *capital* cash and the other with *working* cash.

Capital cash may be thought of as represented by the funds spent for buildings, fixtures, machinery, equipment, and tools; that is, items that became fixed assets on your balance sheet. Sources of capital cash are investment (someone's savings), earned and retained profits from operations, and reserves set aside for depreciation.

Working cash may be thought of as represented by the funds spent for materials, labor, and overhead — all expense items incident to the operation of your business. The principal source of working cash must be income produced by the business.

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RECOGNIZE THE DIFFERENCES

Many small business owner-managers fail to recognize the differences between capital cash and working cash. They don't understand the role that each kind plays in a business. As a result, they make mistakes in cash management.

For example, failure to distinguish capital cash from working cash — and the requirements for each — led the Crampton Company (name disguised), a small road building and paving contracting firm, into extreme difficulties. It went out after, and landed, its biggest job boosting volume for the year 60 percent above the average of the four previous years. The job was successfully completed. But because Crampton purchased all the required extra equipment, the firm ended the year with its largest profit and no cash. It had to borrow to pay income taxes.

The point is this: All, or at least a major portion, of the extra equipment should have been leased. Cash should have been conserved. A highly efficient road grader was no substitute for cold cash.

Here's another case in point: Two physical units, a bakery-coffee shop and a bar-restaurant, had been operated profitably by two brothers and a brother-in-law. Then they got into trouble because these three owners could agree on only one thing — that real estate was a good investment. Whenever they had any cash, not needed immediately to pay current bills, they used it to buy property. When they ran out of money they couldn't pay their bills, much less take discounts. Finally they had to sell off a major portion of real estate not used in the business.

CHECK YOUR CASH FLOW

Working cash, as the term implies, is that portion of your firm's working capital that is constantly in the form of cash. During the normal course of operation, cash "flows." That is to say it changes into materials and labor and overhead, then into finished goods, then into receivables, and finally back into cash. That is the complete cash-to-cash cycle.

Each business has its own time sequence for working cash to flow from costs to sales and back to

cash. For good cash management you have to know the approximate timing and amounts of cash you need at any given time to support any given volume of business.

To work out the pattern of your own cash cycle you need only a few simple calculations. Start by classifying and averaging each of your major income and out-go items. For example, how long does it take to collect your money from credit sales? Check the number of days from the date a product was sold to the date the payment was made. Using a similar approach, the flow of cash may be timed in practical terms for other items.

In contrast to a manufacturing operation think of a restaurant. It has a rapid cash cycle. Income is cash available daily. The major out-go items are wages and food, which are on a weekly basis. Other expenses like supplies, services, utilities, and rent are paid monthly. The cash cycle is completed once each month.

One small restaurant had an annual sales volume of \$240,000. But due to the fact that it was located in a resort area and drew most of its trade from tourists, it had wide variations in volume. In fact, it did about two-thirds of its business in less than 6 months. This condition produced an uneven requirement for working cash. By establishing a weekly cash-on-hand schedule as of each Monday morning, the manager was able to increase his net profit from less than 2 percent to over 6 percent. Minimum cash requirements ran from a low of 55 percent to as high as 260 percent of weekly volume.

Take another situation. A lumber and building supply dealer has a relatively slow cash cycle. His income is 16 percent cash sales, and 84 percent credit. He'll have a combination of 40, 60, and 90 day accounts receivable with an average collection period of 48 days. The major out-go items are purchases and wages. Purchases are on an accounts payable basis, with the average payable period 61 days. Wages are semi-monthly. Here the cash cycle is completed in just under 3 months.

One growing lumber and building supply firm had annual net sales of \$420,000. Under the pressure of a bank's unwillingness to increase outstanding term loans, it established a cash requirements schedule as of the first day of each month. By conserving and managing its cash, the firm increased inventory turnover from 4.4 to 5.4 times in a single year. It also decreased receivables from an average of 48 days to 36 days. Through a combination of cash purchases and discounts on payables, it made savings calculated at twice the cost of interest on bank borrowings. With the help of the bank this company has recently acquired another yard in an adjacent area.

WHAT THE CASH CYCLE MEANS

The cash cycle of any going business is clear-cut evidence of how that business is operated. It

can and does vary, of course, even within businesses of a similar kind. But analysis -- by tracing the flow and timing of cash, in through sales and out through purchases and expenses -- will reveal the pattern of how the concern uses its cash.

Simplicity should be your objective in setting up a cash requirements schedule. Based upon the analysis of (1) actual cash use, (2) cash requirements, and (3) your firm's studied and expressed wishes, a forecast by weeks, months, or quarters can be developed. A year's projection by months showing cash needs in terms of dollars is the most common. In some few instances a longer period is used for special reasons.

Such a cash forecast provides the small business owner-manager with a practical financial tool. This tool makes much easier the job of controlling those internal operating factors that must be decided and acted upon to keep the business running soundly.

Figure 1 shows a typical forecast of operations and cash flow. In preparing it the manager of the "Wombat" (name disguised) Manufacturing Company made the following assumptions on which projections could be based:

1. Sales will develop unevenly over the year, but on a fairly predictable monthly pattern.
2. Beginning and ending inventories will be constant, but variations will occur during the year according to production needs.
3. Sales will be made on credit terms and outstanding receivables will equal sales made during the preceding 2 months.
4. Purchases will also be made on credit and paid for in the month following delivery.
5. Working cash out-flow for general and administrative expense will be confined to the month indicated by the operating budget.
6. Capital cash out-flow for adding fixed assets will be planned in advance and accounted for in the forecast.

DECISIONS AND ACTIONS

Planning, scheduling, observing, and managing cash, highlights the more important decisions and actions small business managers constantly make. Some of these decisions and actions are:

(1) **Profit Margins:** For a business to have cash, profits must be earned from operations. A key factor in profitable business is the margin between cost and price - the difference between what a product or service costs to make and sell, and what it is sold for. Watching cash protects margins. To maintain profit margin requires continuous thoughtful vigilance.

(2) **Credits:** Accounts receivable are not cash. Credit losses are direct deduction from profits. So grant credit with care, on terms that are firm and understood by the debtor. See that collections are in keeping with terms granted. Go out after the delinquents. Most consumer and business debtors

"WOMBAT" MANUFACTURING COMPANY
Forecast for 1959

	1st Qtr.			2nd Qtr.			3rd Qtr.			4th Qtr.			TOTALS
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Monthly Operations													
Net Sales	17500	17500	20000	20000	22500	22500	30000	40000	37500	32500	22500	17500	\$300000
Less: Material used	8750	8750	10000	10000	11250	11250	15000	20000	18750	16250	11250	8750	150000
Direct Labor	1750	1750	2000	2000	2250	2250	3000	4000	3750	3250	2250	1750	30000
Other Mfg. Exp.	2625	2625	3000	3000	3375	3375	4500	6000	5625	4875	3375	2625	45000
Cost of Goods Sold	13125	13125	15000	15000	16875	16875	22500	30000	28125	24375	16875	13125	225000
Gross Profit	4375	4375	5000	5000	5625	5625	7500	10000	9375	8125	5625	4375	75000
Less: Sales Expense	3750	3750	3750	3750	3750	3750	3750	3750	3750	3750	3750	3750	45000
Gen. & Ad. Exp.	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	21000
Operating Profit	(1125)	(1125)	(500)	(500)	125	125	2000	4500	3875	2625	125	(1125)	9000
Cash Flow													
Cash Bal. (beginning)	5000	7000	3375	1000	1750	1250	2625	1500	1625	3000	1875	2000	
Receipts from Receivables	22500	17500	17500	17500	20000	20000	22500	22500	30000	40000	37500	32500	
Total Available Cash	27500	24500	20875	18500	21750	21250	25125	24000	31625	43000	39375	34500	
Less Disbursements													
Trade Payables	10000	10000	11250	11250	15000	20000	18750	16250	11250	8750	8750	8750	
Direct Labor	2000	2250	2375	3000	4000	3750	3250	2125	1750	1750	1750	2000	
Other Mfg. Expenses	3000	3375	3250	4500	6000	5625	4875	3500	2625	2625	2625	3000	
Sales Expense	3750	3750	3750	3750	3750	3750	3750	3750	3750	3750	3750	3750	
Gen. & Admin. Exp.	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	
Fixed Asset Additions				2500	2500	2500							
Repay. of Bank Loans									7500	22500	18750	8750	
Total Disbursements	20500	21125	22375	26750	33000	37375	32375	27375	28625	41125	37375	28000	
Indicated Cash Shortage			1500	8250	11250	16125	7250	3375					
Bank Loans to be Obtained			2500	10000	12500	18750	8750	5000					
Cash Bal. (ending)	7000	3375	1000	1750	1250	2625	1500	1625	3000	1875	2000	6500	
Materials purchased	10000	11250	11250	15000	20000	18750	16250	11250	8750	8750	8750	10000	
Month-end Position													
Accounts Receivable	35000	35000	37500	40000	42500	45000	52500	70000	77500	70000	55000	40000	
Inventory	43000	46875	48750	56250	69250	80500	82500	69250	54250	43000	39250	41250	
Accounts Payable	10000	11250	11250	15000	20000	18750	16250	11250	8750	8750	8750	10000	
Bank Loans Payable			2500	12500	25000	43750	52500	57500	50000	27500	8750		

Figure 1

are proud to pay on time. Be sure to make your customers proud by seeing that they pay up promptly.

(3) **Overbuying:** Inventory is not cash. But purchases must be *paid for* in cash. Maintain a balanced inventory to avoid over or underbuying. Review the effect of each on cash. A supplier, of course, tries as hard to sell to you as you try to sell to your customers. A special-price purchase of more than you need can seriously upset your cash position. Confining special purchases to cash and the taking of normal trade discounts will, in the long run, usually result in better profits and a stronger financial structure.

(4) **Overtrading:** To seek big volume at cut prices may be enticing, but it can lead to profit disaster and a cash squeeze. It is often better to take less volume and maintain margins and cash. Remember that, at times, price competition can become so

tough that it is good business to let the other fellow have the business. Watching cash places a damper on down-trading — a business bad habit.

(5) **Expense Control:** Scheduling cash and observing cash flow can do more to hold down operating expenses than any other readily available small business index. Effective control of expense is attained by avoiding cost commitments. Furthermore, it is much easier to avoid added expense than it is to reduce expenses once added.

(6) **Working vs. Capital Cash:** To avoid confusion and the over extension of capital cash to the detriment of working cash, a simple device can be used. Use two check books: One account, one color for all *working* cash payments, another account and color for all *capital* cash payments. Watch, especially carefully, all capital cost commitments.

Large, publicly owned and professionally managed corporations have long recognized the need for and used cash cycle schedules - both for capital and operation cash. When to expand, when to defer, when to curtail are determined from timely knowledge of cash requirements in relation to volume, profit margin and the availability of funds.

FOR FURTHER INFORMATION

Businessmen who wish to explore further the subject of cash management may be interested in the references given below. Other good material, of course, could have been mentioned; however, in keeping with the editorial policy of the series this list has to be brief. No slight is intended towards authors whose works are not included.

Budgeting -- Principles and Practice, by H. C. Heiser. The Ronald Press Co., 15 E. 26th St., N. Y. 1959. \$10.00.

"Planning Your Working Capital Requirements,"

by E. F. Reiter. *Management Aids for Small Manufacturers* No. 74, June 1956. Small Business Administration, Washington 25, D. C. Free.

"Basic Accounting for Small Partnerships," by Dixon Fagerberg. *Small Marketers Aids* No. 29, Nov. 1957. Small Business Administration, Washington 25, D. C. Free.

A Handbook of Small Business Finance (3rd Edition), by R. B. Tower. Small Business Administration. 1957. Available from Superintendent of Documents, Washington 25, D. C. 30 cents.

Practical Financial Statement Analysis (3rd Edition), by R. A. Foulke. McGraw-Hill Book Company, 330 W. 42nd St., New York 36, N. Y. 1957. \$10.50.

Fundamental Principles of Accounting, by C. A. Mayer and H. T. Scovill. John Wiley and Sons, Inc., 440 Fourth Ave., New York 16, N. Y. 1954. \$6.25.

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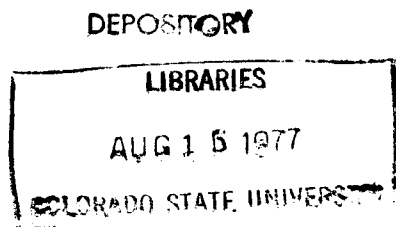
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The ABC's of Borrowing



Revised by Staff Members, Financial Assistance,
Small Business Administration, Washington, D.C.

Revised April 1977

Summary

Some small businesspersons cannot understand why a lending institution refuses to lend them money. Others have no trouble getting funds, but they are surprised to find strings attached to their loans. Such owner-managers fail to realize that banks and other lenders have to operate by certain principles just as do other types of business.

This Aid discusses the following fundamentals of borrowing: (1) credit worthiness, (2) kinds of loans, (3) amount of money needed, (4) collateral, (5) loan restrictions and limitations, (6) the loan application, and (7) standards which the lender uses to evaluate the application.

Introduction

Inexperience with borrowing procedures often creates resentment and bitterness. The stories of three small businesspersons illustrate this point.

"I'll never trade here again," Bill Smith* said when his bank refused to grant him a loan. "I'd like to let you have it, Bill," the banker said, "but your firm isn't earning enough to meet your current obligations." Mr. Smith was unaware of a vital financial fact, namely, that lending institutions have to be certain that the borrower's business can repay the loan.

Tom Jones lost his temper when the bank refused him a loan because he did not know what kind or how much money he needed. "We hesitate to lend," the banker said, "to business owners with such vague ideas of what and how much they need."

John Williams' case was somewhat different. He didn't explode until after he got the loan. When the papers were ready to sign, he realized that the loan agreement put certain limitations on his business activities. "You can't dictate to me," he said and walked out of the bank. What he didn't realize was that the limitations were for his good as well as for the bank's protection.

Knowledge of the financial facts of business life could have saved all three men the embarrassment of losing their tempers. Even more important, such information would have helped them to borrow money at a time when their businesses needed it badly.

This **Aid** is designed to give the highlights of what is involved in sound business borrowing. It should be helpful to those who have little or no experience with borrowing. More experienced owner-managers should find it useful in re-evaluating their borrowing operations.

* All names in *Aids* are disguised.

Is Your Firm Credit Worthy?

The ability to obtain money when you need it is as necessary to the operation of your business as is a good location or the right equipment, reliable sources of supplies and materials, or an adequate labor force. Before a bank or any other lending agency will lend you money, the loaning officer must feel satisfied with the answers to the five following questions:

1. What sort of person are you, the prospective borrower? By all odds, the character

of the borrower comes first. Next is his ability to manage his business.

2. What are you going to do with the money? The answer to this question will determine the type of loan—short- or long-term. Money to be used for the purchase of seasonal inventory will require quicker repayment than money used to buy fixed assets.

3. When and how do you plan to pay it back? Your banker's judgement as to your business ability and the type of loan will be a deciding factor in the answer to this question.

4. Is the cushion in the loan large enough? In other words, does the amount requested make suitable allowance for unexpected developments? The banker decides this question on the basis of your financial statement which sets forth the condition of your business and/or on the collateral pledge.

5. What is the outlook for business in general and for your business particularly?

Adequate Financial Data Is a "Must."

The banker wants to make loans to businesses which are solvent, profitable, and growing. The two basic financial statements he uses to determine those conditions are the balance sheet and profit-and-loss statement. The former is the major yardstick for solvency and the latter for profits. A continuous series of these two statements over a period of time is the principal device for measuring financial stability and growth potential.

In interviewing loan applicants and in studying their records, the banker is especially interested in the following facts and figures.

General Information: Are the books and records up-to-date and in good condition? What is the condition of accounts payable? Of notes payable? What are the salaries of the owner-manager and other company officers? Are all taxes being paid currently? What is the order backlog? What is the number of employees? What is the insurance coverage?

Accounts Receivable: Are there indications that some of the accounts receivable have already been pledged to another creditor? What is the accounts receivable turnover? Is the accounts receivable total weakened because many customers are far behind in their payments? Has a large enough reserve been set up to cover doubtful accounts? How much do the largest accounts owe and what percentage of your total accounts does this amount represent?

Inventories: Is merchandise in good shape or will it have to be marked down? How

forecast is your estimates of cash receipts and disbursements during the budget period. Thus, the budget and the cash forecast together represent your plan for meeting your working capital requirements.

To plan your working capital requirements, it is important to know the "cash flow" which your business will generate. This involves simply a consideration of all elements of cash receipts and disbursements at the time they occur. These elements are listed in the profit-and-loss statement which has been adapted to show cash flow in the box on page 7. They should be projected for each month.

What Kind of Collateral?

Sometimes, your signature is the only security the bank needs when making a loan. At other times, the bank requires additional assurance that the money will be repaid. The kind and amount of security depends on the bank and on the borrower's situation.

If the loan required cannot be justified by the borrower's financial statements alone, a pledge of security may bridge the gap. The types of security are: endorsers, comakers, and guarantors; assignment of leases; trust receipts and floor planning; chattel mortgages; real estate; accounts receivables; savings accounts; life insurance policies; and stocks and bonds. In a substantial number of States where the Uniform Commercial Code has been enacted, paperwork for recording loan transactions will be greatly simplified.

Endorsers, Co-makers, and Guarantors

Borrowers often get other people to sign a note in order to bolster their own credit. These **endorsers** are contingently liable for the note they sign. If the borrower fails to pay up, the bank expects the endorser to make the note good. Sometimes, the endorser may be asked to pledge assets or securities that he owns.

A co-maker is one who creates an obligation jointly with the borrower. In such cases, the bank can collect directly from either the maker or the co-maker.

A guarantor is one who guarantees the payment of a note by signing a guaranty commitment. Both private and government lenders often require guarantees from officers of corporations in order to assure continuity of effective management. Sometimes, a manufacturer will act as guarantor for one of his customers.

Assignment of Leases

The assigned lease as security is similar to the guarantee. It is used, for example, in some franchise situations.

The bank lends the money on a building and takes a mortgage. Then the lease, which the dealer and the parent franchise company work out, is assigned so that the bank automatically receives the rent payments. In this manner, the bank is guaranteed repayment of the loan.

Warehouse Receipts

Banks also take commodities as security by lending money on a warehouse receipt. Such a receipt is usually delivered directly to the bank and shows that the merchandise used as security either has been placed in a public warehouse or has been left on your premises under the control of one of your employees who is bonded (as in field warehousing). Such loans are generally made on staple or standard merchandise which can be readily marketed. The typical warehouse receipt loan is for a percentage of the estimated value of the goods used as security.

Trust Receipts and Floor Planning

Merchandise, such as automobiles, appliances, and boats, has to be displayed to be sold. The only way many small marketers can afford such displays is by borrowing money. Such loans are often secured by a note and a trust receipt.

This trust receipt is the legal paper for floor planning. It is used for serial-numbered merchandise. When you sign one, you (1) acknowledge receipt of the merchandise, (2) agree to keep the merchandise in trust for the bank, and (3) promise to pay the bank as you sell the goods.

Chattel Mortgages

If you buy equipment such as a cash register or a delivery truck, you may want to get a chattel mortgage loan. You give the bank a lien on the equipment you are buying.

The bank also evaluates the present and future market value of the equipment being used to secure the loan. How rapidly will it depreciate? Does the borrower have the necessary fire, theft, property damage, and public liability insurance on the equipment? The banker has to be sure that the borrower protects the equipment.

Real Estate

Real estate is another form of collateral for long-term loans. When taking a real estate

much raw material is on hand? How much work is in process? How much of the inventory is finished goods?

Is there any obsolete inventory? Has an excessive amount of inventory been consigned to customers? Is inventory turnover in line with the turnover for other businesses in the same industry? Or is money being tied up too long in inventory?

Fixed Assets: What is the type, age, and condition of the equipment? What are the depreciation policies? What are the details of mortgages or conditional sales contracts? What are the future acquisition plans?

What Kind of Money?

When you set out to borrow money for your firm, it is important to know the kind of money you need from a bank or other lending institution. There are three kinds of money: short-term money, term money, and equity capital.

Keep in mind that the purpose for which the funds are to be used is an important factor in deciding the kind of money needed. But even so, deciding what kind of money to use is not always easy. It is sometimes complicated by the fact that you may be using some of various kinds of money at the same time and for identical purposes.

Keep in mind that a very important distinction between the types of money is the source of repayment. Generally, short-term loans are repaid from the liquidation of current assets which they have financed. Long-term loans are usually repaid from earnings.

Short-Term Bank Loans

You can use short-term bank loans for purposes such as financing accounts receivable for, say, 30 to 60 days. Or you can use them for purposes that take longer to pay off—such as for building a seasonal inventory over a period of 5 to 6 months. Usually, lenders expect short-term loans to be repaid after their purposes have been served: for example, accounts receivable loans, when the outstanding accounts have been paid by the borrower's customers, and inventory loans, when the inventory has been converted into saleable merchandise.

Banks grant such money either on your general credit reputation with an unsecured loan or on a secured loan—against collateral.

The unsecured loan is the most frequently used form of bank credit for short-term

purposes. You *do not* have to put up collateral because the bank relies on your credit reputation.

The secured loan involves a pledge of some or all of your assets. The bank requires security as a protection for its depositors against the risks that are involved even in business situations where the chances of success are good.

Term Borrowing

Term borrowing provides money you plan to pay back over a fairly long time. Some people break it down into two forms: (1) intermediate—loans longer than 1 year but less than 5 years, and (2) long-term—loans for more than 5 years.

However, for your purpose of matching the kind of money to the needs of your company, think of term borrowing as a kind of money which you probably will pay back in periodic installments from earnings.

Equity Capital

Some people confuse term borrowing and equity (or investment) capital. Yet there is a big difference. You don't have to repay equity money. It is money you get by selling a part interest in your business.

You take people into your company who are willing to risk their money in it. They are interested in potential income rather than in an immediate return on their investment.

How Much Money?

The amount of money you need to borrow depends on the purpose for which you need funds. Figuring the amount of money required for business construction, conversion, or expansion—term loans or equity capital—is relatively easy. Equipment manufacturers, architects, and builders will readily supply you with cost estimates. On the other hand, the amount of working capital you need depends upon the type of business you're in. While rule-of-thumb ratios may be helpful as a starting point, a detailed projection of sources and uses of funds over some future period of time—usually for 12 months—is a better approach. In this way, the characteristics of the particular situation can be taken into account. Such a projection is developed through the combination of a predicted budget and a cash forecast.

The budget is based on recent operating experience plus your best judgment of performance during the coming period. The cash

mortgage, the bank finds out: (1) the location of the real estate, (2) its physical condition, (3) its foreclosure value, and (4) the amount of insurance carried on the property.

Accounts Receivable

Many banks lend money on accounts receivable. In effect, you are counting on your customers to pay your note.

The bank may take accounts receivable on a notification or a nonnotification plan.

Under the **notification** plan, the purchaser of the goods is informed by the bank that his account has been assigned to it and he is asked to pay the bank. Under the **nonnotification** plan, the borrower's customers continue to pay him the sums due on their accounts and he pays the bank.

Savings Accounts

Sometimes, you might get a loan by assigning to the bank a savings account. In such cases, the bank gets an assignment from you and keeps your passbook. If you assign an account in another bank as collateral, the lending bank asks the other bank to mark its records to show that the account is held as collateral.

Life Insurance

Another kind of collateral is life insurance. Banks will lend up to the cash value of a life insurance policy. You have to assign the policy to the bank.

If the policy is on the life of an executive of a small corporation, corporate resolutions must be made authorizing the assignment. Most insurance companies allow you to sign the policy back to the original beneficiary when the assignment to the bank ends.

Some people like to use life insurance as collateral rather than borrow directly from insurance companies. One reason is that a bank loan is often more convenient to obtain and usually may be obtained at a lower interest rate.

Stocks and Bonds

If you use stocks and bonds as collateral, they must be marketable. As a protection against market declines and possible expenses of liquidation, banks usually lend no more than 75 percent of the market value of high grade stock. On Federal Government or municipal bonds, they may be willing to lend 90 percent or more of their market value.

The bank may ask the borrower for additional security or payment whenever the

market value of the stocks or bonds drops below the bank's required margin.

What Are the Lender's Rules?

Lending institutions are not just interested in loan repayments. They are also interested in borrowers with healthy profit-making businesses. Therefore, whether or not collateral is required for a loan, they set loan limitations and restrictions to protect themselves against unnecessary risk and at the same time against poor management practices by their borrowers. Often some owner-managers consider loan limitations a burden.

Yet others feel that such limitations also offer an opportunity for improving their management techniques.

Especially in making long-term loans, the borrower as well as the lender should be thinking of: (1) the net earning power of the borrowing company, (2) the capability of its management, (3) the long range prospects of the company, and (4) the long range prospects of the industry of which the company is a part. Such factors often mean that limitations increase as the duration of the loan increases.

What Kinds of Limitations?

The kinds of limitations, which an owner-manager finds set upon the company depends, to a great extent, on the company. If the company is a good risk, only minimum limitations need be set. A poor risk, of course, is different. Its limitations should be greater than those of a stronger company.

Look now for a few moments at the kinds of limitations and restrictions which the lender may set. Knowing what they are can help you see how they affect your operations.

The limitations which you will usually run into when you borrow money are:

- (1) Repayment terms.
- (2) Pledging or the use of security.
- (3) Periodic reporting.

A loan agreement, as you may already know, is a tailor-made document covering, or referring to, all the terms and conditions of the loan. With it, the lender does two things: (1) protects his position as a creditor (he wants to keep that position in as well a protected

state as it was on the date the loan was made) and (2) assures himself of repayment according to the terms.

The lender reasons that the borrower's business should **generate enough funds** to repay the loan while taking care of other needs. He considers that cash inflow should be great enough to do this without hurting the working capital of the borrower.

Covenants—Negative and Positive

The actual restrictions in a loan agreement come under a section known as covenants. Negative covenants are things which the borrower may not do without prior approval from the lender. Some examples are: further additions to the borrower's total debt, nonpledge to others of the borrower's assets, and issuance of dividends in excess of the terms of the loan agreement.

On the other hand, positive covenants spell out things which the borrower must do. Some examples are: (1) maintenance of a minimum net working capital, (2) carrying of adequate insurance, (3) repaying the loan according to the terms of the agreement, and (4) supplying the lender with financial statements and reports.

Overall, however, loan agreements may be amended from time to time and exceptions made. Certain provisions may be waived from one year to the next with the consent of the lender.

You Can Negotiate

Next time you go to borrow money, thrash out the lending terms before you sign. It is good practice no matter how badly you may need the money. Ask to see the papers in advance of the loan closing. Legitimate lenders are glad to cooperate.

Chances are that the lender may "give" some on the terms. Keep in mind also that, while you're mulling over the terms, you may want to get the advice of your associates and outside advisors. In short, try to get terms which you know your company can live with. Remember, however, that once the terms have been agreed upon and the loan is made (or authorized as in the case of EBA), you are bound by them.

The Loan Application

Now you have read about the various aspects of the lending process and are ready to apply for a loan. Banks and other private lending institutions, as well as the Small Business

Administration, require a loan application on which you list certain information about your business.

For purposes of explaining a loan application, this **Aid** uses the Small Business Administration's application for a loan (SBA Form 4). The SBA form is more detailed than most bank forms. The bank has the advantage of prior knowledge of the applicant and his activities. Since SBA does not have such knowledge, its form is more detailed. Moreover, the longer maturities of SBA loans ordinarily will necessitate more knowledge about the applicant.

Before you get to the point of filling out a loan application, you should have talked with an SBA representative, or perhaps your accountant or banker, to make sure that your business is eligible for an SBA loan. Because of public policy, SBA cannot make certain types of loans. Nor can it make loans under certain conditions. For example, if you can get a loan on reasonable terms from a bank, SBA cannot lend you money. The owner-manager is also not eligible for an SBA loan if he can get funds by selling assets which his company does not need in order to grow.

When the SBA representative gives you a loan application, you will notice that most of its sections ("Application for Loan"—SBA Form 4) are self-explanatory. However, some applicants have trouble with certain sections because they do not know where to go to get the necessary information.

Section 3—"Collateral Offered" is an example. A company's books should show the net value of assets such as business real estate and business machinery and equipment. "Net" means what you paid for such assets less depreciation.

If an owner-manager's records do not contain detailed information on business collateral, such as real estate and machinery and equipment, he sometimes can get it from his Federal income tax returns. Reviewing the depreciation which he has taken for tax purposes on such collateral can be helpful in arriving at the value of these assets.

If you are a good manager, you should have your books balanced monthly. However, some businesses prepare balance sheets less regularly. In filling out your "Balance Sheet as of _____, 19____, Fiscal Year Ends _____," remember that you must show the condition of your business within 60 days of the date on your loan application. It is best to get expert advice when working up such vital information. Your accountant or banker will be able to help you.

Again, if your records do not show the

details necessary for working up profit and loss statements, your Federal income tax returns (Schedule C of Form 1040, if your business is a sole proprietorship or a partnership) may be useful in getting together facts for the SBA loan application.

Insurance

SBA also needs information about the kinds of insurance a company carries. The owner-manager gives these facts by listing various insurance policies. If you place all your insurance with one agent or broker, you can get this information from him.

Personal Finances

SBA also must know something about the personal financial condition of the applicant. Among the types of information are: personal cash position; source of income including salary and personal investments; stocks, bonds, real estate, and other property owned in the applicant's own name; personal debts including installment credit payments, life insurance premiums, and so forth.

Cash Budget

(for three months, ending March 31, 19__)

	January		February		March	
	Budget	Actual	Budget	Actual	Budget	Actual
Expected Cash Receipts:						
1. Cash sales						
2. Collections on accounts receivable						
3. Other income						
4. Total cash receipts						
Expected Cash Payments:						
5. Raw materials						
6. Payroll						
7. Other factory expenses (including maintenance)						
8. Advertising						
9. Selling expense						
10. Administrative expense (including salary of owner-manager)						
11. New plant and equipment						
12. Other payments (taxes, including estimated income tax; repayment of loans; interest; etc.)						
13. Total cash payments						
14. Expected Cash Balance at beginning of the month						
15. Cash increase or decrease (item 4 minus item 13)						
16. Expected cash balance at end of month (item 14 plus item 15)						
17. Desired working cash balance						
18. Short-term loans needed (item 17 minus item 16, if item 17 is larger)						
19. Cash available for dividends, capital cash expenditures, and/or short term investments (item 16 minus item 17, if item 16 is larger than item 17)						
Capital Cash:						
20. Cash available (item 19 after deducting dividends, etc.)						
21. Desired capital cash (item 11, new plant equipment)						
22. Long-term loans needed (item 21 less item 20, if item 21 is larger than item 20)						

Evaluating the Application

Once you have supplied the necessary information, the next step in the borrowing process is the evaluation of your application. Whether the processing officer is in a bank or in SBA, he considers the same kinds of things when determining whether to grant or refuse the loan. The SBA loan processor looks for:

(1) The borrower's debt paying record to suppliers, banks, home mortgage holders, and other creditors.

(2) The ratio of the borrower's debt to his net worth.

(3) The past earnings of the company.

(4) The value and condition of the collateral which the borrower offers for security.

The SBA loan processor also looks for: (1) the borrower's management ability, (2) the borrower's character, and (3) the future prospects of the borrower's business.

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Washington, D.C. 20416

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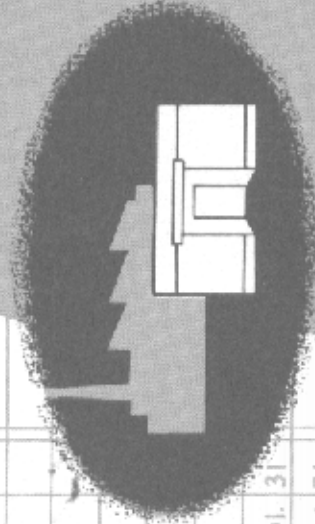
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SMALL BUSINESS MANAGEMENT SERIES NO. 20
(4th Edition)

**Ratio
Analysis
for
Small Business**

by **RICHARD SANZO**

SMALL BUSINESS ADMINISTRATION
WASHINGTON, D.C. 1977





SMALL BUSINESS ADMINISTRATION

**OFFICE OF MANAGEMENT INFORMATION
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About the Author

The author of *Ratio Analysis for Small Business* is Richard Sanzo, an expert on financial ratios and former Dun & Bradstreet executive. Mr. Sanzo has drawn on his many years of experience with that firm to produce this fourth edition of the work he originally wrote in 1957.

Ratio analysis is a valuable management tool for interpreting financial or operating data (from balance sheets, profit-and-loss statements, or both) to detect favorable or unfavorable trends or conditions in business performance. When used with judgment and objectivity—always keeping in mind that like any statistical technique it should be used cautiously—ratio analysis can quickly help business executives spot potential trouble spots. Applied properly the technique can be a valuable aid to sound management.

Ratio Analysis for Small Business is issued as part of the management publications program of SBA's Office of Management Information and Training.

Control in Business Management

WHAT WOULD YOU SAY was the most significant factor in the evolution of business management over the past twenty years? Would you vote for the computer? You'd have a strong point, for, twenty years ago, the computer was just coming out of its infancy.

Only a relative handful of those earliest computers were in use, and they were used mostly for statistical and mathematical computations. Today, of course, the computer plays a wide and universal role in business, not only in sorting and organizing data, but also in controlling production, making forecasts and diverse management reports, preparing payrolls, administering credit, and controlling inventory. In fact, the computer has applications for just about every aspect of business management.

Obviously, very few small businesses own or lease computers. Nonetheless, their electronic shadows fall on many small firms in the form of monthly reports from their banks, their accountants, or as computer-prepared payrolls or accounts receivable controls. But the computer is only a tool—the manager *controls*. And it is this control over the various aspects of business which has evolved most significantly in the past two decades.

This is not meant to discount the importance of sales and

marketing administration. Nothing is more important than finding and serving a customer—as the saying goes, “Sales is the lifeblood of a business.”

Sales techniques, however, haven't changed much in the last twenty years, whereas financial control methods have proliferated. Thus, from the late 1960's on, we have seen the emergence of a new executive position in top management of larger companies, the “Financial Vice-President.” The position includes a variety of responsibilities, ranging from long term planning and budgeting to overseeing expenditures, from supervising accounting programs and watching over profitability to making recommendations to management on all aspects of finance. In short—*controlling*.

And again, obviously, most small businesses can't afford to hire this kind of high-powered financial manager. The small business manager must wear many hats. As one such manager put it while attending a conference of small business owners:

When I came here, my business lost the services of its Chief Executive, Sales Manager, Controller, Advertising Department, Personnel Director, Head Bookkeeper, and Janitor.

Small business owners have to be their own financial vice-presidents, too.

For large business or small, to be successful is, first, to be controlled. A business under proper control watches carefully every dollar that comes in and every dollar that goes out and understands how its capital is to be husbanded, safeguarded, dispersed, and how to keep a portion of its profits for expansion.

Success or Failure Relates to How Management Manages

Why do tens of thousands of businesses disappear each year? Well, not only, of course, because of failure. Some owners simply decide to go into other lines of business. Others take on new associates and form new companies. Others lose interest or find they haven't got the dedication it takes.

On the other hand, an unfortunately large number are forced to close because their businesses are in the midst of bankruptcy,

receivership, assignment, or reorganization under court supervision.

It's been said that more than nine out of ten business failures are caused by some weakness in *management*. This could be overstatement. If a neighborhood grocer suddenly faces competition from a new supermarket opening across the street, or the largest factory in town closes its doors throwing many people out of work, or if fires, floods, or other acts of nature devastate an area, failure can easily follow. There can always be unpredictable circumstances which adversely affect the stability of a business.

However, in most instances, failures result from either the inability of the principals to manage their affairs or mistakes in the way they handled their funds. In failure after failure, it's all too evident that the cause was ignorance, misjudgment, or other human error.

In 1975, for example, there were 11,432 businesses which went bankrupt or were otherwise insolvent. This was the largest total in eight years. These businesses owed more than \$4 billion when they failed. This was by far the largest liability ever recorded for any one year—higher by 25 percent than the dollar liability figure for business failures in 1974.

By no means were these all small concerns. But, whether large or small, most of them failed because of inability to adapt to change or to *control* finances properly.

Those Who Succeed

What about the other side of the coin? What about those who make good?

Let's emphasize one thing first: business success doesn't always depend on the amount of starting capital. One of the largest and most successful building material manufacturing firms in America was started just before the Great Depression by a motivated entrepreneur with just \$500. This kind of success is still possible.

Yet, because of its capital position, it's common to think that small business is always at a disadvantage. The facts argue otherwise. Sure, large business has the advantage of strong capital reserves and specialized staffs for research and promo-

tion—but small business has the compensating advantages of simplicity and flexibility. One recalls the remarks of the president of a small western New York steel mill:

If we get a complaint, or a customer calls us about a problem, I am in the customer's office the next morning with my sales manager and maybe one of our technical men. By the time one of our larger competitors would have begun to study the problem or appointed a committee to look into it, we have already solved the problem or taken care of the complaint and maybe walked off with another order.

But to succeed a small business must be able to use its advantages. To exploit them, the owner-manager must be:

- Competent in production and marketing
- Service minded
- Motivated and hard working
- Able to *control* financial affairs

And so, here we are back at that word—CONTROL—the key to successful management.

Small business managers usually do have a good knowledge of how to get production and sales. Indeed, they could hardly have gone into business without such capability. But many owner-managers educated in the "school of hard knocks" need to build onto that training an understanding of the following fundamentals:

- Correct allocation of expense and overhead items
- Sound credit policies and practices
- Effective inventory control, both in relation to sales and to the operating capital in the business
- Proper balance of assets, such as real estate, machinery, and equipment to capital
- Intelligent management of both current and long term liabilities
- Reasonable apportionment of earnings among competing demands, such as future growth and executive salaries

To help the business owner are two fundamental control

devices for guiding management: the balance sheet and the profit-and-loss (P & L or income) statement. Subsequent chapters will show how maximum use can be made of these devices through ratio analysis.

CHAPTER 2

Business Ratios and How They Work

A BALANCE SHEET tells how a business stands at one given moment in the business year. A profit-and-loss statement sums up the results of operations over a period of time.

Of themselves, these two types of financial documents are a collection of mute figures. But when the assorted financial symbols are interpreted and evaluated, they begin to talk.

A single balance sheet is like the opening chapters of a book—it gives the initial setting. Thus, one balance sheet will show how the capital is distributed, how much is in the various accounts, and how much surplus of assets over liabilities exists. A lone profit-and-loss statement indicates the sales volume for a given period, the amount of costs incurred, and the amount earned after allowing for all costs.

When a series of balance sheets for regularly related intervals, such as fiscal or calendar yearends, is arranged in vertical columns so that related items may be compared, the changes in these items begin to disclose trends. The comparative balance sheets are no longer snapshots, but become X-ray photos of the skeletal structure of all basic management actions and decisions.

Thus, decisions to increase basic inventories because of upward price changes may be revealed in larger quantities of

merchandise on hand from one period to the next. If credits are relaxed and collections slow up when sales remain constant, there may be a successive increase in receivables. If expansion is undertaken, debts may run higher; and if losses are sustained, net worth declines.

Similarly, comparative profit-and-loss statements reveal significant changes in what took place. Were prices cut to meet competition? Then look for a lower gross profit—unless purchasing costs were reduced proportionately. Did sales go up? If so, what about expenses? Did they remain proportionate? Was more money spent on office help? Where did the money come from? How about fixed overhead? Was it controlled? It's only by comparing operating income and cost account items from one period to another that revealing answers are found.

Statements Reveal Important Relationships

In order to make comparisons meaningful, it's helpful to use relationships. If inventories are increased \$50,000, for instance, the significance is difficult to evaluate unless the item is compared with sales and working capital. In other words, could the business really afford that much addition to stock? Did the merchandise turn over as fast as formerly? Or was the result an accumulation of unsalable goods? Thus, you need to relate asset and liability items to something else to make their significance easy to grasp.

Similarly, when you analyze costs in relation to sales, you can translate the cost figures into percentages of the sales. Then, by comparing the percentages from one period to another, you can see whether or not aggregate dollar totals of individual items meant progress or setbacks. Hence, profit-and-loss statements prepared by accountants show not only dollar totals, but usually also the percentages of sales represented by each item. Percentages, of course, are expressions of arithmetical proportions. *Proportions are ratios.*

Three Kinds of Ratios

Broadly speaking, there are three kinds of ratios. The first are

balance sheet ratios which refer to relationships between various balance sheet items. The second are the operating ratios which show the relationships of expense items to net sales. The third group is made up of ratios which show the relationship between an item in the profit-and-loss statement and one on the balance sheet.

Ten Key Ratios

How many different ratios are significant? As might be expected, there's considerable difference of opinion on this question among experts. An early authority, Alexander Wall, while Secretary and Treasurer of Robert Morris Associates, listed 10 ratios in his book, *Basic Financial Statement Analysis*. Roy A. Foulke, another pioneer, concluded that there are 14 important ratios. On the other hand, a study by the American Society of Association Executives, made a number of years ago, found 34 separate types of financial ratios being compiled by 26 different trade associations.

That study suggested, however, that "It should be understood that the range of possible ratios is limited by the number and classification of accounts that are used in various types of business enterprises. Ratio study needs simplification . . . Ratios may lose their significance and accuracy when they become excessively detailed. . . ."

Along this line, a primary objective in this booklet was to narrow down the field of ratios to a working minimum for small business use. Because of this, selection and rejection of material have been necessary. The following ratios, for instance, reflect chiefly balance sheet relationships. A few combine balance sheet and profit and loss items, while one, net profit on net sales, is based exclusively on data from the profit and loss statement. The procedures for preparing an all-balance-sheet study follow the same pattern as those outlined for combined balance-sheet and income-statement analyses.

Against this background, then, the following 10 ratios are suggested as key ones for small business purposes:

1. Current assets to current liabilities.
2. Current liabilities to tangible net worth.

3. Net sales to tangible net worth.
4. Net sales to working capital.
5. Net profits to tangible net worth.
6. Average collection period of receivables.
7. Net sales to inventory.
8. Net fixed assets to tangible net worth.
9. Total debt to tangible net worth.
10. Net profit on net sales.

Brief definitions of these ratios appear below, followed by specific examples using data taken from the balance sheet and profit-and-loss statement on pages 11 and 17. Explanation of the terms of the financial statements used in calculating the ratio is included in the discussion of each ratio.

1. Current assets to current liabilities. Widely known as the "current ratio," this is one test of solvency, measuring the liquid assets available to meet all debts falling due within a year's time.

$$\text{Example: } \frac{\text{Current assets}}{\text{current liabilities}} = \frac{\$151,468}{\$76,968} = 1.97 \text{ times.}$$

Current assets are those normally expected to flow into cash in the course of a merchandising cycle. Ordinarily these include cash, notes and accounts receivable, and inventory, and at times, in addition, short term and marketable securities listed on leading exchanges at current realizable values. While some concerns may consider current items such as cash-surrender value of life insurance as current, the tendency is to treat them as noncurrent.

Current liabilities are short term obligations for the payment of cash due on demand or within a year. Such liabilities ordinarily include notes and accounts payable for merchandise, open loans payable, short term bank loans, taxes, and accruals. Other short term obligations, such as maturing equipment obligations and the like, also fall within the category of current liabilities.

Generally, it's considered advisable for a small business to maintain a current ratio of at least 2 to 1 or close to it for the sake of sound cash flow and healthy financial condition. This is not necessarily a must—particularly if a major part of the current assets are in cash and readily collectible receivables—otherwise, "2 for 1" or better is a pretty good idea.

2. **Current liabilities to tangible net worth.** Like the "current ratio," this is another means of evaluating financial condition by comparing what's owed to what's owned. If this ratio exceeds 80 percent, it's considered a danger sign.

$$\text{Example: } \frac{\text{Current liabilities}}{\text{tangible net worth}} = \frac{\$ 76,968}{\$ 135,880} = 56.6 \text{ percent.}$$

Tangible net worth is the worth of a business, minus any intangible items in the assets such as goodwill, trademarks, patents, copyrights, leaseholds, treasury stock, organization expenses, or underwriting discounts and expenses. In a corporation, the tangible net worth would consist of the sum of all outstanding capital stock—preferred and common—and surplus, minus intangibles. In a partnership or proprietorship, it could be made up of the capital account, or accounts, less the intangibles.

A word about "intangibles." In a going business, these items frequently have a great but undeterminable value. Until these intangibles are actually liquidated by sale, it is difficult for an analyst to evaluate what they might bring. In some cases, they have no commercial value except to those who hold them: for instance, an item of goodwill. To a profitable business up for sale, the goodwill conceivably could represent the potential earning power over a period of years, and actually bring more than the assets themselves. On the other hand, another business might find itself unable to realize anything at all on goodwill. Since the real value of intangible assets is frequently difficult to determine and evaluate, intangibles are customarily given little consideration in financial statement analysis.

3. **Net sales to tangible net worth.** Often called "turnover of tangible net worth," this ratio shows how actively invested capital is being put to work by indicating its turnover during a period. Both overwork and underwork of tangible net worth are considered unhealthy.

$$\text{Example: } \frac{\text{Net sales}}{\text{tangible net worth}} = \frac{\$ 759,016}{\$ 135,880} = 5.6 \text{ times.}$$

There is no particular norm for this ratio. Each line of business tends to establish its own, according to studies made by

Figure 1

ANY SMALL BUSINESS, INC.	
Balance Sheet	
December 31, 19—	
Assets	
Current Assets:	
Cash on hand and in banks	\$ 17,280
Notes receivable	\$19,280
Less notes discounted	12,000
Accounts receivable	\$87,780
Less reserve for bad debts	7,500
Inventories	41,540
Prepayment of expenses	5,088
Total current assets	\$151,468
Plant and equipment:	
Land and building	\$57,980
Equipment, fixtures, and furniture	19,200
Less allowances for depreciation	15,800
Total plant and equipment	61,380
Intangibles:	
Goodwill	2,000
Patents	2,000
Total intangibles	4,000
Total assets	\$216,848
Liabilities	
Current liabilities:	
Notes payable (bank)	\$ 16,000
Accounts payable (trade)	41,288
Taxes payable	14,400
Other payables	5,280
Total current liabilities	\$ 76,968
Long term debt	0
Total liabilities	\$ 76,968
Capital	
Capital stock	\$100,000
Surplus	39,880
Total equity or net worth	\$139,880
Total liabilities and capital	\$216,848

Dun & Bradstreet, Robert Morris Associates, trade associations, and others.

4. Net sales to working capital. Known, as well, as "turnover of working capital" this ratio also measures how actively the working cash in a business is being put to work in terms of sales. Working capital or cash is assets that can readily be converted into operating funds within a year. It does not include invested capital. A low ratio shows unprofitable use of working capital; a high one, vulnerability to creditors.

$$\begin{aligned} \text{Example: } \frac{\text{Net sales}}{\text{working capital}} &= \frac{\text{net sales}}{\text{current assets} - \text{current liabilities}} \\ &= \frac{\$759,016}{\$151,468 - 76,968} = 10.2 \text{ times.} \end{aligned}$$

Deduct the sum of the current liabilities from the total current assets to get working capital, the business assets which can readily be converted into operating funds. A business with \$900,000 in cash, receivables, and inventories and no unpaid obligations would have \$900,000 in working capital. A business with \$900,000 in current assets and \$300,000 in current liabilities also would have \$600,000 working capital. Obviously, however, items like receivables and inventories cannot usually be liquidated overnight. Hence, most businesses require a margin of current assets over and above current liabilities to provide for stock and work-in-process inventory, and also to carry ensuing receivables after the goods are sold until the receivables are collected.

The importance of maintaining an adequate amount of working capital in relation to the amount of annual sales being financed cannot be overemphasized. And it is this degree of adequacy which the ratio of net sales to working capital measures.

5. Net profits to tangible net worth. As the measure of return on investment, this is increasingly considered one of the best criteria of profitability, often the key measure of management efficiency. Profits "after taxes" are widely looked upon as the final source of payment on investment plus a source of funds available for future growth. If this "return on capital" is too low, the capital involved could be better used elsewhere.

$$\text{Example: } \frac{\text{Net profits (after taxes)}}{\text{tangible net worth}} = \frac{\$ 23,768}{\$135,880} = 17.5 \text{ percent.}$$

This ratio relates profits actually earned in a given length of time to the average net worth during that time. Profit here means the revenue left over from sales income and allowing for payment of all costs. These include costs of goods sold, write-downs and chargeoffs, Federal and other taxes accruing over the period covered, and whatever miscellaneous adjustments may be necessary to reduce assets to current, going values. The ratio is determined by dividing tangible net worth at a given period into net profits for a given period. The ratio is expressed as a percentage.

6. Average collection period of receivables. This ratio, known also as the "collection period" ratio, shows how long the money in a business is tied up in credit sales. In comparing this figure with net maturity in selling terms, many consider a collection period excessive if it is more than 10 to 15 days longer than those stated in selling terms. To get the collection period figure, get average daily credit sales, then divide into the sum of notes and accounts receivable.

$$\begin{aligned} \text{Example: } \frac{\text{Net (credit sales for year)}}{365 \text{ days a year}} &= \text{daily (credit) sales } (\$2,079) \\ \text{Average collection period} &= \frac{\text{notes and accounts receivable}}{\text{daily (credit) sales}} \\ &= \frac{\$107,060}{\$ 2,079} = 51.5. \end{aligned}$$

This figure represents the number of days' sales tied up in trade accounts and notes receivable or the average collection received. The receivables discounted or assigned with recourse are included because they must be collected either directly by borrower, or by lender; if uncollected, they must be replaced by cash or substitute collateral. A pledge with recourse makes the borrower just as responsible for collection as though the receivables had not been assigned or discounted. Aside from this, the likely collectibility of all receivables must be analyzed, regardless of whether or not they are discounted. Hence all receivables are included in determining the average collection period.

7. Net sales to inventory. Known also as a "stock-to-sales" ratio, this hypothetical "average" inventory turnover figure is valued for purposes of comparing one company's performance with another, or with the industry's.

$$\text{Example: } \frac{\text{Net sales}}{\text{inventory}} = \frac{\$759,016}{\$41,540} = 18.3 \text{ times.}$$

A manufacturer's inventory is the sum of finished merchandise on hand, raw material, and material in process. It does not include supplies unless they are for sale. For retailers and wholesalers, it is simply the stock of salable goods on hand. It is expected that inventory will be valued conservatively on the basis of standard accounting methods of valuation, such as its cost or its market value, whichever is the lower.

Divide the average inventory into the net sales over a given period. This shows the number of times the inventory turned over in the period selected. It is compiled purely and only for purposes of making comparisons in this ratio from one period to another, or for other comparative purposes. This ratio is not an indicator of physical turnover. The only accurate way to obtain a physical turnover figure is to count each type of item in stock and compare it with the actual physical sales of that particular item.

Some people compute turnover by dividing the average inventory value at cost into the cost of goods sold for a particular period. However, this method still gives only an average. A hardware store stocking some 10,000 items might divide its dollar inventory total into cost of goods sold and come up with a physical average; this however, would hardly define the actual turnover of each item from paints to electrical supplies.

8. Fixed assets to tangible net worth. This ratio, which shows the relationship between investment in plant and equipment and the owner's capital, indicates how liquid net worth is. The higher this ratio, the less the owner's capital is available for use as working capital, to meet debts and payrolls, pay bills, or carry receivables.

$$\text{Example: } \frac{\text{Fixed assets}}{\text{tangible net worth}} = \frac{\$61,380}{\$135,880} = 45.2 \text{ percent.}$$

Fixed assets means the sum of assets such as land, buildings, leasehold improvements, fixtures, furniture, machinery, tools,

and equipment, less depreciation. The ratio is obtained by dividing the depreciated fixed assets by the tangible net worth. Generally, it is inadvisable for a small business to have more than 75 percent of its tangible net worth represented by fixed assets.

9. Total debt to tangible net worth. This ratio also measures "what's owed to what's owned." As this figure approaches 100, the creditors' interest in the business assets approaches the owner's.

$$\begin{aligned} \text{Example: } \frac{\text{Total debt}}{\text{tangible net worth}} &= \frac{\text{current debt} + \text{fixed debt}}{\text{tangible net worth}} \\ &= \frac{\$76,968}{\$135,880} = 56.6 \text{ percent.} \end{aligned}$$

Total debt is the sum of all obligations owed by the company such as accounts and notes payable, bonds outstanding, and mortgages payable. The ratio is obtained by dividing the total of these debts by tangible net worth.

In this case, since there is no long term debt, the result is the same as the ratio of current liabilities to tangible net worth (item 2).

10. Net profit on net sales. This ratio measures the rate of return on net sales. The resultant percentage indicates the number of cents of each sales dollar remaining, after considering all income statement items and excluding income taxes.

A slight variation of the above occurs when net operating profit is divided by net sales. This ratio reveals the profitability of sales—i.e., the profitability of the regular buying, manufacturing, and selling operations of a business.

To many, a high rate of return on net sales is necessary for successful operation. This view is not always sound. To evaluate properly the significance of the ratio, consideration should be given to such factors as (1) the value of sales (2) the total capital employed and (3) the turnover of inventories and receivables. A low rate of return accompanied by rapid turnover and large sales volume, for example, may result in satisfactory earnings.

$$\text{Example: } \frac{\text{Net profits}}{\text{net sales}} = \frac{\$23,768}{\$759,016} = 3.1 \text{ percent.}$$

Analyzing the Profit-and Loss (Income) Statement

Based solely on data taken from the profit-and-loss (P & L) statement, operating ratios show the percentage relationships of each item to a common base of net sales. These percentages may be compared with those of previous periods to measure a firm's performance. They also may be compared to the typical percentages of businesses in similar trades or industries when they are available. Such comparisons will indicate the competitive strengths and weaknesses of a business.

The items included in profit and loss statements vary from business to business. For example, some businesses break down their sales expense to show the costs of salesmen's salaries and commissions, advertising, delivery costs, supplies, and so forth; some do not. In the following explanation of the P & L items, only major items are included.

The following explanations briefly discuss each term in the accompanying condensed profit-and-loss statement (see page 17):

Net sales. This figure represents gross dollar sales minus merchandise returns and allowances. Some accountants also deduct cash discounts granted to customers on the theory that these are actually a reduction of the net selling price; others credit the discounts to "other" expense. "Trade" and "quantity" discounts are, of course, concessions off price, and should be deducted from the gross sales. In setting up the profit-and-loss statement in percentages, the net sales are shown as 100 percent.

Cost of goods sold. For retailers and wholesalers, this figure is the inventory at the beginning, plus purchases, plus "Freight in," and less inventory at the end of the period. "Freight out" is generally shown as delivery expense, either under separate or other sections of the statement.

For manufacturers, there are various additional items to be considered. They include supervision, power, supplies, the direct costs of manufacturing labor (including social security and unemployment taxes on factory employees), that portion of depreciation which enters into cost of production, and many others.

Gross profit on sales. This figure is obtained by deducting cost-of-goods sold from net sales.

Selling expenses. These expenses include such items as salaries of salesmen and sales executives, wages of other sales

Figure 2

ANY SMALL BUSINESS, INC.		
Condensed Profit and Loss Statement		
For year ending December 31, 19—		
Item	Amount	Percent
Gross sales	\$773,888	
Less returns, allowances, and cash discounts	14,872	
Net sales	\$759,016	100.00
Cost of goods sold	589,392	77.65
Gross profit on sales	\$169,624	22.35
Selling expenses	41,916	5.52
Administrative expenses	28,010	3.69
General expenses	50,030	6.59
Financial expenses	5,248	0.69
Total expenses	125,204	16.49
Operating profit	44,420	5.86
Extraordinary expenses	1,200	0.16
Net profit before taxes	\$43,220	5.70
Federal, state, and local taxes	19,542	2.56
Net profit after taxes	\$23,768	3.14

employees, commissions, travel expense, entertainment expense, and advertising.

Operating profit. This is the difference between the gross profit on sales and the sum of the selling expenses.

General and administrative expenses. These expenses include officers' salaries, office overhead, light, heat, communication, salaries of general office and clerical help, cost of legal and accounting services, "fringe" taxes payable on administrative personnel, sundry types of franchise and similar taxes, and other expenses.

Financial expenses. This item would include interest, doubtful accounts, and discounts granted if not already deducted from sales.

Other operating expenses and income. Here might be included various unusual expense items not elsewhere classified, such as moving expenses, against which might be credited income from investments and miscellaneous credits and debits.

Extraordinary charges (if any). Such expenses do not occur very often, but occasionally unusual costs such as losses on sale of unused fixtures and equipment do arise.

Net profit before taxes. This figure is the profit after deducting the regular and extraordinary business charges mentioned above.

Taxes. This item includes the Federal, State, and local taxes paid by the company out of its earnings.

Net profit after taxes. This figure is the final figure showing earnings available for distribution or retention.

Figure 2 illustrates how a condensed profit-and-loss statement would be expressed, first in terms of dollars, then in terms of percentages of net sales. (Not all of the above items are shown.)

CHAPTER 3

Standard or Typical Ratios

HOW MUCH RENT should I pay? How much am I entitled to charge against income for my salary? What should it cost me for making deliveries? What's the average cost of doing business in my line? How much should I pay my sales force?

Hardly academic questions. They are asked by business owners every day, as they talk among themselves, or as they discuss business problems with association executives, bankers, and credit people.

Need for Measurements

On occasion, financing problems arise which introduce further questions. One of the most common is this one: "How much should my business earn on invested capital?" Others are: "I want to buy some machinery. Can I swing the purchase on my present capital, or should I invest more money in the business?" "My competitor's business is for sale; if I buy it, will my operating capital be enough to finance both businesses?" "How fast should my inventory turn over?" "What size reserve should I carry for bad debts?"

The availability of information by which a small business owner may measure performance is important. Indeed, yardsticks in the form of typical or standard ratios for different lines of business have caused many small entrepreneurs to make worthwhile reappraisals of their business thinking.

Some time ago, for instance, a trade association representing part of the contracting business held a meeting to discuss problems in bid pricing. A problem in bidding was placed on the table. Participants were given a set of specifications and material prices on a mythical job. The problem was to figure the costs and bid on the job at a price which would return a reasonable margin of profit.

Bids ranged from 13 to 31 percent above material costs. Meanwhile, a trained cost accountant had already predetermined that the bid margin should be 26 percent. Discussing the wide variation in the results of this exercise, an officer of the association said:

Our people just don't have an adequate understanding of their costs. They can figure the obvious items which they handle every day, but they don't allow enough for their fixed and indirect overhead costs, which aren't recognized fully until they come to check up at the end of the year. Frankly, our membership has too little understanding of all the factors that go into making up a price. As a result, very few of them are earning a fair return. But today's study of these factors in an actual case was an eye opener. . . .

At the other end of the scale, a rapidly growing number of business owners has come to look at ratios as management tools to pinpoint conditions in their businesses which need attention.

Growth of Standard Ratio Studies

Ratio analysis is not an entirely new development. As early as 1913, the Bureau of Business Research of Harvard University conducted a study of the expenses of shoestores. Since then, many more studies have been done by various trade associations, government agencies, mercantile agencies, banks, research departments of industrial and accounting firms, and schools and

universities. Recognition of the importance of good operating ratios will do more than any other present influence to standardize procedures and, thereby, to improve management results.

Sampling the Field

The first step taken by organizations in developing comparative operating ratios is to get detailed profit-and-loss statements from firms in the line of business under study. Naturally, not every concern will turn over its figures, others won't have sufficiently detailed records. And some won't have kept their records in a way that can be compared with those of most of the other concerns in the line.

Of course, if all the firms' figures were kept in the same way and all businesses in the line agreed to furnish them, there would be too much information to handle practically. To get, arrange, and interpret the results would take too much time and be too expensive.

Statisticians overcome this problem by "sampling"; that is, they get information from a random number of firms located over a wide area. The concerns chosen are picked because they are fairly typical of the line in general. Therefore, what's true of the sample can be relied on to be pretty much true of the line as a whole, although no single firm will exactly fit the "sample" firm picture that emerges.

Selecting the size of the sample and the make-up of the individual units of the sample are determined by the use of various mathematical formulas, all too involved to go into here. The important thing to remember is that, when it's done properly, sampling works and gives reliable results.

Obtaining the Figures

Once a method has been worked out for sampling the line, the next step is to select names of concerns in given random areas. These come from lists furnished by an association, from mailing lists, lists of customers, reference books, or whatever other sources are available.

The next step is to send out requests to them for detailed profit-and-loss statements as of a given date. Sometimes, the surveying organization will request that the figures be returned on its own specially prepared forms to insure uniformity and comparability.

Assembling the Results

As soon as the information begins to flow back to the statisticians, the job of assembling and compiling begins. There are several methods of doing this, all of which yield some kind of middle ground figures which try to reflect as nearly typical a result as possible. Once these middle ground figures have been determined, they are often arranged in a summary reflecting in percentages the overall situation for the concerns covered. In other cases, figures may be reported in terms of dollar averages so as to show, for example, typical dollar sales.

Often, the figures are also regrouped in terms of size categories, such as stores with sales volume of \$20,000-\$50,000, stores doing \$50,000 to \$100,000 annual volume, and so on. Or, the figures may be regrouped to show differences according to area, or city versus country, or credit versus cash sales.

Finally, the studies usually pinpoint relationships of certain key items, such as dollar amount of owner's salary, or salary per sales person, or sales per square foot, average stock turnover, and so forth.

One overall summary of a cost-of-doing-business study is shown in Figure 3.

Operating Ratios Vs. Financial Ratios

The number of sources which compile comparative balance sheet ratios is relatively small, as compared with those which conduct studies of operating ratios. Much of the information which is available relative to comparative balance sheet ratios is on larger businesses.

Branches of the federal government, such as the Federal Trade Commission and the Securities and Exchange Commis-

Figure 3

Summary of Operating Ratios of 350 High Profit Hardware Stores		Percent of sales
Net sales	100.00	100.00
Cost of goods sold	61.92	61.92
Margin	35.08	35.08
Expenses:		
Payroll and other employee expenses	16.23	16.23
Occupancy expense	3.23	3.23
Office supplies and postage	.40	.40
Advertising	1.49	1.49
Donations	.08	.08
Telephone and telegraph	.24	.24
Bad debts	.30	.30
Delivery	.17	.17
Insurance	.66	.66
Taxes (other than real estate and payroll)	.16	.16
Interest	.61	.61
Depreciation (other than real estate)	.57	.57
Supplies	.37	.37
Legal and accounting expenses	.31	.31
Dues and subscriptions	.08	.08
Travel, buying, and entertainment	.19	.19
Unclassified expenses	.64	.64
Total operating expense	26.33	26.33
Net operating profit	8.75	8.75
Other income	1.65	1.65
Net profit before income taxes	10.40	10.40

Source: National Retail Hardware Association

sion, have compiled various balance-sheet ratios on large corporations, and similar studies have been made by a limited number of schools and universities. A few trade associations have supplemented their studies on operating ratios in their lines with ratios on selected balance-sheet items. Banks make private ratio studies based on their own files, and use the excellent studies prepared for them by Robert Morris Associates. The compiling of comparative financial statement ratios has also been done for many years by Dun & Bradstreet, Inc.

The primary use of financial ratios is to analyze the monetary condition of a business. They reflect its health.

Operating ratios also serve very useful purposes. One is to enable a manager to allocate, budget, and plan. Successful business management makes use of them to begin each year by designating the percentage of each sales dollar which will go to salaries, rent, travel, general administration, and so forth. With such management by forecast, a business owner can control progress and, if things go wrong, make immediate adjustments. It is a means of forcing profitability.

Secondly, by comparing percentage-to-sales ratios derived by administering costs within a business with those compiled from a cross section typical of the field, the owner-manager can get a good idea if his or her operating costs are imbalanced. Then action can be taken to eliminate the imbalances and improve profitability.

CHAPTER 4

Sources of Ratio Studies

RATIO STUDY SOURCES generally may be classified into three groups. First are agencies which compile data for a number of industries as a by-product of their major function. Among the best known of these are Dun & Bradstreet, Inc., the Robert Morris Associates, and the Accounting Corporation of America. Second is the large number of trade associations which, often in conjunction with colleges or universities, compile studies of the various trade groups and industries with which they are associated. Third are various agencies and departments of the federal government.

In addition, a few industrial companies conduct ratio studies in their customer lines for the benefit of their clients. Among these are Eli Lilly, the National Cash Register Corporation, and Eastman Kodak.

Dun & Bradstreet, Inc.

Since 1932, Dun & Bradstreet has been publishing "Key Business Ratios" in the monthly, *Dun's Review*. These financial ratios cover 22 retail, 32 wholesale, and 71 industrial lines of

business. Dun & Bradstreet also annually compile *Cost of Doing Business*, operating ratios extracted from data in the Internal Revenue Service's *Statistics of Income*. These are published and distributed by Dun & Bradstreet and are available from their Public Relations Department, 99 Church Street, New York, New York 10007 or at any of their branches.

The following types of businesses are covered in financial and operating ratio studies issued by Dun & Bradstreet:

Key Business Ratios

Retailing

Auto and home supplies
 Children's and infants' wear stores
 Clothing and furnishings, men's and boys'
 Department stores
 Discount stores
 Discount stores, leased departments
 Family clothing stores
 Furniture stores
 Gasoline service stations
 Grocery stores
 Hardware stores
 Household appliance stores
 Jewelry stores
 Lumber and other building materials dealers
 Miscellaneous general merchandise stores
 Motor vehicle dealers
 Paint, glass and wallpaper stores
 Radio and television stores
 Retail nurseries, lawn and garden supply dealers
 Shoe stores
 Variety stores
 Women's ready-to-wear stores

Clothing and accessories, women's and children's
 Clothing and furnishings, men's and boys'
 Commercial machines and equipment
 Confectionery
 Dairy products
 Drugs, drug proprietaries, and sundries
 Electrical appliances, TV and radio sets
 Electrical apparatus and equipment
 Electronic parts and equipment
 Farm machinery and Equipment
 Footwear
 Fresh fruits and vegetables
 Furniture and home furnishings
 Groceries, general line
 Hardware
 Industrial machinery and equipment
 Lumber and construction materials
 Meats and meat products
 Metals and minerals
 Paints, varnishes, and supplies
 Paper and its products
 Petroleum and petroleum products
 Piece goods
 Plumbing and heating equipment and supplies
 Poultry and poultry products
 Scrap and waste materials
 Tires and tubes
 Tobacco and its products

Wholesaling

Air conditioning and refrigeration equipment and supplies
 Automotive equipment
 Beer, wine and alcoholic beverages
 Chemicals and allied products

Bakery products
 Blast furnaces, steel works and rolling mills
 Blouses and waists
 Books, publishing and printing
 Broad woven fabrics, cotton
 Canned and preserved fruits and vegetables
 Commercial printing except lithographic
 Communication equipment
 Concrete, gypsum and plaster products
 Confectionery and related products
 Construction, mining and handling machinery and equipment
 Converted paper and paperboard products
 Cutlery, hand tools and general hardware
 Dairy products
 Dresses
 Drugs
 Electric lighting and wiring equipment
 Electric transmission and distribution equipment
 Electrical industrial apparatus
 Electrical work
 Electronic components and accessories
 Engineering, laboratory and scientific instruments
 Fabricated structural metal products
 Farm machinery and equipment
 Footwear
 Fur goods
 General building contractors
 General industrial machinery and equipment
 Grain mill products
 Heating and plumbing equipment
 Heavy construction, except highway and street
 Hosiery
 Household appliances
 Industrial chemicals
 Instruments, measuring and controlling
 Iron and steel foundries
 Knot outerwear mills
 Malt liquors
 Mattresses and bedsprings
 Meat packing plants
 Metal stampings
 Metalworking machinery and equipment
 Millwork
 Miscellaneous machinery, except electrical
 Motor vehicle parts and accessories
 Nonferrous foundries
 Office and store fixtures
 Office computing and accounting machines
 Outerwear, children's and infants'
 Paints, varnishes, lacquers and enamels
 Paper mills, except building paper
 Paperboard containers and boxes
 Passenger car, truck and bus bodies
 Petroleum refining
 Plastics, materials and synthetics
 Plumbing, heating and air conditioning
 Sawmills and planing mills
 Screw machine products
 Shirts, underwear and nightwear, men's and boys'
 Soap, detergents, perfumes and cosmetics
 Soft drinks, bottled and canned
 Special industry machinery
 Suits and coats, women's and misses'
 Suits, coats and overcoats, men's and boys'
 Surgical, medical and dental instruments
 Toys, amusement and sporting goods
 Trousers, men's and boys'
 Underwear and nightwear, women's and children's
 Wood household furniture and upholstered
 Work clothing, men's and boys'

Cost of Doing Business

Retailing

Apparel and accessories
 Automotive dealers

Building materials, hardware, and farm equipment
 Drug and proprietary stores
 Eating and drinking places

Food stores
Furniture and home furnishings
Gasoline service stations
General merchandise
Liquor stores

Wholesaling

Alcoholic beverages
Drugs
Dry goods
Electrical goods
Farm products
Groceries
Hardware, plumbing and heating equipment
Lumber and construction materials
Machinery
Metals and minerals
Motor vehicles
Paper and its products
Petroleum and its products

Manufacturing

Apparel
Chemicals and allied products
Electrical supplies and equipment
Fabricated metal products
Food products (bakery products, beverage industries, canned goods, dairy products, grain mill products, meats, and sugar)
Furniture and fixtures
Leather and its products
Lumber and wood products
Machinery
Motor vehicles and equipment
Ordnance except guided missiles

Paper and allied products
Petroleum refining
Primary metal industries
Printing and publishing
Rubber and miscellaneous plastics products
Scientific industries
Stone, clay, and glass products
Textile mill products
Tobacco
Transportation equipment

Services, Transportation, and Communication

Advertising
Air transportation
Automobile parking, repair and service
Business services
Electrical companies and systems
Gas companies and systems
Hotels
Medical services
Motion picture production
Motion picture theaters
Personal services
Pipeline transportation
Radio and television broadcasting
Railroad transportation
Repair services
Telephone and telegraph services
Trucking and warehousing
Water supply and other sanitary services
Water transportation

Finance, Insurance, and Real Estate

Agriculture and Mining

Robert Morris Associates has developed ratio studies for over 350 lines of business as indicated below. Owners and managers of small concerns wishing further information on the availability of this material may address inquiries to the Executive Manager, Robert Morris Associates, Philadelphia National Bank Building, Philadelphia, Pennsylvania 19107. Following is a list of lines of business for which Robert Morris Associates provides ratios:

Manufacturing

Advertising displays and devices
Apparel and other finished fabric products:
Canvas products
Children's clothing
Curtains and draperies
Men's, youths' and boys' suits, coats and overcoats
Women's dresses
Women's suits, skirts, sportswear and coats
Women's undergarments and sleepwear
Beverages:
Flavoring extracts and syrups
Malt liquors
Wines, distilled liquor and liqueurs
Caskets and burial supplies
Chemicals and allied products:
Drugs and medicines
Fertilizers
Industrial chemicals
Paint, varnish and lacquer
Perfumes, cosmetics and other toilet preparations
Plastic materials and synthetic resins
Soap, detergents and cleaning preparations
Food and kindred products:
Bread and other bakery products
Candy and confectionery supplies
Canned and dried fruits and vegetables
Dairy products
Flour and other grain mill products
Frozen fruits, fruit juices, vegetables, and specialties
Meat packing
Prepared feeds for animals and poultry

Vegetable oils

Furniture and fixtures:
Mattresses and bedsprings
Metal household furniture
Store, office, bar and restaurant fixtures
Wood furniture—except upholstered
Wood furniture—upholstered
Jewelry, precious metals
House furnishings
Leather and leather products:
Footwear
Furs
Hats
Men's and boys' sport clothing
Men's work clothing
Men's, youths' and boys' separate trousers
Men's, youths' and boys' shirts, collars and nightwear
Luggage and special leather products
Tanning, currying, and finishing
Lumber and wood products:
Millwork
Prefabricated wooden buildings and structural members
Sawmills and planing mills
Veneer, plywood, and hardwood
Wooden boxes and containers
Machinery, equipment and supplies—electrical:
Air conditioning
Electronic components and accessories
Equipment for public utilities and industrial use
Machinery, except electrical equipment:
Ball and roller bearings
Construction and mining machinery and equipment
Farm machinery and equipment
General industrial machinery and equipment

Robert Morris Associates

Long noted among the banking fraternity for extensive work in the field of ratio compilation and analysis is Robert Morris Associates, a national association of bank loan and credit officers. Founded in 1914, this organization's size is indicated by the fact that its membership comprises more than 1,200 commercial banks. Its activities include maintenance and advancement of standards of correct credit practice.

Industrial and commercial refrigeration equipment and complete air conditioning units
 Machine shops—jobbing and repair
 Machine tools and metal working equipment
 Measuring, analyzing, and controlling instruments
 Oil field machinery and equipment
 Special dies and tools, die sets, jigs and fixtures
 Special industry machinery
 Metal industries—primary:
 Iron and steel forgings
 Iron and steel foundries
 Non-ferrous foundries
 Metal products—fabricated (except ordnance, machinery, and transportation equipment):
 Coating, engraving, and allied services
 Cutlery, hand tools and general hardware
 Enameled iron, metal sanitary ware and plumbing supplies
 Fabricated plate ware
 Fabricated structural steel
 Heating equipment, except electric
 Metal cans
 Metal doors, sash, frames, molding and trim
 Metal stampings
 Miscellaneous fabricated wire products
 Miscellaneous non-ferrous fabricated products
 Screw machine products, bolts, nuts, screws, rivets and washers
 Sheet metal work
 Valves and pipe fittings, except plumbers' brass goods
 Paper and allied products:
 Envelopes, stationery and paper bags
 Paperboard containers and boxes
 Pulp, paper and paperboard
 Printing, publishing and allied industries:
 Book printing
 Bookbinding, and miscellaneous related work
 Books: publishing
 Commercial printing, lithographic
 Newspapers: publishing and printing
 Periodicals

Typesetting
 Rubber and miscellaneous plastics products:
 Miscellaneous plastics products
 Rubber footwear and fabricated rubber products
 Stone, clay and glass products:
 Brick and structural clay tile
 Concrete brick, block and other products
 Minerals and earths, ground or otherwise treated
 Pressed and blown glass and glassware
 Ready-mixed concrete
 Textile mill products:
 Broad woven fabric—cotton, silk and synthetic
 Broad woven fabric—woolens and worsteds
 Dyeing and finishing
 Hosiery—anklets—children's, men's and boys'
 Hosiery—women's—full fashioned and seamless
 Knitting—Cloth, outerwear and underwear
 Narrow fabrics and other smallwares
 Yarn—cotton, silk, and synthetic
 Toys, amusement, sporting and athletic goods:
 Games and toys, except dolls and children's vehicles
 Sporting and athletic goods
 Transportation equipment:
 Aircraft parts (except electric)
 Motor vehicle parts and accessories
 Motor vehicles
 Ship and boat building and repairing

Wholesaling
 Automotive equipment and supplies:
 Automobiles and other motor vehicles
 Automotive equipment
 Tires and tubes
 Beauty and barber supplies and equipment
 Drugs, drug proprietaries and druggists' sundries
 Electrical equipment:
 Electrical supplies and apparatus
 Electronic parts and supplies

Radios, refrigerators and electrical appliances
 Flowers and florists' supplies
 Food, beverages and tobacco:
 Coffee, tea and spices
 Confectionery
 Dairy products and poultry
 Fish and sea foods
 Frozen foods
 Fruits and vegetables
 General groceries
 Grains
 Meats and meat products
 Tobacco and tobacco products
 Tobacco leaf
 Wine, liquor and beer
 Furniture and home furnishings:
 Floor coverings
 Furniture
 General merchandise
 Iron, steel, hardware and related products:
 Air conditioning and refrigeration equipment and supplies
 Hardware and paints
 Metal products
 Metal scrap
 Plumbing and heating equipment and supplies
 Steel warehousing
 Lumber, building materials and coal:
 Building materials
 Coal and coke
 Lumber and millwork
 Machinery and equipment:
 Agricultural equipment
 Heavy commercial and industrial machinery and equipment
 Laundry and dry cleaning equipment and supplies
 Mill supplies
 Professional equipment and supplies
 Restaurant and hotel supplies, fixtures and equipment
 Transportation equipment and supplies, except motor vehicles
 Paper and paper products:
 Printing and writing paper
 Wrapping or coarse paper and products
 Petroleum products:
 Fuel oil
 Petroleum products

Scrap and waste materials:
 Textile waste
 Sporting goods and toys
 Textile products and apparel:
 Dry goods
 Footwear
 Furs
 Men's and boys' clothing
 Women's and children's clothing
 Wool

Retailing

Aircraft
 Apparel and accessories:
 Family clothing stores
 Furs
 Infants' clothing
 Men's and boys' clothing
 Shoes
 Women's ready-to-wear
 Boat dealers
 Books and office supplies:
 Books and stationery
 Office supplies and equipment
 Building materials and hardware:
 Building materials
 Hardware stores
 Heating and plumbing equipment dealers
 Lumber
 Paint, glass and wallpaper stores
 Cameras and photographic supplies
 Department stores and general merchandise:
 Department stores
 Dry goods and general merchandise
 Drugs
 Farm and garden equipment and supplies:
 Cut flowers and growing plants
 Farm equipment
 Feed and seed—farm and garden supply
 Food and beverages:
 Dairy products and milk dealers
 Groceries and meats
 Restaurants
 Fuel and ice dealers:
 Fuel, except fuel oil
 Fuel oil dealers
 Furniture, home furnishings and equipment:

The ratios can be obtained from the Accounting Corporation's Research Department, 1929 First Avenue, San Diego, California 92101. Following is a list of types of business for which there are ratios:

- Janitorial services
 - Laundries and dry cleaners
 - Linen supply
 - Local trucking
 - Local trucking—without storage
 - Long distance trucking
 - Motels, hotels, and tourist courts
 - Nursing homes
 - Outdoor advertising
 - Photographic studios
 - Radio broadcasting
 - Real estate holding companies
 - Refrigerated warehousing, except food lockers
 - Refuse systems
 - Telephone communications
 - Transportation on rivers and canals
 - Travel agencies
 - Television stations
 - Water utility companies
- Contractors**
- Not Elsewhere Classified**
- Beef cattle raisers
 - Bituminous coal mining
 - Bottlers—soft drinks
 - Commercial feed lots
 - Construction, sand and gravel
 - Crude petroleum and natural gas mining
 - Horticultural services
 - Poultry, except broiler chickens
 - Seed companies (vegetable and garden)
- Floor coverings
 - Furniture
 - Household appliances
 - Radio, TV, and record players
 - Jewelry
 - Liquor
 - Luggage and gifts
 - Motor vehicle dealers:
 - Autos—new and used
 - Gasoline service stations
 - Mobile homes
 - Motorcycles
 - Tires, batteries, and accessories
 - Trucks—new and used
 - Musical instruments and supplies
 - Road machinery equipment
 - Sporting goods
 - Vending machine operators, merchandise
- Services**
- Advertising agencies
 - Auto repair shops
 - Auto and truck rental and leasing
 - Bowling alleys
 - Cable television
 - Car washing
 - Commercial research and development laboratories
 - Data processing
 - Direct mail advertising
 - Engineering and architectural services
 - Farm products warehousing
 - Funeral directors
 - Insurance agents and brokers
 - Intercity bus lines

- Apparel, children's and infants
- Apparel, men's specialty
- Apparel, men's and women's
- Apparel, women's specialty
- Appliance stores
- Auto parts and accessories
- Bakeries
- Beauty shops
- Cocktail lounges
- Confectionery stores
- Contractors—building
- Contractors—specialty
- Dairies
- Dentists
- Doctors of medicine
- Dry cleaning shops
- Drug stores
- Feed and seed stores
- Florists
- Food stores—combination
- Food stores—specialty
- Furniture stores
- Garages
- Gift and novelty stores
- Hardware stores
- Jewelry stores
- Laundromats and hand laundries
- Laundries, plant
- Liquor stores
- Lumber and building material
- Machine shops
- Meat markets
- Motels
- Music stores
- New car dealers
- Nursery and garden supplies
- Paint, glass and wallpaper
- Photographic supply stores
- Plumbing and heating equipment
- Printing shops
- Professional—others
- Repair services
- Restaurants
- Service stations
- Shoe stores
- Sporting goods stores
- Taverns
- TV radio sales and service
- Transportation
- Used car dealers
- Variety stores

National Cash Register Company

The National Cash Register Company publishes an annual "Expenses in Retailing." This booklet examines the cost of operation in about 40 lines of business. The ratios are obtained from primary sources, most of which are trade associations. For some lines of business, the expense percentages are broken down into "controllable expense" and "fixed expense." Following is a list of businesses covered in a recent NCR study:

- Apparel stores
- Appliance and radio-TV dealers
- Automobile dealers
- Auto parts dealers
- Beauty shops
- Book stores
- Building material dealers
- Cocktail lounges
- Department stores
- Dry cleaners

Accounting Corporation of America

The Accounting Corporation of America publishes semi-annually the (*Mail-Me-Monday*) *Barometer of Small Business*. Its data are derived as a by-product of the Accounting Corporation's accounting services to clients through the country. The (*Mail-Me-Monday*) *Barometer* classifies its operating ratios for the various industry groups on the basis of gross volume. The classifications vary with the industry group but seldom exceed \$300,000. The emphasis is on small business.

Feed stores
 Florists
 Food stores
 Furniture stores
 Garages
 Gift, novelty and souvenir stores
 Hardware stores
 Hotels
 Jewelry stores
 Laundries
 Liquor stores
 Mass merchandising stores
 Meat markets
 Men's wear stores

Motels and motor inns
 Music stores
 Novelty stores
 Nursery and garden supply stores
 Photographic studio and supply stores
 Professional services
 Repair services
 Restaurants
 Service stations
 Shoe stores (family)
 Sporting goods stores
 Supermarkets
 Transportation and service
 Variety stores

The Bank of America

As a service to business owners and managers and students of small business, as well as to those thinking about starting a small firm, the Bank of America periodically issues detailed studies of problems in opening a business. These studies, published in its *Small Business Reporter*, include costs-of-doing-business ratios. They can be obtained by writing to *The Small Business Reporter*, Department 3120, P.O. Box 37000, San Francisco, California. Titles of issues in recent years include:

Apparel Stores
 Auto Parts
 Bars
 Bicycle Stores
 Book Stores
 Building Maintenance Services
 Independent Camera Stores
 Proprietary Day Care Centers
 Independent Drug Stores
 Coin Operated Dry Cleaning Stores
 Business Equipment Rental
 Convenience Food Stores
 The Handicraft Business
 Health Food Stores

Home Furnishing Stores
 Independent Liquor Stores
 Mail Order Enterprises
 Mobile Home and Recreation Dealers
 Independent Pet Shops
 Plant Shops
 Small Job Printing Shops
 Repair Services
 Restaurants and Food Services
 Service Stations
 Sewing and Needlecraft Shops
 Shoe Stores
 Independent Sporting Goods
 Toy and Hobby Craft Stores

Specialized Industry Sources

The most important specialized industry sources for ratio data are trade associations. In addition, however, accounting firms,

trade magazines, universities, and some large companies publish ratio studies.

Trade Associations. National associations which have published ratio studies in the past include the following:

American Association of Advertising Agencies, 200 Park Avenue, New York, New York 10019
 American Camping Association, Bradford Woods, Martinsville, Indiana 46151
 American Meat Institute, 1600 Wilson Boulevard, Arlington, Virginia 22209
 American Paper Institute, 260 Madison Avenue, New York, New York 10016
 American Society of Association Executives, 1101 16th Street, N.W., Washington, D.C. 20036
 American Supply Association, 221 North LaSalle Street, Chicago, Illinois 60601
 Bowling Proprietors Association of America, Box 5802, Arlington, Texas 76011
 Building Owners and Managers Association, International, 224 South Michigan Avenue, Chicago, Illinois 60601
 Door and Hardware Institute, 1815 North Fort Meyer Drive, Suite 412, Arlington, Virginia 22209
 Florists' Transworld Delivery Association/Interflora, 29200 Northwestern Highway, Southfield, Michigan 48076
 Foodservice Equipment Distributors Association, 332 South Michigan Avenue, Chicago, Illinois 60604
 Laundry and Cleaners Allied Trades Association, 543 Valley Road, Upper Montclair, New Jersey 07043
 Material Handling Equipment Distributors Association, 104 Wilmot Road, Deerfield, Illinois 60015
 Mechanical Contractors Association of America, 5530 Wisconsin Avenue, N.W., Suite 750, Washington, D.C. 20015
 Menswear Retailers of America, 390 National Press Building, Washington, D.C. 20043
 Motor and Equipment Manufacturers' Association, 222 Cedar Lane, Teaneck, New Jersey 07666
 National American Wholesale Grocers' Association, Room 1810, 51 Madison Avenue, New York, New York 10010
 National Appliance and Radio-TV Dealers Association, 318 West Randolph Street, Chicago, Illinois 60606
 National Art Materials Trade Association, 182 A Boulevard, Hasbrouck Heights, New Jersey 07604
 National Association of Accountants, 919 Third Avenue, New York, New York 10022
 National Association of Electrical Distributors, 600 Madison Avenue, New York, New York 10022
 National Association of Food Chains, 1725 Eye Street, N.W., Washington, D.C. 20006
 National Association of Furniture Manufacturers, 8401 Connecticut Avenue, Suite 911, Washington, D.C. 20015
 National Association of Insurance Agents, Inc., 85 John Street, New York, New York 10038
 National Association of Music Merchants, Inc., 35 East Wacker Drive, Chicago, Illinois 60601
 National Association of Plastics Distributors, 472 Nob Hill Lane, Devon, Pennsylvania 19333
 National Association of Retail Grocers of the United States, Suite 620, 2000 Spring Road, Oak Brook, Illinois 60521

National Association of Textile and Apparel Wholesalers, Statler-Hilton Hotel, 33rd Street and Seventh Avenue, New York, New York 10001

National Association of Tobacco Distributors, 58 East 79th Street, New York, New York 10021

National Automatic Merchandising Association, 7 South Dearborn Street, Chicago, Illinois 60603

National Beer Wholesalers Association of America, 6310 North Cicero Avenue, Chicago, Illinois 60646

National Confectioners Association of the United States, 36 Wabash Avenue, Chicago, Illinois 60603

National Consumer Finance Association, 1000 16th Street, N.W., Washington, D.C. 20036

National Decorating Products Association, 9334 Dielman Industrial Drive, St. Louis, Missouri 63132

National Electrical Contractors Association, Inc., 7315 Wisconsin Avenue, 13th Floor, Washington, D.C. 20014

National Electrical Manufacturers Association, 155 East 44th Street, New York, New York 10017

National Farm and Power Equipment Dealers Association, 2340 Hampton Avenue, St. Louis, Missouri 63139

National Home Furnishings Association, 405 Merchandise Mart Plaza, Chicago, Illinois 60654

National Kitchen Cabinet Association, 334 East Broadway, Louisville, Kentucky 40202

National Lumber and Building Material Dealers Association, 1990 M Street, N.W., Washington, D.C. 20036

National Machine Tool Builders Association, 7901 Westpark Drive, McLean, Virginia 22101

National Office Products Association, 1500 Wilson Boulevard, Arlington, Virginia 22209

National Oil Jobbers Council, Inc., 1750 New York Avenue, N.W., Washington, D.C. 20006

National Paint and Coatings Association, 1500 Rhode Island Avenue, N.W., Washington, D.C. 20005

National Paper Box Association, 231 Kings Highway East, Haddonfield, New Jersey 08033

National Paper Trade Association, Inc., 420 Lexington Avenue, New York, New York 10017

National Parking Association, 1101 17th Street, N.W., Washington, D.C. 20036

National Restaurant Association, One IBM Plaza, Suite 2600, Chicago, Illinois 60611

National Retail Hardware Association, 964 North Pennsylvania Avenue, Indianapolis, Indiana 46204

National Retail Merchants Association, 100 West 31st Street, New York, New York 10001

National Shoe Retailers Association, 200 Madison Avenue, New York, New York 10016

National Soft Drink Association, 1101 16th Street, N.W., Washington, D.C. 20036

National Sporting Goods Association, 717 Michigan Avenue, Chicago, Illinois 60611

National Tire Dealers and Retreaders Association, 1343 L Street, N.W., Washington, D.C. 20005

National Wholesale Druggists' Association, 670 White Plains Road, Scarsdale, New York 10583

National Wholesale Hardware Association, 1900 Arch Street, Philadelphia, Pennsylvania 19103

National Wholesale Jewelers Association, 1900 Arch Street, Philadelphia, Pennsylvania 19103

Northern Heating and Airconditioning Wholesalers Association, 1661 West Henderson Road, Columbus, Ohio 43220

North American Wholesale Lumber Association, Inc., Box 713, Clifton, New Jersey 07013

Northeastern Retail Lumbermen Association, 339 East Avenue, Rochester, New York 14604

Optical Wholesalers Association, 6935 Wisconsin Avenue, Washington, D.C. 20015

Painting and Decorating Contractors of America, 7223 Lee Highway, Falls Church, Virginia 22046

Petroleum Equipment Institute, 1579 East 21st Street, Tulsa, Oklahoma 74114

Printing Industries of America, Inc., 1730 North Lynn Street, Arlington, Virginia 22209

Scientific Apparatus Makers Association, 1140 Connecticut Avenue, N.W., Washington, D.C. 20036

Shoe Service Institute of America, 222 West Adams Street, Chicago, Illinois 60606

Society of the Plastics Industry, Inc., The, 355 Lexington Avenue, New York, New York 10017

Super Market Institute, Inc., 303 East Ohio Street, Chicago, Illinois 60611

United Fresh Fruit and Vegetable Association, 1019 19th Street, N.W., Washington, D.C. 20036

Urban Land Institute, 1200 18th Street, N.W., Washington, D.C. 20036

Wine and Spirit Wholesalers of America, Inc., 7750 Clayton Road, Suite 201, St. Louis, Missouri 63117

Government Sources

Federal government publications provide a wealth of data covering somewhat broader industry classifications in most cases than the private sources.

Among these are the Federal Trade Commission, the Interstate Commerce Commission, the United States Department of Commerce, the United States Department of Agriculture, the Civil Aeronautics Board, the Federal Communications Commission, the Federal Power Commission, and—notably—the Securities and Exchange Commission.

The Internal Revenue Service of the United States Treasury Department annually publishes *Statistics of Income*. This volume contains income statement and balance sheet data compiled from U.S. income tax returns.

Finally, the *Census of Business*, published at five year intervals by the Bureau of the Census, provides limited ratio and dollar financial information.

Other Sources

A number of accounting and management consulting firms have done or are doing ratio studies in selected lines of business.

Such work has been done in the hotel, restaurant, home furnishings, laundry and dry cleaning industries. In addition, various trade publications conduct ratio studies from time to time.

Two well-known industrial companies, the Eli Lilly Company (drugs) and the Eastman Kodak Company (photography) are particularly noted for their data on retail operations in their industries.

CHAPTER 5

Ratio Analysis in Action: A Case History

RATIOS HAVE MANY USES. They are useful in analyzing collections, in checking inventory positions, in giving guidance as to condition of finances, in comparing expense items, and in pinpointing potential or actual disproportions as reflected by balance sheets and profit-and-loss statements. Later on, in a following chapter, there will be discussion of some broad principles and applications of ratio analysis.

Sometimes, however, it is easier to develop an understanding of application of broad principles when they are highlighted by a concrete example. For this reason, the following case is included to show the manner in which the use of financial and operating ratios influenced an actual business in improving its earnings and finances.

A Case History

Here is the story of the Middleville Lumber and Building Supply Company. Middleville is not the company's real name. Neither are the names of the towns, nor the names of the people. But the following account is accurate, if fictionalized.

As the scene opens, Dave Jenkins, the proprietor of Middleville Lumber and Building Supply Company, a local retail lumberyard, is in the outer office of the president of the local bank. He is waiting to discuss renewal of a matured bank loan. At least, that is his minimum objective. What Dave really wants is to obtain from the banker an *increase* in his line of credit. At the moment, Dave is attempting to marshal some telling arguments which would accomplish such a mission.

Dave had opened the yard about 20 years ago. He knew building materials. Margins had been good, and as fast as lumber came in it was shipped out. There had been little need to worry about competition. Meanwhile, the town had been growing—and as builders put up new houses and stores, Dave's firm had profited. Dave's net worth had grown from year to year.

But lately things had been getting tight. There had been strong competition. Builders were asking concessions, and the Middleville company was hungry for new accounts. While branching out into adjoining territories, Dave had been cutting prices. Year by year, he was increasing his sales, but lately was not making much of a profit.

The bank had been helpful. It discounted his trade notes receivable, at the same time opening up a modest line of unsecured credit on his own signature. Somehow, through, word was getting around that "Dave Jenkins wasn't always meeting his bills to suppliers on time." In some cases, overdue bills were resulting in rather pointed reminders from the creditors.

In preparation for his meeting with his banker, Dave had mailed his financial statement and profit-and-loss figures to the bank. These, he knew, would be posted and compared, after which he would be called in to discuss the figures and make new arrangements. He owed the bank \$18,800 of which \$14,000 was on open note, already due.

Dave had written down on a sheet of paper the details of his balance sheet and operating statements. (See Figure 4, page 41.)

As Jenkins gave these figures one last going over, Roy Tompkins, the president of the bank, opened the door and called him in.

Tompkins' special interest was borderline accounts. Through a judicious loan policy and sound advice, he had aided a number of the local businessmen to stay on their feet. A file drawer in the

Figure 4

Middleville Lumber and Building Supply Company			
December 31, 19—			
BALANCE SHEET			
Cash	\$ 1,896	Notes payable, bank	\$ 14,000
Notes receivable	4,876	Notes receivable, discounted	4,842
Accounts receivable	97,456	Accounts payable	152,240
Inventory	156,822	Accruals	5,440
Total current assets	\$261,050	Total current liabilities	\$176,522
Land and buildings	46,258	Mortgage	10,000
Equipment and fixtures	11,458	Total liabilities	\$186,522
Prepaid expenses	1,278	Net worth	133,522
Total assets	\$320,044	Total liabilities and net worth	\$320,044
INCOME STATEMENT			
Net sales		Dollars	Percent
Cost of goods sold		\$727,116	100.0
		582,420	80.1
Gross Profit on sales		\$144,696	19.9
Expenses:			
Drawings	\$14,544		2.0
Wages	74,166		10.2
Delivery expense	10,099		1.4
Bad debts allowance	4,373		0.6
Communications	2,181		0.3
Depreciation allowance	4,382		0.6
Insurance	6,543		0.9
Taxes	10,907		1.5
Advertising	2,180		0.3
Interest	4,000		0.6
Other charges	8,358		1.1
Total expenses	141,733		19.5
Net profit	\$ 2,963		0.4
Other income	2,179		0.3
Total net income	\$ 5,142		0.7

corner of the office contained a group of folders, kept under lock and key, in which detailed records were kept.

The banker motioned to his visitor. "Come in, Dave; sit down." When Dave was seated, Tompkins opened his desk drawer and pulled out a group of sheets containing columns of figures posted in comparative form. The lumberman guessed that they were his.

"Glad you came in. I've been wanting to have a chat with you for quite a while. Dave, you're a good salesman, and you know lumber. How well do you know your own figures?"

"I don't know, Mr. Tompkins. Most of the time, I'm too busy in the yard to go into the ledgers. I leave most of the details to my bookkeeper."

The banker waited and then went on. "Let me ask you another question, Dave. Why do you insist on doing business for nothing?" Dave was startled, and he began to flush. He had been expecting to be taken to task for the overdue note, and had thought himself reasonably well fortified with reasons. But the conversation was now taking a turn for which he was unprepared.

"I'm *not* working for nothing," Dave countered. "These last 2 years have been tough. I've been building up business—you know that. Look at my history. I'm worth more than . . ."

"Wait a minute, Dave. I know what you're going to say. But just look at your figures. Last year, you netted a little over \$5,000. The year before, it was \$4,500 and that was before your taxes. You could have done better working for someone else. You made virtually nothing on invested capital."

"But how much *should* I have made?" Dave asked.

"You know, Dave, the amount of profit a concern 'should earn' on its capital is something of an academic question. Some say that the ratio of net profits after taxes to tangible net worth should be at least 15 percent. Some large businesses in your line expect a 21-to-23 percent return.

"I look at it this way: If you'd gone to work for someone else, and invested in high grade bonds, you could have safely earned around 8 percent in dividends. That's—let's see, \$10,400—more than twice your earnings before taxes.

"Anyway, let's be practical. Your net profit on net sales this year was less than 1 percent. Your State association of lumber and building material dealers reports that its studies indicate an average return for its members of close to 4½ percent on sales.

"Maybe, Dave, you've got all the capital you're going to need," said the banker, as he spread out the Middleville company's figures over his desk. "You know, Dave, I'm convinced you have been violating three commandments of financial management."

"Now, wait a moment, Mr. Tompkins!" Dave countered. "You know as well as I do, I'll never borrow a dime I can't pay back, or

buy a two-by-four I won't pay for. I'm solvent. Look at my figures. I've got assets to pay."

As Jenkins broke off, the banker picked up the figures and continued, "Don't get upset, Dave. I know you're honest, and I know your intentions. If we weren't sure about that, I wouldn't be talking to you. I'm thinking of something else. The three commandments I mentioned are: Don't overbuy, don't over-trade, don't overexpand. Now don't you agree you've done all three?"

Dave hedged. "Well—what makes you think so?"

"Look here." The banker and the lumberman drew up their chairs. "Let's start with your balance sheet. You show current assets of \$261,000 and current debts of \$176,000. Your current ratio is 1.48 to 1. That's dangerously close, according to your association. The average lumberyard should show—at a minimum—a ratio of 3 to 1. Other studies I've seen indicate a prevailing median current ratio of 3.4 to 1. So you look low on current ratio."

"Now take your working capital—current assets less current debts. In your case, it's about \$84,000. That's the money you would have left over, if you were to suddenly pay off all debts by liquidating current assets. It's the protective cushion you need to have in carrying your receivables and inventory. Last year, your ratio of net sales to working capital was about nine times. Experience suggests to me that four times would have been about right. Take your turnover of tangible net worth; by that I mean the ratio of your \$133,000 in tangible net worth to \$727,000 in net sales. It was nearly five and one-half times for the year. My observation is that it should have been a little more than two and one-half times. I'm basing that comment on some 'standard' ratios I obtained for the comparison. That's why I say I think you've been overtrading."

"What does all this standard-ratio stuff mean?" Dave interjected.

"It's simple enough if you figure it out in logical order, Dave. Overtrading with finances is something like speeding in a car. At 30 miles an hour, a blowout is an inconvenience—but at 80 miles an hour?" Tompkins paused to let the point sink in.

"Look Dave—what if one of your big customers goes sour and you have to write some big receivables off as bad debts? What if prices take a quick tumble and your inventory declines in value?

What if building should suddenly come to a halt in this area because of a strike? How about your own health—what if you were to be sick? Suppose creditors demand their money?" "Suppose . . ." and the banker smiled, "Suppose, Dave, we called your loan."

Dave glanced up quickly. "Okay, Mr. Tompkins, I see the point. How about the loan?"

"Let's think some things through first, Dave. We'll get to the loan—and we don't want to see you forced out of business. But let's understand this: a soundly operated business has the strength to sustain blowouts. Yours hasn't."

"Now let's examine this balance sheet again. Obviously, you need more cash. You have \$1,900 in your balance right now. Your operating expenses last year were \$142,000. That figures out to around about \$12,000 a month. You have less than enough cash to meet a week's overhead. I'm inclined to feel that a firm should have enough cash to meet 2 weeks' overhead, as a minimum, and would really be better off to have enough cash to carry it for a month."

"Next think about your receivables. Your daily sales are about \$2,000 on the average. Divide that into \$102,000 in notes and accounts receivables on the balance sheet, and you have an average collection period of over 50 days. Not so bad. That compares favorably with a 51-day median shown for other lumberyards by typical ratio studies. At least, you're not in the banking business with your customers."

"Well, that brings us to inventory. Your company shows a relationship for net sales to inventory of—let's see, divide \$727,000 in sales by \$157,000 in inventory—yes, that's right—4.6 times a year. How about that inventory, Dave? Any deadwood in there?" The bank president chuckled.

"Well, it's like this," Dave came back a little aggressively. "I took my inventory low. I wouldn't sell it outright for \$28,000 more than what I valued it at. Why I've got \$20,000 worth of roofers alone that are up 20 percent since I bought them. Of course, it'll take me several months to move that much, but they'll go for a good profit."

"I'm sure they will, and when they do you'll be looking for more bargains. Tell me, Dave, are you in business to make a profit as a merchandiser or as a speculator on price fluctuations?"

What will happen if you guess wrong?" Then rather emphatically, "You *will* guess wrong someday, you know!"

"But Mr. Tompkins," remarked Dave, rather plaintively, "does a guy have to shut his eyes to a good buy?"

"No; not if he can afford it. You can't. You need that \$20,000 right now to pay bills with, not to mention our note. My checkings show that you're past due with your note payment. Those roofers aren't arguing for you with your creditors. Let's face it, Dave. You are a perpetual overbuyer."

Rather vehemently Dave protested, "But business is a gamble!"

"So's driving an automobile, Dave; if you were taking a trip to California, you'd want to make sure your car was in good shape. You wouldn't just load up on gas and oil. You'd have a mechanic go over your car carefully—checking brakes, tires, engine, electrical system, windshield wipers, and so on. You'd watch out for overloading, too, because you know that excessive strain might cause a breakdown."

"Right now you're driving your business under an overload of items that strain your financial resources. Your current liabilities comprise 132 percent of your tangible net worth whereas a 30- to 35- percent ratio is all that most companies like yours are willing to carry. And 44 percent of tangible net worth is in fixed assets."

"That tells a story, too. I know the purchase of your yard property 2 years ago was tempting, even though we advised against it. Sure you cut your occupancy costs, but think of what you lost in discounts you couldn't take. Suppose you had invested just a fraction of that money in a lift truck. You'd have come out ahead on expense and have saved yourself some irritation and worry in the meantime."

"Gosh, Mr. Tompkins," Dave mused, "this begins to look as though I don't belong in business. Is that what you want to tell me?"

"Not at all, Dave," the banker replied, "What I've been doing is spotlighting a few disturbing facts to help clarify your thinking. You've been trying to take a quick and easy path around some roadblocks. In the process, you got lost."

"It isn't your balance sheet or your income statement that got you into trouble. Your statements are merely end products of some questionable management methods. The key to your

problem, and to a possible solution, lies in your methods of merchandising. Your profit-and-loss statement makes that fairly clear.

"Let's start by making some comparisons. In this file, I have some data about businesses similar to yours to whom we have made loans. I have averaged some of them to find out what the bank thinks you should be doing.

"Take, for example, your expenses. Item by item they compare favorably with the averages in this file. Overall, your total expenses appear to be low—around 20 percent. On that basis, your net profit should be more than the average 13.5 percent shown in my file instead of 0.4 percent. Where's the difference? On the surface, it looks like your cost-of-sales is too high."

"You're absolutely right, Mr. Tompkins," said Dave. "Main thing, I guess, is the difference in profit margin. How do those businesses in your file get the prices?"

The banker gave Dave a keen glance. "Doing much business with Bromway Builders over in Elmville?"

"Sure," Dave came back, "thousands of dollars a month."

"New account, isn't it? I hear they're pretty sharp buyers."

"Yeah, they're rough," Dave admitted somewhat hesitantly. "But they're big-volume buyers."

"How much business do you do with builders and industrials, and how much with homeowners?" asked Tompkins.

"We don't bother much with that little stuff. It's a nuisance to cut and deliver a dozen pieces of two-by-four, six pieces of wallboard, and a pound of nails. We deal mostly in quantity, with contractors and industrial accounts."

There was no immediate reaction from the banker. Then he said, "They tell me you take business as much as 25 miles out of town. That would build up delivery costs, wouldn't it?"

Dave nodded.

"I also hear that you're a bear on service, that you'll deliver a half load to any one at moment's notice. I've seen your yardmen working overtime getting out deliveries. Sure, service keeps customers happy and brings in new ones. But there have to be offsetting compensations. Your trouble, as I see it, Dave, is price.

"They tell me you'd rather miss a meal than lose a sale. Some people say you sold a carload of dimension lumber to Bromway just last week for \$10 a thousand above cost. That's a pretty small

markup on such an item. Frankly, your competitors have been a little gleeful about it."

"But," Dave interposed, "isn't turnover an objective? Everybody is trying for volume nowadays. What about this business of 'Profits in pennies, volume in millions'?"

"It's a nice slogan, in its place," said the banker. "Many grocers can work on small margins, and their net comes out at pennies per dollar. But they move their goods daily and weekly. They aren't so likely to take inventory losses. They sell for cash, mostly. They don't have to invest very much capital in equipment. Their volume is steady. But when a company has to stock large inventories in advance of a season, has to carry receivables and so on, capital turnover can't help but slow down."

"Costs-of-doing-business seek their level in every line. They put a logical limit on how low you can price. Sure, if new methods of selling and moving goods come along—like self-service—then the reduction in overhead can be passed on to the customer. But if you sell a carload of dimension stock at 10 percent above cost, somewhere along the line a carload of other goods has to be marked up proportionately to offset your overhead loss. Either that, or you go broke."

Anxiously, Dave asked, "All right, what do you think I should do; give up?"

"No. That's the furthest thought from my mind. I don't think it's a question of quitting. You're too honest, likable, and hard-working. You know lumber and building supplies.

"Actually, what you and I have been doing is diagnosing some symptoms of sickness. Perhaps some kind of operation is in order. I've got a few suggestions which I believe will cure this patient—if you care to listen."

Dave's reply was quick, and relieved. "Sure, sure—I'll listen. What do you think we ought to do?"

The banker continued thoughtfully, "Thinking over your situation carefully last week, I came to the conclusion that only part, but an important part, of your troubles is financial. Let's tackle them first. You can use \$40,000 more cash, right?"

"Right!"

"Very well," said the banker. "The immediate problem is the loan. I can't risk depositors' money by granting you a larger loan. But I think we can do some refunding. Your yard property appears to have appreciated in value enough so that we can

consolidate the present mortgage and increase it \$25,000. That will refund your \$14,000 note and leave \$11,000 cash. It means \$25,000 in working capital. Now let's look elsewhere.

"Suppose you were to cut back some of that inventory—say \$40,000. Could you manage without causing sales to decline as a result? If you could, it would bring you to an inventory turnover rate of about seven times. You already have some appreciation on that \$20,000 lot of roofers."

This time Dave was slow to answer. As a merchant, he enjoyed being well stocked. He had been through some trying years when merchandise was better to have than money. A well-stocked yard gave him a comfortable feeling. But there *were* those bills.

Reluctantly, he came to a decision. "Yes, I guess we could." "Well, let's leave that one for a minute," continued the banker. "I have one more operation to propose. I want you to give up that unprofitable Bromway account. It's my belief he's headed for trouble; he's working too close. And I believe one or two others on your books have got to start paying you a better price. It's a cinch they'd have to if they did business elsewhere. If they're worth keeping, they'll go along. In other words, I would like to see you slice \$50,000 worth of unprofitable sales volume off your books. It seems like a sacrifice, I'm sure, but no operation is entirely painless."

That was a shocker. Jenkins had worked hard to acquire these accounts, even though the concessions forced on him had been painful.

Tompkins continued, "It means less capital turnover, but at no loss in profit. Also it means buying several thousand dollars less each month. So you might say that, in a sense, it supplies that much additional capital. Furthermore, it means carrying fewer receivables. Taken together, these items begin to get us closer to our objective."

Dave brightened a little. The picture was beginning to look more attractive. Living with a daily burden of debt had been no fun.

"Now," said the banker, "let's look at some profit prospects. It looks as if this do-it-yourself market is here to stay. It's small, package stuff, but it can be profitable. All over the country, lumberyards have shifted their operations to take advantage of

consumer business. They have put in paint and hardware, renting power tools, and so on.

"Over in Elmville, Chuck Stebbins is grossing 30 percent on that type of business. He offsets delivery costs by adding service charges. His power-tool-rental income paid for his outlay the first year. That's not so small, you know. Families are outgrowing new homes as fast as they move in; it means new rooms to build, improvements to make—rumpus-rooms in basements, bedrooms in attics. A good many of these projects qualify for home improvement loans. The bank will take off your hands all that kind of paper you can get.

"This generation of homeowners is a new breed. More leisure hours are resulting in time spent building garages, patios, and repairs. When these people buy, they want two things: service and quality. They'll spend money to get them. If you look at the facts carefully, you'll spend money to get them. Actually, 65 percent of the lumber and building supply businesses now consider themselves full-service dealers. If you look at the facts carefully, you'll see that there's money to be made in the consumer business."

As Tompkins spoke, Dave was already beginning to make calculations.

The banker continued. "This whole proposition must raise a lot of questions in your mind. Don't try to settle it overnight. Why don't you go back to your office and do some figuring. Draw up a budget and work up a few plans. Find out how much business you can do with a reasonable markup. Start making adjustments on items that are too low in price. Prices are still rising in your line, and the adjustments shouldn't be too difficult.

"Then, think about attracting some consumer trade. It might well provide as much as 25 percent of your volume before the end of the summer. Plan on some advertising. The local paper will help you lay out copy and figure costs.

"We'd like to help you stay in business in spite of your present ratios. Well—what do you say?"

As he rose to leave, Dave replied, "You know, Mr. Tompkins, there's something about your approach that makes a lot of sense. Let me think the whole business through, for a few days, as I get more figures together. Then I'd like to map it out with you.

Meanwhile, could you get started on that mortgage? It would give me some breathing space."

The banker nodded and the two walked to the door. In parting Dave remarked, "I think I can work it out. Heaven knows, I hope so." Then with a smile, "Maybe I'll turn out to be a good businessman after all. Anyway, thanks for the education on those revealing ratios!"

CHAPTER 6

Evaluating and Interpreting Ratios

PUTTING RATIOS THROUGH THEIR PACES is likely to repay the time and effort many times over. Many a small business has been able to place operations on a sounder basis through examination of the relationships of margins and costs to sales, and by restoring balance to financial structure. Identification of a problem area can be made simpler with standards of attainable goals such as are provided by ratios. The first step in evaluating and interpreting ratios is establishing a point of view.

The Point of View

In comparing operating ratios for an individual concern with those of a given line of business, the business owner must realize that this comparison is made against averages. (Concede for the moment that these averages are typical; in other words, that the samples which afford the basis for the typical ratios are adequate and the compilations realistic.)

The first question, then, is this: Do you want to be just average? In this respect, the typical ratios are not par. They may include, but do not represent the performance of the least

efficient and the most efficient firms in the sample. Hence the objective of the owner-manager should be to adjust operations so that they are at least as good as, but preferably better than, the typical operating ratios.

When dealing with balance-sheet ratios, the objective, again, is usually to do better than average. Here, though, the averages usually represent a boundary line of safety. A concern with all key ratios close to the proportions reflected by standard ratios for your line is not likely to get you into trouble.

A business may, of course, go below the average here or there, and from time to time. Its investment in fixed assets may be above average, for instance, but be offset by a high degree of liquidity of current assets. Or the fixed assets may be comfortably financed on a long term basis. Or again, a low rate of turnover of tangible net worth and working capital may be the result of an existing surplus of capital. Thus, a business doing \$500,000 annual sales volume on a capital of \$100,000 would show higher turnover, and somewhat greater financing problems, than a business doing the same volume with \$200,000 in capital. The latter business could even show an above average ratio of fixed assets to tangible net worth, simply because it had not replaced its equipment with newer, more costly—but more efficient—machinery. The reverse situation, of course, could also develop.

Ratios are interrelated. That fact may be evaluated in terms of two fundamental precepts: Make money and stay solvent. They have a kinship with the three commandments of sound financial management mentioned earlier: Don't overbuy. Don't overtrade. And don't overexpand.

Interpreting Operating Ratios

The first step, of course, is to obtain whatever typical ratios are available. They need not always be absolutely up to date. Profit margins do not usually vary very widely from year to year. As a result, ratios of a few years back may be just as useful for initial comparisons as the very recent ratios which are much harder for the average small business owner to get. The objective is to set a starting point.

Once operating ratios are obtained, you will want to line them up on some sort of worksheet alongside an item-by-item column of your own results. Some combining of expense classifications may be necessary, but the major items should stand out.

Then comes the reduction of your own dollar operating figures to percents. Usually, a cost-of-doing-business survey will produce several sets of ratios, according to the dollar sales brackets, size of business, location, price class of merchandise, and similar factors. You will naturally want to make your comparisons according to the set ratios which fit your setup most closely.

After making a comparison, earmark those items in your own operating statement which appear seriously out of line with the trade average. Here, the first reaction may be to take some drastic step. However, more fitting would be a careful reflection as to the causes. You must know *why* your figures are out of line.

Selling expenses might be above average, for instance, because of special services to customers, compensated in turn by higher prices. Or a high-priced location could be compensated for by a better-than-average margin of gross profit. So each item should be considered in relation to the overall return.

Once these comparisons are analyzed, corrective steps in portioning expenses to sales may be worked out. Such measures are not necessarily negative. Some managers may see ways to improve their showings by *adding* expenses. For example, perhaps the former advertising budget was too low. An increase might bring in more income.

In this connection, it is essential to understand some of the significant influences on major classifications of the operating statement.

Cost of Goods Sold and Gross Margin

Cost of goods sold and gross margin are definitely interrelated. Costs may, for example, appear high because the margin is too low. Cost of goods sold may be higher or lower than that shown by a typical ratio for several reasons.

One reason for higher cost of goods may be inventory write-downs. If inventories are high during a period, and closing

inventories must be valued below original cost at inventory time, the closing inventory will be lower than normal and will affect cost of goods.

The cost of goods may be too high because of wasteful buying practices. In a manufacturing business, inefficient labor will affect the cost of converting raw materials into finished products, as will excessive manufacturing overhead.

Cost of goods also may seem high simply because of a comparatively low selling price. For example: If sales are \$50,000 and cost of goods is \$40,000, then gross profit on sales is 20 percent and cost of goods sold is 80 percent. But if gross profit were arbitrarily increased to 25 percent while cost of goods stayed the same, sales would be \$53,300, and the \$40,000 figure would represent only 75 percent of sales.

Gross profit, then, may rise or fall because of what affects the costs of goods sold. When your gross profit is seriously out of line with prevailing averages, it is a good idea to examine your buying costs and pricing structure. If the gross profit is higher, it may be a logical result of location, extra services, and the like, the cost of which must be offset by selling prices.

Cost of goods sold is also related to inventory valuations. If, for example, closing inventory is overvalued, gross profit will increase—and vice versa.

Operating Expenses

Wages and salaries. Labor cost is a major item among operating expenses in the profit-and-loss account. The reaction of a business owner to how others in the line are managing these expenses will be instinctive.

A number of ratio studies provide interesting supplementary data for analyzing wage-cost relationships. Some studies, for instance, show a breakdown of *sales per employee*. Other studies which do not make this breakdown may nevertheless show figures for typical dollar sales and dollar expenditures. In this event—if the number of employees is given—the ratio of dollar sales per employee may be computed and compared with figures for your own business.

The latter relationship would be particularly interesting in

comparing *selling costs*. Many sales managers have now come to review selling costs with great care. An abnormally high selling cost-to-sales ratio may lead to questions about selling efficiency. A very low selling cost-to-sales ratio may make it worthwhile to find out whether the selling effort is being concentrated in skimming the cream of large volume customers, and whether a profitable segment of a sales territory represented by smaller volume buyers is being neglected.

At the same time, it is also possible that out-of-line sales costs may be due not so much to the inefficiency of the sales force as to sales and promotion methods. Many retailers have installed self-service departments in their stores as a means of improving their sales-to-cost ratios.

Owner's compensation. The salaries of management are another item worthy of analysis. In a proprietorship or partnership, for instance, it is often the practice to compute profits before allowing for any compensation to owner or owners. Whatever earnings are left, after all other deductions, represent their compensation. Some businessmen feel that every concern should be charged with the expense of a manager. The owner, they say, would have to employ an outside manager if he or she did not exercise that function. In this connection, typical operating ratios can give some insight into the size salary an owner should draw for being manager. It should, of course, be noted that some ratios are distorted to the extent that they combine corporation figures with those of partnerships and proprietorships.

When management compensation is too high as compared with the prevailing standard, it may indicate that an excessive part of profits, which should be retained for future growth, is being drained from the business. Such a procedure is really inviting trouble—for every business should create some kind of cushion, either for expansion or to meet unforeseen contingencies. Some businesses, of course, will be exceptions because they have available to them a liberal surplus of capital over their needs. Moreover, there are profitable concerns in today's highly competitive market, which are content to stand pat on their present volume of business.

In some instances, too high a ratio of management compensation to other items may suggest that the business is supporting

too many principals. A store once operated by two partners might become less attractive as a business venture if, say, four or five partners were to start drawing from it.

Attention should also be called to the situation in which officer-owners of closely held corporations prefer to take their compensation as salaries rather than in dividends. This approach can have a very marked influence on the management payroll.

Advertising cost. Improperly used, of course, advertising may prove to be something less than a cure for competitive problems. The incident may be recalled of a small manufacturer of underwear who spent relatively large sums to bring its product before the public. The advertising was in good taste, and the campaign was well planned. Sales did go up. But so much capital had been laid out in publicity that the business was unable to pay its bills. It went bankrupt before earnings could catch up. The point is that advertising outlays must be subjected to careful planning just as are other costs.

Occupancy cost. Every dollar paid in rent should bring a proportionate return in income. If location costs are high in relation to sales, they should be offset by correspondingly higher prices. Many "swanky stores" located on "exclusive thoroughfares" take this principle for granted.

Perhaps the ratio of occupancy to sales may be a little misleading as the sole arbiter of whether or not rent costs are in line. While this is a useful standard for comparison, it is good to compute also the ratio of *rent to gross profit*. The latter is overlooked in most typical ratio studies, but you can compute and compare it from basic data in the studies.

Bad debt costs. Credit is an instrument of sales. The manufacturer or wholesaler who does not grant credit is a rarity. Credit granting is becoming increasingly in vogue among retailers. There's money in it. Some grocers, such as those specializing in home deliveries and high-priced items, find that through credit, they are able to obtain higher profit margins. In other instances, while the markup cannot be increased, the credit risk is offset by larger volume.

Nevertheless, the manager who becomes deliberately careless

about granting credit is asking for trouble. Faulty reasoning is all too easy. Take, for instance, the manager of a small retail business who was being swamped with orders from new credit accounts on Saturday mornings. This manager was in a quandary for fear that "If I ask them to fill our credit applications, I'll drive the customers away!"

Interpreting Balance-Sheet Ratios

Many business executives have not schooled themselves to the significance of financial balance in their business. As an operating executive, you very likely tend to concentrate on your income account in seeking ways to increase profits or reduce losses. Nevertheless, a careful review of your balance sheets is a worthwhile related procedure. A knowledge of the distribution of your assets and liabilities and an appreciation of the typical ratios for the more successful concerns in your line or area can be of great value. It is particularly so in judging whether the financial structure of your company should be altered or redesigned to improve operating performance.

If the operating statement shows signs of progress, it is easy to rationalize a bad situation, which could be corrected, by saying, "We don't have enough capital," or even "Let the creditors carry us for awhile; look at the business we give them."

All too often, slow payments are an end result of unhealthy underlying conditions that may ultimately endanger the business. You might find, for example, overstocked inventories, excessive collection periods, ill-thought-out expansion programs, or too large investments in fixed assets. In the course of the existence of most concerns there are peaks in business activity, followed by valleys. In the ensuing fluctuations in prices and sales, some unbalanced concerns are unable to make the adjustment. There is always a chance of trouble developing as the result of some unforeseen event such as the advent of new technology or a shift in style. If liabilities are heavy, real difficulties will certainly be faced. A business must have reserves for almost any emergency.

Current Assets to Current Liabilities

In the evolution of financial analysis, it early became a practice to compare current assets to current liabilities. The beginning and the end of financial analysis in those days was the expectation that a healthy business would have a margin of \$2 in current assets to \$1 in current debts. This, it was said, could be considered as "an infallible guide." That notion was not to last for long.

Later, there evolved a second simple comparison: the sum of the cash and receivables to the total of current liabilities.

Still later, a third modification in elementary analysis occurred. Some readers may recall that certain credit issuers, even bankers, upon receiving a balance sheet for credit consideration, would mentally write down the receivables to a valuation of 75 percent of the figure shown on the statement, while also mentally writing down the inventories by 50 percent. These write-downs were made on the theory that these assets were probably overstated to begin with, and that the write-down probably represented what the assets would bring under forced liquidation. Credit, if extended at all, would be granted only on the basis of the "revised" asset values.

However, experience has proved that no single ratio can possibly give a complete picture of financial condition. Other facts can be of vital significance, each telling its own story in conjunction with related ratios and conditions in the particular business.

Nevertheless, a current ratio *does* tell a story. It is an item of evidence. But it should be used with judgment. Sometimes the story is deceptive. A 4-to-1 ratio in a seasonal business might go down to 1.5 to 1 at the height of the season. Or it might be high because of large amounts of accumulated unsold inventory. In the apparel trades, it is always important to consider how much of a "carryover" exists from one season to the next; for instance, summer dresses on hand in the autumn. In this regard, a shoe store in Brooklyn had a current ratio of 4 to 1 largely because of a stock of \$20,000 in high button shoes—which would never be sold.

A 2-to-1 current ratio is not necessarily a guarantee of sound financial condition, but it's not a bad idea to have one most of the time. Ratios below that figure occasionally prevail in the food industry, or among concerns which have exceptionally fast

turnovers of receivables and inventories. Most managers will recognize that a current ratio less than 2 to 1 is a symptom of possible trouble. It's an outward sign that financial stress is occurring.

Liabilities to Tangible Net Worth

Beware of topheavy liabilities! If they do nothing else, they undermine business judgment. Managers who are worried about finding money to meet obligations are less likely to have the analytical objectivity they need to plan sound programs for their businesses.

One of the best indicators of topheavy liabilities is the relationship of liabilities to tangible net worth. A small business is unlikely to owe much in the way of term loans, debentures, or bonds. Term debts are more likely to be loans from officers. These are internal, and in the opinion of many creditors are the most dangerous kind of debt. Or they may be mortgage loans secured by real estate or equipment. If these are large, then the ratio of total debt to tangible net worth may prove significant.

How much can a concern afford to owe? Some analysts feel that for most small manufacturing concerns, a debt equivalent to 75 percent of tangible net worth is pretty high. When liabilities exceed that figure, they reason, the equity of creditors in the assets is coming too close to equaling the equity of the owners. For the small retail business, they would argue that current liabilities should seldom come to more than 50 percent of tangible net worth. Why? A retailer, they note, usually has most current assets in inventory, which must be sold to realize cash. A heavily obligated retailer may find a sudden letdown in inventory turnover embarrassing.

There are only three ways to reduce debt. *One* is to invest more capital—not always available. The *second* is to liquidate assets—not always practical. The *third* is to build up capital from earnings—not possible overnight. So watch those debts.

Turnover of Tangible Net Worth and Working Capital

When capital is forced to turn over too rapidly, a series of

consequences sets in. Every dollar is tied up in some phase of operations. Every cog in the business machine has to function perfectly because there is no reserve of money which can be called upon in an emergency. There can be no letdown in orders received and in sales transacted. Receivables must be collected very promptly, and a large bad debt becomes fatal because that money was absolutely essential for paying bills.

The more a firm's inventory needs replenishment, the more rapid its rate of buying. Bills accumulate. Money has to be borrowed and these loans have to be repaid. What if there are cancellations, or strikes, or marketing changes, or if customers just stop buying? That is where liabilities begin to take on dangerous momentum.

Net Profits on Tangible Net Worth

In 1928 and 1929, radio manufacturing was tremendously profitable. One particular manufacturer made over \$5 million in net profits in a single year, on an initial capital of about the same amount. A 100-percent net profit on capital in 1 year is very heady wine. Next year, the entire capital, including last year's profit, was spent in enlarging the plant. Then, the following year, the bottom fell out of radio and the company went broke.

When net profits loom large in relation to tangible net worth over a very short period, they can lead to a very warm self-appreciative glow. They are like meat to a hungry hunter, and they lure plenty of wolves out of the forests of competition.

There is not much need to belabor the issue of net profits which are too low in relation to capital.

No one has ever proved how much a concern should earn on its existing capital. Nevertheless the fact remains that business ought to make a reasonable return on the money invested in it. That return should be adequate to compensate for risk and provide incentive. After all, profit is the payoff.

Average Collection Period

Not many concerns could afford to cut off every overdue

customer. Some of these customers provide volume—and they do not all fail. A random survey of 100 concerns rated as "fair" credit risks 10 years ago would find that most of them are still in business.

Credit management implies selectivity. Credit management by rigid yardsticks is pretty cumbersome. Too lax a credit policy can turn credit into a bog, an unsafe footing for business sales. Too rigid a policy can mean loss of business and a failure to cultivate future profitable outlets.

The collection period is a medium for comparison; it doesn't pinpoint the condition of individual accounts. If the collection period is too high, it may mean deadwood in the receivables in the form of accounts that should be written off. It might even be a signal that nonbusiness receivables, such as loans to outsiders, are included. Slow collections could be a danger signal of overdependence on too many slow payers. Too low a collection period might justify taking a few more credit risks.

So watch average collection periods—your own, and the other person's.

Inventory Turnover

One owner spent a spring vacation in the West and combined business with pleasure by buying his entire summer's requirements from western factories. Prices were high, and he had many a happy vision of what profits would accrue from higher prices which were bound to come that summer. Apparently he never asked himself, "But what if prices go down?"

Actually, he would have been put out of business, because those commitments exceeded his capital, and he had borrowed the money with which to buy. Fortunately, prices did not decline, but they didn't go up either.

Many a marginal business has remained a live because of unexpected profits which accrued from appreciation of inventories in a rising market. The trouble is that sometimes those unexpected profits come to be accepted as a normal return from "astute" management. However, unexpected losses from inventory depreciation in a falling market have just as often become a prelude to bankruptcy for such self-acknowledged astute entrepreneurs.

An excessive inventory can result in unexpected losses from depreciation, changes in style, perishability, and price fluctuations. A typical small business will seldom find it desirable to carry more than 100 percent of its working capital in inventory.

The profits a business earns are justified by risks taken in the normal function of converting goods from raw materials to finished products, of distributing goods, of judging style and anticipating demand, of stocking goods to suit customer convenience, and of rendering services. Net profits for such functions are seldom spectacular. In other words, the legitimate function of a business is to merchandise, produce or serve—not to speculate. Speculative profits and losses are for speculators. Business owners may be entitled to speculate, if they can afford it, but they cannot afford it on creditors' money.

Fixed Assets to Tangible Net Worth

Once there was a manufacturer of what, for the sake of protecting the company, must be called "widgets." The business was started in a very small way, but the owner was quite ingenious. The widgets were unusual in that they were completely processed, whereas competing products required further operations before use. Moreover, these particular items were being produced at a comparatively low price. The demand was great. The manufacturer began to expand rapidly.

From an output of a few widgets a day, production grew until, in 2 years, it was up to 10,000 widgets a week. That was the absolute maximum; it took new machinery to accomplish that. At this point, a big customer said, "Why don't you put in an assembly line—we will take all the widgets we can get." Money was borrowed and still more machinery was installed. Production went up to 30,000 units a week. The problem was that it took all the money the owner could get to equip the new plant.

One day, the plant manager called the owner and said, "We're running low on materials. Send us more raw widgets."

The owner had to reply, "Can't—haven't any money to buy them."

Whereupon the plant's operation had to be cut back to about one-half its capacity. This was expensive because depreciation

and maintenance were heavy. Payments to suppliers became very slow. Days were anxiety-filled. Only through intensive efforts was the manager able to get outsiders to recognize sufficient profit possibility to invest additional capital and put the business back on its feet. The costs of maintenance, repairs, and depreciation could have wiped out the equity.

The point to remember is that fixed-asset requirements are relative. For example, they are high for a motor carrier and a cannery, low for a cotton goods converter, a wholesaler, or an average retailer. For an average small business, if fixed assets exceed 75 percent of worth, they may become unmanageable because bills cannot be paid with brick and mortar. When money is borrowed to put into fixed assets, the borrowings become a kind of mortgage on future earnings or new capital. For only earnings or new capital can repay that kind of debt. Meanwhile, maturing debt installments may become troublesome.

Management Judgment Necessary

No statistical study will substitute for management judgment. Ratios cannot give the final answer to questions of operating policy. They cannot convert every enterprise into a success overnight. They can help in measuring performance. The knowledge of what others in the same line are doing can be of real assistance in making decisions and in locating potential trouble areas. Beyond that, small business owners and managers must look to themselves for effective action.

For Further Study

THE FOLLOWING PUBLICATIONS are listed for those who may wish to explore further the many and varied aspects of ratio analysis. The list is necessarily selective in keeping with the objectives of this booklet. No discourtesy is intended toward authors whose works are not cited.

Almanac of Business and Financial Ratios, by Leo Troy. Annual, \$16.00 a copy, Prentice-Hall, Inc., Englewood Cliffs, New Jersey 07632.

Barometer of Small Business. Midyear Edition. \$6 a copy. Annual subscription, including 2 issues, \$12.50. Accounting Corporation of America, 1929 First Avenue, San Diego, Calif. 92101. For a number of basic types of small businesses, this study gives sales volumes and trends, as well as operating ratios. For higher groups, it shows typical financial statements.

Dynamics of the Credit Decision, by Richard Sanzo, 1975. Available on request. Dun & Bradstreet, Inc., 99 Church Street, New York, New York 10007. A review of the principles underlying credit decisions, credit ratings, and the application of financial ratios.

Expenses in Retail Businesses. Published periodically. \$1.75 a copy. The National Cash Register Co., Marketing Services Department, Dayton, Ohio 45409. Operating ratios give typical experiences for various lines of retail business. For many lines,

there is a breakdown by size class, as well. Average ratios, according to the compiler, "should be used by the businessman according to his own experience with his specific business and its peculiar characteristics."

Key Business Ratios in 125 Lines. Annual. Single copies free on request. Dun & Bradstreet, Inc., Business Information Systems, 99 Church Street, New York, N.Y. 10007. The 14 ratios, shown in terms of medians, cover approximately 125 lines of retail, wholesale, manufacturing, and construction business.

Cost of Doing Business: Partnerships, Proprietorships. Available on request. Dun & Bradstreet, Inc., Business Information Systems, 99 Church Street, New York, N.Y. 10007. For a number of lines of retail and wholesale trade, manufacturing, construction, services, and the like, this states operating ratios (as a percent of sales) derived from representative samples of Federal income tax returns.

Practical Financial Statement Analysis, by Roy A. Foulke, 6th ed. 1968. \$14.50. McGraw-Hill Book Company, Inc., 1221 Avenue of the Americas, New York, N.Y. 10036. This book describes the background, evolution, and techniques for analyzing financial statements. By tables, it shows an interquartile range of ratios for 72 lines of business activity.

Quarterly Financial Report for Manufacturing Corporations, by Federal Trade Commission-Securities and Exchange Commission. \$6.40 a year. Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. This continuing series of quarterly reports, based on corporation income tax returns, shows the financial characteristics and operating results for all U.S. manufacturing corporations. Reader can use data to make his own ratio analysis.

Sources of Composite Financial Data: A Bibliography, 3d ed. Members 50¢; nonmembers \$1.00. The Robert Morris Associates, Research Department, Philadelphia National Bank Building, Philadelphia, Pa. 19107. Lists and annotates 90 sources for further information on "cost of doing business," operating results, and the like, for 374 industries, including manufacturing, wholesaling, retailing, and service firms.

Statement Studies. Annual. \$13.50 a year. The Robert Morris Associates, Research Department, Philadelphia National Bank Building, Philadelphia, Pa. 19107. Eleven key business ratios are presented, in terms of medians, for approximately 300 different lines of business, including manufacturers, wholesalers, retailers, and services. Businesses are broken down by size class.

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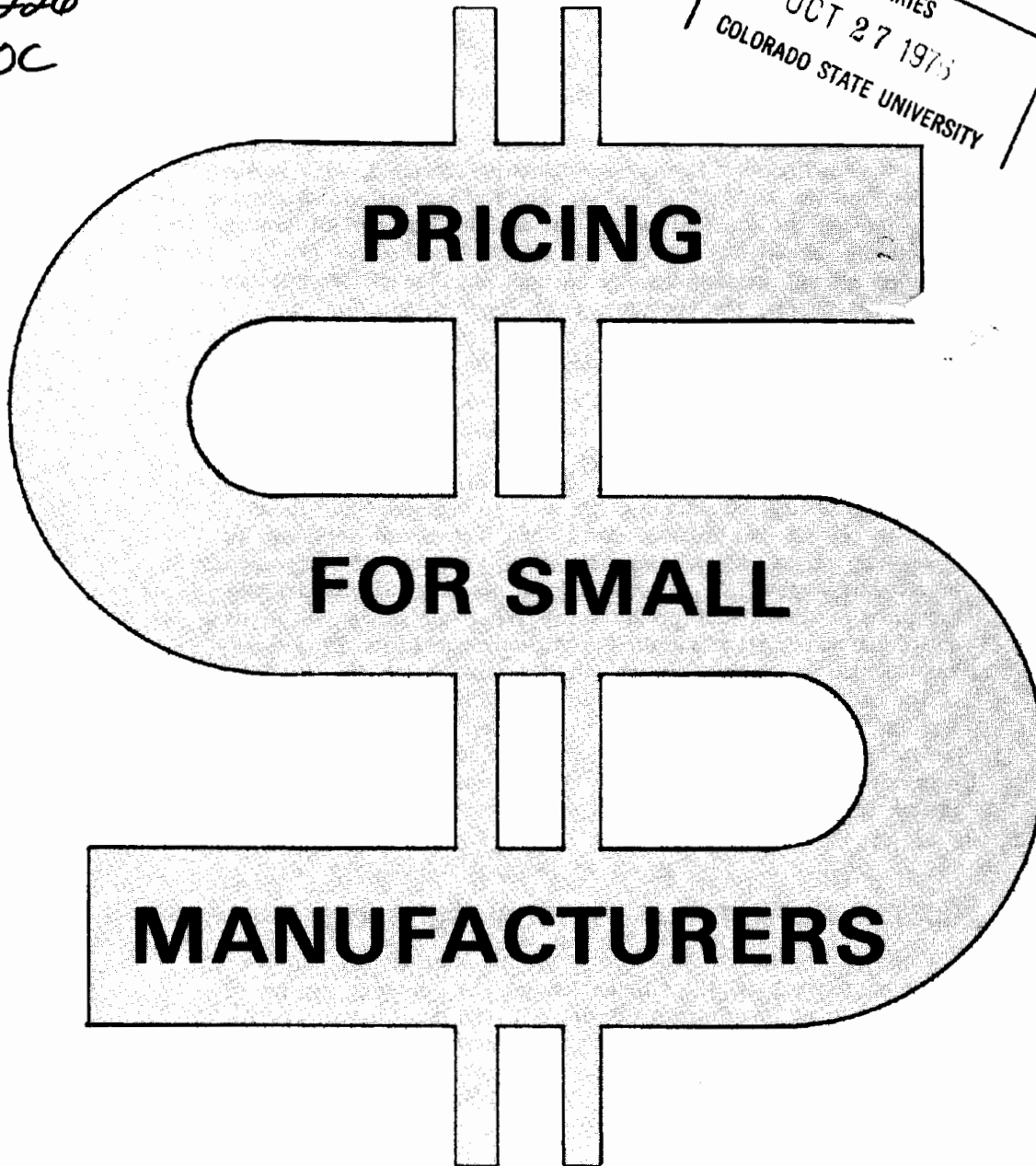
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SUMMARY

A small manufacturer should not compete on the basis of price unless he is the low-cost producer. Usually he should compete on the basis of product performance, quality, delivery time, or whatever advantage he can offer customers over his competitors.

This **Aid** discusses pricing in the framework of a "price ceiling" and a "price floor." The market determines the price at which products will sell and sets a "price ceiling." A small manufacturer's costs and desired profits establish a "price floor" below which he cannot sell and make a profit.

Pricing practices in a small manufacturing company sometimes get out of date. Market conditions change, and pricing practices which were successful a year or so ago may no longer be appropriate.

Owner-managers who have not reviewed their pricing practices recently should do so. Rising costs, material shortages, wide swings in the economy, difficult access to funds for expansion and operation, and tougher competition at home and abroad have all focused attention on pricing.

Good pricing practices require an understanding of the influence of market factors, the economy, technology, competition, and resources. The owner-manager must consider each of these factors in addition to cost-related factors internal to the company.

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TWO BASIC RULES OF PRICING

Most basic to good pricing practices is to recognize that there is more to pricing than internal costs. Two factors are important in developing prices in small manufacturing companies. Number one is to recognize that it is the market, not your costs, that determines the price at which your products will sell. Number two is to be aware that your costs and desired profits only establish a "price floor" below which you cannot sell and make a profit.

The area between the "price ceiling", established by the market, and the "price floor", determined by costs and desired profits, is the "relevant price range." Only if you can produce at a cost which will permit recovery of costs and the desired margin at the price the market determines can you expect to conduct business profitably.

COSTS: ONE FACTOR IN ESTABLISHING PRICES

Good management depends on good cost information. This is as true for pricing as it is for understanding the operating aspects of running a small manufacturing business. If you don't have good cost figures, insist upon your accountant in developing them for you. Once basic cost data is compiled, several alternatives for computing "price floors" based on costs are available.

COST BASED METHODS OF PRICING

Several methods of developing "price floors" based on costs are available. You should keep in mind that each of these methods is designed to meet specific pricing objectives under differing conditions.

Mark-Up On Cost Methods

The most basic and frequently used methods for developing “price floors” are mark-up on cost methods. These involve identifying the various types of costs and adding an additional percentage of those costs as a mark-up. Exhibit 1 shows examples of the various mark-up on cost approaches.

Full Cost Base

This method is designed to recover all costs plus a margin. It is computed by adding up all costs and adding to them a mark-up, or some fraction of those costs. The formula for full-costing is:

$$P = TC + (M)(TC),$$

or, Price equals Total Cost per unit plus a Mark-up, or percentage, of that Total Cost. This method’s main advantage is its simplicity and ease of use. Its biggest disadvantage is that profit may be foregone because of arbitrary overhead allocation. In all cost-based pricing approaches careful treatment of overhead is important. See Example 1 in Exhibit 1.

Incremental Cost Base

This method uses direct labor and direct material as its base, and emphasizes the incremental cost of producing additional units. Because it is normally a larger mark-up on a smaller base than in the case of full-cost base, it shifts sales emphasis toward products that absorb more overhead. The formula for incremental costing is:

$$P = (DL + DM) + M(DL + DM),$$

or, Price equals Direct Labor plus Direct Material plus a Mark-up on the sum of Direct Labor plus Direct Material. Example 2 in Exhibit 1 shows incremental costing.

Conversion Cost Base

Conversion cost basing emphasizes the value added or direct labor plus overhead in developing the price floor. It shifts sales emphasis toward products with high materials costs and economizes on company labor and machines. The formula for conversion cost base is:

$$P = (DL + OH) + M(DL + OH),$$

or, Price equals Direct Labor plus Overhead Plus a Mark-up on the sum of Direct Labor and Overhead. Its obvious disadvantage is that overhead allocation must be based on a clear rationale because the allocation of overhead will influence the price so heavily. Conversion costing is demonstrated in Example 3, Exhibit 1.

OTHER COST-BASED APPROACHES

Other cost-based approaches to pricing include methods designed to determine prices required to accomplish: (1) a desired margin objective or (2) a desired return on investment. Number one is target margin on sales, and number two is target return on investment.

Target Margin on Sales

If the objective is to establish a price which will return a desired

margin on sales, you can use target margin on sales. This method is demonstrated in Exhibit 2. The formula is:

$$P = \frac{\text{Total Cost}}{100\% - \%SA - \%PM},$$

or, Price equals Total Manufacturing Cost per unit divided by one hundred per cent minus the Per Cent of Sales and Administrative Costs minus the Per Cent of desired Profit Margin.

This method will identify what price must be charged to achieve a desired margin on sales. As with all the methods discussed, it will permit you to vary the factors and see what price must be charged to accomplish different returns, or what price must be charged based on various cost figures. The Target Margin on Sales requires accurate information on sales and administrative costs.

Target Return on Investment

This method determines what price must be charged to achieve a desired return on investment. Exhibit 3 demonstrates this method. The formula is:

$$P = \frac{(\text{ROI}) \frac{I}{Y} + FC + VC(Q)}{Q},$$

or, Price equals desired Return on Investment (R.O.I.) times the ratio of Investment in dollars over the desired payback period in Years, plus Fixed Costs, plus Variable Costs times Quantity sold, all divided by the Quantity sold.

The Target Return on Investment method is only as accurate as your estimate of the quantity that will be sold. Often, where sales volume is sensitive to price, only a rough estimate of how much will be sold at a given price is possible. Therefore, this method should not be considered an exact method for determining price just because a formula has been developed to compute the price with this method.

After determining the price using this formula you should ask the question, "How many can I sell at this price level?" If anticipated sales at this price level are not at least equal to the volume used in the pricing formula, the Q in the formula, you can not sell at that price. You must either reduce costs, or accept a lower ROI, in order to reduce the price of your product.

If lower costs are possible, or low ROI is acceptable, rework through the formula to determine the new price. Only when the volume you can actually sell equals or exceeds the quantity (Q) used in the price formula will you make the desired Return on Investment.

THE "PRICE CEILING"

The foregoing methods of determining the "price floors" based on cost are only half the pricing problem. They tell you what price is required to cover costs and earn a return. But they are accurate only if the market will accept the required volume at the resulting price. The "price ceiling", determined by the market, is the other half of the pricing problem. Determining the "price ceiling" is often difficult to do. Economic, market, competitive, consumer and many

EXHIBIT 1
Mark-up on Cost Pricing

Mr. Smith, president of ABC Manufacturing Company, develops a new product and wants to determine what price he should sell it at. With the help of his accountant, he develops the following cost information:

Direct Labor (DL)	10¢ per unit
Direct Material (DM)	20¢ per unit
Overhead (OH)	6¢ per unit
Total Cost (TC)	36¢ per unit

Mr. Smith is considering three pricing methods, which are outlined below, to establish his price floor.

EXAMPLE 1 FULL COST PRICING	EXAMPLE 2 INCREMENTAL COST	EXAMPLE 3 CONVERSION COST																										
$P = TC + M(TC)$ Therefore, price is:	$P = (DL + DM) + M(DL + DM)$ Therefore, price is:	$P = (DL + OH) + M(DL + OH)$ Therefore, price is:																										
<table style="width: 100%; border-collapse: collapse;"> <tr><td style="width: 80%;">Total Cost</td><td style="text-align: right;">.36</td></tr> <tr><td>Margin (50%)</td><td style="text-align: right;">.18</td></tr> <tr><td style="border-top: 1px solid black;">Price</td><td style="text-align: right; border-top: 1px solid black;">.54</td></tr> </table>	Total Cost	.36	Margin (50%)	.18	Price	.54	<table style="width: 100%; border-collapse: collapse;"> <tr><td style="width: 80%;">Direct Labor</td><td style="text-align: right;">.10</td></tr> <tr><td>Direct Material</td><td style="text-align: right;">.20</td></tr> <tr><td style="border-top: 1px solid black;">Direct Costs</td><td style="text-align: right; border-top: 1px solid black;">.30</td></tr> <tr><td>Margin (100%)</td><td style="text-align: right;">.30</td></tr> <tr><td style="border-top: 1px solid black;">Price</td><td style="text-align: right; border-top: 1px solid black;">.60</td></tr> </table>	Direct Labor	.10	Direct Material	.20	Direct Costs	.30	Margin (100%)	.30	Price	.60	<table style="width: 100%; border-collapse: collapse;"> <tr><td style="width: 80%;">Direct Labor</td><td style="text-align: right;">.10</td></tr> <tr><td>Overhead</td><td style="text-align: right;">.06</td></tr> <tr><td style="border-top: 1px solid black;">Conversion Cost</td><td style="text-align: right; border-top: 1px solid black;">.16</td></tr> <tr><td>Margin (200%)</td><td style="text-align: right;">.32</td></tr> <tr><td style="border-top: 1px solid black;">Price</td><td style="text-align: right; border-top: 1px solid black;">.48</td></tr> </table>	Direct Labor	.10	Overhead	.06	Conversion Cost	.16	Margin (200%)	.32	Price	.48
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Mr. Smith has selected the margin he wants in each of the three pricing methods, and has come up with three different prices for his new product. By looking carefully at each, he sees that if he changes the desired margin in any of the three, the price would change. He must now say to himself, "These are price floors developed on the basis of my costs and desired margins. Can I sell the product at any of these prices?" If so, he obviously would want to receive the highest price he could and would select the 60¢ price for his product. If he could not sell even for 48¢, he would have to either accept lower margins, or somehow reduce costs in order to stay in business.

other factors can influence it. Two approaches can be used to determine the price ceiling. They are: (1) hit or miss, and (2) market research.

The hit or miss approach requires that the product be produced and put on the market. You should keep one principle in mind when using this approach. . . "It is easier to lower prices than to raise them."

Therefore, for new products, it is better to put the product on the market with a little extra margin than with not enough. If the market will accept the product at the price with the extra margin included, more rapid recovery of costs will occur. If it will not, the price can be reduced to see if that will stimulate sales. Lowering the price from a high margin is much more acceptable to the market than introducing the product and then finding that the price was too low, and having to raise the price.

The market research approach offers the benefit of not having to risk finding out the market won't accept the product at the required price before an investment is made in producing the product. But usually, this requires the use of outside experts to make the determination, and it can be costly. The choice between the "hit or miss" approach and market research should be made based on the

EXHIBIT 2 Target Margin on Sales

Mr. Jones, president of XYZ Manufacturing, has developed a new product and wants to determine at what price he should sell it. Mr. Jones has many products in his product line, and through experience has learned that if he can get a 25% margin on sales, he can make a satisfactory return. He also knows that his selling and administrative costs usually run around 15%. By using the Target Return on Sales method he can determine what price he should sell at. Mr. Jones' accountant has developed the following cost figures:

Direct Labor (DL)	\$ 4.50 per unit
Direct Material (DM)	8.00 per unit
Overhead (OH)	12.50 per unit
Total Cost Per Unit	\$25.00 per unit

Mr. Jones calculates his price floor in the following manner:

$$\text{Price} = \frac{\text{Total Cost Per Unit}}{100\% - 15\% - 25\%} = \frac{25.00}{1.00 - .15 - .25} = \frac{25}{.60} = \$41.67$$

Mr. Jones must now determine if his product will sell at \$41.67. If it will not, he must either accept a lower profit margin, or reduce costs if he is going to be able to sell his product.

amount required to manufacture a small amount of the product and put it on the market, compared to the cost of market research.

The principle to remember is that products are bought on the basis of perceived value in the minds of the buyers, and not on the basis of what it costs you to produce. Only if you can produce at a cost permitting sale of your product at a price equal to or below the buyer's perceived value will you make the sale.

WHAT IF THE MARKET BALKS?

What if the market won't take your product at the established price? If the market will not accept your product at a price which will cover costs and the desired margin, four alternatives are available: (1) discontinue the product, (2) accept a lower margin, (3) reduce costs, or (4) differentiate your product from your competition's in the minds of buyers.

Selecting among the first three alternatives must be based on your own profit requirements and whether or not you can reduce costs by enough to allow selling at a price the market will accept. Using several different cost and profit or margin figures in the price formulas presented earlier will help you determine what is the best alternative.

Product Differentiation

One pricing option that is far too seldom used by small manufacturers is to avoid competing on a price basis. This can sometimes be done by emphasizing quality, service, product performance, delivery time, financing arrangements, engineering or design help, discounting and packaging. Small manufacturers often find that their sales are not as sensitive to price as they thought, if they stress nonprice factors in promoting and selling their products.

Will Product Differentiation Work?

Product differentiation will work best under conditions where price sensitivity is lowest. Several factors influence the buyer's sensitivity to prices. They include: (1) the availability of substitutes, (2) the frequency with which purchases of your product are made by the individual buyer, and (3) the impact of the purchase on the buyer's budget. If competing products are not readily available to the buyer, his sensitivity to price will be lower. If his purchase of your kind of product is not frequent he will be less sensitive to price. If the purchase of your kind of product does not have a major impact on his budget, he will be less price sensitive.

For example, one small manufacturer had for years produced a small item for use in hospitals and doctors' offices. Over the years this very profitable item became more and more expensive to produce, but because competitors were not raising their prices on the item, this small manufacturer felt that he couldn't. He had decided to drop the item from his line and to write his customers, explaining that rising costs were forcing him to drop this product. But he was afraid that if he did, his sales in other related products would fall sharply as his customers went to his competitors where they could buy the full line.

When he sought advice from a consultant, he was told to let his customers make the decision on whether or not they would buy the product from him or elsewhere. The consultant advised him (1) to raise the price to make it a good margin above costs and (2) to write the customers explaining rising costs had forced him to increase the price so he could continue to offer them the complete product line.

EXHIBIT 3 Target Return on Investment Pricing

Mr. Green, president of JKL Manufacturing Company, has developed a new product and wants to determine what price he should sell it at. Because this new product will require a substantial investment, he wants to be sure that he can get a satisfactory return for his investment. His requirement is a 30% return before taxes. Since he is in the 48% tax bracket, this will give him approximately a 15% return after taxes.

Mr. Green's accountant has estimated the following costs for the new product:

Required Investment	\$100,000.00
Fixed Costs	\$ 20,000.00
Variable Costs	\$ 200.00 per unit

Mr. Green also requires that his investment be paid back within five years, and estimates that he can sell 500 units per year. He can use the Target Return on Investment formula to develop his price.

$$\text{Price} = (\text{ROI}) \frac{I}{Y} + \text{FC} + \text{VC}(Q) = (.30) \frac{100,000}{5} + 20,000 + 200(500)$$

$$= \frac{(.30) 20,000 + 20,000 + 100,000}{500} = \frac{6,000 + 20,000 + 100,000}{500} = \frac{126,000}{500} = \$252$$

Mr. Green must now ask himself if he thinks he can sell 500 units at \$252 in each of the next five years. If he can't, he must either accept a lower ROI or reduce costs in order to make his investment pay.

He did so, and much to his surprise, he not only did not lose a single unit of volume, but turned a losing product into a solid money maker.

His customers did not leave him for several reasons. First, the product did not have high budget impact for them. Second, the frequency of purchase of this item was normally only as replacement was required due to breakage. Third, establishing new arrangements with a different supplier was probably more time consuming than the price rise in his own product warranted.

If any of the three conditions exist (few substitutes, low budget impact, or infrequency of purchase), price may not be as important in selling your product as you might assume. Experiment with increasing prices on a limited basis. But be sure to emphasize the other attributes of your product or your service as you promote and sell your product. If you can show the customer that you can provide an advantage in product performance, quality, or the services you offer, you will find that price is not as important as if you did not emphasize these advantages.

FOR FURTHER INFORMATION

Readers who wish additional information on pricing may be interested in the references below. The list is necessarily brief and selective; however, no slight is intended toward authors whose works are not mentioned.

Pricing in Business by D. C. Hague. 1973. \$8.95. Beekman Pub. Inc., 53 Park Place, New York, New York 10007

Pricing Decisions in Small Business by W. Warren Hayes. 1973. \$8.75. Greenwood Press, Inc., 51 Riverside Avenue, Westport, Connecticut 06880

Cost Accounting for Small Manufacturers by R. Lee Brummet and Jack C. Robertson, 2nd ed. 1972. SBMS No. 9, Small Business Administration, Available from Superintendent of Documents, Washington, D.C. 20402

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SMALL MARKETERS AIDS No. 105

Washington, D. C.

August 1964

A PRICING CHECKLIST FOR MANAGERS

By Joseph D. O'Brien

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Boston College, Boston, Massachusetts

SUMMARY

Pricing is a basic factor in insuring the profitable operations of small retailers. Pricing plans, objectives, and policies are important phases of management, and to set effective prices the owner-manager must: (1) know his costs and (2) understand buyer motivation, timing, and competitors. Nonpricing practices can also be used to attract customers. The questions in this Aid are designed to help small marketers in evaluating their pricing policies and practices.

EXAMINING COSTS, SALES VOLUME, AND PROFITS

The questions in this part should be helpful when you look at prices from the viewpoint of costs, sales volume, and profits.

Costs and Prices

The small retailer who sets the price for an item by applying a standard markup may be overlooking certain cost factors which are connected with that item. The following questions are designed to help you gather information which should be helpful when you are determining prices on specific types of items.

- | | <u>Yes</u> | <u>No</u> |
|---|------------|-----------|
| 1. Do you know which of your operating costs remain the same regardless of sales volume? | _____ | _____ |
| 2. Do you know which of your operating costs decrease percentage-wise as your sales volume increases? | _____ | _____ |
| 3. Have you ever figured out the breakeven point for your items selling at varying price levels? | _____ | _____ |
| 4. Do you look behind high gross margin percentages? (For example, a product with a high gross margin, may also be a slow turnover item with high handling costs. Thus it may be less profitable than lower margin items which turn over fast.) | _____ | _____ |
| 5. When you select items for price reductions, do you project the effects on profits? (For example, if a food marketer considers whether to run canned ham or rump steak on sale, an important cost factor is labor. Practically none is involved in featuring canned ham; however, a rump steak sale requires the skill of a meat-cutter and this labor cost might mean little or no profits.) | _____ | _____ |

Pricing and Sales Volume

An effective pricing program should also consider sales volume. For example, high prices might limit your sales volume while low prices might result in a large, but unprofitable volume. The following questions should be helpful in determining what is right for your situation.

- | | | |
|---|-------|-------|
| 6. Have you considered setting a sales volume goal and then studying to see if your prices will help you reach it? | _____ | _____ |
| 7. Have you set a target of a certain number of new customers for next year? (If so, how can pricing help you to get them?) | _____ | _____ |

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Yes No

- 8. Should you limit the quantities of low-margin items which any one customer can buy when they are on sale? (If so, will you advertise this policy?) _____
- 9. What is your policy when a sale item is sold out before the end of the advertised period? Do you allow disappointed customers to buy the item later at the sale price? _____

Pricing and Profits

Prices should help bring in sales which are profitable over the long pull. The following questions are designed to help you think about pricing policies and their effect on your annual profits.

- 10. Do you have all the facts on costs, sales, and competitive behavior? _____
- 11. Do you set prices with the hope of accomplishing definite objectives, such as a 1-percent profit increase over last year? _____
- 12. Have you set a given level of profits in dollars and in percent of sales? _____
- 13. Do you keep records which will give you the needed facts on profits, losses, and prices? _____
- 14. Do you review your pricing practices periodically to make sure that they are helping to achieve your profit goals? _____

JUDGING THE BUYER, TIMING, AND COMPETITORS

The questions in this part are designed to help you check your practices for judging the buyer (your customers), your timing, and you competitors.

The Buyer and Pricing Strategy

After you have your facts on costs, the next point must be the CUSTOMER--whether you are changing a price, putting in a new item, or checking out your present price practices. Knowledge of your customers helps you to determine how to vary prices in order to get the average gross margin you need for making a profit. (For example, to get an average gross margin of 35 percent, some retailers put a low markup--10 percent, for instance--on items which they promote as traffic builders and use high markup--sometimes as much as 60 percent--on slow-moving items.) The following questions should be helpful in checking your knowledge about your customers.

- 15. Do you know whether your customers shop around and for what items? _____
- 16. Do you know how your customers make their comparisons? By reading newspaper ads? Store shopping? Hearsay? _____
- 17. Are you trying to appeal to customers who buy on price alone? To those who buy on quality alone? To those who combine the two? _____
- 18. Do any of your customers tell you that your prices are in line with those of your competitors? Higher? Lower? _____
- 19. Do you know which item (or types of items) your customers call for even though you raise the price? _____
- 20. Do you know which items (or types of items) your customers leave on your shelves when you raise the price? _____
- 21. Do certain items seem to appeal to customers more than others when you run weekend, clearance, or special-days sales? _____
- 22. Have you used your individual sales records to classify your present customers according to the volume of their purchases? _____
- 23. Will your customers buy more if you use multiple pricing? (For example, 3 for 39 cents for products with rapid turnover.) _____
- 24. Do your customers respond to odd prices more readily than even prices, for example, 99 cents rather than \$1? _____
- 25. Have you decided on a pricing strategy to create a favorable price image with your customers? (For example, a retailer with 8,000 different items might decide to make a full margin on all medium or slow movers while featuring--at low price levels--the remaining fast movers.) _____
- 26. If you are trying to build a quality price image, do your individual customer records, such as charge account statements, show that you are selling a larger number of higher priced items than you were 12 months ago? _____
- 27. Do your records of individual customer accounts and your observations of customer behavior in the store show price as the important _____

factor in their buying? Service? Assortments? Some other consideration?

Yes No

Time and Pricing

Effective merchandising means that you have the right product, at the right place, at the right price, and at the right time. All are important, but timing is the critical element for the small retailer. The following questions should be helpful in determining what is the right time for you to adjust prices.

- 28. Are you a "leader" or a "follower" in announcing your price reductions? (The follower, even though he matches his competitors, creates a negative impression on his customers.) _____
- 29. Have you studied your competitors to see whether they follow any sort of pattern when making price changes? (For example, do some of them run clearance sales earlier than others?) _____
- 30. Is there a pattern to the kinds of items which competitors promote at lower prices at certain times of the month or year? _____
- 31. Have you decided whether it is better to take early markdowns on seasonal or style goods or to run a clearance sale at the end of the season? _____
- 32. Have you made regular annual sales, such as Anniversary Sales, Fall Clearance, or Holiday Cleanup, so popular that many customers wait for them rather than buying in season? _____
- 33. When you change a price, do you make sure that all customers know about it through price tags and so on? _____
- 34. Do you try to time price reductions so they can be promoted in your advertising? _____

Competition and Pricing

When you set prices, you have to consider how your competitors might react to your prices. The starting place is learning as much as you can about their price structures. The following questions are designed to help you check out this phase of pricing.

- 35. Do you use all the available channels of information to keep you up to date on your competitors' price policies? (Some useful sources of information are: things your customers tell you; the competitor's price list and catalogs, if he uses them; his advertising; reports from your suppliers; trade paper studies; and shoppers employed by you.) _____
- 36. Should your policy be to try always to sell above or below competition? Only to meet it? _____
- 37. Is there a pattern to the way your competitors respond to your price cuts? _____
- 38. Have you lost certain customers because competitors match your price cuts? _____
- 39. Is the leader pricing of your competitors affecting your sales volume to such an extent that you must alter your pricing policy on individual items (or types of items) of merchandise? _____
- 40. Do you realize that no two competitors have identical cost curves? (This difference in costs means that certain price levels may be profitable for you but unprofitable for your competitor or vice versa.) _____

PRACTICES WHICH CAN HELP OFFSET PRICE

Some small retailers take advantage of the fact that price is not always the determining factor in making a sale. They supply customer services and offer other inducements to offset the effect of competitors' lower prices. Delivery service is an example. Comfortable shopper's meeting place is another. The following questions are designed to help you take a look at some of these practices.

- 41. Do the items or services which you sell have advantages for which customers are willing to pay a little more? _____
- 42. From personal observation of customer behavior in your store can you tell about how much more customers will pay for such advantages? _____
- 43. Should you change your services so as to create an advantage for which your customers will be willing to pay? _____
- 44. Does your advertising emphasize customer benefits rather than price? _____

Yes No

- 45. Are you using the most common nonprice competitive tools? (For example, have you tried to alter your product or service to the existing market? Have you tried stamps, bonus purchase gifts, or other plans for building repeat business?) _____
- 46. Should policies on returned goods be changed so as to impress your customers better? _____
- 47. If you sell repair services, have you checked out your guarantee policy? _____
- 48. Should you alter assortments of merchandise to increase sales? _____

FOR FURTHER INFORMATION

Businessmen who wish to explore further the subject of pricing may be interested in the references indicated below. This list is necessarily brief and selective. However, no slight is intended toward authors whose works are not mentioned.

Guides Against Deceptive Pricing. Free from the Bureau of Industry Guidance, Federal Trade Commission, Washington, D.C. 20580. The Federal Trade Commission issued this booklet on December 20, 1963 to supersede those in effect since October 2, 1958.

These *Guides* are designed to highlight certain problems in the field of price advertising which experience has demonstrated to be especially troublesome to businessmen who in good faith desire to avoid deception of the consuming public. The *Guides* are not intended to serve as comprehensive or precise statements of law, but rather as practical aids to the honest businessman who seeks to conform his conduct to the requirements of fair and legitimate merchandising.

The *Guides* deal with the following: I--Former Price Comparisons; II--Retail Price Comparisons; Comparable Value Comparisons; III--Advertising Retail Prices Which Have Been Established or Suggested by Manufacturers; IV--Bargain Offers Based Upon the Purchase of Other Merchandise; and V--Miscellaneous Price Comparisons.

Pricing for Profit and Growth. A. Bergfeld, J. Earley, and W. Knobloch. 1962. \$12.90. Prentice-Hall, Inc., Englewood Cliffs, N.J.

Competition and Price Making in Food Retailing. Ralph Cassady, Jr. 1962. \$6.50. The Ronald Press Co., New York, N.Y.

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Management Aids for Small Manufacturers

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PRICING ARITHMETIC FOR SMALL BUSINESS MANAGERS

By Jules E. Anderson and Earl C. Gassenheimer, Management Consultants, New York, N. Y.

SUMMARY

A recent study revealed that only 4 out of 155 leading industrial companies had written price policies. The survey also brought out that even among the best managed companies an understanding of pricing arithmetic is comparatively rare. Yet pricing has a direct bearing on any company's success. Several important factors are involved in pricing arithmetic: (1) The profit-margin formula (P.M.); (2) standard costs; (3) replacement value in costing; (4) pricing for maximum profits; (5) effect of capacity on pricing decisions; and (6) pricing flexibility. This Aid discusses each of those factors.

The costs of operating a business may be considered in two major categories. In the first are costs related to your plant capacity, more commonly called "fixed" costs. Among them are rent, depreciation, salaries, research costs and many others throughout all departments of the business.

Their characteristics are:

- (1) They vary with capacity changes (production, selling, and the like) but do not vary directly with day-to-day shifts in how many units you make or sell;
- (2) They are set mostly by management decisions as to how many dollars you will spend per period of time, and can be altered by your decision (property can be bought or sold, personnel hired or laid off, and so on);
- (3) They have only an indirect influence on product cost; and
- (4) You can record and check them best in terms of total dollars spent in a given length of time.

In the second category are product costs, more

commonly called "variable" costs. Production items such as raw materials, packaging, direct labor, and sales variables such as outgoing freight, commissions and cash discounts are typical examples. They have the following characteristics:

- (1) They vary directly with the number of units you sell;
- (2) They apply directly to each individual product;
- (3) Market conditions influence them more than independent management decisions; and
- (4) You can record and check them best in terms of dollars per unit of production, per dollar of sales, or per similar volume measurement.

Some costs, by management decision, can be either fixed or variable: Advertising costs may be appropriated as fixed dollars in a period, or as variable dollars figured as a percentage of sales volume. Some expenses require careful study to determine their specific category. However, simplicity may lead you to treat unimportant doubtfuls as fixed costs.

PROFIT-MARGIN FORMULA

The profit-margin formula (P.M.) of pricing takes into account cost, volume, and profit relationships. This formula distinguishes between variable and fixed costs. It uses only the *variable* element as the starting point in setting prices. The *fixed* element is accounted for separately as a part of general plant overhead. The profit-margin is the difference between net sales revenue and the total variable costs of the products sold. The first pricing objective is to cover all the variable costs charged directly to the item. The second pricing objective is to produce, in addition, the largest possible number of profit-margin dollars which can be applied to overall fixed costs.

The profit-margin formula is a highly practical

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measuring tool because it gives you a basis for sound management decisions. It helps, for example, in deciding whether to make or to buy a part, to purchase additional machinery or to replace old equipment, to expand or contract capacity, increase or decrease advertising outlays.

Here is a simple example. A businessman considers putting on new salesmen at a total monthly cost of \$2,000. He also plans an increase in advertising of \$5,000 per month. Based on recent experience, he estimates that these moves will increase his sales by at least 10 percent and, possibly, by as much as 50 percent. Currently, 5,000 units are being sold at a per-unit margin of \$11.06. Thus he anticipates a dollar gain ranging between \$5,530 (with a 500-unit increase), and \$27,650 (with a 2500-unit increase). All he needs to cover his gamble of \$7,000 monthly is a sales increase of 12.66 percent ($633 \text{ units} \times \$11.06 = \$7,000$).

STANDARD COSTS

It is not the purpose of this Aid to discuss standard costs in detail; there are text books and articles on this subject. Suffice it to say, here, that soundly established standards are the gauges for checking costs and expenses. Variances above or below a standard are the profits or losses of internal operations.

For example, suppose you use a certain liquid in your process. Over the last few years you've paid an average of 52 cents per gallon. So you take that as the "standard" cost. Then you get a chance to pick up 1,000 gallons at 49 cents per gallon.

When you come to work out the effects of that purchase you make a distinction. You still figure each gallon of liquid going into your product at the standard 52 cents. *But* you chalk up a profit of \$30 (\$0.03 per gallon saving on 1,000 gallons) for your purchasing operation. You'd keep right on using 52 cents as the basic cost per gallon of liquid when you put a price on the finished item.

Later, you might have to pay 55 cents for another 1,000 gallons of liquid. You would then account for the variation from standard by showing a \$30 loss due to purchasing inefficiency. You would figure that for pricing purposes each item you made still cost the standard amount.

Having variances isolated in this way makes it easier to see where a good or poor job is being done. A "bad break" in buying should not be charged off as an added manufacturing cost.

REPLACEMENT VALUE IN COSTING

Replacement costs are often the most helpful

ones to use in selling-price determination. In some industries steadiness of raw material prices may reduce the day-to-day importance of this principle.

In rising market conditions, the cost of replacing inventories should have a strong influence on the pricing of finished products currently being sold. Even in a declining market the replacement approach is important because companies may delude themselves by refusing sales which are below their "actual" cost. Unfortunately, the loss has already been incurred on the inventory itself and it may be urgently important to take some sales profit on the lowered inventory value before further declines occur.

In defining replacement cost you should not necessarily tie it down to the basis of narrow market trading. Frequently, the most recent transactions are too small or too scattered to be a fair gauge of replacement value. In such cases, replacement value may be *your own considered judgment*. In other words, it is a prediction, rather than an actuality. Thus, if the present price of a raw material is \$9 per unit - - but you think that competition will force the price down to \$8.50 by the time of your next purchase - - the replacement cost you should use in pricing is \$8.50.

PRICING FOR MAXIMUM PROFITS

The optimum selling price is one that will net the most dollars (after allowing for applicable selling costs) during the time the product is on the market. It depends in part on whether you have a short- or a long-run item. Also, it represents the profit-margin concept on the basis of standard replacement cost. For a case in point see figure 1.

THE EFFECT OF CAPACITY ON PRICING

In the preceding situation it was assumed that production capacity is 1,000 units, based on the fixed cost rate of \$3,000. Consider now some additional arithmetic involved in arriving at a final conclusion.

First, you note that based on the assumption of a 1,000 unit capacity and of 800 unit sales at the optimum price of \$15, you have idle capacity of 200 units. This represents an additional profit potential of 200 units at \$6.60 per unit or \$1,320. It may be that you can earn part of this \$1,320 by offering 200 units at a special price, or by giving special inducements to the sales force, or through additional advertising and sales promotion.

Second, you see if you can cut total fixed costs by economy in all operations. Remember, with that \$15 price only 80 percent of capacity is used; facilities for turning out 200 units will lie idle.

	<u>% of Unit S. P.</u>	<u>Operating profit forecast at various selling prices</u>			
Unit Selling Prices under consideration		\$ 18.00	\$ 16.00	\$ 15.00	\$ 14.00
Direct Variable Selling Costs-					
Sales Commission	3.5				
Cash Discount	2.0				
Prov. Bad Debts	0.5				
Total	6.0	1.08	.96	.90	.84
Freight and Delivery		.50	.50	.50	.50
Direct Product Variable Replacement Costs at Standard		7.00	7.00	7.00	7.00
Total Direct Variable Costs		<u>8.58</u>	<u>8.46</u>	<u>8.40</u>	<u>8.34</u>
Profit Margin Per Unit		\$ 9.42	\$ 7.54	\$ 6.60	\$ 5.66
Estimated Sales Volume: Units		400	600	800	900
Total P. M. Dollars		<u>\$3,768.00</u>	<u>\$4,524.00</u>	<u>\$5,280.00</u>	<u>\$5,094.00</u>
Fixed Costs & Expenses @ 100% capacity (1,000 Units)		<u>3,000.00</u>	<u>3,000.00</u>	<u>3,000.00</u>	<u>3,000.00</u>
Operating Profit		<u>\$ 768.00</u>	<u>\$1,524.00</u>	<u>\$2,280.00</u>	<u>\$2,094.00</u>

These estimates lead to the conclusion that \$15 is the optimum selling price. Other considerations, such as a need for particular price lines, might call for a decision to set a price which would yield less profit. However, correct pricing arithmetic is essential in reaching a sound conclusion.

Figure 1

Thus, if you can reduce any costs relating to this idle capacity, you should do so.

Third, you find out whether the firm could improve its total profit picture by reducing fixed costs to a capacity of only 600 units and selling at the \$16 price. For example, suppose you got rid of enough productive facilities to cut down to a 600-unit capacity. And suppose that by doing so you also eliminated at least \$756 worth of fixed costs (heat, rent, maintenance, and the like). In that case, you could earn more profit by selling fewer units at a bigger price. Here is the arithmetic:

Total P. M. dollars	
800 units @ \$15.00 equals	\$5,280
600 units @ \$16.00 equals	4,524
Difference	<u>\$ 756</u>

To go a step further, a reduction of, say, \$1,000 in fixed costs would yield a profit advantage of \$244. (Bear in mind, of course, that these are not the *only* considerations which enter into a decision to reduce capacity and sales.)

FLEXIBILITY FOR SALESMEN

Manufacturers who set prices and stick to them rigidly often miss worthwhile profit opportunities. Hence, the need for pricing flexibility under the profit-margin formula gives rise to "soft" and "firm" pricing policies. Pricing uniformity admittedly has many advantages. But pricing flexibility, properly and moderately employed, can create daily profit opportunities. While all pricing decisions must be carefully weighed against customers' and competitors' reactions and possible

long term effect, no such opportunity should be discarded without positive reasons.

When a company's sales order backlog is below what is required to operate at full capacity, soft pricing is needed. Conversely, the higher the sales order backlog, the firmer the policy. Soft pricing means: price concessions, special discounts and allowances, liberalized credit policy and terms, special drives and contests, and increased advertising and sales promotion.

In an actual example, the profit plan of a food products company forecast a profit margin on sales to a certain large customer which made up 20 percent of its total forecast P. M. for the quarter. The offering price of the particular product was \$2.20 per pound. The replacement cost was \$2 with selling commission at 2 percent of sales price. A total of 50,000 pounds was offered at \$2.20. The customer stated he would buy at \$2.18. At \$2.18 a P.M. of \$6,800 would be earned after brokerage

of \$2,200. But in this instance -- at the suggestion of the sales manager -- the customer was offered a \$2.16 price, if he would buy 100,000 pounds. The broker agreed to a 1½ percent commission. Result: a P.M. of \$12,760 after paying the broker \$3,240.

INCREASING PROFITS - A CASE HISTORY

The "Cassette Company" (name disguised), a small manufacturer of bedding products, had a production capacity of 15,000 units per month. During 4 months of the year Cassette was able to sell its entire output. And for the remaining 8 months, its sales averaged 10,000 units monthly. Capacity months were profitable, but slack periods showed losses making total yearly results unsatisfactory. As a result, management consultants were called in. They reviewed the company's operating forecast for the month of July. This was set up as follows:

<u>CASSETTE'S ORIGINAL FORECAST</u>		
Sales revenue	\$400,000	100%
Less: Discounts and Allowances	<u>8,000</u>	<u>2%</u>
Net Sales	\$392,000	98%
Cost of goods sold:		
Material	\$160,000	40%
Direct Labor	60,000	15%
Manufacturing expenses	<u>80,000</u>	<u>20%</u>
Total	<u>300,000</u>	<u>75%</u>
Gross profit	\$ 92,000	23%
Selling and advertising	60,000	15%
General and Administrative	<u>40,000</u>	<u>10%</u>
Total	100,000	25%
Operating Loss	<u>\$ 8,000</u>	<u>2%</u>

Figure 2

The consultants worked out a standard-cost system, and recast the operating forecast using the margin-of-profit formula, based on 100 per-

cent of capacity and on predicted sales. The results of this approach are shown in figure 3.

<u>REVISED FORECAST</u>					
<u>Profit Potential at 100% Capacity</u>			<u>Original Sales Forecast</u>		
Sales:					
Percent Capacity		100.0%		66.7%	
Units			15,000		10,000
Average Selling Price			40		40
\$ Revenue		<u>100.0%</u>	<u>\$600,000</u>	<u>100.0%</u>	<u>\$400,000</u>
Deductions:					
Discounts and Allowances		2.0%			8,000
Sales Commissions		4.0%			16,000
Provision for Advertising		3.5%			14,000
Provision for Bad Debts		0.5%			2,000
Total		<u>10.0%</u>	<u>60,000</u>	<u>10.0%</u>	<u>\$ 40,000</u>
Net Realization		<u>90.0%</u>	<u>\$540,000</u>	<u>90.0%</u>	<u>\$360,000</u>
Direct Costs of Goods Sold @ Standard:					
	<u>Per Unit</u>				
Material	\$16.00	40.0%	\$240,000	40.0%	\$160,000
Production Labor	5.00	12.5%	75,000	12.5%	50,000
Variable Expense	.75	1.9%	11,250	1.9%	7,500
Total		<u>54.4%</u>	<u>326,250</u>	<u>54.4%</u>	<u>217,500</u>
Profit Margin		<u>35.6%</u>	<u>213,750</u>	<u>35.6%</u>	<u>142,500</u>
Fixed Manufacturing Expense			82,500		82,500
Expenses:					
Selling Expenses			30,000		30,000
General and Administrative Expenses			38,000		38,000
Total		<u>25.1%</u>	<u>150,500</u>	<u>37.6%</u>	<u>150,500</u>
Operating Profit or (Loss)		<u>10.5%</u>	<u>\$ 63,250</u>	<u>(2.0%)</u>	<u>(\$ 8,000)</u>

Figure 3

Market studies revealed greater volume potential at higher retail prices. Cassette's volume actually suffered because its low prices denoted an inferior product to the buying public. Analysis also showed that competitors with higher prices were spending considerably more in cooperative advertising and in retail sales incentives. Cassette, because of inadequate knowledge of costing and pricing principles, believed it could not offer greater advertising cooperation without losses. However, when the P. M. formula in pricing was introduced, the following actions based upon it were taken by management: The average sales price was increased from \$40.00 to \$48.00; the provision for advertising was increased from 3.5% of gross revenue to 5.0%; a more liberal credit policy was adopted (from past experience, no increase in bad-debt provision was felt necessary); and a special promotional fund of \$25,000 was appropriated to be spent at the discretion of the sales manager.

A revised forecast for the month of July was then prepared. It is shown in figure 4 together with the actual operating results.

THE ROBINSON-PATMAN ACT

In addition to marketing factors, the legal aspects of pricing must be considered. No attempt will be made in this Aid to discuss the Robinson-Patman Act or other laws affecting pricing. However, controllers, marketing and other executives should not reject economically sound pricing policies because of legal uncertainty. This should be left to a *legal expert*. His advice should be sought on the attainment of pricing objectives which do not violate any laws or regulations.

FOR FURTHER INFORMATION

Businessmen who wish to explore further the subject of pricing may be interested in the references given below. Other good material, of course, could have been mentioned; however, in keeping with the editorial policy of the series, this list had to be brief. No slight is intended towards authors whose works are not included.

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CASSETTE'S OPERATING STATEMENT AND COMPARISON TO FORECAST

	Amounts		% to Sales Revenue		Variances	
	Forecast Revised	Actual	Forecast	Actual	F-Favorable-Volume	U-Unfavorable Non-Volume
Sales:						
Capacity %	100	97.9				
Units	15,000	14,680			320 U	
Average Selling Price	\$ 48	\$ 45.64				2.36 U
Sales Revenue	\$720,000	\$670,000	100.0	100.0	\$15,360 U	\$34,640 U
Deductions:						
Disc. & Allow.	\$ 14,400	\$ 14,740	2.0	2.2	307 F	\$ 647 U
Sales Comm.	28,800	31,490	4.0	4.7	614 F	3,304 U
Prov. for Advertising	36,000	28,810	5.0	4.3	768 F	6,422 F
Prov. for Bad Debts	3,600	3,350	0.5	0.5	77 F	173 F
Total	\$ 82,800	\$ 78,390	11.5	11.7	\$ 1,766 F	\$ 2,644 F
Net realization	\$637,200	\$591,610	80.5	18.3	\$13,594 U	\$31,996* U
Cost of Goods Sold:						
(At Standard)						
Material @ \$16. per Unit	\$240,000	\$234,880	33.3	35.0	\$ 5,120 F	-0-
Direct Labor @ \$5. per Unit	75,000	75,102	10.4	11.3	1,600 F	\$ 1,702 U
Variable Expenses @ \$.75 per Unit	11,250	12,918	1.6	1.9	240 F	1,908 U
Total	\$326,250	\$322,960	45.3	48.2	\$ 6,960 F	\$ 3,670 U
Profit Margin	\$310,950	\$268,650	43.2	40.1	\$ 6,634 U	\$35,666 U
Unit P. M.	20.73	18.30				2.43 U
Fixed Expenses:						
Manufacturing	\$ 82,500	\$ 81,800	11.4	12.2		\$ 700 F
Selling	30,000	\$ 30,000	4.2	4.5		
Special Promotion	25,000	23,000	3.2	3.4		2,000 F
General, Administrative	38,000	38,600	5.3	5.8		600 U
Total	\$175,500	\$173,400	24.4	25.9		\$ 2,100 F
Operating Profit	\$135,450	\$ 95,250	18.8	14.2	\$ 6,634 U	\$33,566 U
Breakeven Sales:						
Units	8,466	9,475			1,009 U	
Sales Revenue	\$406,368	\$432,439			\$26,071 U	

* Analysis of net realization non-volume variance:

Unfavorable variance due to price decline	\$34,640
Less: Sales Deductions 11.5%	3,984
Variance Net	30,656
Unfavorable variance due to increase in sale deductions of .2%	1,340
Total unfavorable variance in net realization as above	\$31,996

Figure 4

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Management Aids FOR SMALL MANUFACTURERS

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DOCUMENTS

IS YOUR CASH SUPPLY ADEQUATE?

SOCIAL SCIENCES

By Jack H. Feller, Jr.

Managing Partner, J. H. Feller and Associates, San Rafael, California

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SUMMARY

The amount of cash necessary for financial health and growth varies according to types of businesses and with individual companies. This Aid suggests some of the ways owner-managers can determine whether they have an adequate cash supply. The amount of cash can be determined only by careful analysis of the business. To assure an adequate cash supply, the owner-manager needs records on which to prepare meaningful forecasts and reasonable budgets. Only then can he control and conserve cash so that it will be available at the right time. Only then will he know whether his business will generate sufficient cash or whether he will need to borrow. Included is an adapted budget form which should be helpful in planning for, and keeping track of, the cash supply.

averages and should not be relied on solely when determining your own company's needs.

Companies have individual requirements and goals which have to be considered in order to ensure profitable operation. You'll need to make your judgment on facts which you can get from your past financial records.

After you have these facts, you'll need to: (1) decide whether your cash supply was adequate in the past, (2) estimate your future cash needs, and (3) take effective steps to control and conserve your cash for those future needs.

TWO KINDS OF CASH

An adequate cash supply for your company should be one which enables you to pay your current operating costs on time and to provide for future expansion costs. Thus you need to think about and provide cash for two kinds of costs.

First, you have to have WORKING CASH. Funds you use to buy raw materials, to pay wages, and to pay other day-to-day business expenses fall in this category. For most companies, they come from daily receipts--that is from cash sales and payments of accounts receivable.

Second, you have to have cash for CAPITAL expenditures--additions to, as well as replacements of, fixed assets such as your plant, equipment, and tools. Such cash may come from either a long-term loan or from daily receipts in excess of working cash requirements. If the latter source is used, it may be necessary to withhold the distribution of profits in the form of cash until enough cash is accumulated to meet the capital requirements.

"How much cash does my business need?" is a question which often troubles owner-managers of small manufacturing companies. And rightly so because cash is the fuel which is necessary for operating the business.

The amount of cash which a company needs for profitable operation depends on the company itself because cash requirements vary according to the type of business. The amount which would be an adequate cash supply for one company may well be too small for another.

In thinking about cash needs, many managers use an old rule of thumb. It says that usually a company's cash balance should be equal to at least one-fourth of the company's current debts. However, if you operate blindly on this rule you may run into trouble.

Another method for determining cash needs is to compare industry ratios and statement studies, offered by trade publications, with your company's finances. But keep in mind that these ratios and statement studies are

An owner-manager should have a firm understanding of which portions of his cash he is going to use as capital cash and which as working cash. In his thinking, he should keep them separate. He should realize that cash on hand and in the bank must first be

set aside for outstanding obligations. The cash that remains may be used for new capital expenditures if the business warrants them.

A company's cash supply is the amount of money on deposit at the bank. (It also includes undeposited receipts and readily convertible securities such as U.S. bonds and notes.) Except in highly seasonal businesses or in extraordinary situations, it should take care of requirements for working cash. But, a company's cash by itself is not profit because there may be large unpaid debts which can eat up a large checking account balance.

On the other hand, profit--a good net income--cannot be used for additional working cash if it has been distributed to its owners and is no longer available for expenditure. Profit is an important goal, and you should keep it in mind constantly. However, don't let preoccupation with profit block your vision so that capital cash is not available for growth and expansion.

In providing an adequate cash supply, you should also think of: (1) possible future increases in operating costs because expanded sales will mean bigger bills for labor and raw materials, for example, and (2) possible future increases in your capital expenditures when you have outgrown your present plant and equipment.

PLANNING YOUR CASH SUPPLY

Your planning for an adequate cash supply should be done in three phases: (1) make a forecast, or estimate, of your future sales; (2) set up an operating budget based on your sales estimate; and (3) make a cash budget to show the amount of funds needed in order to carry on your operations.

Besides your basic books of account, the kinds of records you will usually need are: (1) sales records, (2) production cost records, and (3) monthly cash statements. These records help you determine the business (or cash) cycle in your company--how much money comes in from sales, how much goes out for raw materials, and so on. You use these records to provide you with information about your cash needs based on anticipated sales.

• Estimate Sales

Sales are the starting point in forecasting the future needs of your business. You make a careful estimate of your sales expectations. You base this estimate on your company's past performance as described in your financial records.

Keep in mind that the past is just a yardstick and does not take into account growth or any plans for expansion. So along with the facts from your records, take into consideration any expected changes in your business. For example, if your sales have increased by 5 percent each year for the past 3 or 4 years, you'd expect them to increase 5 percent next year if conditions stay the same. In making

sales forecasts, you'll want to try to include some margin for unforeseeable events. For example, what happens if sales drop off 20 percent in the slack season rather than the 10 percent which is normal for your operation?

When you have an estimate of your total sales volume for next year, break it down by months. You'll need monthly figures when you determine what is an adequate cash supply.

• Operating Budgets

Once you have an estimate of your sales volume, you can set up a production budget. This budget will project the selling, manufacturing, and overhead costs based on your estimated sales.

In developing an operating budget, you start with your estimated monthly sales figures for the next 6 or 12 months. Figure how much each activity of your business will cost in order to make your expected sales goal. Your records of past expenses will serve as a guide. For example, if you spent \$40,000 last year for the raw materials necessary to do \$100,000 in sales and expect to do \$110,000 in sales this year, you would need to budget \$44,000 for raw materials--an increase of 10 percent in both sales and raw materials.

You then set a figure for other cash needs, such as labor, overhead, and selling expenses.

Some owner-managers find the advice of their keymen and foremen valuable when they work up operating budgets. These supervisors, for example, help to see that details about their departments are not overlooked.

• Prepare A Cash Budget

After you have your operating budget, you are ready to work up a cash budget. It is a plan which shows the cash receipts you expect to take in during a certain period and the expenditures you expect to make during that time. These figures should be on a monthly basis. Prepare a detailed forecast of the amount of cash you expect to take in and spend month-by-month to cover 1 year.

Some owner-managers who have never budgeted find it easier to start with a 6-months budget. They use their experience from the first 6 months when developing the budget for the second 6 months. It is also a good idea to make a skeleton forecast for an additional 12 months. In this manner, you will have a plan for the next 2 years.

In preparing your cash budget, you use figures from your sales forecast and your operating budget. If you've never prepared a cash budget, the sample on page 4 has been adapted for helping you to provide for adequate cash of both types--capital cash and working cash. This Aid deals mainly with the latter.

CONTROL AND CONSERVE

After you have set up your cash budget, your task will be that of seeing that your

company operates within it. If your budget estimates are good, the necessary amount of cash will be available at the right time.

Therefore, the owner-manager must see that his company lives within its sales, production, and cash budgets. At the same time, he must make sure of his supply of cash by seeing that his customers pay their bills promptly and by safeguarding funds after he receives them.

Company procedures should safeguard assets, especially those which are easily negotiable. Only you, or employees to whom you delegate spending authority, should be able to spend cash.

Control procedures should cover every expense item from purchasing to payroll checks. There should be a reasonable explanation for any sizable difference between actual and budgeted expenditure. Where there is, budgets should be adjusted and adhered to.

One of the most obvious ways of safeguarding your company's money is the separation of your personal funds from those of your business. Let your company pay you a salary and show that amount as an administrative expense item in your company's budget and accounting records. Then use a separate bank account for your salary and personal expenses. In paying themselves a bonus, good managers wait until the end of the year and draw from the profits which are left after the needs of their businesses are taken care of.

You may want to keep in mind also that the owner-manager's salary can offer a way to improve the cash position, especially in a fairly new company. By timing the drawing of his pay, he can sometimes keep his cash balance high on critical days in the month. For example, if you pay for raw materials on the first of the month, you may want to draw your salary check around the 15th after funds have come in from several of your slow paying customers.

Your methods for assuring an adequate cash supply should also cover credit which you give your customers. The owner-manager who allows customers to fall behind in their payments creates a drain on his cash balance. In effect, he is financing them when he cannot afford it.

If your need for cash is great around the first of the month, your credit policies should encourage customers to pay you near that time. Offering a discount for prompt payment, in many cases, enables a company to keep its money turning and thus operate with smaller cash balances.

Purchasing offers another way to save money. Teach your people to buy raw materials and other items at the best price. In delegating purchasing, make one person responsible. Thus you can avoid the waste which sometimes occurs when several persons buy items and none knows what the other is doing. Inventory and materials control are im-

portant in reducing confusion and duplication. For additional information, see, "Pointers on Raw Materials Inventory Control," *Management Aid* No. 155, free from SBA.

Another possibility for saving cash is leasing equipment rather than buying it. For additional information, see "Rented Tools Can Improve Efficiency," *Technical Aid* No. 79, free from SBA.

OVERCOMING TEMPORARY DEFICIENCIES

Even though you plan and control cash, there may be times when income from sales may not be great enough to cover your current bills. The problem: adjusting to a temporarily weak cash supply.

Sometimes you may be able to adjust by rearranging your billing cycle and by tightening your credit limits. At other times, you may need to arrange a short-term loan at your bank.

Usually, it is easier to do such borrowing when you plan for it. When you know ahead that your cash balance will be low at certain times of the year, discuss it with your banker and thus prepare him ahead of time.

A BASIS FOR GROWTH

Finally, maintaining an adequate cash supply is a basis for growth. Many owner-managers realize that it is good business not to distribute all their profits. They plow a large part of profits into expanding the business by using them for capital expenditures such as new machines and equipment.

In order to develop surplus cash which can be reinvested to provide additional profits, a company must, first of all, take in enough to pay its bills including periods when little, or no, money comes in from sales, for example, in a seasonal type of business. When such needs are provided for, the owner-manager can plan for growth.

He may wait until the end of the year to invest surplus cash in a new piece of equipment, for example. Or he may siphon some of it off during the year. Items 20, 21, and 22 in the sample budget on page 4 of this *Aid* are for your use in planning for, and keeping track of, such capital expense items.

Sometimes a business does not generate surplus cash fast enough so the owner-manager has to get his capital cash by long-term borrowing. He finds that it is easier to get such loans when he has maintained an adequate supply of working cash - one that enables him to build a reputation for paying his bills on time. Such a reputation makes a favorable impression with bankers, especially when they see that the owner-manager has built it by planning his cash supply.

Regardless of how you manage the details of your company's growth, keep in mind that an

adequate cash supply is vital to expansion. Plan to keep close watch on your cash position. Inspect it periodically--every week, every 2 weeks, every month--according to the best time for your business. In this manner, you can make sure that cash is coming in, as you expected, and being used, as you planned.

FOR FURTHER INFORMATION

Businessmen who wish to explore further the subject of an adequate cash supply may be interested in the references indicated below. This list is necessarily brief and selective.

However, no slight is intended towards authors whose works are not mentioned.

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CASH BUDGET (for three months, ending March 31, 19__)						
EXPECTED CASH RECEIPTS:	January		February		March	
	Budget	Actual	Budget	Actual	Budget	Actual
1. Cash sales						
2. Collections on accounts receivable.						
3. Other income						
4. Total cash receipts						
EXPECTED CASH PAYMENTS:						
5. Raw materials						
6. Payroll						
7. Other factory expenses (including maintenance)						
8. Advertising						
9. Selling expense						
10. Administrative expense (including salary of owner-manager).						
11. New plant and equipment						
12. Other payments (taxes, including estimated income tax; repayment of loans; interest; etc.)						
13. Total cash payments						
14. EXPECTED CASH BALANCE at beginning of the month						
15. Cash increase or decrease (item 4 minus item 13)						
16. Expected cash balance at end of month (item 14 plus item 15)						
17. Desired working cash balance						
18. Short-term loans needed (item 17 minus item 16, if item 17 is larger)						
19. Cash available for dividends, capital cash expenditures, and/or short-term investments (item 16 minus item 17, if item 16 is larger than item 17)						
CAPITAL CASH:						
20. Cash available (item 19 after deducting dividends, etc.)						
21. Desired capital cash (item 11, new plant equipment)						
22. Long-term loans needed (item 21 less item 20, if item 21 is larger than item 20)						

Filing Classification: *Financial Management*

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August 1964

DOCUMENTS

How Do You Know What Your Business Is Worth?

By G. H. B. Gould and Dean C. Coddington*

SUMMARY

Although small businessmen need to place a value on their businesses when negotiating for funds, when settling estates, or when selling out, there is no standard formula for determining value. Often value is subjective--what a person thinks the business is worth to him.

This Aid discusses three methods for setting value: asset value, market value, and capitalized earnings value. It concludes that the capitalized earnings approach is the most valid because that method embodies all the factors in valuation.

Corporations whose stocks are actively traded on the major exchanges are valued continuously by the investing public. But how do owner-managers of small closely held companies determine how much their business is worth when they, for instance, seek outside financing?

Or how do you value a business for situations such as those involving estate and gift taxes? And what about the value of a company which you may purchase in order to strengthen your own business?

NO SET FORMULA FOR VALUATION

Various methods can be used for computing a company's worth, but no set formula exists. Keep in mind that the buyer, or investor, wants an answer to one question: What percent of return can I get on my investment? Or said another way: What is the value of the future earning power of this company?

The best way to answer that question is by using the capitalized earnings method for evaluating the worth of a company. But first, look at two other commonly used methods: (1) asset valuation, and (2) market valuation.

• Asset Valuation

Companies are often evaluated by their assets as reflected in book value, reproduction

value, and liquidation value. However, assets are significant only as they enable a company to manufacture and sell products, or services, that will generate profits.

Book Value. Sometimes a company's book value does not hold up in the marketplace. One company, for example, sold for \$300,000 even though its net worth or book value was \$600,000. The reason: a large part of the assets was tied up in specialized equipment and slow-moving inventory, sales volume was down, and the company's net income after taxes was only \$30,000. The purchasers decided that the company to them was worth only 10 times earnings, or \$300,000.

Another disadvantage of valuing a company on its net worth is that book value can be high because of retained earnings over a long period of time. The company can still be a poor investment because its current earnings are down and prospects for increased future earnings are dim.

Reproduction Value. Many small businessmen value their companies in terms of reproduction value--the current cost of reproducing the assets of the business. They reason like this: The cost of duplicating my business will be higher than what is shown on my balance sheet because many items have been depreciated. Also inflation has increased the prices of certain prices of machinery.

A disadvantage of reproduction value is that it tends to set a high asking price on a business. Often a man can start a new one with less capital than it takes to buy a company on its reproduction value.

Liquidation value is the amount that would be available to the common stockholders in the event that a small business is liquidated. In liquidation, time is often a factor; outside pressures demand action; and the business is sold at a sacrifice. However, this method has some use in placing a floor under the value of a company--determining the minimum asking price.

• Market Value

Quoted prices on stock exchanges constitute market value of common stock. Usually such

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prices in a broad and active market can be considered the current value of a company. But even so a company is sometimes merged or sold at quite a different value from the current value of its marketable common stocks.

Market value can be subjected for example, to short-term swings caused by rumors, opinions, and other factors. The fickleness of over-the-counter stock prices tends to be even greater than that of the major stock exchanges. For example, the announcement of potential contracts often raises the over-the-counter value of the stock of an electronics company out of proportion to its real value.

Where thin, limited markets exist, differences between the current value and market price of a company's stock are apt to be great. For example, a company with 300,000 shares outstanding might sell at 5 to 10 times earnings and under book value per share because demand for the stock is slight. The industry is highly competitive, the company's sales are down, and profits have been declining. At the same time, another company with 300,000 shares outstanding--but with strong earnings and growth prospects--might sell at 30 to 50 times earnings and many times book value.

CAPITALIZED EARNINGS VALUE

Whether you buy or sell a small company you need to know about the company's ability to earn profits--especially future profits. The capitalized earning approach considers a business as a living, changing organism which uses its assets to produce the greatest possible return on investment.

Two steps are used in capitalizing earnings. First, you find a company's true earning power, based on both its past experience and future probabilities. Second, you capitalize these earnings at a rate which is realistic for the risks involved.

• Finding a Company's Earnings

A company's past earnings record gives a buyer, or investor, an indication of what he might reasonably expect in the future. He learns about this record from past income statements. Looking at them for a 5-year period helps him to see trends.

The buyer should make adjustments to the income statement for: (1) nonrecurring items that a buyer should not expect to encounter in the future, (2) unusually large bad debts, (3) inventory write-offs, (4) excessive salaries, (5) low salaries that might have to be raised in order to get qualified assistants, and (6) nonbusiness ventures.

The kind of accounting procedure used can also have a direct effect on reported earnings. For example, one company may charge the cost of tools and dies as expense items in the year in which they were bought. Another may

amortize the cost of such equipment over a period of years and thereby increase earnings.

When a potential buyer adjusts for non-recurring items and for varying accounting practices, he is trying to judge what future earnings might be under his ownership. His return on investment has to come from possible future earnings.

Therefore, the buyer needs income statement projections based on what he thinks he can do with the company. Often an independent study of the company's prospects for sales helps to give a sound basis for earnings projections.

Even though selling may be your last thought at this point, it is a good idea to look ahead. Make sure that your accounting system records the information necessary for making realistic earnings projections. Thus you can base your negotiations on facts should you ever decide to sell. Also, don't buy, or sell, without having an independent audit of the company's books.

Finally, from the 5-year period, you have to pick one annual earnings figure as the true earning power of the business. If the company has a proven record, current earnings can often be used. In well-established companies, proven past profits and projected income for the current year usually go together to make the true earnings figure. However, when a company is fairly new but with good potential, future earnings estimates are weighed heavily.

• What Capitalization Rate Should Be Used?

The rate at which you capitalize a company's average earning power depends on the risks involved. The higher the risk of generating projected earnings--and thus creating a return on the buyer's investment--the lower the capitalization rate.

Suppose, for example, that the earning power of two companies is the same--\$100,000. Suppose further that Company A has a proven record of profits and a very substantial annual earnings growth rate. With highly favorable prospects for the future, Company A might be capitalized at 20 times earnings for a value of \$2 million. At the start, the investor would get 5 percent return on investment, and the proven growth of earnings would increase his possibility for a greater return in the future.

However, keep in mind that valuation is also subjective--what the buyer thinks the business is worth to him. Some may be willing to pay a much lower multiple of earnings for a closely held company even though the present owners have built an outstanding record for growth and prospects appear favorable.

On the other hand, Company B is relatively small and in a highly competitive industry. The company is growing but has not established itself. A buyer would need a high percentage return--20 percent or more--on investment. If he needed 20 percent, earnings could be capitalized at 5 times for a value of \$500,000.

• External Influences

When determining the proper capitalization rate, or price-earnings multiple, external influences have to be weighed. Some of them are:

(1) Economy. What effect will the state of business and the regional and national economic outlook have on the company?

(2) Industry. Do industry factors--such as competitive structure, cyclical, seasonal and Governmental influences, and industry glamour--make the company attractive to investors? Unattractive?

(3) Company position. How does the company compare with its competitors in size, growth, margins, order backlog, suppliers, patents, and freight advantages?

(4) Financial strength. How do the company's balance sheets and income statement ratios compare with competitors and with credit statistics for the industry as a whole? A debt-free company, of course, can borrow capital for expansion and diversification.

(5) Management. Is the company's management strong? Does its past performance indicate that it can maintain and increase profits in the future?

(6) Character of investment. In a closely held company--one person or a small group owning more than half the stock--the price-earnings multiple will be lower because of the nonmarketability of the investment.

• Factors Which The Buyer Injects

In addition to these external influences, the price-earnings multiple is often determined by factors which the buyer, or investor, may throw into the situation. Some examples are:

(1) Buyer's price-earnings multiple. If an investing company can buy a company at a price-earnings multiple below its own, its stockholder's position is not diluted. For example, if a buying company's stock is selling at 15 times earnings, it can afford to issue stock with a value up to--but not more than--15 times earnings for an acquisition. However, if the buying company pays more than 15 times earnings, its stockholders will earn less per share on the combined earnings.

(2) Competitive investments. When buying for investment, the return on the purchase price of a company must compare favorably with other things--such as stocks, bonds, real estate, or savings deposits--for which the buyer could spend his money.

(3) Job money. Companies are often sold to buyers who want to take over active management, and such a buyer may be willing to pay a little more.

(4) Buyer's needs. Another company might pay a higher price than an individual buyer in order to fill needs such as management, products, brands, patents, franchises, or licensing agreements.

(5) Method of payment. Tax factors have to be considered. Acquisitions effected through merger, sale of stock, or sale of assets for either cash or stock depend on tax factors involved with the corporation's assets and net worth as well as each stockholder's personal position.

(6) Minority stockholders. The value of a minority ownership position in a closely held company is not as great as a majority stockholder because of the additional risks associated with lack of control.

(7) Cash flow. Cash flow--net profits after taxes plus non-cash charges, such as depreciation, depletion, and amortization, has become an important factor in valuation. The cash generated from operations can be used for capital expenditures, reduction of debt, payment of dividends, and expansion. So a company may be sold at a very high multiple of earnings yet at a reasonable ratio to cash flow. This cash "payout" often determines the ultimate value of a business and is becoming increasingly important.

APPLICATION OF METHODS

When determining how much your company is worth, keep in mind that its marketable value may vary according to what you are planning to do.

If you set a value in order to get public financing, bear in mind that a public underwriting of securities should be priced so that the investment will be attractive in comparison with stocks of other companies in your industry. Such pricing should also give the stock room to rise after the issue has been floated.

The situation is somewhat different if you seek private financing. When buying non-marketable securities, an investor needs a higher return. Usually private venture capital sources seek investments which will double in value and be marketable within 3 years.

In a private sale to one individual, he buys on what he thinks he can earn from the company. If he plans to operate the company himself, he may pay more for the intangible benefits of having managerial responsibilities.

Above all, in buying or selling, keep in mind that value varies with individuals. The worth of a going company is largely a subjective matter--what a person thinks the business is worth to him. But even so, the capitalized earnings approach embodies facts which can be used to arrive at a realistic value.

The capitalized earnings method helps you to: (1) find the true earning power of a business and (2) then find the investment necessary to earn a rate of return that is in line with the risks involved. This method also considers all of the external influences--such as the economy and industry conditions--which bear on a company's prospects.

FOR FURTHER INFORMATION

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GETTING MONEY FOR LONG-TERM GROWTH

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COLOADO STATE UNIVERSITY

By Neil H. Jacoby

Dean of the Graduate School of Business Administration, University of California, Los Angeles, California; and co-founder and director of Electronics Capital Corporation

SUMMARY

Getting capital for long-term growth is one of the problems of an expanding company. Small businessmen in increasing numbers are solving this problem by getting equity capital from small business investment companies.

Pointing out that there are more than 500 SBIC's in the United States, this Aid urges small businessmen to select the one that best suits their needs. It then suggests steps that should help owner-managers in their negotiations with SBIC's.

How can the owner-manager of a small business get funds to finance the long-term growth of his company?

Your market is expanding. Looking ahead 5 or 10 years, you see bright prospects for profitable growth. Perhaps your present products are meeting wider favor with the public. You may have developed or believe you can develop promising new products.

To seize these opportunities, you must: (1) expand your manufacturing facilities, (2) buy new equipment, (3) hire additional personnel, (4) enlarge research and development, (5) meet bigger payrolls, and (6) finance larger inventories of raw materials, work-in-process, and finished products. In short, you need more capital.

But you have already invested all of your own money, or the greatest part of it, in your business. Moreover, you have exhausted the possibility of long-term loans or sales of stock to members of your family or your relatives.

SEARCHING IN VAIN

So, where do you get the capital you need? You can't get the money from your local commercial banker. Public policy and the prudent rules of commercial bank management permit him to lend you funds primarily on a short-term basis. They prevent him from buying stock in your firm, or even from making a long-term (10 or 15 year) loan. Commercial banks must always be ready to meet unexpected demands by their depositors.

Perhaps you can get a firm of investment bankers to underwrite an issue of your stock, or long-term debentures or bonds. However, you find that most investment bankers are not interested. Your business is small, relatively new, and lacks the strength and the established growth pattern that enable the investment bankers to sell your securities to the public.

Suppose you do find an investment banker who'll underwrite the sale of some stock in your firm, or sell it on commission on a "best effort" basis. His fee may be so high that the money will cost you more than you want to pay.

These costs, along with large legal, accounting, appraisal, State or SEC registration fees, make this course of action unwise.

Perhaps you then decide to try to get more capital by selling or discounting your accounts receivable with a commercial finance or factoring company. Or you may think of financing your expanding inventories by setting up a field warehouse. Here a professional custodian could issue warehouse receipts as collateral for a loan from a commercial bank or finance company.

However, when you check into these methods, you learn that accounts receivable or field warehouse receipt financing involves much paper work. Various fees, charges, and discounts will make your money cost more than you can profitably pay.

This kind of long-term financing of growth is worth the cost to some types of expanding companies. In some cases, the additional services rendered by such finance companies make their rates acceptable. But, nevertheless, suppose that you decide it's not for you. Such high-cost money, you reason, puts too great a burden on your future earning power.

Until fairly recently when a small businessman reached this stage in his search for growth capital, he usually had to stop. He was forced to resign himself to getting along with the capital he had. He could only hope to increase his capital by plowing back whatever earnings he had left after taxes. This meant that the growth of his company was slow--in fact, much slower than it could have been with sufficient capital.

USING AN SBIC

Today, however, small businessmen have another place to go for growth capital. You can go to a Small Business Investment Company (SBIC) operating in your community.

SBIC's are a new kind of private financial institution. They were created by Congress in 1958 and licensed by the Small Business Administration. They provide capital financing to small businesses on reasonable terms.

SBIC's make up a kind of "fourth banking system" for small businesses. This system is parallel, in many respects, to the Farm Credit System, the Housing and Home Finance System, and the commercial banking system.

Typically, SBIC's lend money to small companies. SBIC's take in return debentures running from 5 to 15 years to maturity. These debentures are convertible into common stock of the small company at a predetermined price.

SBIC's also make loans that are not convertible into common stock. Such loans to small unincorporated companies often carry stock purchase warrants or options. These warrants give the SBIC a right or privilege to convert all or part of the debt into stock under certain conditions--for example, should the small company become incorporated during the life of the debt. The average rate charged by SBIC's for supplying such long-term capital is competitive and relatively low--in many cases about 8 percent a year.

SELECTING AN SBIC

How should you select an SBIC?

What should you expect from one?

First, you should select an SBIC whose investment policy is compatible with the needs of your business. The nation's more than 500 licensed SBIC's follow many different investment policies. Some SBIC's operate nationally, others regionally, and some locally. Some specialize in particular industries, such as electronics, drugs, chemicals, or foods. Others invest in any industry. Some limit investments to established companies, while others finance totally new ventures.

Some SBIC's are interested only in larger investments of \$200,000 to \$500,000 in a firm. Others will invest as little as \$20,000 or \$30,000.

Some SBIC's offer professional management consulting services as well as capital, while others do not.

You should pick the SBIC whose policies and services best meet your needs. Remember that you are, in effect, picking a business partner who will be with you for a long time. It is important to take into partnership an organization that knows your kind of business and is able to help with your particular problems.

Second, you should select an SBIC that is able to offer you management counsel and assistance as well as capital.

As head of a small company you are obliged to make decisions requiring specialized knowledge and training. You must resolve problems of law, accounting, taxation, organization, personnel, production, marketing, transportation, as well as finance. Because your company can't afford full-time experts in all these fields, management advice and service from an SBIC can be very helpful.

For instance, the SBIC can help you locate key executives and other personnel. It can conduct periodical management audits, help lay out plans and budgets, devise methods of controlling operations, identify trouble spots, and suggest remedies.

A well-managed SBIC will have officers and staff who can provide management services as well as capital because this service helps it protect its investment in your company. At the same time these services improve your chances of success.

If your company and the SBIC are both quite small, such services may be limited, informal, and without special fee. On the other hand, if the SBIC is fairly large and has a good-size investment in your business these management services may be extensive, frequent, and involve a fee.

PREPARING TO NEGOTIATE

After you've decided which SBIC you want to approach, you'll need to do certain things in order to negotiate with it. For example, what information will it need from you? How will it appraise your business and its prospects?

The following suggestions are based on three years experience in SBIC financing of small companies. You'll need to prepare yourself in five major areas.

● Prepare a Written Prospectus

This statement can be discussed and left with the SBIC's management. You'll be surprised too at how much you will learn about your own company when you get the facts together on paper.

Set forth briefly but accurately the history of your company. Include: (1) its present and proposed products and services, (2) the nature of present and proposed markets, (3) organization structure, (4) qualifications of principal executives, (5) nature of labor supply, (6) names of principal raw material suppliers and principal customers, (7) prospective sales and earnings, and (8) long-term financial requirements.

The managers of any SBIC will be favorably impressed if your application is well organized and informative. Your written prospectus saves everybody's time by permitting all persons to get the available facts quickly.

● Frank Appraisal

Give the SBIC an analysis of your company's present condition. In this frank appraisal list: (1) your company's strengths and weaknesses, (2) your past and present operating problems, (3) what decisions you have made or intend to make, (4) the results of past decisions, and (5) the anticipated results of present decisions.

Such a statement will do three things. (1) It gives the SBIC a basis for judging your capabilities as an evaluator and planner. (2) It provides the foundation for mutual confidence between you and the SBIC and starts both of you toward a good working relationship. (3) It saves time because the SBIC will examine you and your company thoroughly before making any commitment.

● Make A Long-Range Forecast

Many small businessmen applying for long-term financing forget that the SBIC needs to know about their long-term sales prospects. Often these men give the SBIC sales forecasts that are vague or based on wishful thinking rather than facts.

Be sure to make a market forecast of sales by products for the next 5 to 10 years. Such a survey should identify: (1) principal uses of your products, (2) your principal customers, and (3) the end-uses of your products in systems or otherwise.

If you supply components which customers use in systems, your customers may be able to help in your forecast. They might give you estimates of the growth they hope to achieve in their sales.

You'll be wise to get professional help. Marketing experts can give you a sound market appraisal and sales forecast. Remember this is the basis of all projections of financial needs.

Your money will be well-spent for two reasons. First, you'll have a realistic forecast. And second, chances are that the SBIC management will be favorably impressed with this part of your application. It indicates that you know how to use the tools and techniques of good management.

● Ask For Enough

Give the SBIC a full estimate of the funds you need to carry out your long-term plan.

Many small business managers seem to believe that they have a better chance of getting additional capital if they ask for the minimum amount. This is a serious mistake. One of the greatest risks in growing companies is undercapitalization.

So be sure to ask for enough capital to do what you want to do. Base your estimate on the assumptions you have when working out your long-term plan for growth.

You'll be needing cash for things such as: (1) product research and development, (2) market development, (3) maximum and minimum sales forecasts, (4) outlays for fixed assets and tooling, (5) starting up costs, and (6) contingencies.

If your estimates for these needs are too low, you'll be asking for less capital than you need. And later on your company may run into financial trouble at the very time when your plan is about to succeed.

The officers of a well-managed SBIC will try to protect their investment in your company by committing enough money to enable it to complete its growth plan. They don't expect their investments to pay off immediately. They appreciate the fact that you need time to achieve your long-range growth plans.

● Show Management Continuity

Show the SBIC that you and your key men are firmly tied to your company. In the end, the success of a business depends on the hard work, imagination and competence of people, especially the key executives.

An SBIC will expect assurance that you and your key employees are personally committed to the future of your company. It looks for economic interest as well as for moral and emotional ties.

The SBIC will expect you and your principal associates to have substantial cash investments in your company. The SBIC feels that if you and your key men have enough invested, you'll see that your company has management continuity--key people who can keep it going.

Key men in a growth company should be paid primarily by incentive plans rather than by drawing high salaries. An SBIC will be favorably impressed if your current salary payments are modest with the key executives having substantial potential for gains in stock options or bonuses, if the company makes the profit you plan for it to make.

It is desirable for your company to have long-term employment contracts with its key personnel. Such contracts may be difficult to enforce sometimes, but they do help to indicate to SBIC managers that you are trying to build and keep a sound management team.

MAXIMIZING POTENTIAL VALUE

"How much of an interest do I have to give up in return for the capital I need?" This is a question that bothers many small businessmen. They often fail to see that the answer lies in maximizing the potential value of their investment rather than in keeping the largest possible percentage of their ownership in the company.

The owner-manager of one small electronics company, for example, fell into this error and unwittingly damaged his own interests. The net worth of his company was \$400,000, and he wanted \$100,000 from an SBIC so he could expand. With this \$100,000 he planned to double profits in 5 years and make the company worth \$800,000.

He proposed to sell the SBIC \$100,000 of debentures convertible into 20 percent of his company's common stock. A thorough analysis showed that he was developing some very

promising products. However, he would need \$500,000 in additional capital to exploit fully the potentialities of these products.

So the SBIC proposed that he take \$500,000 instead of \$100,000. This \$500,000 was to be in the form of \$250,000 of debentures convertible into 40 percent of his company's common stock and \$250,000 of non-convertible long-term loans.

With this bolder plan of expansion his company's profits were expected to quadruple in 5 years. This would give the company a prospective net sound value of \$1,600,000.

However, this owner-manager turned down the SBIC proposal. He did not want to give up 40 percent of his equity in the company. By doing this he lost an opportunity to increase his personal assets by \$720,000 (60 percent of the difference between the original value of \$400,000 and the prospective value of \$1,600,000).

He preferred a financing arrangement which would have increased the value of his personal assets by only \$320,000 (80 percent of the difference between \$400,000 original value and \$800,000 prospective value). Moreover, the probability of success of the \$500,000 expansion plan was actually greater than that of his own plan.

This case illustrates several things. First, the important variable in a financing arrangement with an SBIC is not the percentage of equity which the owner-manager gives up for additional capital. Second, the important factor is the amount of the potential growth in value of his own equity. And, third, many small businessmen often underestimate their true needs for additional capital.

Because capital financing of small companies is high-risk financing, an SBIC has to have strong inducements in the form of an equity in the firm. Such an arrangement helps the SBIC to protect itself against the losses it suffers from the companies that fail to overcome the

risks involved in growth. With greater risks the inducement to the SBIC must be larger.

However, SBIC's do not seek to control or operate small businesses. Their aim is to invest in the growth of these companies and to keep their own present management hard at work.

The suggestions in this Aid should help you to select the SBIC most likely to meet your needs. They should also help you and the SBIC to arrive at a mutually beneficial long-term financing agreement.

FOR FURTHER INFORMATION

Businessmen interested in exploring further the subject of getting money for long-term growth may be interested in the references indicated below. This list is necessarily brief and selective. However, no slight is intended toward authors whose works are not included.

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FINANCIAL FACTS WHICH LENDERS REQUIRE

By Selwin E. Price, C.P.A.*

SUMMARY

Can this small company repay the loan? To answer this question lending officers of banks and other financial institutions need certain kinds of information about the small company which is asking for the loan.

This Aid discusses the various kinds of financial facts which lenders require when considering a loan. The lending officer bases his judgment upon: (1) The type and nature of business collateral such as accounts receivable and inventory, (2) the company's audited financial statements, (3) the company's sales and cash projections, and (4) the company's operating and financial ratios. He also needs additional information so he can keep abreast of the company's progress during the life of the loan.

When an owner-manager sets out to borrow money, his problem is convincing the people at the bank, or at other lending institutions, that he can repay the loan. One way is by putting up collateral. You can pledge personal assets, such as: savings accounts, Government securities, bonds, and stocks.

Suppose, though, that you don't have personal assets, what assurance can you give the lending officer? In many cases, your company's accounts receivable, inventories, and fixed assets will serve as collateral for a short-term bank loan (one running 60 days, 90 days, or less than a year) or a medium term loan (one running from 2 to 5 years).

The lending officer expects you to repay such loans from your current assets and the profits made by your business. This means that he has to know that your company is strong enough to earn and retain the funds necessary for repaying the loan. To get this information, the

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lending officer studies the financial facts of your business.

The financial data which most lenders want information about are: (1) business collateral, (2) your audited financial statements, (3) sales and cash projections, (4) operating and financial ratios, and (5) operations of the business during the life of the loan.

FACTS ON BUSINESS COLLATERAL

When you secure a loan with business collateral such as, accounts receivable, inventories, or fixed assets, the lender needs to know about the condition of that business collateral. In some cases, he will send his representative directly to your plant to get such information.

The lender's representative will look for various facts when he visits your plant. This will include, but is not necessarily limited to: (1) general information about your company; (2) the condition of your accounts receivable; (3) the condition of your inventories; and (4) the condition of your fixed assets.

• General Information

Some of the general information which he looks for is:

Are the books and records up-to-date and in good condition? What is the condition of notes payable? What is the condition and aging of accounts payable? What are the salaries of the owner-manager and other company officers?

Are all taxes being paid currently? What is the order backlog? What is the number of employees? What is the insurance coverage?

• Accounts Receivable

On accounts receivable, the lender's representative wants to know:

Are there indications that some of the accounts receivable have already been pledged to another creditor? What is the accounts receivable turnover?

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SALES AND CASH

Is the accounts receivable total weakened because many customers are far behind in their payments? Has a large enough reserve been set up to cover doubtful accounts?

He will want especially to check the condition of your largest accounts. How much do these customers owe and what percentage of your total accounts does this amount represent?

- Inventories

The lender's representative wants to know the following about your inventories:

Is merchandise in good shape or will it have to be marked down? How much raw material is on hand? How much work is in process? How much of the inventory is finished goods?

Is there any obsolete inventory? Has an excessive amount of inventory been consigned to customers? Is inventory turnover in line with the turnover for your industry? Or is money being tied up too long in inventory?

- Fixed assets

On fixed assets, the lender's representative is interested in:

The type, age, and condition of equipment, the depreciation policies, the details of mortgages or conditional sales contracts, and your future acquisition plans.

AUDITED FINANCIAL STATEMENTS

A financial statement that has been audited by a public accountant is one of the most important tools which the lender uses in considering a loan application.

As one bank officer says, "I sometimes grant a loan on the basis of an audited statement even when that statement shows a loss situation." However, he is sometimes hesitant about granting a loan on the basis of an unaudited statement even when it shows a profit.

The audited statement is furnished by the borrower. This means that you have to pay a public accountant to examine your financial statements and prepare an auditor's report for the lending officer's use.

The audit fee will be according to the time spent on your job. You can help to reduce the number of hours by making sure that the auditor does not have to do detail work which your bookkeeper can do.

Some examples of the detailed preparation which your bookkeeper, or accountant, can get out of the way before the auditor arrives are: (1) balance your general ledger and insure that all ledgers agree with your control accounts, (2) reconcile your bank accounts, and (3) analyze your income and expense accounts.

You should also be ready for the physical inventory which the auditor will want to observe. Instruct your people ahead of time on the proper methods of taking and pricing the inventory.

The lending officer gets an idea about the amount of cash you expect to take in by looking at your cash forecast.

A cash forecast, as you may already know, is a plan, or estimate, in statement form. It shows: (1) how much cash you expect to receive, (2) how much you expect to spend, and (3) how much cash you expect to have on hand at the end of a certain period. This period will usually be for a year with detail given on a month-by-month basis.

The accuracy of a cash forecast depends, to a great extent, on the owner-manager's estimate of future sales. The first step, then, in working up a cash forecast is that of estimating future sales. You may want to set a sales figure for the year based on your experience and judgment. Your bookkeeper can use last year's monthly sales figures and break your estimated annual figure down into 12 monthly sales figures.

When you have the expected sales figures for each month, you are ready to estimate future expenses. Your bookkeeper can furnish the raw material by giving you last year's expense figures on a monthly basis and his calculations about expected expenses for the coming 12 months.

You can work out a cash forecast by adding to your expected cash balance at the beginning of each month, all the cash receipts which you expect. Then from this total, you subtract all the cash disbursements which you expect to make.

The ABC Company cash forecast in the box on page 3 of this Aid is an example of this method. This forecast lists receipts and all expected cash disbursements by months. Notice that cash receipts are listed according to the source, and cash disbursements are listed by kinds of expenditures. Notice also that the \$14,241 cash balance at the end of January becomes the cash balance for the beginning of February.

JUDGMENT WITH RATIOS

Supplying the lending officer with ratios for your company can help him in making a judgment on your loan application. These ratios enable him to put his finger on the strong and the weak spots in your financial operation.

The seven most commonly used ratios are: (1) current or working capital ratio, (2) quick ratio or acid test, (3) accounts receivable turnover, (4) inventory turnover, (5) net worth to total debt, (6) book value per share of stock, and (7) ratio of expenses to sales.

Current or working capital ratio. You get this ratio by dividing your current liabilities into your current assets.

Quick ratio or acid test. To get this ratio, divide your current liabilities into your cash

ABC COMPANY CASH FORECAST

(Name disguised)

	<u>January</u>	<u>February</u>
Cash Receipts		
Collection of accounts receivable (net)	\$77,000	\$61,000
Cash sales	2,000	2,500
Other cash income	300	1,100
Total:	79,300	64,600
Cash Disbursements		
Payments of accounts payable (net)	42,400	39,500
Payroll	6,300	6,150
Expenses	15,500	14,900
Capital expenditures	3,000	2,100
Repayment of loan	2,000	2,000
Other cash expenditures	1,100	800
Total:	70,300	65,450
Excess (deficiency) of cash receipts over disbursements	9,000	(850)
Cash balance at beginning of month	5,241	14,241
Cash balance at end of month	\$14,241	\$13,391

plus current receivables. The quick ratio is usually figured along with the current ratio because inventories which usually make up the bulk of current assets must be sold before current liabilities can be liquidated.

Accounts receivable turnover. You get this ratio by dividing your net credit sales into your trade receivables at the end of year multiplied by 365. The result of this ratio indicates the average number of days' sales which are uncollected.

Inventory turnover. This ratio shows the number of times inventory turns over in 1 year and is arrived at by dividing your average inventory into your cost of sales.

Ratio of net worth to total debt. You get this ratio by dividing total liabilities into your net worth. Lenders often use it when the current ratio has improved over past years. The reason: They want to make sure that the improvement is the result of profitable operations.

Book value per share of stock. By dividing the number of outstanding shares of stock into your company's net worth, you can find the value of a share of outstanding stock if the company cashed in its net worth. This does not necessarily represent the market value of a share of stock.

Ratios of expenses to sales. The lender uses these ratios, along with your profit and loss statement, to tell whether your expenses are in line with the average expenses for your type of business. You figure these ratios by dividing net sales into your expenses.

Other Ratios. Some lenders also use other ratios, which they have developed, as aids for determining whether a loan is safe. Bear in mind that ratios vary from industry to industry because each industry has its own peculiarities. The lender wants to see how your ratios compare with those for your industry.

OPERATIONS DURING LIFE OF LOAN

After you have borrowed the money, the lender needs to know how your company is progressing while you still owe him. The long-term loan requires more facts and figures than short-term borrowing. The lender gets this information from data which your accountant or bookkeeper supplies.

The lender may want: (1) a balance sheet, (2) statement of earnings and retained earnings, and (3) a source and application of funds statement. He requires these reports periodically. How often depends on the time length of your loan.

As a rule, such interim financial statements must be signed by you or one of your company's officers. This signature shows the lender who is responsible for the contents of the reports.

Your interim statements can be simple. The important thing is that they be accurate.

Sometimes lenders also ask for other financial data, such as (1) your sales of major products and profit margins per product, (2) a list of major customers, and (3) an aged listing of accounts receivables. Often the lender wants such information on a comparative basis, for example, as of July 1 for the past 3 years. He uses such information to determine trends in your business.

● Facts for Efficiency

You can also use the facts which you supply the lender. As a management tool, they can help to insure efficient financial operations.

The cash forecast is an example. With it you can see whether cash has come in as you planned. If, for instance, collections of receivables are slow, you can take the proper action.

Other information which you can learn from your monthly cash forecast statements are: (1) Is there overinvestment in inventory or capital equipment which might threaten a safe cash position? (2) Is there excessive spending for expenses? (3) Is there excess cash on hand that should be used for expanding the company?

Keep in mind that successful performance and financial reports which record that suc-

cess can help you when you need to borrow again.

FOR FURTHER INFORMATION

Businessmen who wish to explore further the subject of financial facts which lenders require may be interested in the references indicated below. This list is necessarily brief and selective. However, no slight is intended towards authors whose works are not mentioned.

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COLLECTING PAST DUE ACCOUNTS

WITHOUT LOSING CUSTOMERS

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COLORADO STATE UNIVERSITY

By J. W. Eller

Assistant Vice President

American Credit Indemnity Company of New York, Baltimore, Maryland

SUMMARY

Collecting past due accounts is a problem with two aspects. First, the small owner-manager needs his money to keep his own cash flow in balance; and, second, he wants, in many cases, to keep the delinquent account as an active customer.

This Aid points out that delinquent debtors, who have previously been prompt in paying, are often embarrassed. It discusses three questions which can be helpful in making the right approach to such debtors. They are: Why? How? and When? Also discussed are ways in which the owner of a small manufacturing company can help his customers to pay their past due debts.

Most customers are honest, and many pay their bills on time. Yet at one time or another, some firms with whom you do business find that they cannot pay their bills on time. It happens even though they are normally good credit risks.

Sometimes the account is past due because of conditions over which your customer has little or no control. For example, he may be strapped for cash because several of his big customers have not paid him on time or because of an unexpected emergency which took the cash he had planned to use for paying you and his other suppliers.

Your problem in collecting from such customers has two aspects. First, you need what he owes you in order to keep your own business healthy financially. Second, you want to keep that account as an active customer, and your desire to do it usually increases with the size of his orders.

You want your money, but you don't want to turn the past due customer against your company. In thinking about how to collect from him, you should look at the three kinds of debtors.

KINDS OF DEBTORS

Knowing the kind of debtor your customer is can be helpful when you approach him. As a rule, delinquent debtors fall into three classes: (1) the victim of unexpected misfortune, (2) the victim of poor management, and (3) the dishonest debtor.

• Victim of Unexpected Misfortune

First, and probably the most common kind of debtor is the one who is the victim of misfortune. His bad luck could be an uninsured fire or a theft. It might be the temporary reduction of his company's income because of a disaster such as a flood. It could be poor business conditions in his community.

Sometimes the debtor is a victim of the insolvency of one of his customers. A case in point is that of the Plover Company*, which manufactures women's shoes. For years, Mr. Plover's company operated at a profit. One of his big customers was a large chain of shoe stores which he regarded as a prime credit risk.

However, the chain suddenly ran into trouble and had to go into bankruptcy. Unfortunately, the Plover Company was one of the major creditors. As a result of the bankruptcy, a substantial amount of Mr. Plover's potential working capital was tied up for many months. And in turn, Mr. Plover's company was unable to pay its bills when they came due.

Unusual weather sometimes causes customers--especially those who sell seasonal items--to become delinquent in paying their suppliers. One manufacturer of skis, toboggans, and other winter sports equipment, for instance, had several accounts which became delinquent because of a mild winter. As a result, the retailers could not pay the manufacturer for their normally heavy inventories.

• The Victim of Poor Management

Some debtors are victims of poor management--their own. When they make a debt, they

*Names are disguised in Aids.

sincerely intend to pay on time, but they get in trouble by making poor judgments.

A case in point is that of the Solid Construction Company. Grandfather Solid founded the company and set its tradition for quality building. As a master craftsman, he built a reputation for giving customers the benefit of his excellent workmanship. He passed this reputation--along with a good credit reputation--on to his son who in turn passed it along to his son.

Unfortunately, the tradition of quality work got the company in trouble. Against keen competition, Mr. Solid, III, won several bids. They proved to be very costly because he insisted on giving customers quality work even though they were not willing to pay for it. The result: Losses on the bids forced the Solid Company to go into bankruptcy.

Perhaps Mr. Solid, III, could have avoided the bankruptcy if he had used better business judgment. For example, he might have filed two bids. One would have been a close one--meeting the customer's specifications and nothing more--to beat competition. His second bid would have included the cost of quality workmanship and thus would have exceeded the customer's specifications. In either case, he could have then built according to the customer's wishes.

Sometimes poor judgment causes a businessman to overbuy. Often such a debtor complains, "The salesman talked me into buying more than I meant to buy."

That statement is truer than many creditors like to acknowledge. According to a survey of credit executives, the sales managers of many companies insist on credit for customers who are poor risks--even though they know that these customers cannot pay on time. Such situations are "conflicting interests"--between salesmen and credit men. Why sell a customer more merchandise than he can reasonably be expected to pay for on usual terms?

You may want to check the extent to which your salespeople influence the extension of credit. If you have a high percentage of past due accounts, you may want to determine whether the best long-range policy is to stick to the credit lines which your credit man has set up or to go ahead and make sales quotas by overextending credit. Keep in mind that the owner-manager who grants credit to poor risks is asking for trouble.

• The Dishonest Debtor

Fortunately the dishonest, or fraudulent debtor, is in the minority. Only a small fraction of the people who use credit are dishonest.

The dishonest debtor never has any intention of paying. Often known as a "dead-beat", he, right from the start, works to cheat creditors.

You can spot this type of debtor rather easily and early. From the start, he may order merchandise in excess of the normal needs of his type of business. Then early in

your collection process, he becomes evasive and difficult to contact. When you do catch him, he makes promises which he does not keep. He refuses to offer any explanation for his failure to pay.

Sometimes such debtors look for unsuspecting creditors. Herman Rossoman's appliance store provides an example. Over the years, Mr. Rossoman built a good sales volume and an excellent credit reputation with his suppliers.

When he died, Mrs. Rossoman sold the business. The buyers, who proved to be crooks, continued to run it under the name of Rossoman's Appliances.

They ordered and received thousands of dollars worth of appliances in the short time that it took the suppliers to learn that Rossoman's Appliances was operating under new ownership. As the merchandise arrived, the fraudulent debtors moved it and hid it. The new owners were running an "in-the-front-door-out-the-back-door" operation.

When the creditors discovered the scheme, they immediately filed an involuntary petition in bankruptcy against the store. Law enforcement officers were able to recover much of the concealed merchandise. But even so, the creditors still had considerable losses.

The point to keep in mind about such a debtor is: move fast. As soon as you see that he is dishonest, take legal steps to collect the money he owes you. He is one type of customer you can afford to lose.

THE EMBARRASSMENT OF OWING MONEY

One fact is very important when you are trying to collect past due accounts without losing customers. That is this: Most delinquent debtors are embarrassed because they are not able to pay their bills.

Usually, the business owner is proud of his good paying habits and credit record. Then he suddenly finds himself, possibly through no fault of his own, unable to pay according to schedule, and he is embarrassed.

Hurt pride causes the embarrassed debtor to do strange things--things which he normally would not think of doing. Sometimes, he refuses to furnish information or promises to supply it later and never does. Sometimes, he makes promises which he knows he cannot keep. He does it to gain time with the hope that things will work out. Then again, when pressed for payment, he adopts a belligerent attitude which is completely unlike him. Or he may hide behind a wall of silence, refusing to offer any explanation to his creditors.

The wrong approach toward a debtor who is in this state of mind can cause hard feelings and result in the loss of a customer. The right approach can help you to collect your money and keep the debtor as a good customer.

THREE IMPORTANT QUESTIONS

In making the right approach toward an embarrassed debtor, three questions are helpful. They are: Why? How? and When?

In most cases, debtors do not need to be reminded that their accounts are past due. You have sent them statements and past due notices.

However, when an account goes beyond your routine collection process, you begin to give that customer some personal attention. Here the proper approach is important.

Keep in mind that the right approach does not mean leniency. Rather it indicates strength--the kind of strength which enables an owner-manager to work with other business owners with consideration and justice.

Of course, the natural question to ask him is "When do I get paid?" But before you ask it, try putting yourself in his place. How would you react to such a question if you were embarrassed because you were not able to pay? Chances are you would resent it.

Such resentment occurs because "When do I get paid?" is a selfish question. It shows that you, as creditor, are not interested in your customer's problem or welfare. Sometimes, such a question causes the debtor to withdraw further into his shell of silence. Or he might make additional rash promises or becomes antagonistic. In each of these cases, you are well on the way to losing a customer.

"Why haven't I received payment?" is a better approach. When you ask "why," you give an embarrassed debtor the opening he has been waiting for. "Why" gives him the opportunity to tell you about his setbacks and the reasons why he had been unable to pay you. Thus the belligerent debtor has a chance to air his grievances--real or imaginary.

Of course, you have to watch for excuses. However, as a rule, an honest and embarrassed debtor will not make up an excuse. Rather, he is glad for the chance to explain why he had not paid. Often, a reason can be checked out. For example, suppose his reason is that one of his big customers has not paid him. If need be, you can easily check such an excuse.

In fact, it is a good idea to get up-to-date information before you ask the customer why he has not paid you. A current credit report from a reliable credit reporting agency lets you know, for example, whether the customer is behind in paying other companies or only your company. Sometimes, a delinquency is caused by the debtor's personal habits, marital difficulties, or his inattention to business.

When you know the reason why your customer has not paid, you have a better understanding of: (1) his situation, and (2) his future ability to pay. You have also gained his confidence because you have shown him that you want to help him solve his problem--that of restoring his credit with your company.

"How can you pay?" is the next question you ask your past due customer. Notice that "how" continues to show that you are interested in his problem and want to keep him as a customer.

Most embarrassed debtors have thought a great deal about their financial difficulties. In fact, your customer--when he's the kind you want to keep--has probably lost sleep worrying about how to pay you.

By the time you go to talk with him, he may have worked out a partial solution for paying you but not a good enough one. He is still embarrassed and worried.

When you ask about your customer's plans for paying, you show additional interest in him and gain his goodwill. You have also gotten information which will be helpful a little later. When he tells you "when" he will pay, information about his plan helps you to judge whether you can rely on his word or whether he is making a promise which you both know he cannot keep.

"When can you pay?" is the question for which your other questions have laid the groundwork. With those questions, you showed interest in the customer's problem; you got information about how he plans to pay you; and you indicated that you want to help him so he can continue to buy from your company.

Your customer has been expecting you to ask when he will pay up. But because of the manner in which you worked up to the question, you have kept a friendly and pleasant relationship with him.

Some owner-managers feel that such an approach coddles the delinquent debtor. Their attitude is: "When a man knows just how far leniency will go, he will find a way to pay." Perhaps so, but these business owners fail to realize that they, themselves, would prefer a friendly and pleasant approach by their creditors.

Such business owners would pay the creditor who, without warning, started a harrassing and threatening collection procedure. But chances are they would probably stop doing business with him. A patient and understanding approach is not coddling when it helps keep the debtor--who needs your product--on your company's list of active accounts.

But even so, bear in mind that some delinquent accounts may not be collectible even with proper handling. Sometimes the customer simply does not have the capacity to pay, and you may have to write him off as a bad debt. Your goal in extending credit is to try to keep such possibilities as low as possible.

HOW CAN YOU HELP?

The help which you can offer, and on customer depends on his, and some- yours. Both of you have your own problems. Your customer's difficulty, be complicated times your own problem, by the nature of you.

As you handle each case on its own merits, keep in mind that other than money, the most important element to an embarrassed debtor is time. He needs time to solve his financial problems.

How much time you can give him depends on his answers to your questions, "Why?" and "How?" It also depends on: (1) the amount of money he owes you, (2) your past experience with him, (3) an analysis of the situation to determine whether his proposed plan is workable, and (4) sound judgment as to the effect on your cash flow.

Keep in mind also that you, even if your finances would permit it, should not assume the customer's burden to too great an extent. If you do, he may lose respect for himself and you.

One way to help a past due customer to keep his respect is to insist that he try to show good faith by giving you some type of payment almost immediately. Installment notes offer one way for the past due customer to get back on his feet. You space them so he can pay them and still have cash enough left to keep his business operating. In some cases, you may want to go with him to see what help his bank can offer.

Sometimes, the customer may be delinquent with several companies, and the problem is: Who gets paid first? One way to solve it is by calling in the other creditors, with the debtor's permission, for a frank discussion with the goal of working out arrangements to help the debtor pay everyone while staying in business. If the number of other creditors is large, a working committee can be selected to handle the details.

Your aim is helping the customer recover so that he can do two things: (1) pay what he already owes you, and (2) continue to buy from you.

Sometimes such buying may be on a reduced scale until he gets back on his feet. Or it may be for cash.

Because of his embarrassment at owing you, he may be making small cash purchases from other companies. Insist that he do this cash business with you. With his help, work out a figure which he can add to his cash order. With such an installment plan, he can pay off his old indebtedness.

Such an arrangement helps you to keep your past due customer's goodwill. It keeps him as a customer--a loyal customer--because you have helped him to repay his debt and regain his pride. When a customer does not respond--and a few won't--to the help you try to give him, you will be better off without his goodwill. In such instances, the collection of delinquent receivables is more important than the customer's goodwill.

FOR FURTHER INFORMATION

Readers who wish to explore further the subject of collecting past due accounts may be interested in the references indicated below. This list is necessarily brief and selective. However, no slight is intended toward authors whose works are not mentioned.

Barnes on Credit and Collection by E. H. Barnes. 1961. \$15.00. Prentice-Hall, Inc., Englewood Cliffs, N.J.

Credits and Collections: Management and Theories by Theodore N. Beckman, 7th Ed. 1962. \$8.50. McGraw-Hill Book Company, Inc., 330 W. 42d St., New York, N.Y.

Credit and Collection Management by William J. Shultz and Hedwig Reinhardt. 3d Ed. 1962. \$11.95. Prentice-Hall, Inc., Englewood Cliffs, N.J.

"Successful Handling of Problem Accounts" in *Credit and Financial Management*. May 1964. Single copy 50 cents, \$5 per year. National Association of Credit Management, 44 E. 23rd St., New York, N.Y. 10010.

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Management Aids FOR SMALL MANUFACTURERS

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CASH MANAGEMENT IN SMALL PLANTS

By Theodore E. Boros
Assistant Manager, Management Services Division,
Ernst & Ernst, Cleveland, Ohio

This Aid is designed to inform owner-managers of small plants about the importance of managing their cash. Management of cash is just as important as the management of sales, production, or merchandising. Cash position can mean success or failure. Many an enterprise has failed because of mismanagement of cash.

Policing is the first and a very important part of cash management. This action protects cash from loss due to thievery or carelessness. It is done by using effective internal control.

The second, and an equally important, aspect of cash management is that of maintaining adequate funds to meet the needs of the business. This can be done by using the techniques of cash planning.

PROFIT VS. CASH

Emphasis on profits sometimes pushes the importance of cash control and management into the background. One small company learned that cash and profits frequently have no immediate relationship. It also learned it could not measure the company's profitability by looking at the checking account balance alone because business runs on credit and through money invested in inventories and capital items. Neither could this small company look at its net income alone as a yardstick for a healthy financial condition.

The company found that it was important to plan for and to provide a sound and healthy cash position for its business.

The owner-manager should set up his salary as a business expense and live within it. Each time he draws extra money he weakens his firm's cash position. He could withdraw cash to the point that the firm would not have enough money on hand to pay its bills. It is important, especially in the early years of a business, that the owner-manager control his personal finances so that they are not a drain on the firm's cash.

● *Receipt or Disbursement.* Planning for your cash requirements is essential because nearly all of your business activity results eventually in either a cash receipt or a cash disbursement. No matter what you do, sooner or later that particular activity ends in either your receiving cash or your paying out cash. You can have cash ready when you need it by using the techniques of cash management. The two main techniques are: internal control and maintaining an adequate cash balance.

Methods of obtaining internal control include: segregation of business and personal funds, use of an imprest (or an advance) petty cash fund, daily deposits of cash, owner-manager approval of disbursements, reconciliation of bank accounts, proper treatment of tax liabilities, annual audit, and bonding of employees.

Methods of maintaining an adequate cash balance include: sales forecasts, manufacturing budgets, cash forecasts, daily cash statements, and materials control.

INTERNAL CONTROL

Internal control is a system of checks adopted within a business to safeguard its assets. This control usually provides that the work of one person will be reviewed or examined by another. A system of checks is necessary for any enterprise of more than one person. Even as legislative, executive, and judicial branches of our country were established to provide an internal check upon one another, so does a system of checks apply to business.

Cash is your most vulnerable asset. In almost every case of embezzlement, a *trusted* employee was responsible for the loss (one who was not "trusted" would hardly have the opportunity). It is not fair to an employee to place him where the only check is the trust that you have in him. Courts have, in many cases, given light sentences to those guilty of stealing from their employer because the employer failed to provide a system of checks on the employee's work or to pay the employee commensurate to the responsibility of his position.

American business loses an estimated \$1.5 billion annually through fraud and embezzlement. Recent surveys of fraud cases indicated

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that about 72 percent of the amount lost was concealed through manipulations of cash disbursements, around 15 percent through manipulation of inventory, and about 13 percent through manipulation of cash receipts and other operations. These statistics show how important it is to use sound methods of internal control for protecting and conserving your cash.

However, in a small office elaborate internal control procedures are not always practicable. Often the number of office employees are too few to allow segregation of cash handling and accounting functions. Reasonable compromises between practicability and effective internal control must often be made.

Internal control over cash and related functions in a small business may be provided by:

- (1) Segregation of business and personal funds,
- (2) Use of an imprest (or an advance) petty cash fund,
- (3) Deposit of cash intact daily,
- (4) Approval of disbursements, signing of checks, and bad debt writeoffs,
- (5) Reconciliation of bank accounts,
- (6) Treating local, State, and Federal tax money as liabilities,
- (7) Annual audit, and
- (8) Bonding of Employees.

● *Business and Personal Funds.* Business and personal funds should be separated because business plans cannot be effectively organized if the nonbusiness activities are combined with them. Also the confusion caused by mingling the funds may make it difficult to prepare and file required Government reports, including income tax returns.

● *Imprest Petty Cash Fund.* Establish a separate imprest (or an advance) petty cash fund sufficient to cover small expenses. It can be, for instance, a fund of \$200: From this fund, you can pay for postage, delivery charges, purchases of small supplies, and similar items without writing checks for every small purchase. Obtain signed receipts made out in ink or keep an original vendor invoice for each disbursement. The total of the money in this cash fund plus the receipts for expenditures should always equal the imprest amount, in this case \$200.

When the fund balance becomes low, list the expenses in detail and draw a check payable to the custodian of the fund for reimbursement. The amount of the reimbursing check should be charged to the appropriate expense accounts. Mark the supporting documents (signed sales tickets, receipts, and so on) "Paid" to prevent subsequent re-use to obtain funds fraudulently.

● *Deposit of Cash.* Deposit your cash received in the bank exactly in the form and on the day it is received. If your customers send checks in the mail, you, as owner, should designate someone other than the bookkeeper to open and inspect the incoming mail before it is distributed. Owners of some small companies have found it practical to scan the mail and segregate the envelopes containing checks.

Simple and effective control over checks received in the mail can be maintained if you run an adding machine tape of checks received and compare the total against the amount recorded on the bank deposit ticket for the day. Investigate any difference. If it is not practical for you to do this, have someone other than the cashier or person regularly handling the customers' accounts list the checks.

● *Disbursements, Signing of Checks, and Bad Debts.* Approval of disbursement vouchers and signing of checks by a person other than the persons handling cash and posting records provides significant control over cash. Review of disbursement documents by you, as owner, supplies a positive internal check resulting from your intimate knowledge of the business. Unfamiliar items vouchered for payment should be immediately investigated.

When you are satisfied about the disbursement, mark your approval for payment on the voucher and sign the disbursement check. Maintain a numbering system for the checks so that you can keep a record of those issued. Should you be away for several days be sure to examine all disbursements which may have been made in your absence.

Sometimes owner-managers of small businesses sign the checks themselves. This practice lets them know who is being paid what. However, if this practice takes too much of your time you may want to cosign the checks with one of your associates whom you have made responsible for approving disbursements.

Review and approve bad debt writeoffs so you can be informed of accounts charged off. This will help to prevent an employee's pocketing one customer's payment and writing that account off as a bad debt.

● *Reconciliation of Bank Accounts.* A very simple but quite effective protection of cash is furnished through the reconciling of bank accounts by a qualified person other than the cashier or bookkeeper. You, as owner, should review bank reconciliations along with bank statements from time to time so that you are familiar with the status of your funds and so you can be assured that the reconciliation is being properly carried out.

The importance of reviewing reconciliation of bank accounts is illustrated by what happened to the Ableton Company (name disguised). The cashier-bookkeeper reconciled the bank

accounts which were not reviewed by anyone else in the company. When a shortage was discovered, it was \$90,000. This embezzlement occurred over 5 years, and an executive review of the bank statement or bank reconciliation would have immediately shown up the discrepancy between the amount listed on the bank statement and the books.

● *Local, State, and Federal Tax Money as Liabilities.* To control funds collected from employees, customers, or others, you should see that all tax returns are filed and payments made. For example, one company failed to remit to the Internal Revenue Service taxes withheld from employees. The company forgot to treat this tax money as a liability. The owners used their cash balance in the bank account as a barometer of the company's financial health. They expanded on the basis of what seemed to be available cash.

The Internal Revenue Service investigated and found that taxes withheld amounting to \$30,000 had not been remitted. The company was allowed to repay this over a period of years. Even so it had considerable financial difficulty and almost went bankrupt in the process.

The important thing to remember is that the money you deduct for payroll and income taxes belongs to the Government. The law requires that you deduct this money from your employees' pay and forward it monthly (if amount exceeds \$100) to the proper Government agency. Always forward this tax money on time so you won't build up a backlog which might jeopardize not only your cash but also your business.

● *Annual Audit:* An annual audit provides a significant deterrent in the prevention of frauds. The fact that an audit is conducted each year may discourage trusted employees who may otherwise be tempted to embezzle working funds of the business.

● *Bonding of Employees.* A fidelity bond is a type of insurance. It provides money to pay you back for losses. To be assured you have proper and adequate fidelity insurance, you may want to review your coverage with your insurance agent, broker, or company representative.

MAINTAINING ADEQUATE CASH BALANCES

There is also another aspect of cash management in small plants. It is important to monitor activities that ultimately result in cash transactions. Unless you watch over granting of credit, contracting liabilities and pricing you may dissipate your funds and be strapped for cash even though the internal control over your cash is excellent. You can get information on such activities from: sales forecasts, budgets, cash forecasts, daily cash statements, and materials control.

● *Sales Forecasts and Manufacturing Budgets:* The first step of any forecast or budget pro-

gram is the sales forecast. The volume of production is based upon sales. To develop more informative data you should determine both dollar amounts and units of sales. After you get the projected sales dollars and units you should develop your manufacturing budget upon the sales forecast. You should use information in the manufacturing budget to control utilizing plant machinery and personnel efficiently and economically. Operations should be at levels that produce enough products to meet shipping schedules and to maintain adequate but not excessive inventories.

● *Cash Forecasts.* After the sales forecasts and manufacturing budgets are made, prepare a cash forecast--that is, the estimated amount needed to support the program outlined in your budget. For a discussion and an example of a cash forecast see "Planning your Working Capital Requirements," by Edward F. Reiter in *Management Aids for Small Manufacturers*, Annual No. 4. Small Business Administration. Available from Superintendent of Documents, Washington 25, D. C. 45 cents.

You will probably find that it is not possible to maintain a cash balance that just meets your operating and capital improvements requirements at all times. You will need short-term credit for seasonal needs. Your bank lending officer deals in this type of credit every day. However, do not wait until you need to borrow before establishing your credit with your banker. Develop a business relationship *before* you need to borrow. (For a detailed description of how to develop a sound business-banker relationship, see *Management Aid* No. 116, "Helping the Banker Help You," available free from the Small Business Administration.) You should choose the bank in which you deposit your funds.

When your cash is not sufficient to cover seasonal declines in sales, and a build-up of inventories results in the need for additional cash, visit the banker who knows you already and get a short-term loan to meet your requirements.

Sometimes collections from accounts receivables will be coming in at a rapid rate, and your business will generate more cash than you need for operating. Here you can see your banker about the possibility of investing this excess cash on a short-term basis. In this way it can produce revenue and improve your total profit picture.

What is an adequate cash balance? It is not practical to give a formula or rule as to the amount of cash always necessary in relationship to other assets. However, the operating experience of a large variety of small plants suggests that as a rule most small manufacturers maintain a cash balance equal to approximately $\frac{1}{4}$ of their current debts for material purchases, payrolls, taxes, and so on.

There are various collections of published statistics which can be analyzed to determine

the general practice in your particular line of business. Two well-known sources of this type of information are Dun & Bradstreet, Inc. and Robert Morris Associates (the national association of bank loan officers and credit men). The latter organization issues yearly a book containing statement studies covering more than 170 lines of business and representing the cooperation of about 500 member banks. Dun & Bradstreet, Inc., publishes annually a series of ratios for 72 lines of business in manufacturing, wholesale and retailing fields.

Further specific assistance in your own field may be available from trade association or Government sources and can certainly be developed by your public accountant.

● *Daily Cash Statements.* A daily summary of cash activity for each bank account (some companies use several accounts) will provide information as to your current cash position. This summary should show balance by bank accounts at the beginning of the day, deposits, disbursements, and balance at the end of the day.

● *Materials Control.* Control over materials is necessary to manufacture products economically. Without economic production, you may dissipate cash unnecessarily and lose your competitive position. A materials control program is well covered by Clayton L. Traeger in "Materials Control for Small Plants" in *Management Aids for Small Business*, Annual No. 2, Small Business Administration, Superintendent of Documents, Washington, D. C. 55 cents.

EVALUATING EFFECTIVENESS

You have to evaluate the results of your cash management just as you evaluate the results of the other aspects of your business. You can use monthly income Statements and balance sheets to judge the effectiveness of the various cash management techniques. Your review of these financial statements is a control that enables you to watch developments and note any unusual event that may indicate a cash problem.

As owner, inspect your financial statements each month and relate this information to the actual activity of your business. The intimate knowledge you have gotten firsthand about your business enables you to recognize quickly any cash problem that might be creeping into your operation.

After you analyze the trends indicated by your financial statements, take the corrective action necessary to protect your cash or other assets.

FOR FURTHER INFORMATION

Businessmen may consult the following references for additional study and guidance: In keeping with the additional policy of the series, this list is necessarily brief and selective. However, no slight is intended toward authors whose works are not mentioned.

A Guide to Some Pitfalls of Business by Irving I. Ackerman, Pagent Press, Inc., 101 Fifth Ave., New York, N. Y. 1957. \$3.00.

Executive's Guide to Accounting by H. L. Wittner, Prentice Hall, Inc., Englewood Cliffs, N. J. 1958, \$7.50.

Higher Management Control by T. G. Rose and Donald E. Fair, McGraw Hill Book Co., Inc., 330 W. 42nd St., New York 36, N. Y. 1957. \$6.50.

"Traps to Avoid in Small Business Management" by A. M. Woodruff, in *Management Aids for Small Manufacturers*: Annual No. 6, Small Business Administration, Superintendent of Documents, Washington, D.C. 30 cents.

"Materials Control for Small Plants" by Clayton L. Traeger, *Management Aids for Small Business*: Annual No. 2, Small Business Administration, Superintendent of Documents, 55 cents.

"Planning Your Working Capital Requirements" by Edward F. Reiter, in *Management Aids for Small Manufacturers*, Annual No. 4, Small Business Administration, Superintendent of Documents, Washington, D. C. 45 cents.

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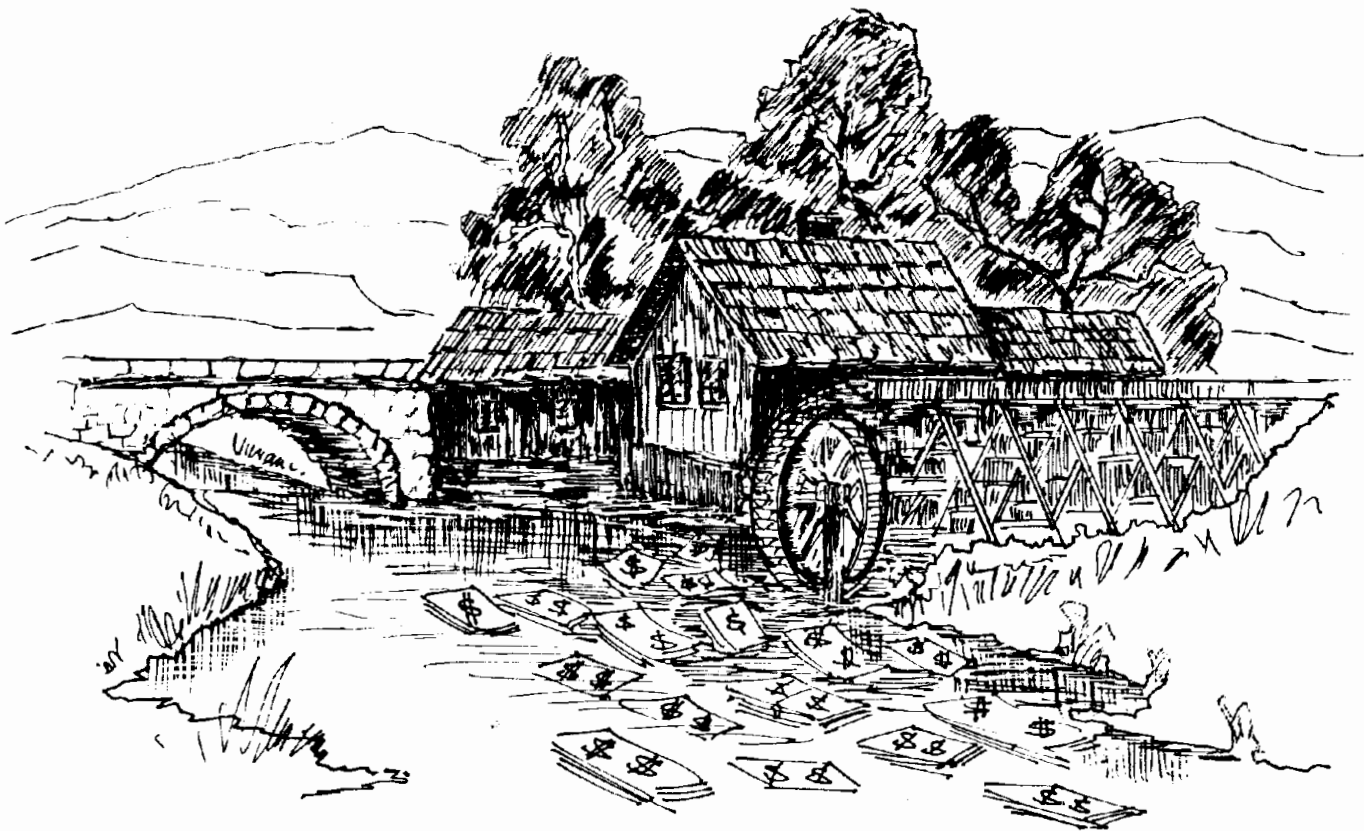
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CASH FLOW in a small plant

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SUMMARY

The prime objective for any business is to survive. That means, a firm must have enough cash to meet its obligations. This **Aid** shows the owner-manager how to plan for the movement of cash through the business and thus plan for future requirements.

The author of "Cash Flow in a Small Plant" is Danny S. Litt, Corporate Budget and Planning Director for Norris Industries, Incorporated.

INTRODUCTION

"Business is booming. This month alone, the sales volume has risen over 50 percent."

Many proud owner-managers equate growth in sales volume with the success of their enterprise. But, many of these so-called "successful" businesses are becoming insolvent because they do not have enough cash to meet the needs of an increasing sales volume. For, without cash, how can the business pay its bills, meet its payroll requirements, and purchase merchandise for the increased sales demand?

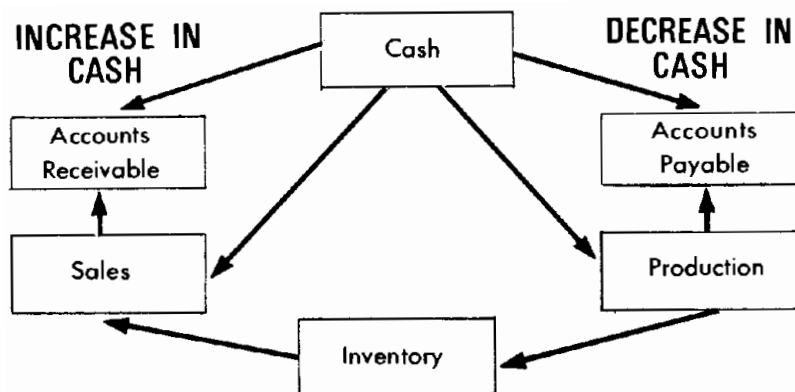
A business must have enough cash to meet its legal obligations and avoid becoming insolvent. This is a primary business objective that may override other objectives, such as sales volume. What good is additional sales volume if you're out of business?

Sufficient cash is one of the keys to maintaining a successful business. Thus, you must understand how cash moves or flows through the business and how planning can remove some of the uncertainties about future requirements.

CASH FLOW

Cash Cycle. In any business there is a continual cycle of events which may increase or decrease the cash balance. The following diagram is used to illustrate this flow of cash.

Cash is decreased in the acquisition of materials and services to produce the finished goods. It is reduced in paying off the amounts owed to suppliers: that is, accounts payable. Then, inventory is sold and these sales generate cash and/or accounts receivable; that is, money owed from customers. When customers pay, accounts receivable is reduced and the cash account increases. However, the cash flows are not necessarily related to the sales in that period because customers may pay in the next period.



Net Working Capital. Current assets are those resources of cash and those assets which can be converted to cash within one year or a normal business cycle. These include cash, marketable securities, accounts receivable, inventories, etc. Current liabilities are obligations which become due within one year or a normal business cycle. These include accounts payable, notes payable, accrued expenses payable, etc. You may want to consider current assets as the source of funds which reduce current liabilities.

One way to measure the flow of cash and the firm's ability to maintain its cash or liquid assets is to compute *working capital*. It is the difference between current assets and current liabilities. The change in this value from period to period is called *net working capital*. For example,

	<u>19×1</u>	<u>19×2</u>
<i>Current Assets</i>	\$110,000	\$200,000
<i>less Current Liabilities</i>	- 70,000	- 112,000
<i>Working Capital</i>	<u>40,000</u>	<u>88,000</u>
<i>Net Working Capital Increase (Decrease)</i>		<u>\$48,000</u>

Net working capital increased during the year, but we don't know how. It could have been all in cash or all in inventory. Or, it may have resulted from a reduction in accounts payable.

Cash Flow Statement. While net working capital shows only the changes in the current position, a "flow" statement can be developed to explain the changes that have occurred in any account during any time period. The cash flow statement is an analysis of the cash inflows and outflows.

The ability to forecast cash requirements is indeed a means of becoming a more efficient manager. If you can determine the cash requirements for any period, you can establish a bank loan in advance, or you can reduce other current asset accounts so that the cash will be made available. Also, when you have excess cash, you can put this cash into productive use to earn a return.

The change in the cash account can be readily determined if you know net working capital and the changes in current liabilities and current assets other than cash.

Let NWC be net working capital
 CA be the change in current assets other than cash
 CL be the change in current liabilities
 $cash$ be the change in cash

Since net working capital is the difference between the change in current assets and current liabilities,

$$NWC = CA \text{ (other than cash)} + cash - CL$$

$$cash = NWC - CA \text{ (other than cash)} + CL$$

This relationship states that if we know net working capital (NWC), the change in current liabilities (CL), and the change in current assets less cash (CA less $cash$), we can calculate the change in cash. The change in cash is then added to the beginning balance of cash to determine the ending balance.

Suppose you forecast that sales will increase \$50,000 and the following will correspondingly change:

Receivables	increase by \$25,000
Inventory	increase by \$70,000
Accounts Payable	increase by \$30,000
Notes Payable	increase by \$10,000

Using net working capital of \$48,000, what is the projected change in cash?

$$cash = NWC - CA \text{ (other than cash)} + CL$$

$$= 48,000 - 25,000 - 70,000 + 30,000 + 10,000$$

$$= -7,000$$

Conclusion: over this time period, under the condition of increasing sales volume, cash decreases by \$7,000. Is there enough cash to cover this decrease? This will depend upon the beginning cash balance.

Sources and Application of Funds. At any given level of sales, it is easier to forecast the required inventory, accounts payable, receivables, etc., than net working capital. To forecast this net working capital account, you must trace the sources and application of funds. Sources of funds increase working capital. Applications of funds decrease working capital. The difference between the sources and applications of funds is the net working capital.

The following calculation is based on the fact that the balance sheet is indeed in "balance." That is, total assets equal total liabilities plus stockholders' equity.

$$\text{current assets} + \text{noncurrent assets} = \text{current liabilities} + \text{long-term liabilities} + \text{equity}$$

Rearranging this equation:

$$\frac{\text{current assets}}{\text{current liabilities}} = \frac{\text{long-term liabilities} + \text{equity} - \text{noncurrent assets}}{\text{current liabilities}}$$

Since the left-hand side of the equation is working capital, the right-hand side must also equal working capital. A change to either side is the net working capital. If long-term liabilities and equity increase or noncurrent assets decrease, net working capital increases. This change would be a source of funds. If noncurrent assets increase or long-term liabilities and equity decrease, net working capital decreases. This change would be an application of funds.

Typical sources of funds or net working capital are

- Funds provided by operations
- Disposal of fixed assets
- Issuance of stock
- Borrowing from a long-term source

To obtain the item, "funds provided by operations," subtract all expense items requiring funds from all revenue that was a source of funds. You can also obtain this result in an easier manner: add back expenses which did not result in inflows or outflows of funds to reported net income.

The most common nonfund expense is depreciation, the allocation of the cost of an asset as an expense over the life of the asset against the future revenues produced. Adjusting net income with depreciation is much simpler than computing revenues and expenses which require funds. Again, depreciation is not a source of funds.

The typical applications of funds or net working capital are

- Purchase of fixed assets
- Payment of dividends
- Retirement of long-term liabilities
- Repurchase of equity

The following is an example of how sources and applications of funds may be used to determine net working capital.

Statement of Sources & Applications of Funds

<i>Sources of Funds:</i>	
<i>From Operation</i>	
<i>Net Income</i>	\$ 10,000
<i>Add Depreciation</i>	15,000
	25,000
<i>Issuance of Debt</i>	175,000
<i>Issuance of Stock</i>	3,000
	\$203,000
 <i>Applications of Funds:</i>	
<i>Purchase of Plant</i>	\$140,000
<i>Cash Dividends</i>	15,000
	155,000
<i>Net Working Capital Increase (Decrease)</i>	\$48,000

Statement of Changes in Financial Position. This statement combines two statements previously discussed: the statement of sources and application of funds and the changes in working capital accounts. This statement can be converted into a cash flow statement by solving for cash as the unknown, as shown below.

<u>Cash Flow Statement</u>		
<i>Sources of Funds</i>	\$203,000	
<i>Applications of Funds</i>	<u>155,000</u>	
<i>Net Working Capital</i>		<u>\$ 48,000</u>
 <i>Less:</i>		
<i>Increase in Receivables</i>	25,000	
<i>Increase in Inventory</i>	70,000	<u>- 95,000</u>
 <i>Plus:</i>		
<i>Increase in Accounts Payable</i>	30,000	
<i>Increase in Notes Payable</i>	10,000	<u>40,000</u>
<i>Cash Flow</i>		<u><u>\$ -7,000</u></u>

PLANNING FOR CASH FLOW

Cash flow can be used not only to determine how cash flowed through the business but also as an aid to determine the excess or shortage of cash. Suppose your analysis of cash flow forecasts a potential cash deficiency. You may then do a number of things, such as:

- Increase borrowings: loans, stock issuance, etc.
- Reduce current asset accounts: reduce receivables, inventory, etc.
- Reduce noncurrent assets: postpone expanding the facility, sell off some fixed assets, etc.

By using a cash flow statement you can determine if sufficient funds are available from financing activities, show funds generated from all sources, and show how these funds were applied. Using and adjusting the information gained from this cash flow analysis will help you to know in advance if there will be enough cash to pay

- Bills to suppliers
- Bank loans
- Interest
- Dividends

Careful planning will insure a sufficient amount of cash to meet future obligations on schedule which is essential for the "successful" business.

PLANNING AID

The following example is presented to help you develop a cash flow analysis. Of course, all names are disguised.

During the next month, Irene Smith, owner-manager of Imagine Manufacturing, expects sales to increase to \$10,000. Based on past experience, she made this forecast:

Net income to be 9% of sales	\$ 900
Income taxes to be 3.2% of sales	320
Accounts receivable to increase	5,000
Inventory to increase	2,000
Accounts payable to increase	3,000

Her beginning cash balance is \$3,000 and she plans to purchase a piece of equipment for \$1,500. What is her cash flow?

Cash Flow Analysis

<i>Sources of Funds:</i>	
<i>Net Income</i>	\$ 900
<i>Depreciation</i>	1,000
	<u>1,900</u>
<i>Application of Funds</i>	
<i>Addition to Fixed Assets</i>	\$1,500
<i>Payment of Taxes</i>	320
	<u>1,820</u>
<i>Net Working Capital Increase (Decrease)</i>	<u>80</u>
<i>Working Capital Accounts</i>	
<i>Less Change in</i>	
<i>Inventory</i>	\$ - 2,000
<i>Accounts Receivable</i>	- 5,000
<i>Plus Change in</i>	
<i>Accounts Payable</i>	3,000
<i>Cash Flow</i>	<u>- 3,920</u>
<i>Plus Beginning Cash Balance</i>	<u>3,000</u>
<i>Equals Ending Cash Balance</i>	<u>- 920</u>

Assuming Irene's forecast is correct, she has a cash need of \$920 next month. If she cannot borrow the additional funds, she must either reduce sales, which may reduce profits, or find another source of cash. She can now use her cash flow analysis to try to determine a source of funds or a reduction in the application of funds. An easy solution is to postpone the purchase of the equipment. This would increase her cash flow by \$1,500, more than enough for a positive cash balance at the end of next month.

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SMALL BUSINESS ADMINISTRATION • EUGENE P. FOLEY, Administrator

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SMALL MARKETERS AIDS

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BUILDING STRONG RELATIONS WITH YOUR BANK

DOCUMENTS

SOCIAL SCIENCES

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SUMMARY

Owners of small retail, wholesale, and service firms should build strong relations with their banks for at least three reasons: (1) faster and better services are supplied by a bank that is familiar with its customers and their business; (2) suggestions for keeping a business financially healthy are more readily given by a bank that is informed about its customers' business; and (3) crisis borrowing can be avoided and loans planned when the bank-customer relationship is on a solid foundation.

This Aid discusses ways for building strong banking relations. Some of them are: (1) match the firm's needs and the bank's services, (2) get to know the banker on a personal basis, (3) earn his respect, and (4) share plans for the future with him.

New owners of small retail businesses often feel on uncertain ground when dealing with banks. One reason is their limited experience with banks and their lack of knowledge as to how banks operate.

Some business owners, for example, start a small store because they are good salesmen. Others open small retail service shops because they have the necessary technical experience. In both situations, the owner's experience with banks has often been limited to writing personal checks and depositing savings.

This Aid is designed to help such small business owners think about the important matter of building a strong relationship with their banks. More experienced small marketers should also find it useful as a check-

list to see whether they are doing all they can to foster good relations with their banks.

MATCHING NEEDS AND SERVICES

Some new owners open a checking account in their firm's name at the bank which they used before they went into business. In many cases, that bank may be as good as any other for their business purposes. One advantage may be that you already personally know one of the bank's officers. In other cases, however, that particular bank may not offer the services that are needed by a growing retail or service business.

You may have been fortunate in that an alert banker learned about your plans for opening a store. He then visited you and explained the services which his bank could offer. He probably told you that his bank could provide many of the following services: (1) credit references on customers or potential customers; (2) financial, investment, and estate advisory services; (3) loans needed in your business; (4) discounting customers' accounts and notes payable; (5) check certification; (6) safe deposit boxes; (7) night depositories; (8) collections of remittances (lock boxes); (9) payment of freight invoices; (10) check reconciliation services; and (11) payroll accounting services.

If you don't already know them, your first task in building strong relations with your bank is finding out the kinds of services your bank offers. If these services don't match your needs, don't hesitate to mention it to your banker. Banks are in a competitive business, just as you are. As one metropolitan banker says "the small business owner should shop around to find the bank which suits his needs best just as he shops around for any other business need."

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Whether you are checking your present bank or shopping around, you will want to look at five things. They are: (1) convenience to the bank, (2) size of the bank, (3) requirements for loans, (4) bank's knowledge of your type of business, and (5) whether many of your customers use that bank.

● Convenience to the Bank

Your bank should, if possible, be in a location that is convenient for you. If it is near your place of business, you reduce the risks involved in carrying cash receipts to the bank.

Some small business owners find that a bank on the way, or near their homes, is more convenient for depositing receipts. If such is your case, keep in mind that carrying large cash receipts is risky. Ask your banker's advice about how you can cover the theft and personal liability risks that are involved.

● Size of the Bank

Unless you need large loans, the bank's size may not be important to your business. And even then a small efficient bank can help you by drawing on the resources of a larger bank with whom it has a working agreement. A small branch bank can do the same by making available the services of its head office.

● Requirements for Loans

Find out before you open an account, or need to borrow, the bank's requirements on loans. Most businesses need to borrow sooner or later. Ask questions such as:

Is collateral required on various kinds of loans? How much collateral? How long does it take to have a loan approved? Does the bank have limitations on the number of small loans or types of business to which it will grant loans? What are the repayment terms? What reports--supporting information--do you have to make? Will the bank give you a "line of credit?" Is it necessary for you to maintain certain balances before the bank can consider loans?

● Knowledge About Your Type Business

If possible, choose a bank that is somewhat familiar with your type of business. Often local banks develop a substantial amount of information about the kinds of businesses in their area. Such knowledge helps them to understand and evaluate your requirements and financial status more quickly.

● Bank Used By Customers

If at all practical, it is a good idea, particularly for a community type firm, to use the bank which your customers and potential customers use. Such a practice helps you because: (1) the "float" is minimized, that is, checks clear the bank more quickly, and (2) credit information on your customers is more readily available to you.

One small retailer suggests a way to find out how many of your customers use a particular bank. He watches the checks which customers give him and groups them by banks in order to make a list of customers who use each bank.

SHOPPING FOR A BANK

If you are shopping for a bank, you may want to ask your landlord and other local merchants about the bank they used. Your trade association, or members located in your neighborhood, may be another source of information about banking conditions.

After you have a list of banks you may want to use a method which a small wholesaler of meat products used to select his bank. Here is what he suggests that his fellow small businessmen do.

Make an appointment with an officer of a bank you are considering using. Tell him about the kinds of services you think you need and describe how you feel he can best service your account. Ask his advice about other bank services that may be helpful to you. Write down the answers he gives to your questions.

Make an appointment with an officer of the next most suitable bank and proceed as you did with the first one.

If you need to contact additional banks, ask that the information be written and forwarded to you. Now, make a comparison of all the bank information you have gathered and your reaction to the bankers' attitudes and then select the one that you believe best serves your needs.

The following tips can be helpful when you open an account:

First, get a letter of introduction from your former bank--the one in which you had your personal account. The reference of that bank will save much time and help to establish good relations with the new bank.

Second, it is important from the start, that you work to establish good relations before you need to borrow money. When you need money to finance inventory, for example, you should not be under pressure when you go to negotiate for it.

Third, and an important key to building a strong relationship with the bank, develop a personal contact with an officer or other responsible employee in the bank.

GETTING TO KNOW YOUR BANKER

In getting to know your banker, your aim is that of having a friend at the bank--someone who knows you and the problems of your business and in whom you can confide.

If he is not already familiar with your type of business, your job will be to acquaint him with it. However, an even more important task is that of proving to him that you are a competent and progressive manager.

Direct contact with a banker who knows you and who has a personal interest in your problems can save you time. For example, when you need a quick credit reference on a potential customer, he can give you information over the telephone. It is also helpful to cultivate one particular teller.

If the bank assigns your account to someone who is not interested in learning about your business, ask for another person with whom you can work on a personal basis. Keep in mind that a progressive bank is interested in helping its small business customers grow.

Knowing your banker and the bank's services can help you with customers who need financing. The experience of one small marketer provides an example. He says that when one of his customers is thinking about a purchase which requires financing, the customer "is reassured when I can describe intelligently or arrange easily for him financing through my bank. He goes on to say "The fine relationship I have with my bank is the reason I am able to discuss or arrange such transactions."

EARNING THE BANKER'S RESPECT

In a sense, building strong relations with your bank is a matter of earning the respect of the banker with whom you deal. You earn it and build a reputation for good character and integrity and for being a good manager by conducting your banking affairs in a logical manner.

Six steps can be helpful: (1) show good faith, (2) give the bank volume, (3) provide the bank with financial data, (4) invite the banker to visit your place of business, (5) introduce the banker to your top assistant, and (6) discuss future plans with your banker.

● Show Good Faith

Good faith is the most important single factor in daily dealings with your banker. Always keep your word just as you expect him to keep his.

Another way to show good faith is by observing the bank's policies. They are designed to meet legal regulations and local economic conditions under which the bank operates.

A very important way of showing good faith is that of keeping the banker informed on all the developments of your business--good or bad.

Some small retailers fail to do this and create a bad impression at the bank. As one banker describes it, some small businessmen "often use bad judgment the first time they cannot meet their obligations. Instead of discussing it with their bankers, they try to evade the issue." In many cases, the bad image, which the retailer, service operator, or wholesaler creates, is worse than the actual condition warrants.

● Give the Bank Volume

Give the bank enough volume to make you a profitable customer. After all, banking is a business, too. Banks are interested in, and watch, the average checking account balances carried by their customers.

Moreover, such volume helps the bank to offset its costs for services to you. In any event, an active and profitable bank account creates goodwill at the bank just as an active customer account does at your place of business.

● Provide Financial Data

Financial facts about your business help the bank to know whether you are a competent manager--one who can operate his business profitably and keep it in sound financial condition. So right from the start, give your friend at the bank financial information. Give him copies of your profit and loss statements, balance sheets, and cost and budget statements. Such financial statements will mean more to your banker, who will use them along with his credit file on your firm, if they are prepared by an independent auditor.

Keep in mind that supplying factual information on your firm's finances helps to build your reputation for integrity. Loan officers are often suspicious of statements which are padded or scanty, and such questionable statements handicap the small marketer who seeks a loan. (For additional information see "Financial Facts Which Lenders Require," *Management Aids For Small Manufacturers* No. 164, May 1964, free from SBA.)

● Invite the Banker to Visit

Ask the banker to visit your place of business. Let him see for himself the features of your operation. Show him that you are prepared and stocked to give your customers what they want.

Tell him about your sources of supply and show him how you receive and maintain your stocks. If you have merchandising techniques which give you an edge over your competitors, tell him about them. Also show him your methods for reducing operating expenses.

● Introduce Your Assistant

When the banker visits your place of business, let him talk to your immediate assistant, if you have one. Encourage your assistant to explain his duties and responsibilities and to tell about his business experience. The banker feels better about your business when he knows that someone is being trained to take over if something happens to you.

If you don't have an assistant, you may want to introduce the banker to your top salesperson. The objective: To show the banker that your people know their merchandise and their customers.

• Discuss Future Plans

When your banker knows about your plans, he has a better understanding of what your future financial needs will be.

Then he can offer more specific advice and suggest ways in which the bank can help you meet those needs. The time to give him this information is sometime ahead of the date when you will need the financial help.

PLANNING THE FUTURE

Financial planning offers yet another way to build strong relations with your banker. His respect is substantial for the small marketers who plan because in many cases small retailers and service operators do not adequately plan their financial operations.

These nonplanners often make bad impressions at their banks when lack of plans gets their firms into crises. Such owners run into financial trouble when their sales, for example, expand rapidly. The reason: The cash flow generated by the increased sales is not sufficient to pay for their increased stocks, parts inventory, and other current expenses.

Often the banker's reaction to such cases is: "If only you had planned for these increased expenses, it would have been easier to help you."

Bankers prefer dealing with small marketers who plan their financial needs. Such men are usually considered good credit risks because they know what to expect from their business.

Basically, financial planning involves four things: (1) estimating as near as possible the amount of sales for a fixed future period--3, 6, or 12 months; (2) estimating as near as possible the expenses connected with those sales; (3) determining whether your business will need cash, in addition to that brought in by sales, to pay its bills on time; and (4) if a loan will be needed, determining how your business can repay it.

Such planning can help you to reduce the cost of financing. Knowing your needs beforehand

gives you time to build your case for the money and to shop around for it if necessary.

Progressive small marketers also plan for the long range. They try to estimate their financial situation for the next 2, 3, or 5 years. By discussing such plans with the banker, they further strengthen their relations with him.

In making your financial plans, you will have to have certain data developed. For example, your accountant should work up financial analyses, such as cash forecasts, income and expense budgets, and capital budgets. He should also prepare financial statements, such as profit and loss and balance sheets, and he should work up financial ratios to show your expenses in relation to sales, your breakeven point, and inventory turnover. This information should be gotten together as the need arises or on a semiannual or annual basis.

FOR FURTHER INFORMATION

Businessmen interested in exploring further the subject of building strong relations with their bank, may be interested in the following references. This list is necessarily brief and selective and no slight is intended toward authors and other sources which are not included.

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WHAT KIND OF MONEY DO YOU NEED?

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SUMMARY

A small business needs four kinds of money from time to time. They are: (1) normal trade credit, (2) short-term bank loans, (3) term borrowing, and (4) equity (investment) capital.

The Aid discusses the uses of each type of financing. It points out that the purpose for which the funds are to be used is an important factor in deciding the kind of money needed.

It is also important that small businessmen plan ahead so as to have flexibility when negotiating for funds. Such flexibility is helpful in using the right kind of money in a certain situation.

Some small businessmen get into financial trouble because they do not realize that there are distinctions in the various kinds of money used in business. Often such men get pushed by circumstances into reaching for whatever kind of money is handy when they need it.

A big danger in this approach is that some owner-managers try to operate with the wrong kind of money for a particular situation. For instance, some of them try to lean on their suppliers (using this convenient form of normal trade credit) to cover a situation that requires a bank loan.

• On a Shoestring

Bill Nomadaman* is a case in point. Trade credit helped him to handle a fairly large inventory with his small working capital.

However, as Mr. Nomadaman's sales increased, he began to have money troubles. Within several months he had to double his inventory.

Even though his suppliers granted him increasing amounts of trade credit,

*Names are disguised in this Aid.

Mr. Nomadaman couldn't collect his accounts receivable fast enough to meet all his bills. Sometimes he had to scratch to meet his payroll.

Mr. Nomadaman realized that he needed to move up to the next step on the money ladder. For the next problem, of that kind, he arranged for a short-term bank loan which gave him more flexibility in his day-to-day operations.

• Straining To Meet Obligations

Other owner-managers sometimes try to make short-term bank loans handle a situation that demands term borrowing. For example, Joe Wellston needed some equipment which cost several thousand dollars.

He decided he could pay for it with a short-term bank loan over a period of 10 to 12 months. He reasoned that he could squeeze his costs to accumulate most of the money needed to repay the bank.

However, production problems ate up most of the cost reductions Mr. Wellston had counted on. When his note came due, he had to renew it instead of paying it off as he had hoped to do.

Several renewals later, Mr. Wellston finally paid off the note. But he had learned a lesson. He realized that it would have been better if he had bought the equipment with term borrowing. "Next time," he says, "I'll get a loan for 2 or 3 years rather than trying to squeeze by on a short-term bank loan."

• Growth Creates Problems

Still other owner-managers try to use term borrowing when their companies really need equity capital. Roy Cutter is a case in point.

His company was growing and needed more production space. He decided he could build an addition with term borrowing. He planned to repay the money over a period of 3 years.

However, as his company's growth continued, it created various problems. Among them was the lack of money. His loan payments became a burden as Mr. Cutter tried to make too little

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funds cover the various demands of his growing business.

What Mr. Cutter needed was equity capital. He needed partners who could wait perhaps a decade or more for a return on their investment in his company.

All of the businessmen in these examples ran into money problems for the same reason. Each was trying to operate one step behind his company's needs.

Each reached for the most convenient kind of money. And each failed to realize that the handiest kind of money was not the right kind for their companies at that particular time.

FACTS ABOUT 4 KINDS OF MONEY

How can you tell whether the handiest kind of money is the right kind for your company at a particular time? How can you be sure that you aren't a step or two behind in the matching of money to your business' needs?

Successful businessmen have learned how to answer these questions. Some of them, like Nomadaman, Wellston, and Cutter, learned the hard way--through trial and error. If you are going through this same experience, a brief review of certain facts about the four kinds of money might be helpful.

• Normal Trade Credit

There are various kinds of very short term financial assistance. Among them are: trade credit, discounting customers' notes, installment paper, and commercial factors.

These forms of normal trade credit have one thing in common. They are usually granted on your credit reputation and require a minimum of prearrangement between you and the person who grants you the credit.

Trade credit, in a sense, is a courtesy which businessmen extend to each other. Your suppliers give it to you when you buy raw materials and so on from them. You, in turn, extend trade credit to the distributors, wholesalers, and so on who buy your products.

Trade credit works fine as long as every person in the pipeline pays when he should. Trouble comes when you try to make it do more than it is supposed to do.

Trade credit is convenient because you don't have to fill out applications or other formal papers. And you usually handle it as a bookkeeping transaction.

Customers notes are another source of normal trade funds. The bank will buy your customers notes or advance you money against them.

A third source of normal trade credit is installment paper. Some small businessmen sell the installment promissory notes which their customers give them for products such as appliances. (For additional information see "Can You Afford Installment Selling?" *Small Marketers Aid* No. 76, free from SBA.)

Factors offer still another possibility for normal trade credit. You sell your accounts receivable. If you sell them "without recourse," the buyer (or factor) assumes any loss due to uncollected accounts.

The factor's commission is generally based on the net face value of the receivables you sell him. It varies with the commodity, of course, but usually it runs from 1 to 3 percent.

• Short-Term Bank Loans

You can use short-term bank loans for purposes such as financing accounts receivable for, say, 30 to 60 days. Or you can use them for purposes that take longer to pay off--such as for building a seasonal inventory over a period of 5 to 6 months.

Banks grant such money either on your general credit reputation with an unsecured loan or on a secured loan--against collateral.

The unsecured loan is the most frequently used form of bank credit for short-term purposes. You do not have to put up collateral because the bank relies on your credit reputation.

The secured loan gives you money against some of your assets. The bank requires security as a protection for its depositors against the risks that are involved even in business situations where the chances of success are good.

One type of secured loan is that in which you pledge or assign your accounts receivable as security. The lender will usually advance you from 50 to 90 percent of the face amount of your receivables.

Another kind of secured loan is one in which you use your inventory as collateral. Depending on the nature of your product and its marketability, a lender may be willing to advance 50 to 90 percent of the value of your pledged inventory.

In short-term money situations, the bank can set up helpful arrangements. For instance, it will often give you a line of credit. A line of credit helps you to avoid delays in getting loans when you need them.

Or the bank can arrange for you to have revolving credit. It gives you a maximum line of credit. You can borrow against it, repay, and borrow again.

Many banks require an annual clean-up by the borrowers of short-term money. You have to be out of debt to the bank at least once during the year.

(For additional information see: "Helping the Banker Help You" in *Management Aids for Small Manufacturers Annual* No. 8, Small Business Administration, Superintendent of Documents, Washington 25, D.C. 1962. 35 cents.)

• Term Borrowing

Term borrowing provides money you plan to pay back over a fairly long time. Some people

break it down into two forms: (1) intermediate--loans longer than 1 year but less than 5 years, and (2) long-term--loans for more than 5 years.

However, for your purpose of matching the kind of money to the needs of your company, think of term borrowing as a kind of money which you probably will pay back in installments over several years.

For instance, think of it as money which you might use to pay for a \$12,000 machine. In such case, you and the bank, or some other financial institution, agree on the terms when you discuss the loan. You might, for instance, repay the \$12,000 in 4 payments of \$3,000 or in a similar manner.

• Equity Capital

Some people confuse term borrowing and equity (or investment) capital. One reason is that both kinds can be used for the same types of things.

Yet there is a big difference. You don't have to repay equity money. It is money you get by selling an interest in your business.

You take people into your company who are willing to risk their money on it. They are interested in potential income rather than in an immediate return on their investment.

Suppose, for example, that you are in a new kind of business--one in which the risks are still in an indefinite state. Banks and other financial institutions cannot afford to lend their depositors' money in such uncertain situations.

Or it may be that you have borrowed all that you can. You are not over-extended, but your collateral is covered by credit. You have no more collateral to offer banks and other lending institutions..

In such cases, equity capital offers you a source of funds. You can sell part of your business to a person (or to an organization, such as a Small Business Investment Company) who is willing to take unusual risks and who can afford to wait over a relatively long time for a return on his money.

(For more information see: "Getting Money for Long-Term Growth," *Management Aid* No. 138, free from SBA.)

HOW DO YOU DECIDE WHAT KIND TO USE?

Deciding what kind of money to use is not always easy. It is sometimes complicated by the fact that you may be using some of various kinds of money at the same time.

For example: (1) you may be financing accounts receivable with normal trade credit, (2) using short-term bank loans to build inventory for a seasonal peak, (3) paying for certain equipment with term borrowing, and (4) taking care of expansion demands with equity money.

Yet two things can be helpful when you are deciding what kind of money you need. One is purpose--for what purpose will you use the money?

The other is a review of your financial records. Such a review can help you to answer questions such as: What kind of money have you used? What was your experience with it. How much? When? Was it enough to do your job?

(Some businessmen make the mistake of trying to operate with too small an amount of money. This is dangerous because sometimes even a small unexpected turn of events puts their companies in jeopardy.)

Were you able to repay it as you had planned? Or did you have trouble paying back certain kinds of money? Did a particular kind turn out to be more expensive than you had planned?

Good financial records can help you to get the facts. For instance, your cash-flow statements should show where your operating money is coming from and where it is going. Your budget should show an estimate of your income and expenses for at least 12 months.

Analyze your records to find answers to questions such as:

Does the trend over the last 4 or 5 years indicate that you are relying heavily on normal trade credit for short-term needs? Could you save money and operate easier by using some short-term bank loans? Can you save by consolidating debts into one periodic payment instead of straining to pay a host of smaller bills each month?

In effect, use your records as guides when you are figuring out your future needs. Yet, don't be hidebound by the past. Rather use it to work for improvements in the future.

One improvement that you may want to think about concerns timing. Some small businessmen always borrow under the gun. They don't start looking around for money until they need it. Then their company's immediate requirements often press them into arrangements that are not the most profitable for them.

The point to remember is: Try to determine your money needs ahead and plan so you can have some flexibility when you go to negotiate a loan.

Try to give yourself time to check all possibilities when you start casting about for money. Sometimes you may not be able to get exactly the credit deal you want.

Yet being aware of all the available sources and the effect that each might have on your business, can help you to use the second best--or even the third best--credit deal when you have to.

WHERE DO YOU GET THE MONEY?

After you have decided what kind of money you need for certain situations, you may want to go one step further. Make a list of the sources of money. Write down the names of places that might lend you certain kinds of money.

For instance, list the local bank, or banks, that might give you a 90-day loan without security.

List the bank, or banks, with whom you might negotiate a secured loan--say, one for 18 months or longer.

List insurance companies, and other financial institutions, which offer possibilities for term borrowing.

Review Government sources of money, such as the Small Business Administration. Find out what they offer and under what conditions. Then list the ones you might need to contact.

(For additional information on Government sources see: *Management Aid* No. 52, "Loan Sources in the Federal Government," revised July 1962, available free from SBA.)

Review sources of equity capital that might be available to you. You may want to start by getting from SBA Washington or the nearest SBA field office, a list of Small Business Investment Companies which operate in your area.

Keep in mind that the negotiation of equity capital takes time and plan to gather the facts about such sources well in advance of the time when you might need to start negotiations.

Finally, plan to review your list of money sources at least once a year so as to keep it up-to-date.

FOR FURTHER INFORMATION

Businessmen interested in exploring further the subject of what kind of money they need may be interested in the references indicated below. This list is necessarily brief and selective. However, no slight is intended toward authors whose works are not included.

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●●● PRODUCTS LIST CIRCULAR (A monthly booklet) ●●●

It describes recent patents whose owners desire to commercialize. The service of the Circular is available to patent owners at no charge.

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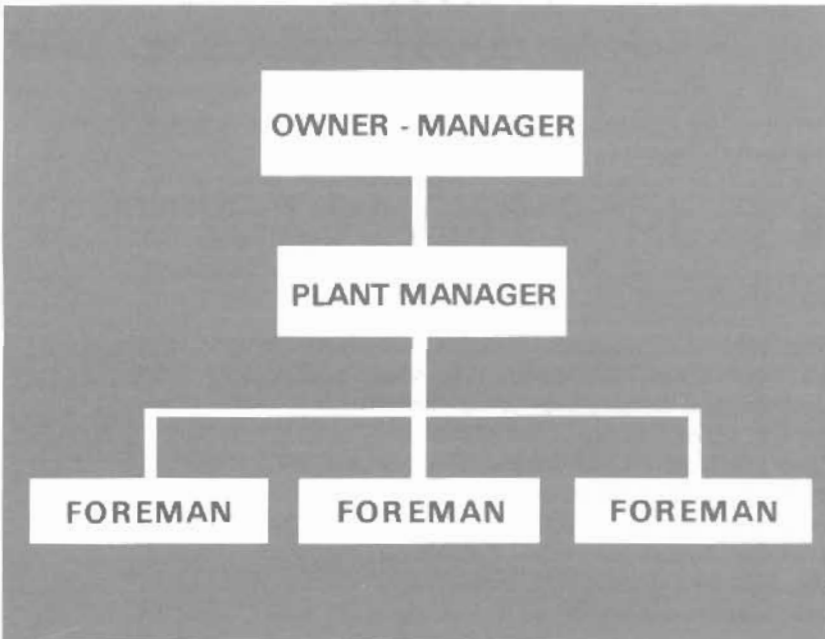
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for small manufacturers**

WASHINGTON D.C.

SEPTEMBER 1967

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delegating work and responsibility



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SUMMARY

Delegating work, responsibility, and authority is difficult in a small plant because it means letting others make decisions which involve spending the owner-manager's money. At a minimum, he should delegate enough authority to get the work done, to allow assistants to take initiative, and to keep the operation moving in his absence.

The *Aid* discusses controlling those who carry responsibility and authority and coaching them in self-improvement. It emphasizes the importance of allowing competent assistants to perform in their own style rather than insisting that things be done exactly as the owner-manager would personally do them.

The author, of this *Aid*, Mr. Stanley Wantola, is an industrial specialist, in the New York Area Office of SBA.

“LET others take care of the details.”

That, in a few words, is the meaning of delegating work and responsibility.

In theory, the same principles for getting work done through other people apply whether you have 25 employees and one top assistant or 150 to 200 employees and several keymen. Yet, putting the principles into practice is often difficult.

Delegation is perhaps the hardest job owner-managers have to learn. Some never do. They insist on handling many details and work themselves into early graves. Others pay lip service to the idea but actually run a one-man shop. They give their assistants many responsibilities but little or no authority.

HOW MUCH AUTHORITY?

Authority is the fuel that makes the machine go when you delegate work and responsibility. It poses a question: To what extent do you allow another person to make decisions which involve spending your company's money?

That question is not easy to answer. Sometimes, an owner-manager has to work it out as he goes along, as did Tom Brassler.* His pride in being the top man made it hard for him to share his authority. He tried, but he found to his dismay that his delegating was not as good as he thought.

One day when he returned from his first short business trip, Mr. Brassler stormed out of his office. He waved a sheaf of payroll sheets and shouted, "Who approved all this overtime while I was away?"

"I did," the production chief answered.

Realizing that all heads were turned to see what the shouting was about, Mr. Brassler lowered his voice. Taking the production manager with him, he stepped back into his office.

There he told the production man, "You've got your nerve authorizing overtime. This is still my company, and I'll decide

* All names are disguised in *Aids*.

what extra costs we'll take on. You know good and well that our prices are not based on paying overtime rates."

"Right," the production man replied. "But you told me I was in full charge of production. You said I should keep pushing so I wouldn't fall behind on deliveries."

"That's right," Mr. Brassler said. "In fact, I recall riding you about a couple of orders just before I went out of town."

"You can say that again. And one of them—the big order—was getting behind so I approved overtime for it."

"I would have done the same thing if I had been here," Mr. Brassler said. "But let's get things straight for the future. From now on, overtime needs my okay. We've got to keep costs in line."

Mr. Brassler then followed up with his other department heads, including his office manager and purchasing agent. He called them in, told them what had happened, and made it clear that their authority did not include making decisions that would increase the company's operating costs. Such decisions had to have his approval, he pointed out, because it was his company. He was the one who would lose, if and when, increased costs ate up profits.

Yet if an owner-manager is to run a successful company, he must delegate authority properly. How much authority is proper depends on your situation.

At a minimum, you should delegate enough authority:

- (1) To get the work done.
- (2) To allow key men to take initiative.
- (3) To keep things going in your absence.

TO WHOM DO YOU DELEGATE?

Delegation of responsibility does not mean that you say to your assistants, "Here boys, you run the shop." The men to whom you delegate responsibility and authority must be competent in the technical areas for which you hold them accountable. However, technical competence is not enough.

In addition, the person who fills a key management spot in the organization must either be a manager or be capable of becoming one. A manager's chief job is to plan, direct, and coordinate the work of others.

He should possess the three "I's"—initiative, interest, and imagination. The manager of a department must have enough self-drive to start and keep things moving. He should not have to be told, for example, to make sure that his employees start work on time.

Personality traits must be considered. A keyman should be strong-willed enough to overcome opposition when necessary. He should also have enough ego to want to "look good" but not so much that it antagonizes other employees.

SPELL OUT THE DELEGATION

Competent people want to know for what they are being held responsible. The experience of Charles P. Wiley illustrates how one

owner-manager let them know. He started by setting up an organization. He broke his small company into three departments: a production department, a sales department, and an administrative department.

The man who handled production was responsible for manufacturing, packing, and shipping. The sales manager was responsible for advertising, customer solicitations, and customer service. Mr. Wiley regarded the administrative department as the headquarters and service unit for the other two. Its manager was responsible for personnel, purchasing, and accounting.

Mr. Wiley also worked out with his assistants the practices and procedures necessary to getting the jobs done. His assistants were especially helpful in pointing out any overlaps or gaps in assigned responsibilities. He then put the procedures in writing. Thus each supervisor had a detailed statement of the function of his department and the extent of his authority.

This statement included a list of the specific actions which they could take on their own initiative and a list of actions which required approval in the front office—Mr. Wiley, or in his absence, the assistant general manager.

Mr. Wiley had thought about the times when he might be absent from the plant. To make sure that things would keep moving, the production manager was designated assistant general manager and given authority to make all operational decisions in Mr. Wiley's absence.

In thinking about absences, Mr. Wiley went one step further. He instructed each department head to designate and train an assistant who could run the department if, and when, the need arose.

When you spell out the delegation, be sure that departments are coordinated. The experience of another small plant owner, John Chiefson, is a case in point. He thought his departments were coordinated until the shop manager reported that he was swamped with "rush" orders.

"It's impossible for me to make good on Bill's promises," the shop chief said. Bill was the sales manager.

When Bill was called in, he said, "I had to promise early delivery to get the business."

Mr. Chiefson resolved the problem by instructing the sales manager and the shop manager to work out delivery dates together.

Make sure that departments are coordinated when you spell out the responsibilities and authority of each keyman. Thus you reduce the chances of confusion as well as insuring that there is no doubt as to who is responsible for specific jobs. Then, the particular keyman can take corrective action in his area of responsibility before things get out of hand.

KEEPING CONTROL

When you manage through others, it is essential that you keep control. You do it by holding a subordinate responsible for his actions and checking the results of those actions.

In controlling your assistants, try to strike a balance. You should not get into a keyman's operation so closely that you are "in his hair" nor should you be so far removed that you lose control of things.

You need feedback to keep yourself informed. Reports provide a way to get the right kind of feedback at the right time. They can be daily, weekly, or monthly, depending on how soon you need the information. Each department head can report his progress, or the lack of it, in the unit of production that is appropriate for his activity; for example, items packed in the shipping room, sales per territory, hours of work per employee.

Periodic staff meetings are another way to get feedback. At these meetings, department heads can comment on their activities, accomplishments, and problems.

COACHING YOUR STAFF

For the owner-manager, delegation does not end with good control. It involves coaching as well, because management ability is not acquired automatically. You have to teach it.

Just as important, you have to keep your managers informed just as you would be if you were doing their jobs. Part of your job is to see that they get the facts they need for making their decisions.

You should be certain that you convey your thinking when you coach your assistants. Sometimes words can be inconsistent with thoughts. Ask questions to make sure that the listener understands your meaning. In other words, delegation can only be effective when you have good communications.

And above all, listen. Many owner-managers get so involved in what they are saying or are going to say next, that they do not listen to the other person. In coaching a person so he can improve his ability, it is important to tell why you give the instructions. When a person knows the reason, he is better able to supervise the employees who work for him.

ALLOW STAFF TO WORK

Sometimes an owner-manager finds himself involved in many operational details even though he does everything that is necessary for delegating responsibility. In spite of defining authority, delegating to competent persons, spelling out the delegation, keeping control, and coaching, he is still burdened with detailed work. Why?

Usually, he has failed to do one vital thing.

He has refused to stand back and let the wheels turn.

If the owner-manager is to make delegation work, he must allow his men freedom to do things their way. He and the company are in trouble if he tries to measure his assistants by whether they do a particular task exactly as he would do it. They should be judged by their results—not their methods.

No two persons react exactly the same in every situation. Be prepared to see some action taken differently from the way in which you would do it even though your policies are well defined. Of course, if an assistant strays too far from policy, you need to bring him back in line. You cannot afford his second-guessing.

You should also keep in mind that when an owner-manager second-guesses his assistants, he risks destroying their self-confidence. If the assistant does not run his department to your satisfaction and if his shortcomings cannot be overcome, then replace him. But when results prove his effectiveness, it is good practice to avoid picking at each move he makes.

FOR FURTHER INFORMATION

Readers interested in exploring further the subject of delegating work and responsibility may wish to consult the references indicated below. This list is necessarily brief and selective. However, no slight is intended toward authors whose works are not mentioned.

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**SMALL BUSINESS ADMINISTRATION
MANAGEMENT AIDS No. 208
for small manufacturers**

WASHINGTON D.C.

**PROBLEMS IN
MANAGING A
FAMILY-
OWNED
BUSINESS**

By Robert E. Levinson
President, The Steelcraft
Manufacturing Company, Cincinnati, Ohio

SUMMARY

Management problems in a family-owned business are somewhat different from the same problems in a nonfamily business. When close relatives work together, emotions often interfere with business decisions.

In some family companies, control of daily operations is a problem. In others, a high turnover rate among nonfamily members is a problem. In still other companies, growth is a problem because some of the relatives are unwilling to plow profits back into the business.

This *Aid* discusses such problems from the viewpoint of the family member who is the company's manager. It offers suggestions that should help him in his efforts to manage objectively and profitably. ■

When an owner-manager puts up his own money and operates his own business, he prizes his independence. "It's my business," he tells himself in good times and in bad times.

However, "it's our business," in a family company. Conflicts sometimes abound because relatives look upon the business from different viewpoints.

Those relatives who are essentially "money men" (silent partners, stockholders, and directors) see only dollar signs when judging capital expenditures, growth, and other major matters. Relatives who are essentially "industrialists" and engaged in daily operations judge major matters from the viewpoint of the production, sales, and personnel necessary to making the company successful. Obviously, these two viewpoints may conflict in many instances.

This natural conflict can be aggravated by family members who have no talent for money or industry. Sometimes they are the weak offspring of the founders of the company—sons and daughters who lack business acumen—and sometimes they are inlaws who must be taken care of regardless of their ability or the company's needs.

Basically, the management problems which face the manager of a family-owned business are the same as those which confront the owner-manager of any small manufacturing company. But the job of the "family manager" is complicated because of the relatives whom he must reconcile to the facts of the market place, the factory, and the counting house. ■

THE SPARKS FLY

Different opinions do not always produce discord, but sometimes they cause "sparks to fly"—especially in a family-owned company. Emotion is an added dimension as brothers and sisters, uncles and aunts, nephews and nieces, and fathers and sons work together in such a small business.

For the individual who must head such a company, the important thing is to recognize this dimension of emotions and to make objective decisions which are often difficult to come by in such situations.

Many times when members of a family are active in the business, it is hard to make objective decisions about the skills and abilities of each other. For example, one says about another relative, "he was lazy when we were

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kids, and he's still lazy." Or a disgruntled wife says about an aunt, "what does she know about the business? She's only here because of her father's money."

If such emotional outbursts affected only the family, the manager might "knock a few heads together" and move along. But often it is not that easy. The quarrels and ill feelings of relatives have a way of spreading out to include nonfamily employees.

Then the manager's problem is to try to keep the bickering from interfering with work. He cannot afford to let the company become divided into warring camps. He has to convince nonfamily employees that their interests are best served by a profitable organization rather than by allegiance to particular members of the family.

Another aspect of the emotional atmosphere is that often nonfamily employees tend to base their decisions on the family's tensions. They know how their bosses react and are influenced by this knowledge. ■

IS THE MANAGER REALLY IN CONTROL?

The president of a small company is not always necessarily the man in charge. In many family-owned businesses, the elder statesman of the family becomes president or chairman of the board of directors. But day-to-day management is in the hands of other members of the family.

In some cases, even the best hands are tied as the family member tries to manage the business. For example, the ceiling on the amount of money he can spend without permission from the rest of the family may be too low for the situations confronting the company. Having to clear operating expenditures may mean missing opportunities for increased profits, such as taking advantage of a good price on raw materials.

In other cases, the manager may be in a bind because of emotional involvement. For example, he may feel that he has to clear routine matters with top family members because "Uncle Bill never lets me forget my mistakes." Personalities and emotional reactions create bottlenecks that work against an efficient operation.

Efficiency may be reduced also by relatives who indulge in excessive family talk during working hours. The manager should set the example and insist that other relatives refrain from family chit-chat on the job.

In some family-owned companies, the day-to-day manager himself may be a bottleneck. He may be a bottleneck because he does not have the ability to delegate work and authority. He may be the manager because of age or the amount of capital he has in the business without regard to his qualifications. In other instances, he may hold up progress because he does not listen to others in the company.

One solution is for other members of the family to persuade such a manager to let someone else run the day-to-day show, perhaps a hired manager.

If a member of the family has to be in charge of operations, he should be capable of using efficient management practices. He should also be capable of learning and using new management techniques. In addition, he should be thick-skinned enough to live with family bickering and tough enough to make his decisions stick.

One way to obtain objective control in a family-owned business is to hire an outsider to manage the day-to-day operations, when the company can

afford it. Part of the price may be giving him an equity in the business with the result that he may become as biased as any other family member. With a hired manager, the family members will have their hands full in setting policies and in planning for growth. An efficient hired manager will see to it that his employees—family and nonfamily alike—know to whom to go when he is absent because of business trips, vacations, or illness.

Such definite lines of authority are even more important when a member of the family manages operations with other relatives filling various jobs under him. The responsibilities of family members should be spelled out. "Family employees" should discipline themselves to work within the bounds of these lines of authority. Even then, it is wise to have a nonfamily employee high in the organization so that he can be involved in operations and help smooth out any emotional decisions which family members may make.

The manager's authority to suspend or discharge flagrant violators of company rules should also be spelled out. His control is weakened if he has to make special allowances for "family employees."

An important question connected with authority is: Who takes over if, and when, something happens to the family member who heads the business? His position may be "up for grabs" if the family hasn't provided for an orderly succession. This need is especially critical when the top family member is approaching retirement age or is in poor health. ■

YOUR BROTHER-IN-LAW NEEDS A JOB?

One of the most common problems in a family business is the hiring of relatives who do not have talent. But what is the top man to do when his sister or another close relative says, "Bill needs a job badly"? The emotional aspect of such family relationships is hard to fight. But try to go into it with your eyes open. It will be hard to fire him if he turns out to cost you more money than his presence is worth.

The main thing is to recognize the talent or lack of it. Suppose your brother-in-law, for example, has little or no ability as far as your company is concerned. Perhaps you can put him in a job where in spite of his weaknesses he can make a contribution and not disturb other employees.

The major concern is not necessarily the relative but how he affects other employees. In some cases, a relative can demoralize the organization with his dealings with other employees. For example, he may loaf on the job, avoid unpleasant tasks, take special privileges, and make snide remarks about the top man and other relatives.

If you are stuck with such a relative, try putting him in a job where he will have minimum contact with other employees. Keep him out of the mainstream of decision making. He might be placed in a sales office in another city some distance from the company's headquarters where he will be under the supervision of a top producer. Another alternative is to change his attitudes by formal or informal education.

The key is to see that the nontalented relative does not affect the relationship that you, the manager, have with other members of your staff. When you keep him "out of their hair," other employees will respect you for it.

Strange things sometimes happen. There is always the chance that the nontalented relative may find himself under your direction and turn into an asset for your company. ■

IS NONFAMILY TURNOVER HIGH?

Some family-owned companies are plagued with a high turnover among their nonfamily top people. Sometimes relatives are responsible. They resent outside talent and, at best, make things unpleasant for nonfamily executives.

In other cases, top notch men leave because promotions are closed to them. They see sons and nephews being pushed into executive offices.

The exit interview is a useful device for getting at the root of this type of turnover. A key employee who has decided to leave may be eager to tell you the true story—or at least enough of the facts to help you develop a course of action.

When a manager has the facts, he may have to confront the trouble-causing relative with an unpleasant story. What comes out of the confrontation is anyone's guess. Rare is the owner-manager who can fire a troublesome and close relative and make it stick. One way to remove such a thorn from the side of key executives is to help the relative start his own business in a noncompeting line—provided he has the management ability that is necessary for success. Another way is to “exile” him to a branch office or help him get a job with another company. ■

SPENDING TO SAVE MONEY

Many times, the owner-manager feels that he must make an expenditure to improve efficiency, yet other family members oppose the expenditure. They view it as an expense rather than an investment. They feel that funds spent for items, such as more efficient equipment, encroach on their yearend dividends.

One way to help these relatives see that “you have to spend money to make money” is to base your arguments for the expenditure on facts and figures which nonfamily employees have gathered. Suggest to the opposing family members that the matter be settled on a cold dollar basis: for example, “by spending money for this machine, we can increase profits and get our money back in 4 years.”

When, and if, the opposing relatives refuse to accept your projection, try calling in outside business advisers. Relatives will sometimes believe advisers, such as your banker, accountant, or attorney, when they won't accept your judgment. But keep in mind that outside advisers who are personally close to other family members, should not be included among your counselors.

Paid consultants can also be useful in proving the worth of an expenditure. Such help is particularly valuable on specialized projects which require more research than you or your regular advisers have time to do. ■

STATUS QUO BLOCKS GROWTH

When some of the relatives in a family-owned business grow older, they develop an attitude of status quo. They don't want things to change and are afraid of risk. With this attitude, they can, and often do, block growth in their family's business.

The solution to such a problem is to urge or suggest that the status quo members slowly disappear from the scene of operation. One way to do this is to dilute their influence in management decisions. For example, the status quo relatives might be given the opportunity to convert their stock in the

corporation to preferred stock. Or they might sell some of their stock to the younger relatives.

It might also be possible for the status quo relatives to think in terms of gradual retirement. Their salaries can be reduced over several years, and they can relinquish some of their interests. With the proper legal advice, it might be possible for a small corporation to recapitalize. A new partnership agreement might be drawn up when the company is a partnership.

Such actions can take into account all of the growth of the business to that particular point and can enable the retreating members to recover their equity. Meanwhile, the manager and active relatives can renew their efforts toward expanding the business. ■

HOW IS THE PIE DIVIDED?

Paying family members and dividing profits among them can also be a difficult affair. Many persons feel that they are underpaid, but what about relatives who comment as follows:

“Uncle Jack sits around and gets more than I do.”

“Aunt Sue goes to Europe on the returns of money her husband put into the business before he died 10 years ago.”

“Your brother goofs off and rakes in more than you do.”

How do you resolve such complaints? You don't entirely. But if the business is a small corporation, certain equalizing factors can be accomplished by stock dividends. By recapitalizing the company, some stockholders can take preferred stock with dividends. Others can have common stock with smaller dividends.

When family members are inactive in the company, their income should be based on its profits. Not always is it possible to convince family members of the advantages of such an arrangement. The use of outside advisers, especially your banker and accountant, may help to convince them.

Salaries are best handled by being competitive with those paid in the area. Find out what local salary ranges are for various management jobs and use these ranges as a guide for paying both family and nonfamily personnel. When you tie pay to the type of work that the individual does, you can show disgruntled relatives the value that the industry puts on their jobs.

Fringe benefits can also be useful in dividing profits equitably among family members. Benefits, such as deferred profit sharing plans, pension plans, insurance programs, and stock purchase programs, offer excellent ways to placate disgruntled members of the family and at the same time help them build their personal assets.

How the pie is divided is vital to growth in a small business. Profits are the seedbed for expansion, and lenders are influenced by what is done with them. What banker wants to lend a company a substantial amount when its earned surplus is drained off by relatives? ■

WHERE DO YOU GO FOR MONEY?

Another major problem in managing a family business is that of obtaining money for growth. Generally speaking, if the company is profitable, the top man can get funds from his local bank.

But when the growth is substantial, his company often outgrows its local bank. When he sees the prospect of expansion looming ahead, the managing

relative should begin to plan for it. He will need to consider techniques for financing, such as the following. Planned financing may be a combination of these items:

- Taking out a mortgage on the company's building.
- Asking suppliers to extend credit on purchases.
- Factoring the company's receivables and inventory financing.
- Borrowing on a note basis from friends.
- Borrowing the cash surrender value of relatives' life insurance policies.
- Contacting an insurance company for a long-term loan.

Contacting the Small Business Administration for a business loan. In some areas, the manager can get financing from a Small Business Investment Company.

If the business is a small corporation, the following techniques also offer possible sources of money:

- Selling a portion of the stock to the company's employees for cash.
- Selling some of the stock to another company for cash. In a merger, you can use the credit of the larger company.
- Contacting a regional investment banker who may privately find a lender, using some of the company's stock as collateral.
- Contacting a national investment banker who would place some of the company's stock. This would be "going public."

Effective budgetary controls are important in seeking growth funds. Such controls help the managing relative in determining the company's needs. Lenders also regard them as evidence of good management. ■

EXCHANGE INFORMATION

Fortunately, in most communities, the manager of a family-owned business is not alone. Other individuals operate small companies for their families and may provide a source of information and help.

The managing relative should seek out and cultivate his counterparts. He can exchange ideas with them and learn how they solved problems in which their relatives were involved.

In a small corporation, the thinking can be stimulated by having outsiders on the board of directors—directors who are not relatives and who are from other types of businesses.

State and national trade associations are also good sources of information and help. Through them, the managing relative can get facts from non-competitors in his industry. ■

FOR FURTHER INFORMATION

Businessmen who wish to explore further the subject of problems in managing a family-owned business may consult the following references. This list is necessarily brief and selective. However, no slight is intended towards authors whose works are not mentioned.

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Management Aids for Small Manufacturers

Washington 25, D. C.

August 1957

TRAPS TO AVOID IN SMALL BUSINESS MANAGEMENT

By *A. M. Woodruff*, Director, Bureau of Business Research, University of Pittsburgh, Pittsburgh, Penna.

SUMMARY

Good times can be perilous -- at least as far as business operation goes. Why? The reason is that in periods of prosperity some executives tend to become complacent. They overlook various dangerous management traps which are always ready to ensnare the unsuspecting. The dangers are greatest in small business. This fact is borne out by recent investigations. For example, during the 2-year period, 1954-56, the Bureau of Business Research of the University of Pittsburgh studied causes of bankruptcy in the field of small manufacturing. Ten companies which had failed were checked in comparison with 10 concerns which had been highly successful in similar lines. The findings of this study are presented in the following sections. All the bankrupt firms were in lines in which the successful companies, otherwise comparable, made money -- at the same time and in the same metropolitan area. The failures fell into 18 specific and avoidable management traps which the successful firms *had* avoided. All of the bankruptcies stemmed from *poor business management*. Three kinds of poor management showed up repeatedly: (1) poor financial planning because of inadequate records, (2) poor sales management including deficient product planning and market analysis, and (3) poor general administration culminating in expenses not covered by revenues. For a quick picture of how the bankrupt companies fared in regard to the various management traps, see figure 1 on page 2.

OPERATING EXPERIENCE ANALYZED

Here, briefly discussed are the 18 management traps which the survey discovered.

(1) **Inadequate Records.** Company A bid unsuc-

cessfully on about 75 Government contracts. Lacking the data with which to estimate closely, the managers first presented figures "high enough to be safe." Unable to get business this way, they then employed a representative who turned out to be very expensive and who also got the company involved in a disastrous subcontract. A fraction of the money thus wasted would have been sufficient to establish an adequate bookkeeping system. But, like many others, this concern was guilty of false economy in the accounting department.

Company E was a partnership with a good product. Nevertheless, during bankruptcy proceedings the accountants were unable to reconstruct within reasonable time even the simplest form of statement from the tangle they found. Despite the company's up-to-date plant and excellent equipment, office records consisted of masses of unsorted papers jammed into an old-fashioned safe. The firm, incidentally, had a postage meter with a capacity 20 times its average mail.

Company D became involved in a complex problem of depreciation which stemmed from the writeup of certain assets when they were transferred from a predecessor partnership to the Company D. After several years the company was challenged by the Government on its depreciation charges. Litigation dragged on for years. Eventually a tax claim of \$300,000 was affirmed and the company had to liquidate to meet it.

(2) **Cumulative Losses.** In several cases, serious losses were traced to a series of seemingly insignificant little leaks. Collectively these dribbles were the equivalent of a substantial breach in the financial dike. Management was unaware of the leaks at the time. Suitable reports were either missing, or too cumbersome for analysis, or too long delayed in reaching the proper desk.

(3) **Tax Requirements.** Company J, with yearly sales of about \$400,000, was managed by technical

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men without administrative experience. These men were unconcerned about tax requirements, and took no interest in the tax aspects of depreciation. Annual reports, to be sure, were worked out for income tax purposes, but analysis was limited to a monthly glance at the bank statement. This firm was low bidder on a very substantial contract, but in figuring its bid omitted social security and unemployment taxes. Since no provision was made to pay these taxes they became delinquent with the inevitably unfortunate consequences.

Similarly, Company H became involved in an equally complex problem of LIFO (last in, first out) valuation of inventory. A mistake by an accountant who had not fully understood the rules led to a tax claim against the company of nearly \$450,000. In both cases, decisions on complicated tax problems should have been made only on the basis of the best legal and accounting advice obtainable.

(4) Growth Influences. In most of the cases studied, trouble resulted from the growth of the business beyond the scope of a bookkeeping sys-

tem which had been used while the firm was small. In three cases, management deliberately tried to save money on recordkeeping. In another, the owner was unaware of any problems until events forcibly directed his attention to them; by then it was too late.

(5) Cost Analysis. Company A did not know the cost of its own plant and tools. The plant was partly built by shop employees. These men, when not otherwise busy, laid cement blocks and did other structural work. Production tools were developed in much the same way. Management contended that the "plant and tools had not cost anything" since they had been built in the spare time of manufacturing employees. This resulted in classifying as expense, items which should have been capitalized. At tax time these cost items were challenged. In the absence of cost figures, an appraiser had to be retained to evaluate the actual capital assets for depreciation purposes.

Company G had three operating departments. Two had skimpy cost data and the other had reports far too elaborate and cumbersome for ready

FREQUENCY OF 18 MANAGEMENT TRAPS
(10 Bankrupt Small Manufacturers)

MANAGEMENT TRAPS	COMPANIES										
	A	B	C	D	E	F	G	H	I	J	
A. Poor Financial Planning											10
1. Inadequate Records											9
2. Cumulative Losses											5
3. Neglected Tax Payments											4
4. Expansion Beyond Resources											3
5. Excessive Fixed Costs											3
B. Poor Coordination Between Manufacturing and Selling											10
6. Lack of Product Development											9
7. Lack of Diversification											7
8. Lack of Data on Own Customers											5
9. Contracted Entire Output to Single Buyer											3
10. Lack of Market Research											2
11. Continued Policies of Bankrupt Predecessor											1
12. Legal Problems											1
C. Poor Other General Administration											7
13. Family Factors											3
14. Lack of Administrative Coordination											3
15. One-Man Management											3
16. Lack of Technical Knowledge											2
17. Absentee Management											1
18. Internal Conflict											1

Figure 1.

analysis. Management was equally ignorant of costs in all three cases. It later was learned that one department had six identical operations - - all of which, to be sure, were necessary. However, two cost about \$10 per unit, two nearly \$25, with the other two in between. Such facts were in the cost reports but very hard to find. After reorganization and the installation of simple records throughout, the steady loss was turned into a healthy profit, largely by bringing the cost of the six operations mentioned down to the \$10 to \$12 range.

(6) Product Development. Late in the 1920's, Company B ran into mounting sales resistance to its line of wooden ice boxes in competition with steel ice chests. The owner, however, refused to believe that any device for storing food would ever seriously rival his "time tested line."

By the early 1930's, sales of wooden chests had dwindled to the vanishing point. Also, mechanical refrigeration had been successfully developed and was rapidly taking over the market. Some move obviously had to be made. The owner of the firm, with no market study, ordered conversion from wooden ice chests to steel ice chests. In doing so he shifted operations from one obsolete product which his firm understood to another outdated product which his firm did *not* understand. When this changeover to steel chests took all remaining capital in the firm plus the owner's entire personal resources, bankruptcy followed.

(7) Product Diversification. All the unsuccessful companies lacked product diversification. Nine of them engaged in no product research at all. In contrast, however, 9 of the 10 successful firms also surveyed emphasized product development as a means of having on hand ready alternatives in case of market trouble with any one product. These successful manufacturers emphasized the importance of "keeping several balls in the air at once."

(8) Customer Information. When Company I became badly delinquent on a bank loan, the bank insisted on a systematic review of the books by a local accountant. In the mass of confused data he unearthed an important source of trouble. Company I had been shipping to customers without any credit investigation. Its receivables were in bad shape. There was no systematic collection policy and most of the accounts were 90 or more days old. One customer, for example, owing \$4,748, was himself bankrupt and had made no payments for over a year. Yet Company I had continued to ship to him, and carried his account as a good receivable.

(9) Market Diversification. In order to avoid the problems of selling, Company A contracted all

its output to one buyer. When the buyer cancelled the contract the company was left with no alternatives. And all of its capital was tied up in that particular venture. Company I was caught in a single contract arrangement which it could not fulfill. In the end, however, it was more fortunate than Company A, and was able to reorganize as a more diversified enterprise.

(10) Marketing Research. Two companies undertook substantial ventures without any marketing research whatever. Three companies in order to sidestep sales problems adopted the seemingly easy solution of contracting the entire plant output to a single buyer. Later they found that this created very real hazards.

(11) False Confidence. Company D took over the assets of a bankrupt predecessor, but continued all the same policies. Moreover, it engaged in a substantial tool-up, costing nearly \$1 million, with no valid basis for believing that the expansion would be supported by sales. The new management, just like the old, was never able to get its sales up even to the point of profitable operation.

(12) Legal Problems. Company H tried to save money on legal advice. When long-drawn out patent infringement proceedings had to be undertaken, the firm was ill-equipped technically and financially. Foresight and competent professional guidance could have warded off much of the trouble.

(13) Family Factors. There were three cases in which favoritism to members of the family contributed to eventual failure. Typically, company assets were depleted in order to carry idle and useless executives at high salaries. In one case, however, the owner's brother-in-law meddled so much in the active management that disaster resulted.

(14) Administrative Coordination. Seven of the 10 unsuccessful firms were never able to coordinate selling and manufacturing. This was partly a by-product of poor records which denied management essential information about which lines were selling and how profitably. And partly it was the result of the fact that the managers frankly loathed selling, and resented the time they felt it "stole from the productive side of the business."

In contrast, the successful firms also studied, kept their selling and manufacturing activities closely coordinated. In nine of these cases, the owner or president kept close watch on sales as well as on production records. In the tenth case the owner was a technical man who did not enjoy selling but fully appreciated its importance. As a result, he hired the best sales manager available and paid him a larger salary than his own.

Trouble was also found in several concerns with regard to formulating policy and communicating it to those who must carry it out. Company I was typical: Its owner was a skilled machinist who did well with 12 machines and 20 men while his wife kept the books. But he fell victim to his own success when he expanded to 60 machines and 100 men. Then he was too busy avoiding technical errors in production to be aware of any problem in coordinating overall administration. His firm, too, sank into bankruptcy.

(15) Management Succession. One-man management destroyed Company C. The owner built up the firm from its start in a basement workshop to a value of \$220,000 in less than 5 years. Failing health forced his retirement while he was still less than 50 years of age. He sold out to a group of investors who did not realize that his technical genius had been the sole foundation of the company's success. It was never clearly recognized that one man's engineering skill is no substitute in business for a sound management team. When the plant failed 6 months later the new owners suffered complete loss.

Company D was headed for 7 years by a man described by his associates as stubborn, self-opinionated, and highly secretive. He kept large sums of company money in his office safe to avoid their disclosure to one of his key directors who was president of the depository bank. When this company head died unexpectedly his associates succeeded to a lagacy of indescribable confusion with no prepared successor to the top job.

(16) Technical Knowledge. A group of investors bought Company G. The new owners had little technical knowledge and lacked any background for selecting a good technical man as operating vice president. But on the basis of the plant's previous reputation they had no trouble getting a contract to supply gun parts. The first two shipments were rejected outright on the basis of quality. Ultimately, the contract was cancelled. The new owners were bankrupt within 6 months. The lack of technical

competence brought operations to a standstill and served to wreck the firm.

(17) Absentee Management. Company B fell into the management trap of executive inattention. After a long period of profitable operation, the firm went through a series of years of absentee management. Financial records, which had never been good, were neglected, and with the owner away constantly, the bookkeeper failed to make several years' tax payments. In the end the firm failed.

(18) Internal Conflict. In Company E, bankruptcy was directly traceable to a 5-year fight between partners. The trouble centered on the subsidizing of relatives in various sinecures, and allegations of various kinds of scandalous misconduct. At one point, one partner secretly negotiated an exclusive sales contract. Through it, in one year, he quadrupled his commissions although total sales volume was reduced. There was also apparent manipulation of the partners' expense accounts. Yet potentially, the line of business was profitable, and had the partners devoted the time to running their firm that they spent trying to outwit each other, the concern would not have failed.

IMPLICATIONS FOR MANAGERS

The implications of these experiences for small business executives are clear. To stay competitive managers must manage. This means planning, organizing, coordinating, and controlling--for the firm as a whole, not just for one function like production or sales. It means also thinking ahead to offset potential trouble before it is too late.

The cases studied point up the continuing need and value of adult education courses on business management such as those cosponsored by the Small Business Administration and various educational institutions. Offered in many communities for small business owners and managers, this kind of instruction and discussion can be a valuable defense against the numerous management traps.

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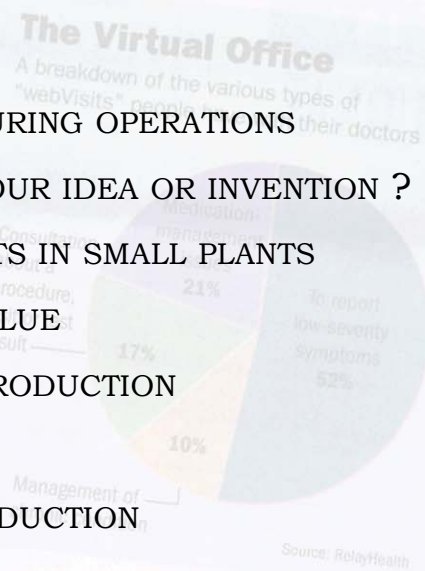
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PRODUCTION

- BROADENING YOUR MANUFACTURING OPERATIONS
- CAN YOU MAKE MONEY WITH YOUR IDEA OR INVENTION ?
- CONTROLLING INSPECTION COSTS IN SMALL PLANTS
- IMPROVING YOUR PRODUCTS VALUE
- PLANNING AND CONTROLLING PRODUCTION FOR EFFICIENCY
- POINTERS ON SCHEDULING PRODUCTION
- PROFITABLE SMALL PLANT LAYOUT
- RENOVATION-EXPANSION CHECKLIST



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That May Slow Midwest Economy

By LEE HAWKINS JR.

DETROIT—In moves that could slow the Midwest manufacturing economy—particularly in election-year battleground states such as Michigan and Ohio—the two titans of the U.S. auto industry, General Motors Corp. and Ford Motor Co., said they will cut fourth-quarter vehicle production.

The announcement followed a disappointing August for auto makers, which saw American consumers steer clear of large, fuel-chugging sport-utility vehicles as oil prices surged. Sales of GM's big Chevrolet Suburban SUV fell 38%, amid a decline of 14% in overall sales, and Ford's large Expedition SUV slumped by 23%, despite discounts of as much as \$6,000 per vehicle, amid a 13% decline in overall sales.

Sales of Toyota Motor Corp.'s big Sequoia SUV plummeted 38.7% and the Japanese auto maker, which has been doing well against its U.S. rivals, saw overall sales decline by 10%. DaimlerChrysler AG's Chrysler Group said its monthly sales fell 6% from a year earlier.

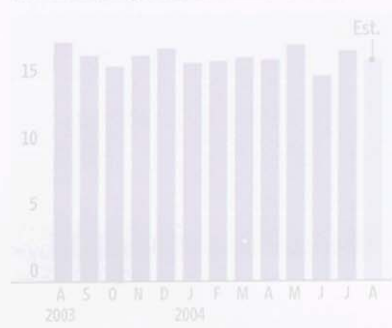
GM and Ford executives played down the August declines in demand for large SUVs, saying the segment is volatile. But the abrupt decline is of deep concern for the industry, given the large profit margins on those models.

The monthly sales numbers were somewhat less alarming. August is historically a volatile month in the U.S. industry, and auto makers cautioned that the

year-to-year comparisons were skewed because Labor Day weekend sales were included in August last year, and weren't included in the latest results. Some car makers blamed Hurricane Charley for depressing sales in Florida.

Downshift

Seasonally adjusted annualized sales rate for U.S. cars and light trucks, in millions of units



But the decision to ratchet back production is a significant step, because the auto makers play a huge role in the country's manufacturing economy. GM said it will cut production at its North American factories by about 7% during the fourth quarter.

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16.94	PogoChild PGM	1.00	4.9	15	8000	26.00	0.01	
20.39	PogoBiting PGG	20	7	16	10020	26.00	0.01	
13.70	PepsiAm PAS	08	4	16	4340	20.24	0.40	
44.10	PepsiCo PEP	92	1.8	23	27769	49.74	-0.26	
11	Perdigao ADS PDA	55a	1.8	--	56	30.47	-0.23	
6.26	PeriniCp PCR	--	7	1427	15.23	0.13		
15.05	PerkinElmer PNI	28	1.6	30	2930	17.55	0.07	
7	PermRilyTr PBT	78a	7.9	--	608	9.90	-0.19	
9.67	PerotSys A PER	--	29	2810	13.51	0.20		
7.50	Petrobras ADS PZE	--	--	684	9.42	0.01		
38.54	PetroCnda PCZ x	40g	--	--	366	47.91	1.25	
30.80	PetroChina ADS PTR	356a	7.0	--	1998	50.99	0.63	
15.51	PetroKishota A PNZ	208g	1.0	6	3947	30.41	0.44	
21.06	Petrubra ADS A PBR	1.76a	5.7	6	9421	31.05	0.30	
19.36	PhilBras ADS A PBR	1.76a	6.3	--	5654	27.96	0.07	
29.80	PhieffViac PV	25e	2.2	--	2	38.61	-0.25	
29.50	Pfizer PFE	68	21	31	142882	32.35	-0.32	
46.04	PhelyDody PD	25e	3	17	12440	81.75	0.19	
23.20	PhilAutIndr POB	1.64	6.5	--	34	25.31	0.01	
10	PhilLngrDet PHL	--	--	906	23.14	0.47		
21.89	PhlpsEl PHG	44e	1.9	--	4794	23.32	0.12	
7	14.10	PhillipsVanH PVH	15	7	dd	1255	29.01	-0.15
8	9.56	PhoenixCds PNX	1.66	1.6	14	3110	14.28	-0.25
0	30.52	PhoenixCos un	1.81	5.7	--	3	31.99	-1.30
9	1	PhosphRies PLP	--	dd	387	1.18	0.01	
9	38.32	PidmnnCg PNY	1.72	3.9	15	1846	48.02	0.42
14	25.36	Pier 1 PIR	40	2.3	14	12567	37.10	-0.25
14	12.11	PilgrmPlr PPC x	06	2	18	3430	25.21	0.81
18	6.15	PinnacleEnt PHK	--	dd	3847	13.12	0.72	
18	34.12	PinnacleWCap PNV	1.80	4.2	15	4009	42.30	0.17
25	20.40	PioneerCp PPD	23e	1.1	--	30	21.69	-0.31
30	23.70	PioneerRies PPD	20e	6	11	6098	34.50	1.05
30	38.70	PierJeffray PJC n	--	--	72	42.46	-0.64	

SBA
 Your Small Business Resource

Management Aids for Small Manufacturers

Washington 25, D. C.

March 1956

BROADENING YOUR MANUFACTURING OPERATIONS*

By John G. Turnbull, Robert J. Holloway, and Joseph P. McKenna
School of Business Administration, University of Minnesota

SUMMARY

Competitive conditions today make a broader operating base worth careful thought, even by very small manufacturers. It can be done by adding a new product to the line, by offering an additional service, or by marketing through a supplementary channel of distribution. Recent business history shows that many companies have profited by diversifying. Many more are continuing to prosper largely because suitable diversification has increased their sales, stabilized their work during seasonal or cyclical variations, and spread the risk over a wider production and marketing base. In addition, from the community standpoint concerns with a broad operating base are often highly desirable because of their adaptability to changing conditions and their relatively steady employment patterns.

A commonsense approach to the question of whether or not to diversify involves taking five orderly steps: Identifying an actual need, analyzing the type and scope of the need, evaluating the alternate courses of action, putting the final decision into operation, and checking up on results.

Small businesses sometimes face special considerations which should be investigated and weighed in a realistic and objective way. Among these some of the most important are: The characteristics of management's temperament and objectives, the capabilities and limitations of the executives' training, experience and interests, the outside sources from which practical ideas and information may be obtained at supportable cost, and the individuals or groups who can supply funds and financial management assistance.

Diversification implies more than one product line, more than one type of service offered, more than one type of marketing channel, or various combinations of these and other alternatives.

WHY DIVERSIFY

Why should any business manager think about diversification? Generally, of course, because

*The authors wish to thank Robert C. Ferderer and A. H. Hartsche of the Small Business Administration for their advice and assistance in preparing this Aid.

it is hoped diversification will pay off. But there are some specific reasons, too. As far as the small business enterprise itself is concerned, the following reasons are frequently listed in support of diversification:

- (1) To increase profits, by adding products or services which will increase sales;
- (2) To maintain or increase the share of the market;
- (3) To replace unprofitable lines or, where forced to carry unprofitable lines, as an offset to them;
- (4) To keep up with changing demands for goods and services;
- (5) To spread the risk by not "putting all one's eggs in one basket";
- (6) To utilize idle facilities which arise, for example, in the production of seasonal goods;
- (7) To capitalize on the operating advantages of a stable work force;
- (8) To gain other benefits peculiar to the company in question.

As far as the community is concerned, diversification both within companies and within the communities makes for greater business stability.

INSTABILITIES FACED IN BUSINESS

One of the major needs for diversification is in meeting business instabilities which can arise from a number of sources. Among the more important are the following:

• Long-term shifts in patterns of demand.

Common illustrations are wagons and automobiles, or steam and diesel locomotives. But there are hundreds of less well-known cases, many of which have bankrupted small enterprises that did not adjust to new situations.

• Business cycles.

Some business operations have been notoriously "prince and pauper" in nature, booming in good times and being very

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hard hit in bad. Steel and housing are frequently cited as illustrations. But here, again, there are many other small business operations hit equally hard by such cyclical swings.

• **Seasonal variations.** These derive from consumer demands that are not steady throughout the year—the demand for swimming suits—or from production patterns that have peaks, such as processing agricultural foodstuffs and manufacturing snowplows.

• **Conversion to defense production and reconversion.** Experiences of companies after World War II and the Korean period point up the fact that serious problems can develop from these causes.

• **Operations at less than capacity.** Sometimes low production may be called for because a business is newly started and has not developed its markets, because given markets have not been exploited fully enough, or because all possible markets have not been tapped.

Of the ways in which such instabilities can be met, diversification is one of the most important. But note: Diversification can also be profitably used where these instabilities are not necessarily present. It is an offensive as well as a defensive weapon.

TECHNIQUES OF DIVERSIFYING

Among the principal diversification techniques, the following six stand out:

• **The product manufactured.** Many illustrations can be given for adding product lines to yield stabilization. For instance, since snow tires make inroads on tire chains, the chain manufacturer turns to other types of chains. A company manufacturing rubber winter footwear turns out decoys in its slack season. A metal-stamping company experiments with plastics. Subcontracting may lead to product as well as other types of diversification.

• **The service offered.** This relates to the service which the manufacturer performs for customers. Here again illustrations are plentiful for long-term, cyclical, seasonal, competitive and other cases. For instance, a boatyard provides repair and drydock equipment designed to attract additional customers.

• **A "full line" diversification.** This involves additional products or services offered to make a "full line" available. Thus, a manufacturer of phonograph records may not only make a complete line of supplies in addition, but may also provide repair service on record players.

• **Marketing channels.** It is possible for the manufacturer to reach new markets by diversifying his channels of distribution; that is, by using several different ones for the marketing of his product. A camera manufacturer may use the trade channel of manufacturer, to retail camera shop, to consumer. By

using different channels—for instance, mail-order houses or drugstores—he may be able to get his product before new groups of consumers. Seldom can all potential consumers be reached through one channel; usually it takes a variety of channels.

• **Price diversification.** The situation here involves offering various price lines of the same general class of goods. For instance, a candy manufacturer may develop a series of different price lines, trading up and down on the market. Likewise, mechanical equipment manufacturers use this type of price diversification with different models.

• **Personnel procedures.** Sometimes a business can "diversify" by means of specialized personnel practices. This is particularly true in the case of small enterprises. The training of employees for versatility, can yield diversification of skills and permit an employer to utilize a smaller work force than would otherwise be necessary. This tends to promote more stable operations. Conversely, the smaller firm may use various specialized talents—but hired on a temporary basis to do one particular job.

PROCEDURES IN DIVERSIFICATION

What steps does diversification involve? The following provides an outline of the major items.

• **Discovery of need.** In some cases a need may be easily seen, as in extreme seasonal variations or steadily decreasing profits. In other cases the need may not be apparent. Perhaps a company is not keeping its share of the market, and yet, because its sales are rising, this is not readily recognized. Therefore, the small business owner should continually endeavor to keep informed over a period of time on what is happening to sales of his products as compared with those of competition. Marketing research at the customer level can often help a producer become aware early of a need for diversification.

• **Analysis of need.** Next, it then becomes necessary to analyze the need. What is the source? To what stage has the problem progressed? Does it demand immediate action or can you afford to move more slowly? List on paper the facts about a problem, and write opposite them a personal evaluation of their influence on the total situation. Do as much advance planning as you can so as to avoid having to make hasty decisions under pressure.

• **Determination and evaluation of alternative solutions.** Once the problem is understood write out a description of the various solutions which might be applied. Perhaps the solution should involve a new or changed product, a new or changed service, a new or changed marketing process, shifts in personnel practices, or some combination of these. Or, perhaps you

should consider getting out of one product family and into something different.

Then, in light of the available choices, you must decide which proposal appears to be the best. The "ideal" diversification pattern is one which uses existing production techniques, marketing channels and personnel—and requires minimum financing. But this "ideal" cannot be achieved in most cases. Hence, it is necessary in making a final decision to take into account a series of limiting factors such as the following:

(1) **Ability of management:** New product "A" might be a possible alternative. But it might also require expansion into a field where management does not feel technically competent and where its experience is not broad. In some cases, management may have no choice except to go far afield, but such departures should be made only when the magnitude of the risk has been carefully judged.

(2) **Resources at hand or obtainable in the enterprise:** The alternative selected should be conditioned in part by the resources the enterprise can command. A machine shop is capable of doing certain types of jobs. Thus, with the resources in such a shop, it is not likely that you could readily convert it to the production of rubber footwear. Nevertheless, there may be cases in which it would pay to secure new resources and to move into areas not previously exploited. This would be the case, for example, where the basic demand pattern had changed, and the business had no choice but to shift or go out of business.

(3) **Available financing:** If one of the proposed alternatives depends upon the availability of outside capital, that availability will automatically become a limiting factor. Moreover, availability alone is not the only problem. Some avenues to diversification may require that stock in, or control of, a closely held business be opened up to outsiders. This the proprietors or partners may be unwilling to do.

(4) **Marketing possibilities:** Think also in terms of markets and outlets. For example, if a manufacturer's salesmen are calling on hardware stores selling nuts and bolts, why not hinges also? Or other similar lines? The marketing process may also impose limitations on the choice of alternative solutions; that is, a particular method of selling may be successful for only certain kinds of goods. All production cannot be forced through a given trade channel merely because the manufacturer has already developed that channel.

• **Putting the decision into operation.** Once a course of action has been decided on, it is necessary to put it into operation. This requires the assignment of needed resources and personnel to handle the new task, plus the proper "mix" of men and machines in turning out

and marketing the new product. Therefore, it is advisable to have a full plan worked out on paper showing, in detail, the sequence and timing of actions and what resources and manpower are to execute them. As this plan is carried out, changing conditions and new information may force revisions. But as each change is made it should be thought through and formalized, so that the plan is always specific, always complete—and always current.

• **Follow-up and evaluation.** After the diversification step has been taken, it is necessary to assess the results on a continuing basis. Is the project paying off? The answer to this question involves, first, the choice of some payoff yardstick. Second, it involves getting the information to apply the standard. A convenient yardstick is found in calculating the comparative return on investment. What were the figures like before the step was taken, and 3, 6, 9 months or a year afterwards? Be sure that all extraneous factors which can be identified are taken into account. *Periodic* assessment should always be used to determine what the trend of the enterprise looks like.

SPECIAL PROBLEMS IN SMALL BUSINESS

Diversification can involve greater risk for a small business than for a large enterprise. This is likely to be the case for a number of reasons, among them the following:

• **Management temperament.** Small business owners may be less income conscious than their larger brothers. Small business operations are viewed by some as a "way of life" as much as they are a way of maximizing profit. However, the head of a firm who adopts such a philosophy and does not wish to expand, should recognize the defensive possibilities of diversification. While he may not wish to become steadily bigger, he should be aware that a skillfully selected diversification program may protect him from becoming steadily smaller and, ultimately, from being wiped out.

• **Management competence and interests.** The small business manager usually has to be a jack-of-all-trades. On the one hand, this fact can make it less difficult to move into new areas; on the other, it means that additional executive duties may in time become unmanageable. Some enterprises, to be sure, can hire new specialized talent; the typical small business operator, however, cannot. He can "spread himself only so thin" before negative results appear.

• **Keeping up with new developments.** Some business enterprises possess research staffs which keep them abreast of new events and developments in their field. Others prefer to hire consulting help as needed. But because of the costs involved, neither of these procedures is readily available to the average small business. As a result, help should be sought from

other less expensive sources such as Federal Government agencies, trade associations, and the various nonprofit, educational groups.

• **Financing.** In many cases, the most important question in deciding whether or not to broaden the manufacturing base is: "Where's the money coming from?" Many small business owners have had trouble in finding the answer to that one. Nevertheless, the problem *can* usually be solved. The first step in the solution should be a careful appraisal of how big the needs really are. Step two should be an equally careful evaluation of what form of financing is best for the business: money available within the company, borrowed funds, or investment capital. That question of the source is important. (Further information on this point is developed in SBA's Small Business Management Series booklet No. 15, titled *A Handbook of Small Business Finance*, available from the Superintendent of Documents, Washington 25, D. C., at 30 cents per copy.)

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MAKING SOUND DECISIONS

In making diversification decisions, the small business owner should understand and weigh as many as possible of the various factors involved. In particular, he should pay most attention to the matters about which he knows least. If, for example, diversification involves a familiar production technique but an unfamiliar marketing channel, the business owner should seek specialized marketing assistance. In today's business climate, the marketing problem is frequently the most critical; that is, it is often easier to produce new goods and services than to dispose of them.

Clearly, diversification is not the easiest and least expensive program a small business enterprise can undertake. Neither is it a riskless operation. Therefore, not all small business owners should rush to undertake a broadening-out program. Nevertheless, diversification can have much to recommend it, both as an offensive and as a defense business technique. It is worth some close consideration by any small business manager.

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CONTROLLING INSPECTION COSTS IN SMALL PLANTS

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SUMMARY

As a small manufacturing company grows, it frequently has difficulty in keeping the costs of inspection within reasonable bounds. Money is spent on inspection primarily to protect against shipment of defective products. As such, the use of funds must be reviewed periodically. Make sure that inspection procedures are set up and run efficiently; that inspectors are properly chosen and trained; that gauges and equipment are maintained; and that inspecting is done accurately. Certain ratios of inspection costs are available as a guide to managers. The experience of companies successful in achieving good inspection-cost control suggests some key questions worthy of attention by small plant operators. Among them are the following: Do you get engineering help in planning inspection operations? Have you located inspection operations strategically? Are your inspection procedures consistent with the quality levels desired? Do you remove defects promptly? Does your record keeping system provide operating people with a quick, effective basis for correcting trouble?

In the long run, the success of a small business depends to a large degree upon the quality of the service it renders or the product it sells, or both. When a manufacturing organization is started, it can often count on the careful, personal attention of the owner, plus the craft skills of its few workers, to assure quality of output. But as a company grows, jobs like inspection often have to be delegated to others. During this process it often seems that the cost of inspection and quality control rises at a faster rate than does the volume of business. In many cases, this is true because no one has a clear idea of how to set up controls over these costs. Therefore, the purposes of this Aid are to assist in providing a way of judging inspection costs; to

point out pitfalls to be avoided; and to suggest how proper records can lead to better management and better control over these costs.

WHAT IS INSPECTION SUPPOSED TO DO?

You pay for inspection because you want to protect yourself and your customers against acceptance and shipment of products which do not meet established specifications. It is, therefore, within the scope of this inspection function to:

- (1) Take responsibility for seeing that incoming materials are as specified when purchased;
- (2) Make sure that the specifications and tolerances themselves are reasonable and, wherever possible, capable of being measured objectively;
- (3) Provide measuring devices and gauges, and maintain them at correct settings (whether they are used by inspectors or by machine operators); and
- (4) Keep track of production equipment to make sure it is functioning properly and is able to meet the specifications or tolerances called for.

Many small producers seem seldom able to set their own specifications for the product they make, or to ascertain whether these requirements have been met. Both often have become the province of the *buyer*. He says what he wants and he decides whether or not he got it. This arrangement may appear to be more advantageous for the manufacturer than it really is. Both your inspection and manufacturing costs may go up considerably if you get involved in specifications which are very hard to meet, and if the acceptance criteria used by your customer are so tight that you are "boxed in" and forced to operate with very expensive methods. You actually may sometimes be better off without that particular customer. In any case, however, you should understand clearly the implications of specifications set by your customers. In your bid you should add the proper cost increment to assure acceptable and profitable production.

WHAT DOES INADEQUATE INSPECTION COST?

Suppose for a moment that you decided to save

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money by getting rid of inspection entirely. Naturally, this state of affairs is unlikely to develop in practice. However, it is interesting and instructive to compare the costs you would eliminate by so doing with the costs you would create. A broad breakdown would be:

Eliminated

(1) Wages to inspectors, and to operators who do their own gauging.

Created

(1) Cost of materials scrapped or junked because of substandard quality;

(2) Labor, material, and burden (or overhead) costs spent on rejected product, in an effort to make it acceptable;

(3) Labor and burden put into product which is eventually scrapped as unsalvageable anyway;

(4) Burden arising through having to have additional capacity because of defectives being made; that is, capacity over and above what you actually need to turn out the volume for which a market is already established;

(5) Discount losses on seconds, sold in the same or different markets;

(6) Cost of customer returns of product not resalable;

(7) Delays and stoppages caused by defectives or by inability to meet the requirements of the purchaser;

(8) Customer complaints deriving from unsatisfactory product shipped to them; and

(9) Loss of goodwill of customers dissatisfied by poor quality.

For at least the first six of these new costs, a specific dollar figure could be estimated rather closely. For the last three, of course, the costs would be largely intangible. Nevertheless, there is no doubt that all these costs exist, and that each could be a sizable sum of money.

Clearly, then, you would be ill-advised to economize by neglecting inspection. The real objective is to eliminate as much as possible the costs of unsatisfactory output.

HOW MUCH IS SPENT ON INSPECTION?

There are two rough measures of relative inspection cost in general use. The most common one is the ratio of *inspection-labor hours to direct-labor hours*. Generally this ratio may run from 0.05 to 0.25, probably averaging about 0.10. Since industry patterns vary widely, of course, no single figure can be considered appropriate for every plant.

The other ratio is *inspection cost to value of manufactured product*. It usually runs from 0.005 to 0.030, depending again upon the particular product and industry.

These two ratios are valuable to you principally by the fact that if they are applied consistently over

a period of time within a given organization, they can help you to measure the increase, decrease, or consistency of your inspection costs. Historical records of these ratios can show you the trend. Guided by that you can decide to take action or not as you see fit.

WHO IS RESPONSIBLE FOR INSPECTION?

Before inspection costs can be controlled somebody has to be made responsible for this work. Two viewpoints are common among managers as to who it should be. One group separates responsibility for inspection from line supervision, and concentrates it in the hands of specialists. These inspectors usually have power to recommend that production equipment not delivering acceptable product be shut down to await attention by supervision.

The other widely held approach (also demonstrated to be practicable) is to hold line supervision - - foremen and group leaders - - directly responsible for both quality and quantity. In this case, inspection work is under supervision of the foreman.

One experienced executive has this to say: "A small business manager with a production run should equip his line people with working gauges, templates, or other inspection media. There should be a specialist or two in the plant to check this equipment with master media and keep it in good condition. In this way responsibility for quality stays with operations, while the assurance of accurate 'yardsticks' for measuring quality becomes a staff function."

In the end, the answer to which organizational method is the most economical must be dictated by (1) your own circumstances, (2) the economic consequences of failure to meet a quality standard, and (3) the personalities of the people involved.

A CHECKLIST OF ECONOMICAL INSPECTION PRACTICES

Companies successful in achieving good control of inspection costs and activities have demonstrated the value of certain money-saving approaches which you may want to consider for your own shop:

• Control Raw Materials and Purchased Parts.

Ordering and obtaining acceptable raw materials and component parts is largely controlled by the ability of buyer and seller to agree on a definition of what is being sold. Clear material specifications, capable of being measured objectively wherever possible, are extremely important. Where bulk materials have a high transportation cost, many purchasers find it economical to have quality-assurance inspection done by the *seller*. In this case, an agreed-upon type of documentary proof of consistent quality is desirable. Industry standards, such as those set up by the American Society for Testing Materi-

als, are valuable in this regard.

In many processes, it is important to identify individual shipments of raw materials during processing so that any defective batches may be identified as to source. Control records should, therefore, be designed to carry such information if you feel that you may need recourse later.

● **Plan Inspection Operations With Engineering Help.** Inspection operations should be based upon an engineering analysis of the most logical points in the processing at which to perform them. Many times additional labor and burden are spent in processing product already beyond redemption. Therefore, it is good practice to set up inspections only after careful study of the route your product will take during manufacture.

Another important question is whether or not the inspection devices you use really allow you to distinguish satisfactorily between good and bad product. Control of quality presupposes measurement. So be sure the equipment being used to measure is up to the job.

Also, the principles of motion economy and good workplace layout are important factors in keeping the inspection down to a reasonable cost, but capable of delivering the quality you want.

● **Locate Inspection Strategically.** The physical location of your inspection operation should be carefully worked out within the limits of the building. Where very precise tolerances must be met, calling for careful attention to gauge setting, it is usually better to bring together in one place all inspection and sorting work, so that gauges, records, and personnel may be more easily controlled. Centralized inspection, however, can be very costly if it causes repeated backtracking of partially processed materials.

Typically it is best to do all *final* inspections at a point physically removed from the manufacturing operations. This helps to cut down the chances of creating defects after final inspection. In addition, packaging (if called for) may be done immediately after final inspection, within that separate area.

Inspections made during processing are frequently of the "patrol" type. Items being inspected are not removed to a separate location. However, many manufacturers have found that patrol inspection may cost more than it saves. There are two reasons: (1) the patrol inspector sometimes checks so small a sample of the output that little, if any, control over quality is achieved; and (2) trends suggested by tabulations of the results of patrol inspection may not be clearly enough defined for proper process control.

● **Relate Amount of Inspection to Quality Needs.** One of the most important, but perhaps least understood aspects of controlling inspection costs, is

the need for good initial engineering so that you don't waste money by having more elaborate inspection than the situation calls for, or by having so little inspection that your scrap and reworking costs shoot up. In some cases, for example, inspection is performed on a 100-percent basis to remove perhaps ½ of 1 percent of unacceptable product. Actually, the cost of permitting that proportion to be completed would be much less than the cost of removal. In other cases, sampling inspection is done without having determined mathematically how many units should be checked to get the most economical protection.

Small manufacturers are particularly liable to find costs rising because uneconomical inspections are being performed. Or they find that quality requirements are being set too high or too low in relation to end-product specifications. You should, therefore, encourage your own engineering personnel (or someone you bring in) to study the quality requirements production has to meet, and then design the simplest possible inspections which will maintain that quality.

Simple tabulations and charts showing how quality is holding up - - particularly when used as working aids at the machines - - often make it possible to reduce greatly the amount of inspection necessary to meet a given quality level. If you don't already use them, you may have much to gain by adopting some of these techniques.

● **Remove Defects Promptly.** It is an axiom of low-cost inspection that defects should be identified, and either corrected or removed, as soon as possible after they show up in the product. Sometimes this is not easy to do, especially when the existence of the defect cannot be discovered until after partial assembly or some further processing. All the same, prompt inspection as a policy can assist greatly in pinpointing early the cause of a defect, and can enable you to take timely action aimed at removal of that cause.

● **Measure Inspection Effectiveness Regularly.** In controlling inspection costs it pays to provide some means of keeping track of inspection output. Records should include information on the time required to perform the inspection, the inspector's name, and the operating data. Over a period of time this will enable you to spot significant trends in the pieces handled by each inspector.

Selection and training of inspectors is not a matter of utilizing "unhandy," overage, or misfit employees. Selection should be made with the job requirements in mind. Objectivity, care with details, and good visual perception are of great importance. (Tests are available to measure eyesight characteristics.)

You should also consider setting up an internal inspection "audit" procedure; that is, a measure of

the effectiveness of the inspection itself. To do this, a sampling of the product approved in the regular inspection is re-inspected. Then the ratio of remaining defects to units inspected is recorded and analyzed periodically. In that way you get a clue to the quality level which the customer will find if he inspects your product upon receipt.

● **Handle "Borderline" Product Properly.** Being careful to work out a procedure for disposing of questionable product really pays off. In general, it is wise to have these decisions made only by top executives. Theoretically, of course, exact specifications should be held in *all* cases. As a practical matter, however, you have to operate within a *range* of quality. You can approach the limits of this range without danger to your reputation. But responsible decisions must be made on items which fall right at those borderline limits. Will they be accepted or rejected? Common sense tells you that such decisions are best made by management people who are well able to evaluate the size of the risk involved.

● **Keep Good Inspection Records and Use Them.** One of the great contributors to ineffective inspection, poor control and, consequently, high inspection costs, is the failure on the part of managers to insist on accurate records. Furthermore, many managers fail to *use* records to obtain better control. Yet fewer things lead to quicker inspection-cost control than good records properly maintained and interpreted.

When you set up your inspection-records system, keep in mind the following questions: Do you . . .

(1) Write the records only once, preferably at the point where the inspection takes place?

(2) Summarize details rapidly and accurately?
 (3) Follow up any unsatisfactory situations revealed by records with positive action for improvement of quality?

(4) Establish and use objective measures of quality being manufactured and/or shipped; revise them whenever changing conditions dictate?

In addition to information which is valuable in making management decisions, good inspection records also give you a better basis for estimating costs on future work of the same general kind.

FOR FURTHER INFORMATION

Businessmen interested in exploring further the subject of controlling inspection costs may wish to consult the following books. Other good volumes, of course, could have been mentioned, but in keeping with the policy of this series the present list is necessarily brief and selective. No slight is intended toward authors whose works are not included.

Mechanical Inspection, by W. H. Armstrong. McGraw-Hill Book Company, 330 W. 42nd St., New York 36, New York. 1953. \$5.50.

Quality Control Handbook, by J. M. Juran, Ed. McGraw-Hill Book Co., 330 W. 42nd St., New York 36, N. Y., 1951. \$12.00.

Organization for Production, by E. S. Roscoe. Contains chapters on production control, quality control, and costs. Richard D. Irwin, Inc., 1818 Ridge Road, Homewood, Ill. 1955. \$7.20.

Materials and Processes (2nd ed.), by J. F. Young. Contains chapters on gauging, inspection, testing, and quality control. John Wiley & Sons, Inc., 440 Fourth Ave., New York 16, New York. 1954. \$9.75.

Management of Industrial Enterprises, by R. N. Owens. Contains chapters on Inspection and Cost Control. Richard D. Irwin, Inc., 1818 Ridge Road, Homewood, Ill. 1953. \$7.20.

Procurement: Principles and Cases, by H. T. Lewis. Contains chapters on inspection and determination of quality. Richard D. Irwin, Inc., 1818 Ridge Road, Homewood, Ill. 1952. \$7.20.

Purchasing: Principles and Applications (2nd ed.), by S. F. Heinritz. Contains chapter on inspection of purchased materials. Prentice-Hall, Inc., Englewood Cliffs, N. J. 1951. \$6.50.

Production Handbook, edited by L. P. Carson. Contains chapters on inspection and quality control. The Ronald Press Company, 15 E. 26th St., New York 10, New York. 1958. \$16.00.

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By John B. Kline

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SUMMARY

Some small manufacturers take production schedules for granted because bottlenecks are few and far between. Minor problems are easily ironed out, and orders are delivered to customers on time.

Other small manufacturers are not as fortunate. Scheduling in their plants is complicated by the nature of the process, the complexity of the products, and frequent changes in quantity requirements.

Your situation may fall somewhere between these two, or it may be like one of them. In any case, the suggestions in this *Aid* should help you to highlight weaknesses and strengths which will bear closer examination and action.

Scheduling production in a small plant is easy to understand. Often the scheduler can stand at one end of the factory and see each machine through which raw materials must go in order to make the products. But even so, scheduling production effectively is often easier said than done. Many things can, and frequently do, go wrong during the hours or days needed to turn raw materials into products.

BACKGROUND FACTORS

The production scheduler must have certain information before he can line up production for a small factory. Whether the owner-manager does the scheduling himself or delegates it to someone, he has to be familiar with the following factors.

The Production Layout (Product, Process, or some Combination).

The Factory Workload (Order Control, Flow Control, or Block Control).

Factory Capability and Versatility (Machines, Personnel, and Service Facilities).

Existing Standards (Labor, Machines, Transportation, Costs, and Knowledge).

Systems and Procedures (Records, Reporting, Communications, and Coordination).

PRODUCTION LAYOUT. Good layout of machinery helps the scheduler by cutting down on unnecessary product movement and on production bottlenecks. You should check the kinds of jobs or production sequences that are usually employed in your plant. Your aim is to determine whether your layout is appropriate for the majority of production activities you have done in the past and expect to do in the future. When you are satisfied that it is, make certain that your scheduler understands why the machines are placed as they are, their functions, and their productive capacity.

FACTORY WORKLOAD. The scheduler should know how and in what combinations the factory workload is best assigned. Order control is easily applicable in a job-shop but inappropriate for a continuous flow operation. Factory loading must recognize all orders and processes required so that any new production can be scheduled without a detrimental effect on the existing workload. A skilled scheduler will cycle and stagger the workload to achieve flexibility but not beyond the point where he loses the economies of long production runs.

FACTORY CAPABILITY. Manufacturing capability may vary widely from one firm to the next. One plant may have a flexible layout, general purpose equipment, and a preponderance of skilled workmen to provide capability. Another may rely on lower labor skills and less versatile machines which reduces the flexibility.

If you haven't already done it, analyze your machines, personnel, and factory processes. Use your findings to develop a basic framework on what your plant can do if the nature of your production were to change. With such information, the scheduler is prepared for differing circumstances.

WORK AND TIME STANDARDS. Standards are necessary because they help a manufacturer to compute what the factory should produce under a given set of conditions. They are an important aspect of scheduling. Some standards are determined from methods such as time studies, performance records, cost averaging, and work sampling. As a last resort, some standards are based on estimates of the abilities and the experience of the personnel working on certain portions of the production process.

Standard data are helpful in setting production standards. Standard data represent the allowed time (standard) which has been developed over a period for a given job conducted in a particular manner. Under various circumstances, these data might be referred to as a work standard, time standard, or job standard. The standard data method provides a reliable existing standard that can be applied to a new job which is made up on previously existing and measured standard tasks.

SYSTEMS AND PROCEDURES. Layout, workload, capability, and standards cannot be effective without coordination. Someone has to dovetail them properly. Procedures and effective reporting help to do it. Charts, tables, telephone links, paper records, and electronic reporting devices are the tools that help to keep the schedule on track.

Speed may be important to your reporting system because schedule changes have a "chain reaction." Many adjustments are sometimes needed to accommodate one process change. Schedules rely heavily on shop clerks and other personnel who monitor the actual production process.

ALLOW FOR VARIABLE FACTORS

What you can schedule into your factory depends on the customer's orders. However, the customer is not the only variable factor around which the scheduler must work.

Suppliers are another. Just as you do not control the demand for your product so you do not control suppliers of raw materials. Their actions are governed by many customers, and you have to wait your turn in line.

In a sense, scheduling production is caught between customers on one end and suppliers on the other. Your efforts to ship products when customers want them depend on the dates on which suppliers deliver raw materials to you.

Providing sufficient lead time is the answer to getting materials in on time and to delivering products to customers on time. Every activity in the chain of materials management, production, and distribution requires some lead time, but usually the production time is less than that required by the activities that come before and after production. For example,

your product may be in the factory only 5 or 6 days, but purchasing materials and getting them to your store room may require 2 months. And you may have to hold the finished products for a month in order to accommodate customers' delivery dates.

In effect, you need schedules for what happens on each end of production as well as a schedule for production itself. They need not be elaborate. However, in developing them and coordinating them with production, keep in mind:

(1) If you compress a total schedule, you develop higher costs although lead times can be exchanged from one activity to another. To avoid downtime in the factory you may, for example, get a rush order of raw materials by purchasing from a supplier with a higher price but quicker delivery than your regular supplier.

(2) If you provide a reserve or extra quantity of materials for any production run, you have the opportunity to adjust to change.

(3) If you plan and build your production schedules in relation to the other aspects of your operation, you can utilize the economies in buying, shipping, warehousing, and investment.

WHAT'S TO BE DONE

Before production can be scheduled, what is to be done must be spelled out. This is done with product and process descriptions.

PRODUCT DESCRIPTION. The product description describes individual parts as well as the finished product. One part of this is the bill of materials. It lists all of the items needed to produce a part, or in total, the final product. Prints and drawings depict the parts, showing much detail as to their physical characteristics. Specifications describe in detail the allowable tolerances in dimensions, sizes, and finishes.

PROCESS DESCRIPTION. The process description is concerned with the steps needed to produce individual parts of the complete product. It will list the operations sequences, the machines to be used, the amount and kind of labor, and the estimated time involved. Additional data may include machine set-up instructions and inspection instructions.

Another phase of the process description is the route sheets. These are operation sequence outline forms with an allowance for set-up times and for movement of the job from one operation to the next. If your production is divided into departments, route sheets can be used by a department to schedule the time for a particular job, to monitor a series of jobs, and to tell where the part will go next.

A great deal of supporting paperwork is associated with these activities. For details see the references in the "For Further Information" section of this *Aid*.

TOOLS FOR SCHEDULING

Charts are tools for scheduling. They help the owner-manager to visualize and understand the activities that are being controlled through production scheduling. The principal charts used are: operation process chart, flow process chart, machine load chart, and PERT chart.

Charts allow you to see pertinent manufacturing activities in a consolidated form. They make scheduling easier because they highlight a series of tasks that are being done simultaneously or in a sequence.

OPERATION PROCESS CHART. The operation process chart is a graphic representation of the various operations, time allowances, and materials used in a manufacturing process. It outlines all of the various activities necessary to do the job.

FLOW PROCESS CHART. A flow process chart is a graphic representation of all operations, transportations, inspections, delays, and storages relating to a process or procedure. It carries many more details than the operation process chart, and one flow process chart is often used for only one part of an assembly or other limited quantity of production.

MACHINE LOAD CHART. A machine load chart, often called a Gantt Chart, is used to schedule a given machine or operation time in hours, days, or weeks. A series of machines can be scheduled on a horizontal bar chart. The bars show the time schedules for several machines on the same chart. The interrelationship and dependence of one operation on another is not shown.

PERT CHART. The PERT chart, or network diagram, is used to plan and schedule a series of interconnected production activities which precede to a final goal. It is particularly useful for one-time projects in which a number of activities must precede so as to mesh at critical times. Such meshing is often the case in building construction and large special job shop projects.

PLANNING AND IMPLEMENTING

An effective way for planning your production schedule and implementing it is to use a *sequence checklist*. In using this technique, you proceed from one criterion to the next, hopefully in the order of relative importance. In this manner, you can review the total project before you do any actual scheduling and thus save time and effort.

Initial questions should be designed so that they can be answered easily, often with "yes" or "no", with later questions being more difficult and requiring more subjective judgment.

The sequence checklist that follows is divided into topics. No priorities are assigned because they vary from one company to another.

Scheduling Goals

1. Will the schedule provide a minimum of disruption to jobs already scheduled?
2. Does the schedule provide flexibility in case changes have to be made?
3. Is there sufficient lead time within jobs and between jobs to allow completion in a reasonable period of time?
4. Is this schedule the best of several alternatives?

5. Can the schedule be "sold" to your production manager who will have to live with it?

Limitations

6. Is the schedule based on past proven data or a number of assumed estimates?
7. What kinds of unpredictable events could jeopardize the schedule?
8. What provision has been made to meet unpredictable events?
9. Is the schedule built heavily around internal production or does it have a substantial dependence on outside contractors and suppliers?
10. What parts of the schedule are critical such as specialized labor skills, unique machine applications, and tooling?

Timing

11. Is the time allocated to the schedule sufficient to provide an adequate result?
12. Is machine work time scheduled to achieve the highest or at least a high utilization of machines and operating personnel?
13. Is the time of high-priced labor scheduled for maximum yield?
14. Should the schedule provide "slack" so that later acquired business can be worked into it?
15. Does the schedule provide for overtime work which can be utilized to provide supplemental production without excessive costs?
16. Have the times allocated to the schedule been based on sound standards or prior reliable experience?
17. Does the schedule include a time improvement factor based on the knowledge that work proficiency increases with more experience on the same job?
18. How much can the schedule be compressed?

Quantity

19. Does the schedule provide for increases or decreases in output without undue penalties?
20. Have quantities been cost analyzed in terms of the break-even point and the possibility of additional blocks of production?
21. How often should a minimum production quantity be scheduled for a production run?
22. What labor or machine processes are most restrictive on quantity output?
23. Can end-product quantities be produced efficiently with existing labor and machine capabilities?

Quality

24. What over-all quality level will the schedule provide?

25. Have schedule modifications been compared as to their effect on quality?
26. Can acceptable quality be maintained when production is scheduled upward or downward?
27. Does the schedule take into account the impact of quality on sales and profit?

Costs

28. Have all costs been properly accounted for in the schedule?
29. Which costs are most fixed and which are most variable at different levels of output?
30. Has an adequate amount of overhead been assigned to the schedule at different levels of output?
31. What elements of the schedule are most critical in terms of controlling costs?
32. Is it known, or can it be estimated, how costs are shifted when the schedule is changed?

Profit

33. Is this the most profitable schedule?
34. What changes or modifications in this schedule are most profitable? Unprofitable?
35. Has the schedule been analyzed for profitability from the break-even point up to a maximum possible output?
36. Does the schedule consider both the long and short run effects on profit?

Trade-Offs

37. Is this schedule so devised that it can be replaced with one that is more advantageous?
38. If machine or labor portions are attractive to other possible production, can the schedule be maintained with available alternate methods?
39. How vulnerable is this schedule to replacement by other production?
40. How does this schedule compare with the best and worst of similar production schedules over a past comparable period of time?

Competition

41. Is this schedule consistent with known, proven techniques and methods?
42. Can the schedule be modified easily to capitalize on competitive strengths or weaknesses?
43. Is this the most competitive schedule?
44. Does the action of your competitors control *your* schedules?
45. How can your scheduling avoid direct "head-on" competition with other competitive manufacturers?

FOR FURTHER INFORMATION

Owner-managers of small plants interested in exploring further the subject of production scheduling may wish to consult the references listed below. This list is necessarily brief and selective. However, no slight is intended toward authors whose works are not mentioned.

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"Should You Make or Buy Components?" *Management Aids* No. 189. Free from SBA, Washington, D.C. 20416 (or nearest SBA office).

"Planning and Controlling Production for Efficiency," *Management Aids* No. 177. Free from SBA, Washington, D.C. 20416 (or nearest SBA office).

"PERT/CPM Management System for the Small Sub-contractor," *Technical Aids* No. 86. Free from SBA Washington, D.C. 20416 (or nearest SBA office).

NOTE: The American Production and Inventory Control Society, Inc., Suite 504, Watergate Building, 2600 Virginia Ave., Washington, D.C., 20037, is another source of information. It publishes a quarterly technical journal and holds technical conferences and seminars on production and inventory control.

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Management Aids FOR SMALL MANUFACTURERS

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PLANNING AND CONTROLLING PRODUCTION FOR EFFICIENCY

By Leland S. Hobson and George F. Schrader*

SUMMARY

Inefficient production--the kind that eats into profits--occurs in many small manufacturing companies when their management plans poorly or when their operations are not controlled according to a management plan. In some cases, plans for the plant's volume and rate of production are made on unrealistic sales forecasts. In other cases, even though plans are made for economical operations, control is slack, and unnecessary expenses--such as those caused by overbuying of inventory--pile up.

This Aid offers pointers which the small manufacturer should consider in managing his production operations efficiently in order to avoid a drain on profits. Among the control tools discussed are: the budget, production rate standards, product cost, inventory, and quality controls.

The profits of some small manufacturers suffer because they neglect the dollars and cents aspect in their planning. Sometimes, a drain on income occurs because the owner-manager emphasizes some other activity of his company at the expense of production. For example, he thinks only of marketing his existing product or developing a new product. "If I could increase sales," he says, "I could make a better profit."

In other cases, the owner-manager gives the wrong kind of attention to production. Perhaps he is a skilled craftsman himself and enjoys tinkering with routine details in the shop instead of placing his concern on the overall situation. "I could increase profits," he says, "if I could develop a new process for putting the stuff through the finishing section.

Both kinds of owner-managers miss opportunities for increasing profits because they fail to manage production in dollars and cents terms. Of course, coordinating the various elements that make for efficient production is not an easy job, but you should work on it in two phases. One is planning--setting goals. The other is controlling--making production live within the dollar limits that you have set for it.

SETTING THE OBJECTIVES

Setting the production objectives should start with customers because the reason for production is making products which they want. Often the catch is in timing. When do customers want their orders delivered?

In some shops, production goals amount to "when we've got orders we make the products." In others, the goal means "we have to make products several months ahead because all the customers want them just before their season starts."

In effect, customers set the production goals for small plants. Therefore, your planning of production should start with a sales forecast. How much do you expect to sell? When will you have to deliver it?

Accurate sales forecasting may not be as difficult as it seems if the demand for your product is fairly stable. In such situations, you can predict your next year's sales by analyzing your past sales and adding a reasonable amount for expected growth.

However, the task is more complicated if your product line is in a highly competitive market. In such situations, you may want to get outside help in trying to predict sales rather than relying on the limited knowledge of your own people. Marketing research organizations can collect and analyze data relating to competitive trends and thus provide information for your decisions. Such outside help

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can also be valuable when you are faced with the difficult problem of trying to make a sales forecast for a new product.

The sales forecast is the basis for the whole budget of a manufacturing firm. From it, not only selling expenses, but also the costs of production are projected.

- Production Scheduling

Knowing future sales, however, is not enough. You have to translate your expected dollar sales into production figures if you are to control production costs.

Production volume and rate of production are the key factors in scheduling production. In order to reach your expected sales figure--determined by your sales forecast--you have to determine how many units, or dollars worth of products, you will need to manufacture during the year.

After you have your production volume, you can determine your rate of production. Will you need to manufacture half of the year's volume in 4 months, 5 months, 6 months?

Your rate of production depends on when customers want delivery. It also depends on your facilities, the availability of raw materials, and the availability of labor. When you know your production volume and the rate at which your plant needs to produce, you can plan your operations for the next month, for the next quarter, and for the year.

CONTROLLING PRODUCTION TO MAKE PLANS WORK

When you have your plans for producing a certain volume of products at a certain rate, you are ready to think about making those plans work within certain cost figures. Your objective, of course, is controlling costs so that you eliminate waste and operate with a maximum production efficiency.

- Budgetary Control of Expenses

The best method of controlling production costs is a production budget. It will provide you with anticipated labor, material, and other costs based, of course, on your sales forecast.

But, the budget job does not end here. These anticipated expenses should be compared with actual costs.

To do this, the small plant manager must be sure that he has an accurate statement of each item of expense at least once a month. Any wide discrepancies between budgeted and actual costs should be noted and steps taken to bring them into alignment.

- Production Rate Standard

In most any manufacturing situation, time--machine time, labor man-hours, process time,

delay time, down time, and so on--can be defined in dollar costs. Excessive dollar costs in these areas can mean the difference in profit and loss. Thus, any proposed production plan must be based on sound production standards to keep these costs to a minimum.

You work out your production standards by studying and preparing specifications of your methods and the tooling to be used. Then, you make estimates of the necessary man and machine hours based on industry standards or your experience in similar operations. In the case of new products, your estimates--both for time and money--may have to be adjusted after the break-in period.

In some instances, for example, an unexpected increase in business may necessitate an adjustment of your budget. But, unless your plans are changed, actual and anticipated costs should be approximately the same.

You should consider three types in comparing actual and budgeted costs. Fixed costs, such as rent and indirect labor, do not vary with the level of business activity. Variable costs vary with the volume of business, usually in direct proportion with the changes in volume; examples of this type are the costs of raw material and direct labor. Semivariable costs, such as telephone expense, vary but not in direct proportion to the amount of business you do.

Variable costs are the most important to watch. The alert owner-manager keeps close check on them because this type of expense is critical to profit. For example, if his production volume drops by 20 percent, he tries to cut his direct labor and raw materials costs accordingly.

- Product Cost Control

Product cost control is another tool which can help you to operate efficiently. Only when you know the cost of each part and each operation can you be sure that costs are where they should be. They can be held in check by some piece-work system, by a time-control system, or just by good supervision.

The important thing is to be sure that the predetermined standard cost is not exceeded. Moreover, you should check your cost information frequently to take care of changes before it is too late to do anything about them.

Products should also bear their share of overhead expense. This fact means that overhead expenses have to be kept in line also in order to maintain product cost stability.

Value engineering provides a tool for keeping the cost of a product down. This tool can help you to be sure that every dollar you spend for materials, labor, or expense items actually contributes effectively to the product.

An experienced engineer can, by careful analysis of the value of each part of the product and each operation on each part, trim the cost of material and labor. For example, sometimes

he discovers that expensive materials can be replaced or that certain parts can be eliminated.

In other cases, he may find that the number and complexity of manufacturing operations can be reduced. Or he may suggest fixtures and jigs to eliminate hand operations or reduce machine time.

Thus value engineering often helps to simplify a product and improve its overall quality and performance. At the same time, such engineering often helps to reduce the cost of manufacturing the product, up to as much as 20 percent.

For additional information, you may want to read "Value Analysis for Small Business," *Technical Aids for Small Manufacturers*, No. 87 available free from SBA offices or SBA, Washington, D.C. 20416.

● Waste and Spoilage Control

In keeping the manufacturing cost of your product within standards, it is important to plug leaks which occur through waste and spoilage. Of course, you expect a certain amount of waste and spoilage because employees do make mistakes, machines do get out of adjustment, and sometimes raw materials are faulty.

However, keeping scrap from becoming excessive is your aim. One way is setting a weekly or monthly figure for the amount of lost material which cannot be prevented under normal conditions.

The normal figure for waste and spoilage varies with plants and products, of course. It depends on: (1) the complexity of the product, (2) the age of the manufacturing plant, and (3) the skill and experience of the workers. In some cases, it is 1 percent of the manufacturing cost; in others, it may be considerably higher.

Once you have an accurate figure for your operation, you can keep track of it by watching production reports and by occasionally checking the scrap boxes. Even a gradual increase in spoilage tips you off that corrective action is needed.

Another way to increase efficiency is finding ways of salvaging scrap. If you cannot find a use for it, perhaps it can be sold. For additional information you may want to read, "Cash Values in Industrial Scrap," *Technical Aids for Small Manufacturers* No. 45 available free from SBA offices or SBA, Washington, D.C. 20416.

● Inventory Control

Another controlling tool is inventory control. Inattention to inventory can result in costly delays because the right parts aren't on hand when needed. Or lack of inventory control may

mean that the plant accumulates too large a supply of slow moving raw materials.

The way in which you control depends on your operation. You have to consider factors such as: seasonal tendencies of sales, the kind of products you make, the variety of your products, your assembly methods, and the operations necessary to make your component parts.

Your estimates of future sales are important in dealing with inventory control. Many companies--especially those without seasonal products--find that their previous quarter sales volume is about as dependable an estimate for the next quarter's volume as can be found when planning future inventory needs.

Most small plants do not need an elaborate system of inventory control. However, your system should take into account the availability of raw materials, the time it takes to get raw materials into your plant, your processing time, delivery dates which customers expect, and so on.

Because some of these factors can change from time to time it is important to keep in mind that an effective inventory control system should help you to adjust to changing situations. It should help you to get the most economical arrangement of raw materials, parts, and finished stock. Thus you can serve your customers efficiently while keeping down your investment in inventory.

For additional information you may want to read "Pointers on Raw Materials Inventory Control," *Management Aids for Small Manufacturers*, No. 155, available free from SBA offices or SBA, Washington, D.C. 20416.

● Quality Control

Finally, you should keep in mind the tool of quality control. Some small companies have gotten into serious trouble because of poor quality control. A new product failed to perform satisfactorily. Shipments were held up, greatly increasing inventory and throwing the company into a severe financial strain. And, very important, the companies lost customers.

Keep in mind also that good product quality starts with design. The product must be properly designed and thoroughly tested. Testing must insure that the product will perform properly under the most severe field conditions.

Then, in manufacturing, adequate inspection of parts and of their assembly must insure that each product that comes out of the factory will operate as well as the first sample that was tested.

For additional information you may want to read "Setting Up A Quality Control and Technical Development Laboratory," *Technical Aids for Small Manufacturers*, No. 65, and "Controlling Quality in Defense Production," *Technical Aids for Small Manufacturers*, No. 78, available free from SBA offices or SBA, Washington, D.C. 20416.

FOR FURTHER INFORMATION

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Management Aids

FOR SMALL MANUFACTURERS

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IMPROVING YOUR PRODUCT'S VALUE

By

LIBRARIES

JUN 14 1962

COLORADO STATE UNIVERSITY

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SUMMARY

The demand for value is an important part of today's market. Customers in increasing numbers are looking at quality and price together.

This Aid discusses steps small businessmen can follow as they seek to improve the value of their products. Among such steps are: (1) Determining what is value in a product, (2) By-passing the pitfalls in judging value, (3) Deciding the effect you want the value improvement to have on customers, (4) Looking for new ideas, (5) Evaluating new ideas, (6) Tooling up to make the improved product, and (7) Keeping ahead of the demand for value.

The Aid points out that an owner-manager can increase his chances for success by having several improvement ideas in various stages of action. Such a procedure also helps him to inject current marketing information into his value improvement projects.

"I switched brands because the new one was a better value than the old. I got more for my money. Actually, I couldn't afford not to switch."

You hear statements like this often nowadays. They are significant because they reveal a buying attitude: more for the money. Not quality alone, not price alone, but the best combination of quality and price together. The key word is "value."

Time and again, the manufacturer whose products represent the biggest value in the minds of customers is the one who prospers and grows. Consequently, more and more owner-managers of small companies are digging into the problem of how to improve their products' value.

Effective solutions to this problem usually start with a reasonably clear picture of what value means. But value is hard to describe because it means different things to different people.

For example, a pair of boxing gloves are of great value to a six-year-old boy but of no value to his 60-year-old grandmother.

The meaning of value, then, depends largely on who is describing it.

WHAT IS VALUE IN YOUR PRODUCT?

Yet even though value is complicated, you can determine the value of a given product--your product. You can do it by getting answers to questions such as:

What gives my product value in the minds of my present customers? What features would appeal to potential customers?

One way to answer these questions is by listing the major features of your product which give it distinctive sales appeal. Put down the 10 most important of these "value factors" (or as many as possible if there aren't 10).

Then ask each of your key men to make a similar list. These lists are the starting point in determining the value in your product.

PITFALLS IN JUDGING VALUE

Before you compare these lists, you should be aware of three pitfalls which can keep you from arriving at a sound judgment of value. They are optimistic assumptions, personal bias, and failure to recognize that the market is complex.

• Optimistic Assumptions

Here a person tends to assume certain things about a product rather than looking at it objectively. Usually he does this because previous successes lead him to assume that what worked in one situation will work also in successive similar situations.

¹ Since writing this Aid Mr. Holmes has joined the staff of United Aircraft Corporation, Hamilton Standard Division, Windsor Locks, Conn.

However, as one owner-manager found out, in new situations there is often more difference than first meets the eye.

A HYDRAULIC PUMP was the product which this owner-manager needed to improve. Sales were lagging because it was expensive to operate. So he improved the pump's value by making it cheaper to operate.

His success with this move led the owner-manager to make optimistic assumptions later when he tried to develop a similar pump for a military vehicle. The "halo" on operating cost made him feel that this was an important value factor in the new pump. Actually, however, one of the top value factors to the military people was that the pump be capable of working equally well in climatic extremes. Operating cost was not significant.

Therefore, one of your first tasks in comparing your lists of value factors should be the elimination of any that were based on optimistic assumptions. Insist that each key man prove that he has not made optimistic assumptions.

• Personal Bias

The effects of personal bias are sometimes hard to rule out. The reason: Personal bias often colors a person's outlook no matter how hard he tries to stay objective.

SALESMEN AND ENGINEERS are two groups who sometimes disagree about what makes up a needed product improvement. For instance, the sales manager says, "Engineering won't release it until it's perfect and 5 years behind the market." Equally as sincere is the engineer's comment, "Sales wants a gimmick for every customer."

Such disagreements are often based on the same value factors. The problem is that each man places them in a different order of importance because of his personal bias.

Your goal, then, in discussing your key men's lists is to come up with a list on which there is substantial agreement.

• Market Complexity

The third difficulty in reaching a sound basis for value improvement is the tendency to forget that the market is complex. Owner-managers sometimes overlook the fact that the same product has a different listing of value factors for different kinds of customers.

For example, the consumer market generally contains three types of customers: (1) one type buys on price alone, (2) a second type buys without regard to price, and (3) the third and most numerous type buys in between the two extremes.

Do you know which buys your product? Do you know what amounts you sell to the various types? If you're selling to only one type, is it the best one for you?

The answers to such questions can help you to define the value of your product for your customers.

PICKING YOUR TARGET WISELY

When you know the value factors of your product, you can decide how you want to improve your product's value. One way to pick your target is by answering the question: What effect do I want the value improvement to make on my market?

Here you'll be wise to shoot for what you have a good chance of doing. Remember that no product can be all things to all people.

Knowing what market effect you want to make with your improved product can help you to estimate the answers to three questions. They are: What market changes will I have to make? What profit can I expect? and How much will I have to spend to improve my product?

Some typical targets--or market effects--are: keeping existing customers, adding new but similar customers, and widening the range of your product's application.

• Keeping Existing Customers

If you are improving your product's value with only the aim of keeping existing customers, move with caution. Be sure that your situation does call for product improvement. Costly redesign won't, for instance, correct weaknesses--such as a poor sales force.

Sometimes redesign can backfire. One company, for example, redesigned its product to attract certain types of new customers. But the improved product drove away many existing customers.

If you decide to keep existing customers through product-value improvement, make sure that they are impressed with everything you offer.

Sometimes customers don't notice quality improvement because the product looks like the old one. Including a noticeable improvement in appearance (when possible) can help you to present your product as well as your competitors'--and perhaps better than theirs.

• Adding New, But Similar Customers

Generally speaking, you get new customers by (1) expanding your territory, or (2) changing or adding salesmen. For example, if you have 100 customers, you may reason that another 100 would be willing to buy the same quality product.

On one hand, suppose that your product is so expensive that no one but your first 100 buyers can afford it. In this case, improving the value of your product will mean designing a product virtually as good (sometimes simpler and better) but lower in price.

This will allow you to attract people who are willing to buy only if the price is somewhat lower than that being paid by the 100 existing customers.

On the other hand, suppose your product is cheap, but useful in such limited ways, that only 100 persons will buy it. Here improving the value of your product may mean upgrading it so that it becomes a quality product.

SOURCES OF IMPROVEMENT IDEAS

Direct

- Your salesmen
- Advertising personnel
- Customers
- Research and development personnel
- Supervisory personnel
- Plant personnel
- Professional associates
- Friends and relatives
- Vendors
- Equipment manufacturers
- Competition

Indirect

- Research and development companies and consultants
- Government industrial development commissions
- Trade associations interested in industrial activity
- Commercial bankers
- Individual financiers
- Published lists of available new products*
- Ideas from professional marketing firms
- Articles in professional and trade journals
- New material information
- Government and industry "wanted" lists

*For example, *Products List Circular*, published monthly by Research and Development Division, Small Business Administration, Washington 25, D.C. Available free at SBA field offices.

• Widening the Range of Application

Sometimes existing customers, or even an increasing number of similar customers, won't keep the product moving. And in some cases, a product dies because the manufacturer failed to develop new applications for it--ones which would attract new and different customers.

ONE PARTS MANUFACTURER needed to develop a new application for his product. Sales were limited by the fact that the carbon steel in his product created a corrosion problem.

He could use stainless steel, but it would make his price too high. Eventually, he licked corrosion and kept the price in line by using a completely different material. This improvement gave his product value for an entirely new set of customers--owners of boats.

ONE GLUE MANUFACTURER stumbled on new applications while adjusting his product to meet the changing needs of an existing customer. The customer had been applying the glue by hand with a setting time of 15 minutes.

Then the customer shifted to a mechanical operation which required a faster setting time. So the glue manufacturer had to change his formula.

A bonus was that the new glue formula opened up possibilities in other fields. Now the salesmen are calling on customers whom they couldn't approach with the previous glue.

In industrial products, your customers sometimes see opportunities for improving your product's value before you do. You can be aware of these possibilities quicker if your salesmen make a point of learning all they can about the processes in their customers' factories. Often purchasing agents (as well as the technical journals) are good sources for such information.

In consumer items process changes usually originate with the manufacturer rather than with the customer. Here, don't overlook shift-

ing consumer tastes. (For additional information see: *Small Marketers Aid* No. 66, "Meeting the Risks of Change," available from the Small Business Administration, Washington 25, D. C. Free.)

WHERE DO YOU GET NEW IDEAS?

Another important part of improving the value of your product is in knowing where to get new ideas. Value-improvement ideas come from many sources.

For instance, some owner-managers depend on their salesmen, others depend on their engineers, and many depend on both. Many owner-managers also get good ideas from outside the company.

Your best approach is to know and use all sources. The checklist on page 3 may help you in reviewing what sources you are using.

WHICH ARE THE GOOD IDEAS?

After you have the ideas for improving the value of your product, you're faced with the problem of deciding which ideas to develop and market. How do you know when to go ahead? How do you know when to drop an idea?

There is no formula that will tell a manager how to make such decisions. So much depends on your individual situation. But even so, there are general steps that can help to insure that you review all the things involved in reaching your decision.

First, your list of value factors gives a definition of value for your product. Use it as the starting point for evaluating new ideas. Then do the following:

(1) Write out your improvement ideas to get a clear picture of what you mean.

(2) Review the literature to determine competition and to upgrade your ideas.

(3) Get your key men to look for weaknesses in the ideas. However, don't let one strong person influence this evaluation unduly.

(4) Survey the patent situation.

(5) Estimate your production and marketing costs as accurately as you can.

The sixth, and last step, is making the decision. At this point, make the best decision you can. Then go ahead and act. Throw out the idea if it's no good. Get more information if it's required. Or start improving the product.

(CAUTION: Resist the temptation to make an off-the-cuff decision. Base your decision on an objective review of all your information.)

GETTING INTO ACTION

After you've decided to use an idea, you are ready to start tooling up to bring the improved product through your factory.

As you start tooling up, you may want to keep the following suggestions in mind for use on your next value improvement project:

(1) The next time you hire a salesman, try to get one with a flair for marketing research.

(2) You may want outside or "one-shot" help to analyze your place in the market trends and in relation to your competitors.

(3) If you have no R&D staff--or a limited one--you may want to get outside help on R&D. But don't spend a dime on product research until you've at least determined four things: market potentials, raw material availability, existing competition, and potential competition.

(4) Your own people may be the best ones to engineer the needed design changes. They really know the product. However, such close association sometimes results in stale viewpoints. You can get a fresh outlook by hiring a new man--if you have enough work for him. If not, you may want to use consultants.

KEEPING AHEAD OF VALUE

Indications are that the demand for value--for quality and price together--will continue to be an important factor in marketing. And from this trend at least two questions emerge.

One is: How do you keep ahead of the demand for value?

There is no easy answer. But as a general rule, plan to have several improvement ideas in various stages. For example, have ten in the

idea stage, five in layout form, three in the laboratory, and two on the market.

Doing this helps you to answer the other question: How can I reduce the uncertainty and risk involved in product improvement? No one scores 100 percent, but with several projects working in various stages, you increase your chances of success.

For one thing, such a procedure cuts out the urgency of having to be right the first time. It also gives you a chance to keep injecting current market information into your product improvement plans.

Remember that in improving the value of your product, you'll have a winner only when your idea of value coincides with the customer's conception of value.

FOR FURTHER INFORMATION

Businessmen interested in the subject of product value improvement may wish to consult the following references. This list is necessarily brief and selective. However, no slight is intended towards authors whose works are not mentioned.

"Using Outside R & D", R. G. Murdick. *Machine Design*, Penton Publishing Co., Penton Bldg., 1213 W. 3rd St., Cleveland 13, Ohio. May 11, 1961. Single copy, \$1. \$10 per year.

"Value . . . The Rising Emphasis In Design", E. J. Tangerman. *Product Engineering*, McGraw-Hill Publishing Co., Inc., 330 W. 42d St., New York 36, N. Y. May 15, 1961. Bi-weekly. Single copy, 50 cents. \$3 per year.

"The Challenge of the Materials Age", *Materials in Design Engineering*, Reinhold Publishing Co., 430 Park Ave., New York 22, N. Y. September 1960. Monthly. Single copy, 50 cents. \$3 per year.

"Redesigning Products for Better Marketability", *Management Aids for Small Manufacturers: Annual No. 4*, Small Business Administration. Available from Superintendent of Documents, Washington 25, D. C. 1958. 45 cents.

Filing Classification: *Research, Development and Design*

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Management Aids for Small Manufacturers

Washington 25, D. C.

July 1958

CONTROLLING INSPECTION COSTS IN SMALL PLANTS

By Robert E. Heiland, Research Director, Kurt Salmon Associates, Inc., Washington, D. C.

SUMMARY

As a small manufacturing company grows, it frequently has difficulty in keeping the costs of inspection within reasonable bounds. Money is spent on inspection primarily to protect against shipment of defective products. As such, the use of funds must be reviewed periodically. Make sure that inspection procedures are set up and run efficiently; that inspectors are properly chosen and trained; that gauges and equipment are maintained; and that inspecting is done accurately. Certain ratios of inspection costs are available as a guide to managers. The experience of companies successful in achieving good inspection-cost control suggests some key questions worthy of attention by small plant operators. Among them are the following: Do you get engineering help in planning inspection operations? Have you located inspection operations strategically? Are your inspection procedures consistent with the quality levels desired? Do you remove defects promptly? Does your record keeping system provide operating people with a quick, effective basis for correcting trouble?

In the long run, the success of a small business depends to a large degree upon the quality of the service it renders or the product it sells, or both. When a manufacturing organization is started, it can often count on the careful, personal attention of the owner, plus the craft skills of its few workers, to assure quality of output. But as a company grows, jobs like inspection often have to be delegated to others. During this process it often seems that the cost of inspection and quality control rises at a faster rate than does the volume of business. In many cases, this is true because no one has a clear idea of how to set up controls over these costs. Therefore, the purposes of this Aid are to assist in providing a way of judging inspection costs; to

point out pitfalls to be avoided; and to suggest how proper records can lead to better management and better control over these costs.

WHAT IS INSPECTION SUPPOSED TO DO?

You pay for inspection because you want to protect yourself and your customers against acceptance and shipment of products which do not meet established specifications. It is, therefore, within the scope of this inspection function to:

- (1) Take responsibility for seeing that incoming materials are as specified when purchased;
- (2) Make sure that the specifications and tolerances themselves are reasonable and, wherever possible, capable of being measured objectively;
- (3) Provide measuring devices and gauges, and maintain them at correct settings (whether they are used by inspectors or by machine operators); and
- (4) Keep track of production equipment to make sure it is functioning properly and is able to meet the specifications or tolerances called for.

Many small producers seem seldom able to set their own specifications for the product they make, or to ascertain whether these requirements have been met. Both often have become the province of the *buyer*. He says what he wants and he decides whether or not he got it. This arrangement may appear to be more advantageous for the manufacturer than it really is. Both your inspection and manufacturing costs may go up considerably if you get involved in specifications which are very hard to meet, and if the acceptance criteria used by your customer are so tight that you are "boxed in" and forced to operate with very expensive methods. You actually may sometimes be better off without that particular customer. In any case, however, you should understand clearly the implications of specifications set by your customers. In your bid you should add the proper cost increment to assure acceptable and profitable production.

WHAT DOES INADEQUATE INSPECTION COST?

Suppose for a moment that you decided to save

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money by getting rid of inspection entirely. Naturally, this state of affairs is unlikely to develop in practice. However, it is interesting and instructive to compare the costs you would eliminate by so doing with the costs you would create. A broad breakdown would be:

Eliminated

(1) Wages to inspectors, and to operators who do their own gauging.

Created

(1) Cost of materials scrapped or junked because of substandard quality;

(2) Labor, material, and burden (or overhead) costs spent on rejected product, in an effort to make it acceptable;

(3) Labor and burden put into product which is eventually scrapped as unsalvageable anyway;

(4) Burden arising through having to have additional capacity because of defectives being made; that is, capacity over and above what you actually need to turn out the volume for which a market is already established;

(5) Discount losses on seconds, sold in the same or different markets;

(6) Cost of customer returns of product not resalable;

(7) Delays and stoppages caused by defectives or by inability to meet the requirements of the purchaser;

(8) Customer complaints deriving from unsatisfactory product shipped to them; and

(9) Loss of goodwill of customers dissatisfied by poor quality.

For at least the first six of these new costs, a specific dollar figure could be estimated rather closely. For the last three, of course, the costs would be largely intangible. Nevertheless, there is no doubt that all these costs exist, and that each could be a sizable sum of money.

Clearly, then, you would be ill-advised to economize by neglecting inspection. The real objective is to eliminate as much as possible the costs of unsatisfactory output.

HOW MUCH IS SPENT ON INSPECTION?

There are two rough measures of relative inspection cost in general use. The most common one is the ratio of *inspection-labor hours to direct-labor hours*. Generally this ratio may run from 0.05 to 0.25, probably averaging about 0.10. Since industry patterns vary widely, of course, no single figure can be considered appropriate for every plant.

The other ratio is *inspection cost to value of manufactured product*. It usually runs from 0.005 to 0.030, depending again upon the particular product and industry.

These two ratios are valuable to you principally by the fact that if they are applied consistently over

a period of time within a given organization, they can help you to measure the increase, decrease, or consistency of your inspection costs. Historical records of these ratios can show you the trend. Guided by that you can decide to take action or not as you see fit.

WHO IS RESPONSIBLE FOR INSPECTION?

Before inspection costs can be controlled somebody has to be made responsible for this work. Two viewpoints are common among managers as to who it should be. One group separates responsibility for inspection from line supervision, and concentrates it in the hands of specialists. These inspectors usually have power to recommend that production equipment not delivering acceptable product be shut down to await attention by supervision.

The other widely held approach (also demonstrated to be practicable) is to hold line supervision - - foremen and group leaders - - directly responsible for both quality and quantity. In this case, inspection work is under supervision of the foreman.

One experienced executive has this to say: "A small business manager with a production run should equip his line people with working gauges, templates, or other inspection media. There should be a specialist or two in the plant to check this equipment with master media and keep it in good condition. In this way responsibility for quality stays with operations, while the assurance of accurate 'yardsticks' for measuring quality becomes a staff function."

In the end, the answer to which organizational method is the most economical must be dictated by (1) your own circumstances, (2) the economic consequences of failure to meet a quality standard, and (3) the personalities of the people involved.

A CHECKLIST OF ECONOMICAL INSPECTION PRACTICES

Companies successful in achieving good control of inspection costs and activities have demonstrated the value of certain money-saving approaches which you may want to consider for your own shop:

• Control Raw Materials and Purchased Parts.

Ordering and obtaining acceptable raw materials and component parts is largely controlled by the ability of buyer and seller to agree on a definition of what is being sold. Clear material specifications, capable of being measured objectively wherever possible, are extremely important. Where bulk materials have a high transportation cost, many purchasers find it economical to have quality-assurance inspection done by the *seller*. In this case, an agreed-upon type of documentary proof of consistent quality is desirable. Industry standards, such as those set up by the American Society for Testing Materi-

als, are valuable in this regard.

In many processes, it is important to identify individual shipments of raw materials during processing so that any defective batches may be identified as to source. Control records should, therefore, be designed to carry such information if you feel that you may need recourse later.

● **Plan Inspection Operations With Engineering Help.** Inspection operations should be based upon an engineering analysis of the most logical points in the processing at which to perform them. Many times additional labor and burden are spent in processing product already beyond redemption. Therefore, it is good practice to set up inspections only after careful study of the route your product will take during manufacture.

Another important question is whether or not the inspection devices you use really allow you to distinguish satisfactorily between good and bad product. Control of quality presupposes measurement. So be sure the equipment being used to measure is up to the job.

Also, the principles of motion economy and good workplace layout are important factors in keeping the inspection down to a reasonable cost, but capable of delivering the quality you want.

● **Locate Inspection Strategically.** The physical location of your inspection operation should be carefully worked out within the limits of the building. Where very precise tolerances must be met, calling for careful attention to gauge setting, it is usually better to bring together in one place all inspection and sorting work, so that gauges, records, and personnel may be more easily controlled. Centralized inspection, however, can be very costly if it causes repeated backtracking of partially processed materials.

Typically it is best to do all *final* inspections at a point physically removed from the manufacturing operations. This helps to cut down the chances of creating defects after final inspection. In addition, packaging (if called for) may be done immediately after final inspection, within that separate area.

Inspections made during processing are frequently of the "patrol" type. Items being inspected are not removed to a separate location. However, many manufacturers have found that patrol inspection may cost more than it saves. There are two reasons: (1) the patrol inspector sometimes checks so small a sample of the output that little, if any, control over quality is achieved; and (2) trends suggested by tabulations of the results of patrol inspection may not be clearly enough defined for proper process control.

● **Relate Amount of Inspection to Quality Needs.** One of the most important, but perhaps least understood aspects of controlling inspection costs, is

the need for good initial engineering so that you don't waste money by having more elaborate inspection than the situation calls for, or by having so little inspection that your scrap and reworking costs shoot up. In some cases, for example, inspection is performed on a 100-percent basis to remove perhaps ½ of 1 percent of unacceptable product. Actually, the cost of permitting that proportion to be completed would be much less than the cost of removal. In other cases, sampling inspection is done without having determined mathematically how many units should be checked to get the most economical protection.

Small manufacturers are particularly liable to find costs rising because uneconomical inspections are being performed. Or they find that quality requirements are being set too high or too low in relation to end-product specifications. You should, therefore, encourage your own engineering personnel (or someone you bring in) to study the quality requirements production has to meet, and then design the simplest possible inspections which will maintain that quality.

Simple tabulations and charts showing how quality is holding up - - particularly when used as working aids at the machines - - often make it possible to reduce greatly the amount of inspection necessary to meet a given quality level. If you don't already use them, you may have much to gain by adopting some of these techniques.

● **Remove Defects Promptly.** It is an axiom of low-cost inspection that defects should be identified, and either corrected or removed, as soon as possible after they show up in the product. Sometimes this is not easy to do, especially when the existence of the defect cannot be discovered until after partial assembly or some further processing. All the same, prompt inspection as a policy can assist greatly in pinpointing early the cause of a defect, and can enable you to take timely action aimed at removal of that cause.

● **Measure Inspection Effectiveness Regularly.** In controlling inspection costs it pays to provide some means of keeping track of inspection output. Records should include information on the time required to perform the inspection, the inspector's name, and the operating data. Over a period of time this will enable you to spot significant trends in the pieces handled by each inspector.

Selection and training of inspectors is not a matter of utilizing "unhandy," overage, or misfit employees. Selection should be made with the job requirements in mind. Objectivity, care with details, and good visual perception are of great importance. (Tests are available to measure eyesight characteristics.)

You should also consider setting up an internal inspection "audit" procedure; that is, a measure of

the effectiveness of the inspection itself. To do this, a sampling of the product approved in the regular inspection is re-inspected. Then the ratio of remaining defects to units inspected is recorded and analyzed periodically. In that way you get a clue to the quality level which the customer will find if he inspects your product upon receipt.

● **Handle "Borderline" Product Properly.** Being careful to work out a procedure for disposing of questionable product really pays off. In general, it is wise to have these decisions made only by top executives. Theoretically, of course, exact specifications should be held in *all* cases. As a practical matter, however, you have to operate within a *range* of quality. You can approach the limits of this range without danger to your reputation. But responsible decisions must be made on items which fall right at those borderline limits. Will they be accepted or rejected? Common sense tells you that such decisions are best made by management people who are well able to evaluate the size of the risk involved.

● **Keep Good Inspection Records and Use Them.** One of the great contributors to ineffective inspection, poor control and, consequently, high inspection costs, is the failure on the part of managers to insist on accurate records. Furthermore, many managers fail to *use* records to obtain better control. Yet fewer things lead to quicker inspection-cost control than good records properly maintained and interpreted.

When you set up your inspection-records system, keep in mind the following questions: Do you . . .

(1) Write the records only once, preferably at the point where the inspection takes place?

(2) Summarize details rapidly and accurately?
 (3) Follow up any unsatisfactory situations revealed by records with positive action for improvement of quality?

(4) Establish and use objective measures of quality being manufactured and/or shipped; revise them whenever changing conditions dictate?

In addition to information which is valuable in making management decisions, good inspection records also give you a better basis for estimating costs on future work of the same general kind.

FOR FURTHER INFORMATION

Businessmen interested in exploring further the subject of controlling inspection costs may wish to consult the following books. Other good volumes, of course, could have been mentioned, but in keeping with the policy of this series the present list is necessarily brief and selective. No slight is intended toward authors whose works are not included.

Mechanical Inspection, by W. H. Armstrong. McGraw-Hill Book Company, 330 W. 42nd St., New York 36, New York. 1953. \$5.50.

Quality Control Handbook, by J. M. Juran, Ed. McGraw-Hill Book Co., 330 W. 42nd St., New York 36, N. Y., 1951. \$12.00.

Organization for Production, by E. S. Roscoe. Contains chapters on production control, quality control, and costs. Richard D. Irwin, Inc., 1818 Ridge Road, Homewood, Ill. 1955. \$7.20.

Materials and Processes (2nd ed.), by J. F. Young. Contains chapters on gauging, inspection, testing, and quality control. John Wiley & Sons, Inc., 440 Fourth Ave., New York 16, New York. 1954. \$9.75.

Management of Industrial Enterprises, by R. N. Owens. Contains chapters on Inspection and Cost Control. Richard D. Irwin, Inc., 1818 Ridge Road, Homewood, Ill. 1953. \$7.20.

Procurement: Principles and Cases, by H. T. Lewis. Contains chapters on inspection and determination of quality. Richard D. Irwin, Inc., 1818 Ridge Road, Homewood, Ill. 1952. \$7.20.

Purchasing: Principles and Applications (2nd ed.), by S. F. Heinritz. Contains chapter on inspection of purchased materials. Prentice-Hall, Inc., Englewood Cliffs, N. J. 1951. \$6.50.

Production Handbook, edited by L. P. Carson. Contains chapters on inspection and quality control. The Ronald Press Company, 15 E. 26th St., New York 10, New York. 1958. \$16.00.

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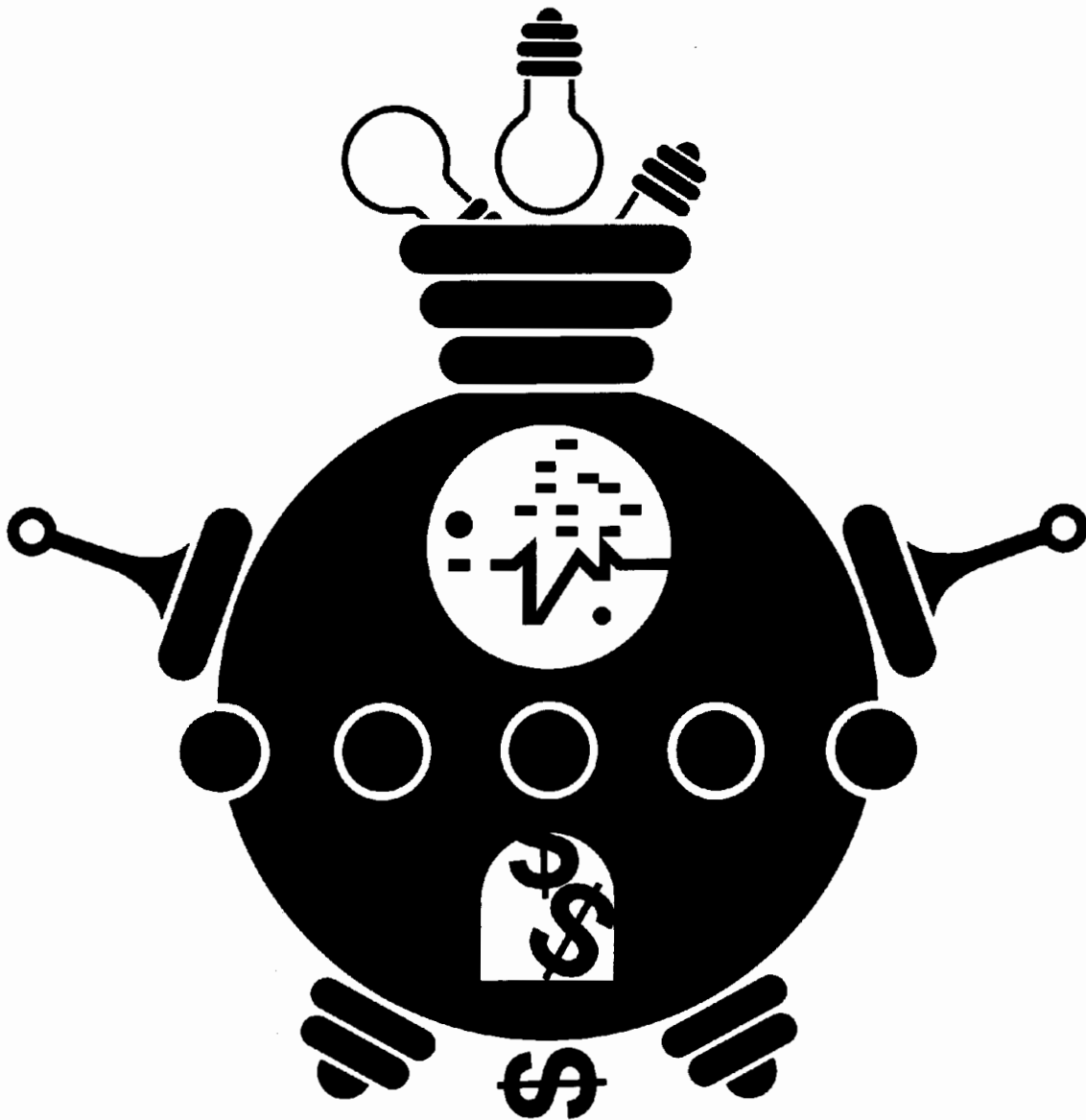
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Management Aids for Small Manufacturers
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Can You Make Money with Your Idea or Invention?

By John Tavela, Editor
Management Publications
U.S. Small Business Administration



Summary

Innovative ideas are essential to business progress. It is very difficult, however, for innovators to get the kind of financial and management support they need to realize their ideas.

This Aid, aimed at idea people, inventors, and innovative owner-managers of small companies, describes the tests every idea must pass before it makes money. It lists sources of help for innovators.

First Printed July 1979

You've Got an Idea? Great!

So, you've had an idea for an invention or an innovative way of doing something that will boost productivity, put more people to work, and make lots of money for you and anyone who backs you? As you've probably heard, you're the kind of person your country needs to compete in world markets and maintain its standard of living. You're the cutting edge of the future.

You are another of those individuals on whom progress has always depended. We all know that it hasn't been huge corporations that have come up with the inventions that have revolutionized life. As the discoverer of penicillin, Sir Alexander Fleming said: "It is the lone worker who makes the first advance in a subject: the details may be worked out by a team, but the prime idea is due to the enterprise, thought and perception of an individual." Innovators like you are business's lifeblood.

Owner-managers who have started companies on new ideas know first hand about the innovation process. They also know that you can expect to hear. . .

You've Got an Idea? So What?

In the first place, the chances that you are the first to come up with a particular innovation are somewhere between slim and none. Secondly, even if you have come up with the better mouse trap, nobody — but nobody — is going to beat a path to your door. In fact, in the course of trying to peddle your BMT, you'll beat up plenty of shoe leather wearing paths to other people's doors. You'll stand a good chance of wearing out your patience and several dozen crying towels as well.

Why is it so hard to find backers for your brainchildren? One consultant put it: "Nobody wants unproven ideas. Nobody wants to be first. Everybody wants to be second." Why this fear of the new?

Well, new product failure rates are estimated conservatively to be between 50 and 80 percent. One survey of major companies with millions of dollars to spend on R & D, market research, and product advertising, and with well-established distribution systems found that of 58 internal proposals only 12 made it past initial screening. From these 12 only *one* successful new product emerged.

Another group set up to help innovators has found that of every 100 ideas submitted 85 have too many faults to bother with. They can be eliminated immediately. Of the remaining 15, maybe five will ever be pro-

duced. One of those might — only might — make money.

With odds like 99 to 1 against an idea being a monetary success, is it any surprise that your idea is greeted with a chorus of yawns? People — companies, investors, what have you — are basically conservative with their money. Ideas are risky.

Does that mean you should forget about your idea? Of course not. It merely means that now you're beginning to see what Edison meant, when he said: "Genius is one per cent inspiration and ninety-nine percent perspiration."

Again, those of you who own small firms started on innovations are well aware of the truth of Edison's words. You've been through the hard work.

Can You Exploit Your Idea?

Although coming up with what you think is a sure-fire idea is the biggest step, it's still only the first one. You've got the other thousand miles of the journey to success still ahead of you.

Many things remain to be done before you can expect to realize the first dollar from your invention or other innovation. You should be prepared for the unhappy discovery that the end of the line for your idea may turn up well before the point you needed to reach to make money from it.

At a bare minimum, your idea will have to pass the following tests:

- Is it original or has someone else already come up with it?
- Can someone produce and distribute it, if it's an invention or other product, or use it, if it's a marketing innovation, a new use for an existing product, or the like?
- Will it really make money? (Will someone buy it?)
- Can you protect your idea?

That seems to be a modest enough list, and it is. The problems arise from the dozens of underlying questions that must be answered before the major questions can be resolved. Here, for example, are the 33 areas that the University of Oregon's Innovation Center runs each submitted idea through to determine if it has commercial merit:

Legality	Development Status	Stability of Demand
Safety	Investment Costs	Consumer/
Environmental Impact	Trend of Demand	User Compatibility
Societal Impact	Product Line Potential	Marketing Research
Potential Market	Need	Distribution
Product Life Cycle	Promotion	Perceived Function
Usage Learning	Appearance	Existing Competition
Product Visibility	Price	Potential Sales
Service	Protection	
Durability	Payback Period	
New Competition	Profitability	
Functional Feasibility	Product Interdependence	
Production Feasibility	Research and Development	

Now that is *not* a modest list. However, for the moment let's ignore the 33 and look briefly at the four broad questions.

Is Your Idea Original?

Obviously, if somebody has already come up with and produced as good an item or a better one, it would be pointless for you to pursue a similar idea any further. You'd only be wasting your time and money.

There are lots of places to look to find out. If your idea is for a consumer product, check stores and catalogs. Check trade associations and trade publications in the field into which your invention or innovation fits. Visit trade shows relevant to your idea. Look in the business and popular press. (Here, you can consult *The Reader's Guide to Periodical Literature* to help you in your search. Your public library has a copy.)

Don't be afraid to ask people in the field if they've ever heard of anything along the lines of your idea. In the pure idea stage it's not very likely that somebody will steal your idea — all the hard work still has to be done. Besides, you can ask general sorts of questions and keep the details of your idea to yourself, if you're really anxious that your idea will be pirated.

Obviously, if what you've come up with is an invention or an idea that can be put into patentable form, you'll eventually have to make a patent search. You could do that in this early stage, but it's probably a better idea to hold off until you've taken a look at your idea in the light of the next two questions.

How Will the Invention Be Produced and Distributed?

The first thought many innovators have is to take their ideas to a big national company. Provide the dazzling idea, they think, and let the giant work out the details. After all, the national company has the money, the production capability, and the marketing know-how to make this sure-fire profit maker go.

Unfortunately, the big companies are almost never interested in ideas from outsiders. Whether that's because, as one innovation broker has suggested, that outside technology is "a risk, a threat," or simply because large corporations need potential sales of an item to be in the tens of millions of dollars, doesn't matter. The cold fact is that selling a big firm on your idea is in the 100,000 to 1 shot range.

On the other end of the scale, you may be able to produce some items yourself, working out of your home and selling by mail order. This method can be a good way to get started, but after a while you may find yourself getting tired of having 200,000 better mouse traps stashed in your bedroom.

To be sure, if you can start (or already have) your own company, you will be better off. It's easier to sell a company than a patent, even if the company is losing money.

Many potential buyers understand a company much better than they understand the technology of an invention. Business people usually look at the profit-and-loss possibilities differently from the way an innovator does.

Many of these business people follow what one innovator has called "the 'Anyhow' theory of economics": "We have a plant anyhow. We have a sales force anyhow. We advertise anyhow. We're smarter anyhow." Such business people also know that by the time they purchase a company

*See the "For Information" section to find out how to get MA 240, "Introduction to Patents," which will help you to find out if you

**You can get a pamphlet "The Office's Disclosure Program" from the U.S. Department of Commerce, Patent Office, Washington, DC

most of the bugs are out of the technology and customers exist.

Between the extremes of starting your own company or having big business buy you out is taking your idea to small and medium-sized businesses. Such firms would be happy to produce an item producing sales in amounts that simply don't interest large companies. Smaller firms may lack marketing and distribution expertise, but again your major problem is even finding one that can help you realize your idea and is interested in trying.

Will Your Idea Make Money?

This is the question that worries everybody. Here is where the risk arises that makes it so difficult to interest people in backing your idea.

It's a question that's really impossible to answer with any assurance. After all, major corporations even with massive market studies hit clinkers all the time. Remember the Edsel? On the other hand, an idea so seemingly stupid that you'd think it was somebody's idea of a silly joke might make millions. Don't you wish you'd thought of the pet rock?

So many factors need to be considered to answer this question. Is there a market? Where is it? Is it concentrated or dispersed? Could the size of the market change suddenly? Will competition drive you out? These questions are by no means the bottom of the iceberg. Yet, answering the money question to the satisfaction of potential backers is the key to the other questions.

Can You Protect Your Idea?

Once you've come up with tentatively satisfying answers to the originality, production and distribution, and salability questions, it's time to consider protecting your idea. After all, it looks like you may have something.

If you do have a patentable item*, it's time to look into trying to protect it under the patent laws. Here briefly are the steps you'll need to follow:

1. Get a close friend (who understands your invention) to sign his or her name on a dated diagram or written description of the invention. Or, you can file a "disclosure document"*** with the Patent Office. Taking one of these measures will provide evidence of the time you came up with your invention in case of a dispute with other inventors over who conceived it first. Sending yourself a registered letter describing the invention is useless as evidence.

2. Make a patent search to see whether or not the invention has already been patented in as good or better a version. You can make a search yourself. The only place to make such a search efficiently is at the Patent and Trademark Office in Arlington, Virginia. The staff at the Office will help you. You may find, however, that the only practical way to proceed from patent search on is with the help of a patent attorney.

3. If the invention has not been patented, prepare a patent application and file it with the Patent and Trademark Office.

*See the "For Further Information" section of this *Aid* to find out how to get a copy of **MA 240**, "Introduction to Patents," which will help you to find out if you do.

**You can get a copy of the pamphlet "The U.S. Patent Office's 'Disclosure Document' program" by writing to the U.S. Department of Commerce, Patent Office, Washington, DC 20231.

Again, you can do this yourself, following the pattern you find in similar, recent patents, though, again, a patent attorney will be helpful. If you have an attorney prepare your application, go through the exercise yourself, anyway. Compare your application with your attorney's. Make sure all of the points you regard as important are covered and that the attorney has written what you want to say. Work out differences together.

4. Promptly file amendments or additional patent applications with the Office if you make important changes in your invention.

Having a patent won't mean you have absolute protection. In fact, one survey found that in over 70% of the infringement cases brought by patent holders to protect their patents, the patent itself was held invalid.

Defending your patent can be very expensive. If you don't have a patent, however, the probability of successfully protecting your invention approaches zero.

Mere ideas or suggestions can't be patented. Some of these you may be able to be put in patentable form, but for those that you can't it's pretty much do-it-yourself.

Say, for example, you think you have a great gimmick for selling more of Company A's products. Leaving aside the likelihood that Company A won't be interested, how do you approach Company A with your idea with any assurance they won't simply use it without paying you a cent?

About the best you can do is write them a letter telling them you have a promotional (or whatever) idea and, without giving them any details, offer to send it to them. Include in your letter a statement to be signed and returned by a Company A representative promising they won't divulge your idea or make use of it without compensation (to be negotiated between them and you), if they'd like to know the details of your plan. They'll probably say thanks but no thanks or that they can't promise any such things without seeing the idea, but it's the only course open to you.

Is There Any Hope?

Each section of this *Aid* seems to be packed with bad news, but the *Aid* wouldn't be doing you any favors by raising false hopes. The point is, you need to be more than an idea person to make money out of an invention or other innovation.

Many small businesses have been doomed from the start because of false hopes. Those of you who already operate going firms have avoided wishful thinking in other business areas. You need to avoid it where innovation is concerned, too.

What *are* potential idea and invention backers looking for? If you read around in the subject, you'll run across many comments to the effect that:

- What we want is an entrepreneur, someone who cannot only invent a product but find capital and a way of getting the product on the market.

- It's better to have a fair new product and a great manager than the other way around.

- Management is the most important element for success of an invention.

Edison wasn't only an inventing genius. He was also a promoting genius, a publicity genius, a capital-raising genius, a genius at seeing potential markets for inventions.

Have you ever heard of Joseph Swan? A strong case could be made for saying he invented the electric light eight months before Edison. Who got the patents? Who got the bulb to the market? Edison. Who invented the electric light bulb? Edison.

Few of us are Edisons. We may have brilliant product ideas, but we aren't usually knowledgeable, let alone brilliant, in all the other areas that need to be covered. We need help.

Where Can you Go for Help?

While you probably still have to invest considerable perspiration yourself, you can get help with some of the sweating. Even Edison had some help.

Patent Attorneys and Agents. Attorneys and agents can help you make patent searches and applications, if you can't do them yourself. The U.S. Patent Office has geographical and alphabetical listings of such people, but doesn't make recommendations or assume any responsibility for your selection from their lists. You can also find attorneys and agents by looking in the classified section of your telephone directory under "Patents."

Invention Promotion Firms. Also likely to be listed in the "Patents." section of the directory are firms that offer — for a fee — to take on the whole job of protecting and promoting your idea. Some of these firms may be quite helpful; however, caution is necessary in dealing with such promoters.

Federal Trade Commission investigations found that one firm, which charged fees ranging from \$1,000 to \$2,000, had had ten clients who made money on their inventions — that was out of a total of 35,000. Another firm with 30,000 clients had only three with successful inventions. If you elect to use an idea promotion firm, make sure:

- They can provide you with solid evidence of their track record — not just a few flashy success stories, but verifiable statistics on the number of clients they've had and the number who have actually made money.

- They don't collect the entire fee in advance.

- They will provide you with samples of their promotional materials and lists of companies to whom they've sent it. (Then check with those companies yourself.)

- You check the promotion firm's reputation with the local Better Business Bureau, Chamber of Commerce, a patent attorney, or a local inventors or innovators club.

Invention Brokers. Brokers work for a portion of the profits from an invention. They may help inventors raise capital and form companies to produce and market their inventions. They often provide sophisticated management advice. In general, you can expect these brokers to be in-

terested in more complex new technology with fairly large sales potential.

University Innovation/Invention/Entrepreneurial Centers.

These centers, some funded by the National Science Foundation, show promise for helping inventors and innovators. The best known one, the University of Oregon's Experimental Center for the Advancement of Invention and Innovation (The Innovation Center), for example, will evaluate an idea for a very modest fee. The Center evaluates an idea on 33 criteria (listed earlier in this *Aid*) to help inventors weed out bad ideas so they won't waste further time and money on them.

The Center also identifies trouble spots that will require special attention in planning the development or commercialization of a potential new product. If an idea looks like it has merit and is commercially feasible, the Center tries to link the innovator with established companies or refer him or her to sources of funds.

The Small Business Administration. The SBA's Small Business Institutes (SBI's) are now working in partnership with the Oregon Innovation Center. SBI's are located at more than 450 colleges and universities around the country. While currently few SBI schools can provide much help with the technical R&D aspects of innovations, they certainly can provide the market research, feasibility analysis, and business planning assistance necessary to make an innovation successful.

SBA field offices (see your local telephone directory under "U.S. Government") can provide you with information about the SBI program. You may find other management assistance programs offered at the field offices of help in realizing your idea as well.

National Bureau of Standards. The Office of Energy-Related Inventions in the U.S. Department of Commerce's National Bureau of Standards will evaluate nonnuclear energy-related inventions and ideas for devices, materials, and procedures without charge. If the office finds that the invention or idea has merit, it will recommend further study by the Department of Energy. The Department of Energy may provide support for the invention if it shows promise. This process may take from nine months to a year.

Inventor's Clubs/Associations/Societies. You may have such clubs in your locality. You can share experiences with kindred spirits and get good advice, low cost evaluation, and other help. The "For Further Information" section of this *Aid* lists national associations that may also be able to help you.

Talking with other inventors is probably the most helpful thing you can do. Find someone who has been through the entire routine of patents, applied R&D, and stages of financing. It doesn't matter if the end result was financial success or failure. Getting the nitty-gritty of the process is what's important.

Are You Being Unreasonable About Your Chances?

If you have read this *Aid* and still think you can make money with your idea, some people might think you've missed the point. If you continue to believe in your idea after looking at the odds and obstacles, you are being unreasonable.

That's exactly what you should be. You're in good company.

All progress is made by unreasonable people, George Bernard Shaw observed. Reasonable people adapt to the world around them; unreasonable people try to change it.

For Further Information

Readers interested in exploring this topic further may find the organizations listed below helpful. The list is necessarily brief; no slight is intended to any organization not listed.

American Association of Small Research Companies
8794 West Chester Pike
Upper Darby, PA 19082

American Society of Inventors
134 Narberth Avenue
Room 101
Narberth, PA 19072

Association for the Advancement of Invention and Innovation
Suite 605
1735 Jefferson Davis Highway
Arlington, VA 22202

Experimental Center for the Advancement of Invention and Innovation
College of Business Administration
131 Gilbert Hall
University of Oregon
Eugene, OR 97403

U.S. Department of Commerce
National Bureau of Standards
Office of Energy-Related Inventions
Washington, DC 20234

The following publications on topics of interest to innovators are available free from **SBA, P.O. Box 15434, Fort Worth, TX 76119**:

- MA 170** — The ABC's of Borrowing
- MA 216** — Finding a New Product for Your Company
- MA 218** — Business Plan for Small Manufacturers
- MA 234** — Attacking Business Decision Problems With Break-even Analysis
- MA 235** — A Venture Capital Primer for Small Business
- MA 240** — Introduction to Patents
- SMA 71** — Checklist for Going Into Business
- SMA 167** — Learning About Your Market
- SBB 3** — Selling by Mail Order
- SBB 9** — Marketing Research Procedures
- SBB 13** — National Directories for Use in Marketing
- SBB 18** — Basic Library Reference Sources
- SBB 29** — National Mailing List Houses
- SBB 89** — Marketing for Small Business
- SBB 90** — New Product Development

The following SBA publications are sold by the Superintendent of Documents, Government Printing Office, Washington, DC 20402. (For current prices and a mail order form, write SBA, P.O. Box 15434, Fort Worth, TX 76119 and ask for **SBA 115B** — For-Sale Booklets.)

RETURN TO PRODUCTION

RETURN TO TOOLS FOR NEW BUSINESSES

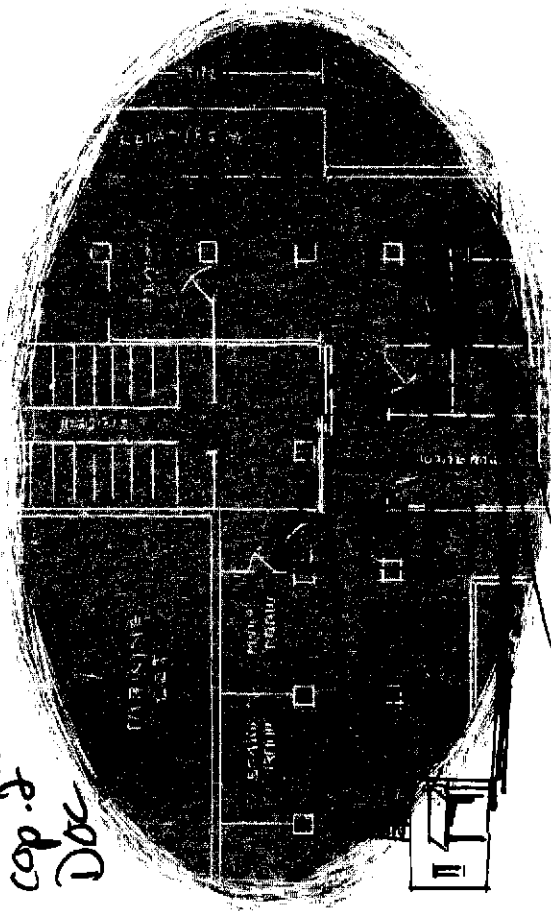
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SMALL BUSINESS ADMINISTRATION

Profitable
Small
Plant
Layout

by JOHN R. IMMER

FOREWORD

All across the country small plants are growing, diversifying their production lines, increasing their production. But all too often the small plant, like Topsy, just grows. No consideration is given to the resulting layout, or to economical movement of material, and the result is a hodgepodge of production machines, material handling equipment, work in process, assembly lines and storage of completed goods.

Eventually the small business owner realizes that costs of finished goods are rising, net profits are falling off, production is slowing down. A check of the situation shows that the basic cause is a lack of economical and orderly movement of production materials through the shop, resulting in excessive labor costs.

Profitable Small Plant Layout has been prepared to assist the owner who finds himself in this predicament and has decided to do something about it.

The author, John Immer, formerly Professor of Industrial Management, The American University, has specialized in plant layout and materials handling, and has written books on *Layout Planning Techniques*, and *Materials Handling*, both published by McGraw-Hill Book Co. In this booklet, Mr. Immer takes a practical approach on how to improve a poor layout when present space is sufficient, or how to start from scratch and plan an entirely new operation. He points out the various factors to be considered and the steps to be taken in planning the move and scheduling the actual movement, whether it be a rearrangement within the present building or the building and equipping of a completely new factory.

The first edition of *Profitable Small Plant Layout* was developed under the administrative direction of Wilford L. White, then Chief of the Management Services Division of the Small Business Administration. Editing and publication were supervised by J. Wade Rice, also of that Division.

EUGENE P. FOLEY,
Administrator, Small Business Administration.

JUNE 1964



SMALL BUSINESS ADMINISTRATION

EUGENE P. FOLEY, *Administrator*

OFFICE OF MANAGEMENT DEVELOPMENT

PUBLICATIONS DIVISION

PREFACE

Making a new layout is a major undertaking for any company regardless of size. It is a project that should neither be entered into lightly nor without considerable preparation. It is a time for analysis of company operations, especially those affecting production.

A distinction should be made between "making" a new layout and "planning" a layout. Frequently a machine is moved without adequate consideration of the effect this would have on other production requirements. In fact, the basic requirements of the machine itself are often overlooked with the result that the newly located machine must be moved again, and possibly again, until a location is found that permits it to function efficiently.

This is the expensive way to make a move and the natural result of inadequate planning. Many a company would not erect a new building without the close guidance of an architect but will purchase and install new equipment without the guidance of qualified layout planning engineers. The result is just what you might expect; high first cost and continued high production costs.

A qualified industrial engineer with experience in layout should supervise every major plant move. In those plants which have a full-time industrial engineer the work should be done under his direction. Other plants should arrange for similar services on a part-time basis according to their needs. (The author knows of one large manufacturing company which spent over a million dollars on a new layout without any material assistance from their industrial engineering department and now they wonder why their production costs are still high! Too many machines were "moved," not "planned.")

The results derived from a new layout are sometimes phenomenal. Lower materials handling costs, less travel for all materials, more convenient and efficient workplaces—all these results of a well planned layout permit production to flow with a minimum of friction. This not only saves money but makes life worth living for the plant manager with even the most difficult production problems.

Many benefits come from improved methods, and a study of methods should be a continuing process in any enterprise. The occasion of planning a new layout focuses attention upon this important function. There was never a better time for a critical analysis of all your methods!

As in most other undertakings there is no substitute for detailed planning by competent personnel. The more completely the planning is

done the lower will be the immediate costs of moving and the greater will be the results, production-wise and cost-wise, in the new layout.

If all the experience of other firms which have changed their layouts could be summarized into one gem of wisdom the result would be—"Plan it Before You Move It!"

JOHN R. IMMER.

JANUARY 1958
Washington, D. C.

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Why Be Concerned About Layout?

**Production Expanding—New Methods—New Products—New Building—
Need To Cut Costs—Effects of Process Type Layout—Effects of Product
Type Layout—Line Production—Which Type To Use**

Growth and change are an essential part of any business. Both the production facilities and the buildings which house them must be expanded as production increases. This process may be either gradual or explosive. Individual machines must be added to current layouts and new workplaces squeezed in. More efficient utilization of space postpones the day of additional construction and of other costs of expansion.

The growing company can expect to reach the period when expansion of physical plant and needed construction cannot be postponed any longer. More space must be obtained. This means increased capital investment and should be a period for evaluation not only of layout but of all company operations.

Layout should never be taken for granted. Methods and layout should always be subject to change.

Production Expanding

Many small plants of today will be the medium-sized plants of tomorrow. Much of this growth is gradual and constant. Careful planning for the addition of machines and workplaces often increases the amount of production that can be obtained within your present building space.

New Methods

Small plants are susceptible to technical advances and they are vulnerable if their methods are not kept up-to-date. For example, a manufacturer of die-cast chromium plated knobs for kitchen cabinet doors may have to add plastic molding equipment to retain his market. Most small plants rely on a very small number of processes. A drastic change of method in one of these processes can easily affect the entire competitive position of the company.

New Products

New products, even where they utilize existing machines and processes, may introduce new problems of handling and will certainly increase

the pressure for usable manufacturing space. You may have a strong advantage if you can go into production on a new item without having to spend a large amount of time and money for additional plant space.

New Building

Have you ever thought about all the things you didn't like in your old plant? Have you considered the effect on costs if you could remove a row of supporting posts from the center of a certain production area? Have you ever fussed about the congestion at a loading dock? A new building is your opportunity to eliminate all the structural and design features of your present building which have plagued you in the past. You can't give too much thought to this new building nor analyze too closely all the activities you intend to house in the new structure. This is your opportunity to start a new life as far as your factory is concerned. For many companies it is the chance of a lifetime and it had better be good. This calls for considerable thought and planning as to future requirements. The design for the new buildings should provide for future growth and expansion, and for whatever flexibility the nature of your operations may indicate as being desirable.

Need to Cut Costs

Nearly four hundred years ago Leonardo da Vinci told the city fathers of Florence that they could afford to spend only so much per public yard to dig a canal and then proceeded to devise machinery by which such costs could be achieved. Today's companies, both large and small, caught in the squeeze of higher prices and competitive price ceilings, must reduce costs to operate profitably. As the cost of individual units of production, both materials and labor, are probably rising during this period, more efficient methods and a better layout of production facilities must be devised.

Where machine processes are already refined and where further cost reduction in these areas would be difficult and expensive to achieve, the intangible cost factors of layout and materials handling may offer the best, if not the only, solution. In many industries, layout and materials handling remain the last frontier of cost reduction.

Effects of Process-Type Layout

The machines in your plant may be arranged according to process or type of machine or they may be grouped according to the production lines you have in operation. The former usually referred to as the

process type of layout, is particularly suited to job-lot manufacture because of its extreme flexibility in producing a wide variety of products with the same equipment.

Disadvantages.—The process type of layout offers problems in routing and scheduling in order to obtain full utilization of machines. Cost of materials handling is very high and considerable space is required for the temporary storage of materials-in-process. This means also that the total amount of materials-in-process is high with all the extra cost this entails. Inspection is more difficult and control over operations is harder to attain. This results in unnecessary delays and inefficient utilization of equipment and labor. Cost control is sometimes almost impossible under this type of layout and where it is effective it is only as a result of extreme vigilance.

Advantages.—The most important advantage of the process type of layout is its flexibility. A number of different products can be manufactured at the same time using the same machines. New Products can be introduced with no change required in the layout. Unprofitable items can be discontinued and the machines used for more profitable lines. Flexibility in the level of production is important to the small plant operator. Machines can be kept busy most of the time yet the layout can be operated at a reduced rate of production when necessary.

Effects of Product-Type Layout—Line Production

Many small plants are organized on a product basis—sometimes with only one or two production lines. Where a limited variety of items is produced and the same processes (and sequence of operations) are required on all of them, it is more economical to have the processes and machines arranged in the order of their use so that materials move direct from one machine to the next.

Disadvantages.—This type of layout is ideally suited to a high and constant level of production. A higher investment is usually required for machines and equipment and a high rate of production may be required to keep above the break-even point of your costs. This puts more pressure on your sales department and often leads to price-cutting in a tight market in order to keep sales up with the volume produced. A very tight supervision is required because failure of any machine may shut down the entire production line. A new product may mean another production line thus deterring you from putting a new product on the market.

Advantages.—By going to line production one manufacturer reduced his processing time for a major product from 6 weeks to 9 days. Another company analyzed its production and as a result developed four

product lines which took care of 80 percent of its total output with a drastic reduction in costs. Lower handling costs between operations, automatic scheduling of materials after they enter the product line, lower inventory of materials-in-process, tighter control over machines and operators and a steady flow of materials in a straight line all combine to provide a much lower unit cost than can be obtained ordinarily in a process-type layout.

Which Type to Use?

Where the disadvantages (particularly lack of flexibility) and the objections (principally high fixed costs) can be overcome, practice tends to favor the product or line type of layout as providing the most efficient production arrangement. There are many job-shop situations, however, where the line type of layout is not feasible nor economical.

Combine the Two Types of Layout.—Many companies combine the two types of layout under one roof. Often, it is not practical to change over all the work of a plant to a product type of layout but it can be done for one or two lines which may comprise a large percentage of the total output of the plant. Thus the company retains all the flexibility of its job-shop facilities and gets the benefit of the lower cost of the straight line production on the greater part of its total output.

Importance of Flexibility.—There are many ways by which machines, work benches, and other equipment can be arranged to permit easy movement. It should be remembered, however, that only certain types of equipment, such as that which is self-contained, electrically or manually operated, is easily moved about. One company mounts its presses on skids so that they can be moved by fork lift trucks; another company puts its movable equipment on casters. Mobility of equipment is one way to get all the advantages of a product-type layout and at the same time retain the flexibility of the process type layout.

Who Does the Work?

**Planning by Owner—Use of Consultants—Architects and Other Specialists
Construction Work**

It is characteristic of many small plants that a major revision of layout may be accomplished within a few months from the date of original decision to the start of production under the new arrangement. In such cases, not enough time is allowed to develop a plan or to consider many of the other elements which affect production costs. Defects in planning can thus be expected to plague the plant for many months to come.

Many times, because of production commitments and for other reasons, a changeover has to be accomplished within too short a period of time. Usually, though, the decision to make the change is the result of considerable deliberation and as much time as possible should be allowed for the planning of the new facilities. There is a definite advantage in letting a proposed plan "set" for a few weeks and then re-approach it with a fresh look.

Who does the work depends largely upon the time available for planning and for making the move. If yours is a small plant and you contemplate changes in layout a year hence it may be possible for you to do most of the work yourself or with your own staff. If it is to be a rush job, you will most certainly have to depend upon outside assistance.

Planning by Owner

Recently a large trucking company in Chicago built a new terminal. The actual plans for the new facilities were preceded by two years of intensive study of other truck terminals, including visits to the most efficient ones. What were considered the best features of all of these were incorporated into the Chicago terminal.

Before a New York department store built a new warehouse in New Jersey more than 17 tentative plans were made and analyzed before an architect was selected to design the building. You may not be able to devote that much time to planning your layout but these examples are evidence of the importance given this subject by other companies.

How Much Time Can You Spare?—For several months the manager of one small plant set aside one hour each Tuesday afternoon to review progress of planning for a new layout. As the date of the changeover approached this time was increased until it reached 50 percent of his total time for the month preceding the layout changes.

Naturally, such a drain on your time requires that routine and non-essential matters be delegated to someone else in your organization during this period. Any major change in layout should be the time for a soul-searching examination of the business because this represents a crucial period for the company. This means that you, as manager or owner, will have to consider and make many far-reaching decisions which, to a large extent, will determine your future success.

Do You Have Personnel With Required Skills?—In order to accomplish all this you will need to have personnel who can do all of the detail planning that is necessary. The following skills are needed:

Production Engineer—A person thoroughly familiar with your production processes, who can analyze your production requirements and state them in terms of specific machines and methods.

Draftsman—who can make your basic floor plans, put layout ideas on paper and prepare final working drawings as directed by engineers.

Utilities Engineer—who can plan changes in utilities. In some plants the plant engineer will do this.

Mechanics—who can move machines and make necessary set-ups in the new locations.

Trade and Utilities—such as carpenters, brick masons, electricians, plumbers, etc. You may not have any of these employed full time but you may have working arrangements with local trades or contractors.

Can Your Regular Personnel Spare the Time for a New Layout?—This is a most important question for you. It may be that your plant superintendent could easily make all production analyses but only at the sacrifice of his regular responsibilities. You may have a number of draftsmen but they are worth more to you on other work on new contracts and new business.

Even large plants have the problem of regular personnel taking time off from regular duties. Small plants usually do not have any "extra" engineering personnel—and time given to planning a new layout means that something else must be sacrificed. This may be worthwhile in the long run but it is a question that you will have to answer for yourself.

How Long Do You Have to Complete the Job?—One small plant that could foresee a number of changes in layout in the near future hired another engineer to devote his time to the development of new methods as a part of the layout changes expected. Improved production more than justified the cost of the engineer.

Even where you have all the skills needed within your own organization the shorter the period of time available to you for planning and putting the new layout into operation the more you will have to rely on outside help.

Use of Consultants

There are few concerns which could not learn considerable by hiring a qualified consultant to help them during this period. It is somewhat like building a house by yourself. Every time you do so you learn something, but this experience is costly. It is better and cheaper to learn from the experience of others. The consultant serves that purpose on these occasions.

Advice on Layout.—Though you may have adequate engineering and drafting facilities within your own plant you can profit by the experience of a consultant who has been through layout changes many times before. He can advise you of the latest equipment available, of new methods that will save you time and money and show you short cuts in developing your new layout.

Many small companies, especially those not large enough to afford a full time engineer, retain a qualified consultant on a monthly or annual basis to advise them on all production and layout problems. One or two days a month may be adequate to take care of ordinary requirements. An impending layout might require 1 day a week for a number of months. In this way you get the benefit of the best engineering knowledge and experience at a reasonable cost.

Supplementary Engineering Personnel.—Many consulting engineers can provide you with additional engineering help for the short period you will need them for the changeover. The rate per hour will be considerably higher than the prevailing annual rate for each type of service but you pay only for the time you need the service. In addition, there is the assurance of the engineering firm behind the work. Such a course is usually preferable to trying to build up your own staff for work that will last for only a few months.

Complete Engineering Service.—In some instances you may find that it will not cost much more than any of the above arrangements to have an engineering firm take over complete responsibility for the new layout. The consulting engineer should be able to develop a plan of detailed phasing for all the work of the layout and should be able to give you a reasonably realistic working schedule even in the first stages of negotiation.

Architects and Other Specialists

In most industrial areas there are architects who have had considerable experience with industrial buildings. They can guide you in the selection of the least expensive type of construction that will fill your needs. Since there is wide variation in cost, this advice can save you considerable money.

Building Codes and Other Legal Requirements.—In these days almost every area has certain building codes and other requirements which have to be met by industrial structures. There may be a number of agencies which have overlapping jurisdictions in your area. Your architect can advise you on all of these and see that your construction conforms to local requirements.

Changes in Existing Buildings.—If you occupy an old building you may be planning to use machines and materials handling equipment heavier than the building was designed to support. Changes in structure required by new layouts should be checked by a registered architect or structural engineer.

New Construction Requires Plans and Specifications.—If alterations to the structure are extensive, if new additions are involved or if contracts are to be let for utilities and construction, you will need detailed plans and specifications. In many areas you are required by law to have the services of a registered architect or engineer if certain features or costs of improvement are involved. In other places it is wise, on general principles, to have competent assistance on any work of this kind.

Construction Work

If only a small amount of work is involved and that of a simple nature it may be possible to have your plant personnel do what is necessary. If you do not have personnel available for this work or men who are qualified to do it, the usual procedure is to hire local tradesmen. These men may be hired directly or through various contractors who specialize in the trades involved. However, it is usually cheaper in the long run to bring in a reputable contractor who will take responsibility for all the work to be done. If extensive work is involved, this is given to a general contractor, otherwise individual contractors may be called in to carry out their respective trades. On projects of any size at all the contractor follows the plans and specifications prepared by your architect or by your engineer.

Estimating Costs and Savings

Direct Costs of the New Layout—Indirect Costs of the New Layout—Savings in the New Layout—Amortizing the costs of the New Layout

Sound business practice requires that all major programs such as a new layout must be budgeted. One reason, of course, is financial—there is probably a limited amount of money available for this purpose. Another reason is that the basic program as a whole must be evaluated and benefits considered against the cost of the program. Generally, there is a compelling reason for changing a layout or the company does not embark upon such a program. The layout developed must satisfy that requirement.

Direct Costs of the New Layout

Inasmuch as possible, all expenses of the new layout should be charged to a special account so that the total cost is available to management. The tendency in many small plants is to consider these as part of normal production expenses without any further identification or separation being made. Depending upon the attitude of management, or of the stockholders, there may be some justification for this type of thinking but it does not permit a complete evaluation of the project.

Planning Cost.—This is the item that is most likely to be hidden in normal production and overhead accounts. However, if consultants or other outside help is used, their compensation becomes quite conspicuous, and it is difficult to show how they have saved a comparable value in company executives' time.

It is not practicable to try to isolate the time spent by supervisors and other principal personnel in evaluating and appraising various layouts. However, any great amount of time spent on the preparation of plans, material lists and other information should be considered in the final accounting. Included in these costs will be all costs of preparing the working drawings, specifications and all other information necessary to make the move.

New Equipment.—This account includes all expenses of purchasing and delivery to the plant of new machines, materials handling equipment, benches, racks, and other production accessories required in the new plan.

Structural Changes and New Construction.—If an extensive structural change or any new construction is involved it will probably be han-

called as a single contract. In this case, an architect will be called in to draw up plans, prepare specifications and supervise the construction, for which he will charge a fee. In addition to this and the contract price to be paid to the general contractor, there are other items of expense for which allowances must be made.

Interest charges on the new construction, depending on how the project is financed, may be a considerable item. Items such as insurance and taxes, and engineering and legal fees must also be considered.

Changes in Utilities.—Whether done by plant personnel, partly by outside groups, changes in utilities must be detailed and the costs estimated or the work contracted. For example, all the electrical work would be contracted to an electrical contractor. Where the exact work to be done cannot be described in advance, alternate arrangements may be made to pay the contractor at a given rate for certain tasks or by the hour.

Included in the cost of utilities will be that of disconnecting the machines to be moved and of reconnecting all utilities to them after they are set up in their new location. In many instances, this may amount to more than the cost of moving the machine itself.

Cost of Moving Machines.—This depends on the number of machines to be moved, the distance involved, the size of the machines and the capability of plant personnel to handle machines of the size involved. One company, for example, has all of its 3,000 pound-presses mounted on skids and moves them around with a forklift truck. On medium-size and larger runs the presses are relocated to permit minimum handling between operations. If you change the location of machines frequently your own mechanics can probably take care of any changes you desire.

If you do not make moves very often or if unusually difficult machines are involved it might pay to have an outside industrial mover do the work for you. Another way is to rent special equipment such as over-size forklift trucks or cranes of the required capacity with or without regular drivers or operators.

Indirect Costs of the New Layout

The most important of the indirect costs is the time sent by the more important members of the company. This is usually a considerable item. Of course, it can be argued that the reappraisal of a firm's production facilities, which is what is mainly involved, is a normal management function and one that every company should carry out periodically.

Frequently, large quantities of supplies and materials are consumed during such a changeover without any accounting being made or any

effort made to charge them to a special account. The same thing, of course, applies to various labor groups within the plant who are used in the changeover.

Savings in the New Layout

There usually are other and additional reasons for making a new layout but lower operating costs is certainly one of the strongest of them all. Generally, a new layout results in increased output. This in itself makes it easy to show a favorable comparison of costs of the new layout as compared to the old. Higher output of manufacturing areas should change overhead rates so as to make them more favorable. In a few instances, increased production is not the immediate objective, but management hopes for a stronger competitive advantage. This may be necessary to keep the company solvent in a highly competitive situation. There is always the prospect of increased business at a later date as the company's competitive position improves.

Tighter Control over Costs and Production.—Both production and cost control should be designed into any production organization. Where this has not been completely effective before, there is no better occasion than that of a new layout to develop such controls as an integral part of the organization. In many cases, the greatest savings in the new system comes from these improved controls rather than from any other improvements in layout and equipment. There is certainly no better objective of a new layout than that of efficient production at the lowest cost. These objectives can be obtained only by the installation of effective controls.

Compare Unit Production Costs.—One test of the efficacy of the new layout is that of the cost per unit. Whether the change involves one machine or an entire plant the unit costs should be estimated for each alternate layout being considered. This assumes that you are able to put down the proportionate share of indirect labor and other items not charged against specific operations.

Isolate Principal Cost Factors.—In the development of unit cost comparisons you may notice specific cost factors that are out of line or which may be reduced by new equipment or by changes in layout. Proper steps can then be taken to correct them.

Effect of Increased Production on Overhead Allocations.—In many lines of manufacturing the overhead account may amount to more than the total of direct labor and in many cases is three or four times as large. Many a company—especially a rapidly expanding one—has been forced out of business because of inability to control its overhead accounts. Better layout should make supervision more effective, reduce handling

between operations, reduce nonproductive time of operators, reduce processing time of materials within the plant and, by more certain production performance, reduce the size of finished stock inventory required to meet customers' requirements.

Use of Operating Ratios.—What is your criteria for measuring the success of your layout? What are your principal objectives? From the cost standpoint it may be an increase in net profit to the company. From a more immediate point of view this may be measured according to the unit cost or may be considered in terms of output per employee, per square foot of plant space or per \$1,000 of total capital invested. The important thing is to use the ratios which have the greatest value to your particular type of operations and which will provide the best guide to the efficiency of your own organization. None of these ratios will have the same significance to every type of manufacturing plant.

Amortizing the Cost of the New Layout

A Mid-western manufacturer once told his layout engineers that they could buy any new equipment as long as they could pay for it within 6 months. Even with this strict limitation they were able to justify a number of changes in layout and the purchase of considerable new materials handling equipment. Later on, after the most glaring inefficiencies had been overcome, this period of time had to be extended so that now they have to work hard to amortize projects within 3 years.

Length of Time Required.—Any new layout to be considered by management should produce a savings. The main question is how much time will be required for these savings to repay the cost of making the change. If increased production is the reason for the new layout, how long will it take the extra production to pay for the cost of the expansion?

One jobbing company figures the cost of moving presses against the extra cost required to complete an order using ordinary job-lot methods. They have found that the savings make it worth while to change the machines for orders requiring only a few days of production. Naturally, the cost of moving the machines has been reduced to a minimum.

Effects of Amortization Period on Method of Financing.—For most small companies the expected amortization period may be extremely important from the standpoint of financing. If this period is too long the financial requirements of the new layout may require an expansion of capital, floating of long-term loans or other changes in the capital structure of the company. For a short-term amortization, temporary financing may be adequate. If the latter course is followed, all figures of savings should be checked thoroughly and all elements of the current business picture examined carefully.

Consider Total Financial Cost.—If a substantial amount of capital is involved in the new layout all costs of obtaining this capital should be considered in the final computation. Likewise, the increased capital investment will also increase the tax liability of the company as to realty taxes, real property, and as to corporate taxes.

Planning the Layout

Know Your Present and Future Space Requirements—Many Factories “Just Grow”—Some Kind of Plan Is Needed—Develop an Ideal Layout—Develop Lines of Flow

Before you can plan a layout you should know what activities or processes of the plant are most likely to expand and how much, so that other processes will not be cramped at a later date. After considering these production requirements, you then have to decide where the plant will grow, in what direction and how soon. The answer to these questions will affect your production plan, the type of construction for new buildings, the basic type of layout and the location of all buildings and other production elements on the plot plan.

Know Your Present and Future Space Requirements

In the rush of every-day activities many plant managers think of plant space requirements only when they run out of space. The plant manager should know what his present actual space requirements are—the amount of net manufacturing space now available to him and the amount of space which will be required (both net manufacturing and total plant space) at projected levels of expansion. In other words, know your space requirements! See Fig. 1.

Note Elements of Plan Which are Most Expensive to Change.—In your plant you have some types of equipment which can be moved around at a nominal cost. You have other equipment which is extremely expensive to move. This latter group includes large machines, permanent construction or extensive utilities.

Does Location of Heavy Equipment Limit Direction of Expansion?—By planning from the beginning you can locate this equipment away from the direction of future expansion. In your present location there are probably a limited number of directions in which you can expand. As much as possible, the permanent equipment should be located on the sides so as not to interfere with expansion in the other directions.

Locate Basic Input and Outgo Areas.—Raw materials, parts and equipment are put into a factory and the finished product goes out. This is an oversimplification of the production process in your plant but

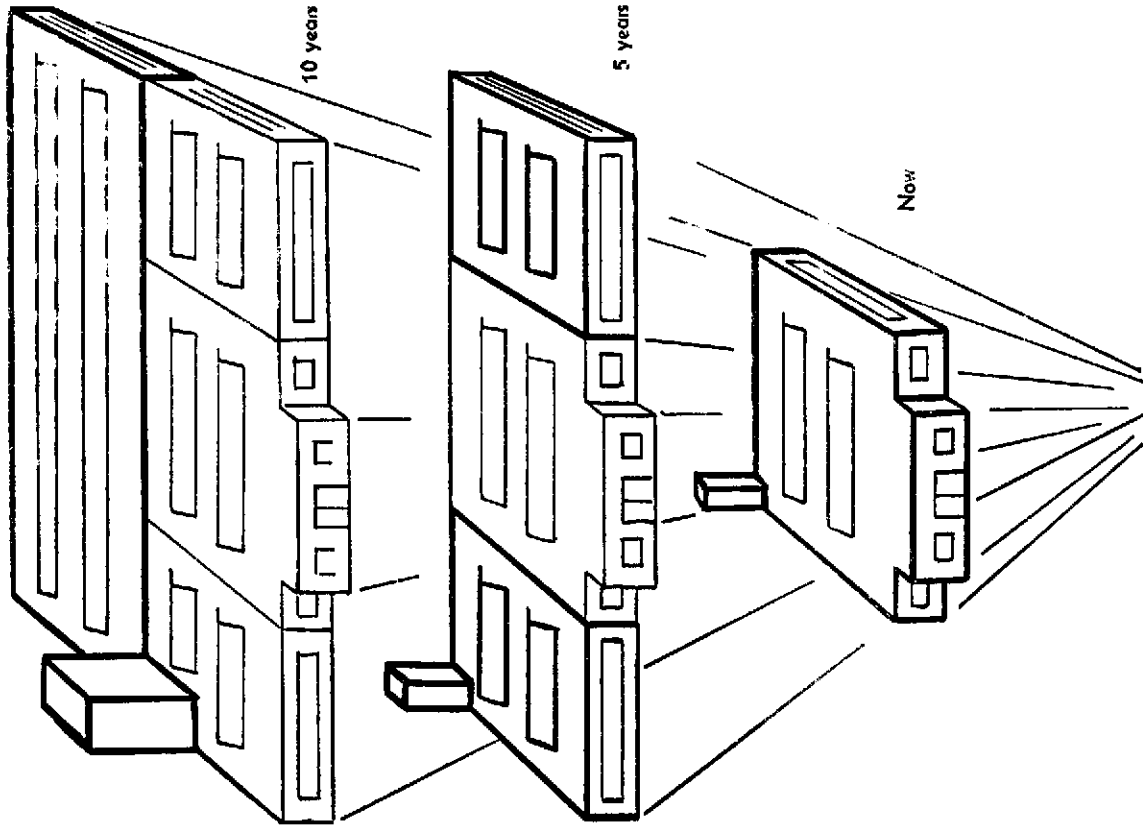


Figure 1.—Plan now for future expansion.

it describes the basic line of flow your production activities should have. Receiving and shipping areas are necessary to every production activity and they should be planned so as not to interfere with each other. They should also be planned so that you have adequate control over them.

Loading docks and railroad sidings are generally permanent fixtures so these areas should be located to permit expansion into other areas as the plant area is enlarged.

Many Factories "Just Grow"—Some Kind of Plan Is Needed

Many factories—both large and small—grow without any forethought or planning whatsoever. As space is needed for a specific machine or process a shed is added to an existing building or it is extended out in one direction or another. The result is usually a hodge-podge of buildings with high materials handling costs and many other characteristics which make efficient organization of production facilities almost impossible to attain.

In many instances it doesn't require much of a plan in order to insure a proper development of plant facilities. However, it does require that someone think about the problem and put those thoughts down on paper.

Check Growth of Each Element of Production.—Although production requirements may increase gradually, the equipment and its space requirement increases in jumps and spurts. As your volume of production expands you will have to add machines, workbenches and other equipment. You will gradually put increasing pressure on each piece of equipment up to a certain point then you will have to buy additional units. Annealing furnaces, for example, have large space requirements so this will represent a considerable expansion. You will have to expand a loading dock someday. When you do you will probably double its capacity which will take care of that requirement for many years to come. The nature of expanding requirements is shown in figure 2. You must recognize which ones require the greatest space and involve the greatest cost.

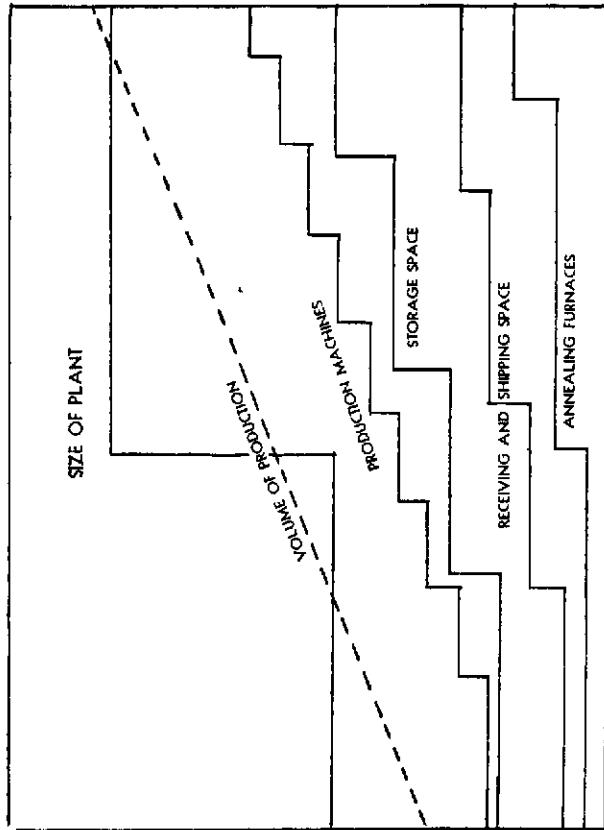


Figure 2.—Space demands of various types of equipment vary considerably. These demands are not met gradually as production increases but periodically as it becomes necessary to add another production unit.

Get Picture of Expansion Requirements of Your Plant.—The chart in figure 2 (when adjusted to your own situation) will give you the basis for computing future plant requirements and will indicate the needs for expansion of each type of equipment. It will also provide a guide to the amount of space that should be added at each stage of expansion.

Get Picture of Your Expansion Requirements for Equipment.—Knowing the capacities of your various machines, the above chart, when based upon your specific machine loads, will give you a picture of your equipment requirements and will help you in planning ahead for layout and for your financial program.

Develop an Ideal Layout

This is a fundamental rule in all layout planning. If you don't know what you are aiming for, you certainly have little chance of reaching it.

Ideal Layout Establishes a Goal.—Before the outbreak of World War II few layout engineers had been able to design a plant exactly as they would like, and for the most efficient production. They almost invariably had to fit the plan into the buildings available to them. The sudden demand for additional manufacturing space enabled them to design complete plans as single production units, and caused planning engineers to change their way of thinking. The result was that a large number of highly efficient plants were constructed during this period. Since then the concept of planning to an ideal has become firmly established.

Make All Moves to Conform to the Ideal Layout.—About 10 years ago a plant engineer in a medium-sized plant in the middle west developed an "ideal layout" for the plant but was unable to sell his management on making the extensive changes required. During the next five years every machine moved was checked against the most desirable location, as indicated by the ideal layout, and was moved to conform to that layout. As a result, this engineer finally accomplished his objective and was able to realize a layout that was substantially the same as that originally devised with little extra cost to the company.

Revise Ideal as Conditions and Objectives Change.—It is a great step forward to have an ideal layout recognized and made official in a plant. It is also important to see that this ideal remains compatible with the objectives of the company. It may be that certain products have been more saleable than others. In most areas the design and style of a product changes and products themselves change. If the processes required for new products or models are the same there may be no adjustment required. However, it may be that new materials and methods may change production equipment and space requirements drastically.

Know the direction in which materials move through your plant. If flow lines showing this movement do not reveal any straightforward pattern you should experiment by moving a few machines or departments on paper. Technical Aid for Small Business No. 37, "Use of Templates and Scale Models in Plant Layout," will give you some helpful pointers. If you manufacture a wide variety of products chart only the movement of the largest-volume items or the ones which are the most expensive to move around.

List Requirements and Functions of Your Plant

What Will Your Production Requirements Be 5 Years From Now?—How Will This Affect Nonproduction Space Requirements?—What Products Are Manufactured?—List Operations on Each Product

Providing a plant for a small company is like buying an expensive suit for a 13-year-old boy. If everything goes well you can expect both of them to have growing pains and to outgrow their clothes in a short time. This is largely a matter of time and health of the company, or boy. A little foresight now may save expensive moves later. Where industrial land is difficult to locate in a specific community and there are strong reasons for desiring to stay in a limited area (such as homes of owners and workers) it is advisable to buy or get options on enough land to take care of foreseeable future needs.

What Will Your Production Requirements Be 5 Years From Now?

Every company should ask itself this question and review the answer at least once a year. Where are you going? Are you making any progress with your present products? Would other products of a similar nature offer greater profit possibilities? Is your regional market limited? In what other ways can the sales of your product be extended?

This gets over into the area of market analysis and sales forecasting but the investment of capital in the business, the plans for new buildings and new equipment and all plans for changes in layout are dependent upon these answers. Three Management Aids for Small Business, "How the Small Plant Can Analyze Old and New Markets," now contained in Management Aids Annual No. 2; and "How Marketing Research Helps Small Manufacturers," in Management Aids Annual No. 3 all provide assistance along these lines.

If it appears that your requirements will involve a number of changes in layout, it will be worthwhile to install under-the-floor conduits or channels so that utilities can be made available wherever required. Various types of flexible electrical conduit, either underground or overhead, should be planned from the beginning to save later expensive electrical changes when machines have to be moved.

What requirements are there for oil lines, waste lines and other utilities? These are expensive to add or change in piecemeal fashion.

What about that big press you plan to install some day? Will your floor be strong enough to support it? Are you considering the installation of other processes which have special requirements as to floor loads or special utilities? Now is the time to plan for them.

How Will This Affect Nonproduction Space Requirements?

As you have probably noticed already, a large percentage of the total plant area is taken up with nonproductive space. In very small plants the percentage of this space is usually very high but it decreases as the size of the plant increases. Nevertheless, as other space requirements increase and as the number of employees increase there will be certain enlargements of nonproduction areas for which you will have to provide.

Office Space.—The enlargement of offices during a general plant expansion program may not be too difficult if existing offices can be expanded into current production space and these production areas expanded in the other direction. One idea is to locate the office and service areas across the front of the building. Facilities can be expanded as the whole factory grows lengthwise or a second story can be added over the office area.

Employee Facilities.—As the number of employees increases the space for rest rooms and lockers has to be increased. Plumbing should be located to permit addition of new risers and additional fixtures with a minimum of additional expense. If properly planned for future additions it may be cheaper to expand present facilities than to develop completely new ones elsewhere in the plant.

What Products Are Manufactured?

The important thing here is the variety of processes and types of operations involved. The number of types and variations of the product also affect the flexibility which must be provided for in your layout.

Can Products Be Grouped?—Layout and all other aspects of production will be simplified if all products can be run through the same processes or sequences of operations. However, many small companies have grown because of their ability to provide variety in small-quantity production. In some instances this is the extra service which enables them to compete with larger firms.

Can Orders Be Combined or Anticipated?—If the demand for specific types or models of your products is fairly constant and it is possible to anticipate orders, it might be worthwhile to consider larger runs, at least of

fairly common parts—especially if much setup is involved. This will, of course, necessitate providing more storage for materials-in-process or for finished parts.

List Operations on Each Product

Accurate knowledge of space requirements is dependent upon knowing the load of each section of the plant. This is usually divided into the main processes involved such as machining (presses, lathes, etc.), foundry, painting, assembly and packaging.

Steps in Preparing List of Operations.—The following steps will provide the basic information needed for showing the load of each section of the plant and for developing future space requirements.

1. List products or items manufactured.
2. List the operations required to complete each product. If different products are assembled from common parts, prepare a list for each part and separate assembly lists for the final products.
3. For each operation show the machine, output per hour and any special equipment used in connection with that operation.

Computing Production Area Requirements.—The following steps are used to develop production area requirements:

1. The daily production desired divided by the production per hour per machine will give you the net machine hours required.
2. The net machine hours per operation plus total of estimated down time and allowance for delays equals the total machine hours required per day.
3. Total machine hours required per day divided by the number of net working hours per day equals the number of machines or work-places required.
4. Number of workplaces required times area of each work place plus total of aisle space equals production area required.

Major Areas Required

Offices—Reception—Sales Offices—"Executive" Offices—Accounting and Bookkeeping—Production Control and Timekeeping—Production—Machine and Assembly Areas—Machine Shop and Plant Maintenance—Testing and Inspection—Receiving, Storage and Shipping—Laboratory Research and Testing—Employee Facilities

In planning the layout of a factory you must first think in terms of major areas and the most efficient relationship they can have with each other. Specifically, these major areas comprise the basic functions or departments of your company. After these relationships have been established to your satisfaction your next step is to work out your subarea allocations of space and so on until you get down to the individual work-place. The important thing is to have all your uses planned in advance of actual needs.

Many functions in a factory for which space must be provided are necessary to carry on the company business. Nevertheless, the space they occupy reduces the net area available for production purposes. All nonproduction uses of space must be evaluated carefully in terms of total space available and the importance of each function to the company.

Offices

In many plants the offices are the show place of the business—the place where a customer's impression of the business-like quality of the company is created. As much care should be given to their layout as to that of the production areas. The "front office" can set the atmosphere for the entire plant.

Reception

In even the smallest plants there should be a reception area, even if it is only a vestibule to keep out cold drafts in winter. A receptionist, or someone assigned to this task, should be located so as to receive all visitors and customers to the plant.

Sales Offices

These should be close to the front entrance and should include facilities for the display of the products of the company. If "sales" consists

of only one or two desks in a general office some extra space should be allotted to it. In that case, displays may be on walls of general offices.

"Executive Offices"

Aside from the extra privilege to which the "boss" is entitled, there are very important psychological reasons for having him in a private area by himself. This is true in large businesses and is even more important in a small business. One of the weaknesses of the small-business man is his inability to separate himself from the details of his business and get a proper perspective on what he is doing and where he is going. A private office, even if it is defined only by a glass partition, helps him to get this perspective and enables him to take a more detached view of the operations of his plant.

Accounting and Bookkeeping

This may comprise the largest office space requirement for the small plant. As they are also concerned with customer accounts they should be adjacent to sales or at least close enough to permit constant reference. The proper storage of records and their protection from fire have to be considered. See Management Aid No. 75, "Protecting Your Records Against Disaster."

Production Control and Timekeeping

If these functions are carried out in the general office area they should be so located that contacts with the production areas of the plant will not bring personnel through other offices areas. There should be a window opening or other means of contact so that shop personnel do not need to enter the general office area.

Production

Production is the basic area where profits are created. Other areas are needed to support and to complement this area but the primary objective of a manufacturing plant is to produce a product. Poor layout or organization in the production area cannot be compensated for by good layout in other areas, no matter how good they are.

Machine and Assembly Areas

The two elements of these areas are the space requirements of the individual machine areas and the efficiency of their arrangement, and the rela-

relationship of these areas to each other. The first determines the efficiency of the individual operations and affects the cost of each operation. The second determines the efficiency of plantwide operations and affects costs other than direct cost of operations. As such, the latter elements of cost are often concealed in indirect costs and seldom given the scrutiny generally accorded direct costs.

Machine Shop and Plant Maintenance

Even the smallest of plants must have some kind of shop or area where simple plant maintenance operations can be performed. As the size of the plant increases it will be found more profitable to have more special design work as well as machine repairs performed by your own personnel. Again the service feature enters the picture where your ability to make quick changes in jigs and other tooling may give you a strong competitive advantage in your operations.

Testing and Inspection

The importance of inspecting and testing functions depends upon the nature of the product. Some sort of inspection and checking should be performed on the product before it is packaged, crated or otherwise prepared for shipment. If all items produced have to be tested, adequate provisions should be made in the layout for this function. Sometimes it is necessary to provide areas that are completely protected from shop fumes, noises, dust, and vibration. The location of operations or processes having the objectionable qualities should be considered in relation to other functions.

Receiving, Storage and Shipping

Ideally, raw materials should be received at one end of the plant, processed through in an orderly manner and the finished products shipped out at the other end. Some of the flow lines by which this is accomplished in the layout are discussed in chapter VII. There should be a complete separation of areas.

In the smallest plants these ideals may be difficult to accomplish. Too often the location of receiving and shipping areas is dictated by elements outside of the plant environment, i. e. railroad sidings or highways, and are, therefore, inflexible and probably impossible to change. For example, one company had access to a railroad siding only at one far corner of the plant. It was possible, however, to divide the loading dock into a shipping and a separate receiving area with corresponding areas inside

the building. A circular flow pattern carried production around the plant in a "U" shape, returning it to the shipping area with a minimum of backtracking of lines.

Storage areas within the plant should be well defined and separated from aisle space and from working areas. Conveyors may be used to store materials on the move. If pallets or skids are used adequate space must be provided for storage of these units between processing operations.

Laboratory, Research and Testing

Not all companies have need of extensive laboratory facilities. The amount of space required for these functions depends on the nature of production activities and the stability of the product. These facilities, when required, should be located away from any objectionable influences. On the other hand, where physical conditions permit, there are advantages to having the testing facilities close to the processes served.

Employee Facilities

In addition to the normal sanitary facilities which must be provided, it may be desirable to provide other facilities which, though not absolutely necessary, may be desirable in order to attract personnel, or to maintain a high level of employee morale. These may include a cafeteria or lunch room, a dispensary, and space for recreational activities.

How To Show the Flow of Materials

Make a List of Operations—Use Process Charts To Show Sequence—Printed Process Charts—Use Flow Diagrams To Show Travel—Adapt Flow Lines to Building Plan—Flow Patterns

The distance traveled by materials progressing through various operations affects not only materials handling costs but total production costs as well. A worker can walk 10 feet in half the time it takes to walk 20 feet. If the total travel of a part can be reduced from 1,100 feet to 200 feet there are a number of savings which will result. In addition to cash savings, many intangible benefits will accrue, such as less congestion of aisles, reduced hazards of extra movement of materials and equipment and smaller inventories tied up in materials while they are being moved these greater distances.

Too often the small plant is a congested mess through which production must fight its way. It is sometimes difficult to ascertain a pattern or a direction of flow.

Make a List of Operations

The first step in determining the proper flow pattern for your operations is to consult your operation list from chapter 5. This list, in itself, often points out a logical sequence of workplace areas. At least it gives you an ideal pattern at which to aim, even though it may have to be adapted to allow for limiting factors of your buildings. You should have these lists ready as you need them for production control, for costing and for estimating on new products.

Use Process Charts To Show Sequences

Probably you have already seen several of these in textbooks and in engineering reports. Most of them look rather complicated since they are showing a very complicated situation. At that, they simplify the problem and make it easier to analyze a situation and to develop a logical flow pattern.

For most small plants these process charts are fairly simple to make. It is as easy to make a process chart as it is to make a list of operations. In some ways it is easier as you are using shorthand symbols rather than lengthy descriptions. The result is a graphic representation which shows clearly the relationships of workplaces in your plant.

The symbols.—Standard symbols have been developed which have received widespread usage in industry. Do not hesitate to originate others if they will serve your purpose. The figures most commonly used are shown in figure 3.

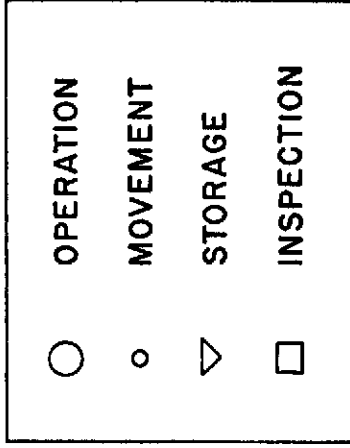


Figure 3.—Standard process chart symbols.

Making the Process Chart.—As a second step in making the flow analysis (the first was to make up the list of operations) you will make a chart using these symbols. The simplest chart is composed of the operations only—you may expect it to look something like the chart in figure 4.

Each operation requires certain other functions. Material must be moved to the workplace and later must be moved to the next operation.

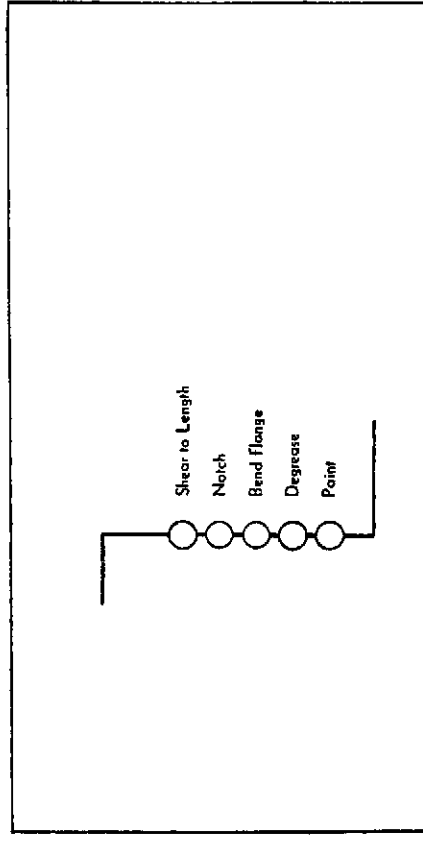


Figure 4.—Process chart consisting of operations only.

Frequently, there is a temporary storage between operations. This requires additional moves. Your chart now begins to look like figure 5.

As a final stage, you may want to add other production information so the complete picture of the flow and balance of operations will be in front of you. This may include the distance traveled, time involved between operations, the amount of time in temporary storage and the total of actual production time compared to the total of all other times.

Use Flow Diagrams to Show Travel

The next step is to convert the ideal flow lines shown on the charts to the flow of materials on the factory floor. This is accomplished by use of the flow diagram. In its simplest elements it duplicates the flow lines of the chart. For example, compare the two diagrams shown in figure 7.

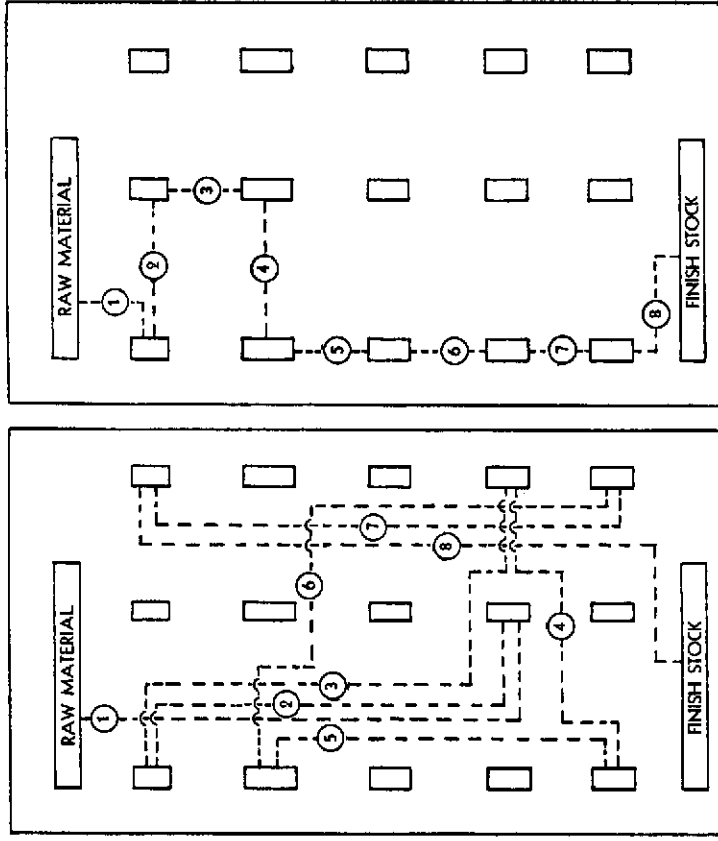


Figure 7.—Flow lines show how distance traveled can be reduced for your major components.

If the pattern shown in figure 7b differs too much with your present flow lines or as shown in figure 7a, drastic changes in your layout may be indicated. This may be the cause of all the extra cost you had not been able to locate before.

Adapt Flow Lines to Building Plan

This is the point at which theory meets reality and usually it is a head-on collision. Many times, the author has had the feeling that certain buildings were just not intended for production operations. He has been amazed at the apparent ingenuity of architects and builders

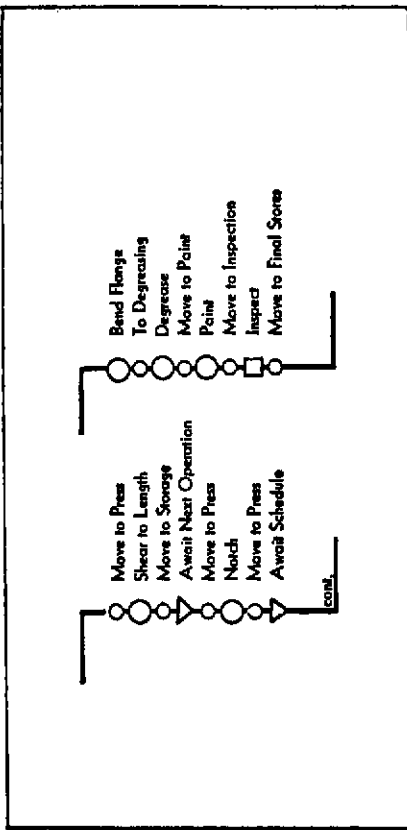


Figure 5.—Process chart showing operations and additional activities required.

Number and quantity of specific parts and sub-assemblies will be required to show total hours and cost of operations. With all this information the chart begins to look formidable but it puts all of your operations down on paper in front of you and shows up the most expensive and wasteful parts of your production operation.

Printed Process Charts

Many companies have special forms printed with the process chart symbols shown on them. The analyst indicates the appropriate activity and inserts the other information which is then available in a form that is easy to use. Figure 6 shows a typical form of this type.

JOB		DATE		INC.		PAGE			
SUBJECT CHARTED		METHOD		SUMMARY		PROP.		SVC.	
CHARTED BY		NO. OF OPERATIONS		NO. OF TRANSPORTATIONS		NO. OF STORAGE		NO. OF INSPECTIONS	
DATE		MAN HOURS OR MINUTES		DISTANCE TRAVELED					
DETAILS (PRESENT PROPOSED)		METHODOLOGY		MATERIALS		EQUIPMENT		NOTES	
NO. OF OPERATIONS		METHODOLOGY		MATERIALS		EQUIPMENT		NOTES	
NO. OF TRANSPORTATIONS		METHODOLOGY		MATERIALS		EQUIPMENT		NOTES	
NO. OF STORAGE		METHODOLOGY		MATERIALS		EQUIPMENT		NOTES	
NO. OF INSPECTIONS		METHODOLOGY		MATERIALS		EQUIPMENT		NOTES	
MAN HOURS OR MINUTES		METHODOLOGY		MATERIALS		EQUIPMENT		NOTES	
DISTANCE TRAVELED		METHODOLOGY		MATERIALS		EQUIPMENT		NOTES	
O O V		O O V		O O V		O O V		O O V	
O O V		O O V		O O V		O O V		O O V	
O O V		O O V		O O V		O O V		O O V	
O O V		O O V		O O V		O O V		O O V	

Figure 6.—Process chart with pre-printed symbols.

in being able to anticipate the critical location of columns, exits, steam lines, stairways, and other relatively immobile building features!

From the standpoint of the flow of materials you are concerned only with the area available to you for actual production operations. At this stage your primary interest is in establishing a basic flow of materials through the plant.

Flow Patterns

Generally, the simplest and straightest pattern of flow will be the most efficient. This objective does not necessarily require a straight line. It usually involves a minimum of backtracking and recrossing of flow lines. This backtracking is not always expensive in itself but its existence is generally an indication that excessive travel distances are involved. It serves as an effective danger signal to higher handling costs.¹

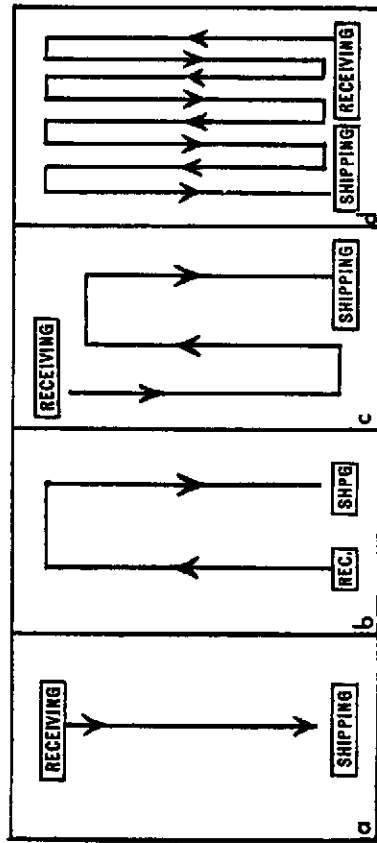


Figure 8.—Patterns of production lines. (a) Straight-line. (b) U-shape. (c) S-shape. (d) Convoluted. (By permission . . . See below.)

Production Lines.—Production lines fall into one of the following patterns:

1. "T" Shape. Materials enter one end of the plant, move through in a straight line and finish at final stores or shipping at the opposite end of the plant. As the number of operations increase the "straight line" will tend to zig-zag but the movement of materials will still be in the same general direction. This shape is usually found in the medium-sized plants rather than in the extremely small (see "U" shape) or extremely large (see "convoluted") plants. (See Fig. 8.)

2. "U" Shape. In this plan, shipping and receiving are located on the same end of the plant. The two areas may be located adjacent to each other and may use the same dock and loading area. Materials in

¹ Adapted from *Layout Planning Techniques*, John R. Immer, 1950. Published by McGraw-Hill Book Co., 330 West 42d Street, New York, N. Y. See chapter 15, *Straight Line Production*.

process flow to the far side of the plant and back again. Although the plan is used for all sizes of plants the extremely small one will usually find it most suitable for its layout. This is because the two functions can be controlled by one man or by one supervisor which is often necessary in the smallest plants.

3. Convoluted pattern. More elaborate layouts which must provide for many workplaces tend to develop into a convoluted or overlapping pattern in order to permit a straight-line flow within a limited area. The simplest flow pattern referred to above tends to develop quickly into this form. In this pattern the shipping and receiving areas may be located at the same side of the plant or on opposite sides—it makes little difference.

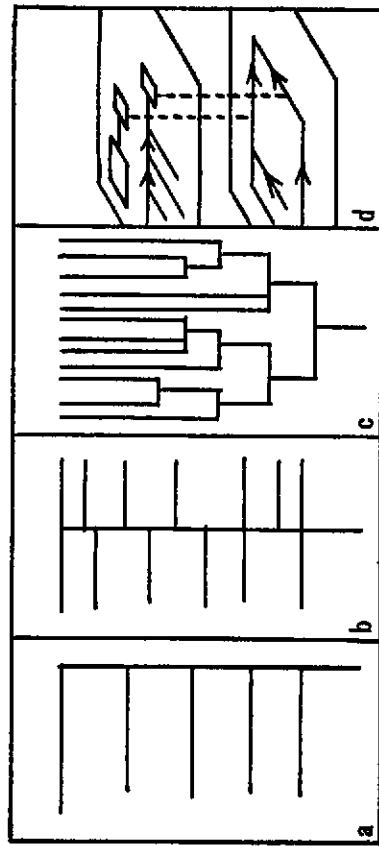


Figure 9.—Patterns of assembly lines. (a) Comb, (b) Tree, (c) Dendritic, (d) Overhead. (By permission from *Layout Planning Techniques*, by John R. Immer. Copyright 1950. McGraw-Hill Book Company, Inc.)

Assembly patterns.—Where a number of parts or assemblies must be brought together the following four types of layout patterns have been developed:

1. Assembly centers. In this type of layout all assembly operations are performed within a fixed area. Historically speaking, this was the first type developed and it is still used for the assembly of extremely large machines and other parts which are expensive or cumbersome to move, such as large generators for power plants, diesel engines and ships. This type is also used where the quantity involved does not justify setting up a progressive assembly line. In a small plant one man frequently performs all the assembly operations on a product within one workplace area. As production increases and others are assigned to the same task you then begin to consider the other types of assembly layout. (See Fig. 9.)

2. Single Comb Pattern. In this and the other patterns of assembly line layout progressive assembly is used. The part being assembled progresses from one assembly station to the next, each worker adding a few

parts or one subassembly. The simplest pattern would consist of a straight line with assembly stations on one side of the line. This main assembly line is kept short by installing completed subassemblies which, in turn, are assembled on side lines which flow into the main line. Thus a comb-shaped pattern is developed.

3. **Double Comb or Tree Pattern.** In this pattern the completed subassemblies feed into the main assembly line from both sides. In the comb pattern the main assembly line is located at one side of the assembly area. As production expands and more of the assembly work must be done on the subassembly lines the layout can be expanded by providing subassembly lines on the other side. Thus a tree-shaped pattern results.

4. **Dendritic Pattern.** As the assembly processes become more complicated even the subassembly lines become crowded. Therefore, subassembly lines are formed which result in a dendritic pattern. This is found only in the most complicated assembly layouts such as for airplanes (in mass production) or automobiles.

Layout of the Workplace

Elements of a Workplace—Tools of Operation Analysis—Space Requirements of Machines—Special Space Requirements

Adequate space must be provided whenever any operation is performed or the worker will not be able to perform his task in an efficient manner. The space should be arranged to permit the easiest and quickest performance of the task. Some companies make detailed methods studies of each workplace. They find that increased production more than compensates for the cost involved in making the study and making the rearrangement indicated.

The Elements of a Workplace

A workplace is a place or area where a definable piece of work is being done. In some cases the term may be synonymous with the operation which one man performs. At other times the workplace area, such as for a hot forging operation, may consist of a furnace, two or more presses and be used by 2 or more persons. Where progressive assembly is used a workplace may consist of a small section of a workbench and the layout will be very simple. Where a product is assembled in one place the workplace may become extremely complicated. There is often much running around looking for parts, plenty of lost motion and a high overall assembly time unless a careful study has been made of the individual operations involved. The positioning of all tools, parts and supplies should be carefully planned so as to minimize the nonassembly time of the assemblers.

The Machine or Working Area.—Where a workplace has a machine, an assembly jig or some other principal piece of equipment this must be considered first in building up the space requirements for the workplace.

Working Space.—The worker must have sufficient space in which to perform all the tasks connected with that particular workplace. If large and unwieldy parts must be handled extra space must be available. On the other hand, space allowed must be kept to a minimum because of the cost of space itself and since a smaller space means less walking for the operator.

Place for Tools.—Tools must be kept in the most convenient place for the operator. Tools used frequently such as nut runners and screw drivers, should be positioned within easy reach. On assembly operations, for example, screw drivers are frequently suspended in front of the operator on spring attachments which pull them back out of the way when released. Every tool should have its place.

Raw Materials, Parts and Assemblies.—All materials needed in the operation should be within easy reaching distance of the operator. Small parts should be grouped in a semi-circular shape in front of the operator. See figure 10. In some bench assembly operations space can be provided on one side for parts and on the other side for the finished assembly.

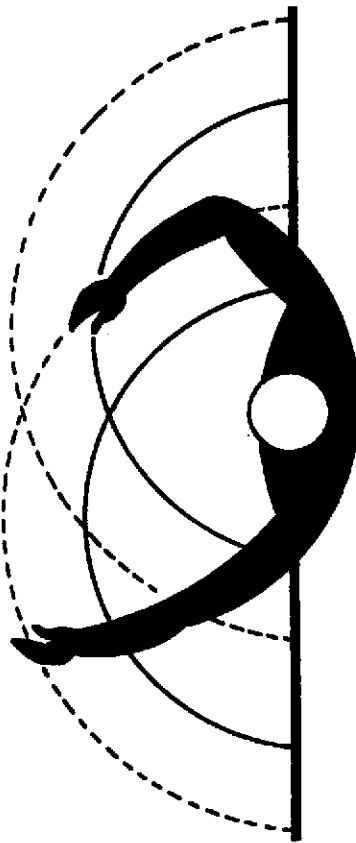


Figure 10.—Limits of reach of operator.

How do these materials get the workplace? What does the worker have to do to get them into position so he can work on them? If they come to him via conveyor (overhead or working height) does he have to stop his other work to remove them from the conveyor? If they come to him on pallets, on skids or in containers does he have to unload them to bring them to a working position?

Enough space must be planned around the machine to permit the spotting of pallets or skids if that system is used. Conveyors should provide for an adequate bank of materials in front of each workplace. These materials should be available to the worker at a normal working height. There are various means for accomplishing this, such as the use of inclined bins or compensating leveling devices.

Space for Finished Product.—All of the above considerations also apply to handling of the finished product. In addition, the finished product may be larger, have a higher degree of finish or include items which require special handling and special packaging and cushioning devices. Storage space for these devices must be provided at the workplace.

Tools of Operation Analysis

In order to get the most efficient method for an operation you have to consider all the elements of the workplace and the motion pattern of the worker (i. e., what he actually does and what motions are required to do each task involved in that operation). Certain methods of analysis have been developed which make it easier to analyze the work done and to present all the pertinent data in an orderly manner so that you can see just what is involved.

Operation Analysis Chart.—This is a handy chart for comparing the work done by the two hands of the operator. Take figure 11 for

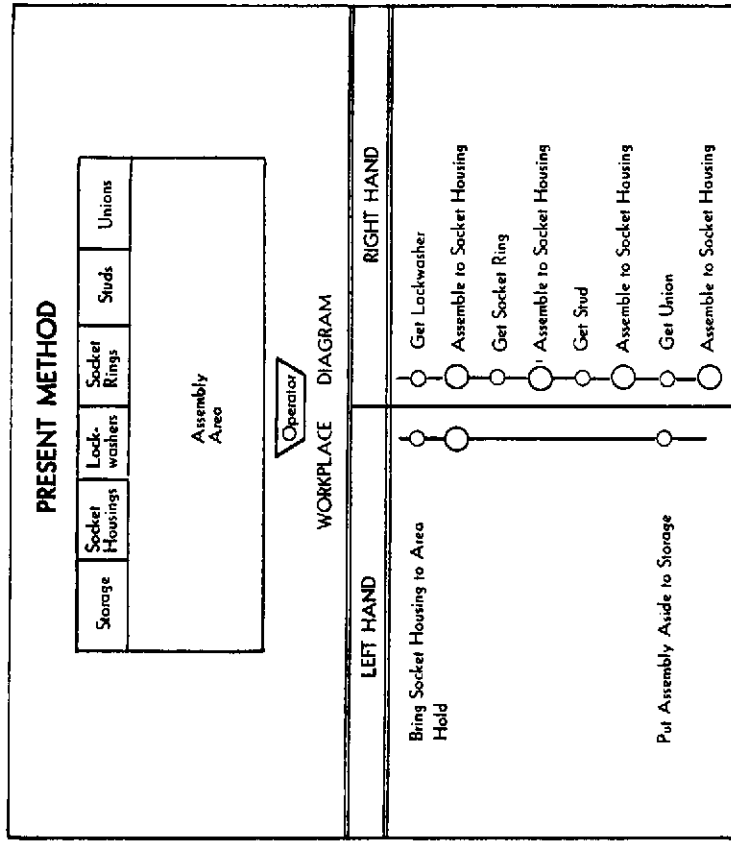


Figure 11.—Operation analysis chart.

example. The first thing you probably notice is that one hand is doing all the work. The left hand is used only for holding the part in place. If you could arrange it so that the left hand performed half of the work you could cut in half the overall time of the operation. Also, the diagram shows how far the operator has to reach for his parts. It takes less time for a man to reach 6 inches than it does for him to reach 18 inches.

Man Activity Chart.—This chart is used to show the activity of a man in relationship to his machine or it can show the activity of several men

who may be involved in the same operation. It is a convenient way of showing how one man can tend two machines or perform other tasks while a machine is working. Its main feature is a time scale which shows the time relationship of the activities of the men and machines being charted.

Workplace Layout.—Often, defects will be spotted immediately just by having the location of worker, machine, tools and materials shown to scale on paper. This shows up distances walked or reached by the operator and defects in locating and positioning the things used for that operation.

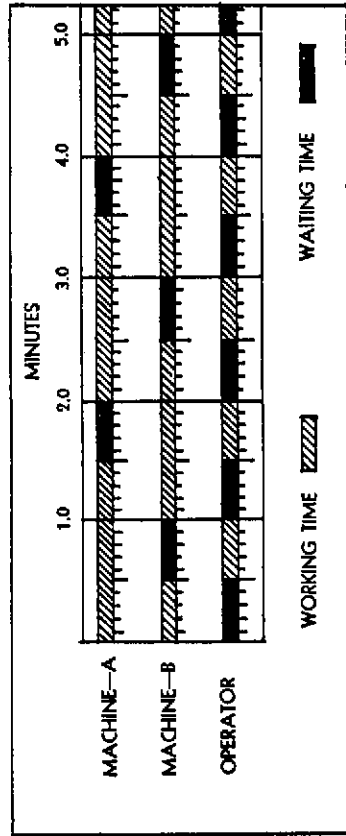


Figure 12.—Man and machine activity chart.

Space Requirements of Machines

Maximum output can be obtained from a machine only by an efficient workplace area. Too much area can be as bad as not having enough. The favorite saying of one layout engineer is: A worker will always use whatever space is allotted to him—in one way or another.

Measurements of the Machine.—The base or mounting of the machine must be measured. Note the location of feet or of other supports by which the machine is to be fastened to the floor. These should be double checked if bolt holes have to be matched up with bolts set in the floor.

Next, note all extensions and overhangs on the machine. Drop a plumb line to the floor for more accurate measurement. Include outermost travel of moving parts such as the bed of a milling machine.

Don't forget to check the height of the machine. Larger machines which are to be moved must be checked for clearance under roof beams and any overhead pipes or other utilities.

Servicing of Machines.—If heavy dies are used the presses must be located so that die handling equipment will have access to them. Most types of machines have access panels to permit inspection of gears and other covered mechanisms. The classic example is the locating of

presses so close to a brick wall that holes had to be knocked into the wall behind each machine to permit access for inspection and maintenance. (Author's note: This might be the most efficient arrangement—except that it wasn't planned that way!)

Operator Space.—This includes all the elbow room needed for the operator plus provision for his tools and any other equipment used in the operation. This space must be carefully planned so as to have everything needed within easy reaching distance and not require any more movement on the part of the operator than absolutely necessary. The properly planned area will also provide for the maximum of safety by isolating dangerous operations or erecting suitable protective devices or walls.

Space for Loading.—Some machines have definite space requirements for loading of raw stock. Automatic screw machines, for example, must be loaded with bar stock which may be 10 to 20 feet long. If these are of the end-loading type this additional free space must be available. If forklift trucks or gooseneck cranes are used for loading they must have access to the magazine area of the machine.

Space requirements of handling equipment must be considered. Such equipment must have access to the working areas of the machine plus space in which to maneuver as required.

Special Space Requirements

In many manufacturing operations there are certain processes which are objectionable to other workers in the plant or which have a deleterious effect upon other processes. For example, a degreasing operation should not be located adjacent to a laboratory or to finish stock storage.

Objectionable Fumes and Noises.—There are a number of operations which have objectionable fumes or other characteristics which require them to be isolated or located so that they will not affect other manufacturing operations. These fumes are not only objectionable but may be hazardous to the health and safety of other workers. They can also cause damage to materials in the later stages of processing or even to finished stock.

Noises and vibrations of heavy machines should be insulated from office areas and from any other areas where precision work or final processing is done. Heavy presses can be mounted on shock absorbers or on special foundations separated from the rest of the structure.

Dangerous Operations.—In every plant there is at least one area which contains danger of fire or explosion which could threaten the entire plant. In addition, there are other areas in which the movement

of equipment or the nature of other operations constitute a hazard to personnel. All lacquers and paints involve highly volatile materials which require special precautions in storage, handling and use. Paint spray operations, under the most favorable conditions, involve hazards to workers and to the plant.

In these areas, special ventilating systems are required to take away fumes and toxic gasses. Fire-fighting equipment, in many instances as designated and as required by State law, will be located nearby. In addition, some of these areas will be protected by automatic sprinkler systems. It is also good planning to have all such areas isolated as much as possible from other parts of the plant. Building codes frequently require a fire wall in such places. Check State and local ordinances and codes thoroughly.

Heat and Utility Requirements.—Some processes have special requirements for vacuum, compressed air, electricity or other utilities. It is often more expensive to move these than it is to move the equipment which uses them. For example, in one plant a brake press was moved into an area formerly used for storage. Making electrical service available to the new area was the most expensive part of the move. Future expansion of processes requiring relocation or extension of utilities should be considered whenever any major changes in layout are made.

Making the Layout

Get Drawing of Buildings and Facilities To Be Used—Use Overlays To Show Areas Available for Production—Use Templates—Scale Models—Critique and Change

As the main function of a new industrial building is to permit the most efficient arrangement of facilities, it is obvious that the building must be constructed around the layout. The success, costwise and productionwise, of recent industrial buildings which have been built around a properly engineered layout has established this as an important planning principle.

Having had some of the ideals of layout shown in earlier chapters (and you should have developed your own ideal layout by this time) you are now ready to adapt that idealized picture to the reality of buildings with certain structural and design limitations. These may prevent you from realizing your ideal layout but with ingenuity and resourcefulness you should be able to make the required modifications and compromises and get a plan that is very similar to "the best plan possible regardless of cost."

Get Drawings of Buildings and Facilities To Be Used

The first step is to get accurate drawings of all buildings and other facilities to be used. Pay particular attention to any structural features which may limit your planning. If multi-floor structures are involved or you have to move any heavy equipment be sure that floor load capacities are checked by a qualified engineer.

Use Construction Plans When Available.—If your building is of recent construction you may be able to get the original construction drawings. These will save you the time and expense of making your own building plans. It is a good idea to check all critical measurements as changes are sometimes made during construction.

Make Your Own Building Plans.—For small plants the most commonly used scale is one-quarter inch to the foot (i. e., one-quarter inch on paper equals 1 foot in the plant). For larger plants a scale of one-eighth inch to the foot may be necessary though it might be preferable to use the one-quarter inch scale and develop the plan in sections. Plot plans may use a scale of 1 inch equals 10, 20, 30, or 60 feet.

A local engineer or architect may be willing to prepare these drawings for you at a nominal charge. Otherwise some member of your own company, with an assistant to help in taking measurements, can make the original tracings necessary.

Check All Utilities.—In almost any change in the location of machines or workplaces some utilities will have to be moved. Time and expense of moving these will be kept to a minimum by having the location and capacity of all utilities determined accurately and completely before you start.

Use Overlays To Show Areas Available for Production

Considerable drafting time can be saved by the use of overlays. These are tracings made over other tracings or drawings of your buildings. Overlays decrease the chance for errors in measurements in making up new sheets or layouts and reduce drafting time for the project.

Master Print on Tracing Paper.—The master tracing of the building can be reproduced on a tracing vellum which can then be used for the drawing in of machines and utilities. This saves the time of reproducing the main structural plans of the building for each drawing.

To Show Production Area.—At this stage your interest is concentrated in the net area available for production purposes. Other areas may be shown in outline only in order to indicate their position relative to the plant as a whole.

To Show Flow Lines.—One overlay might be used to show the flow lines of your existing layout. Others showing the flow lines of proposed layouts will permit an evaluation and comparison of the various proposals. Flow lines of this type should be drawn for each alternative arrangement.

Use Templates

Templates are two-dimensional representations of machines. Their main advantages are that they are quick and cheap to make. They can be made of heavy paper, plastic materials, cardboard or thin pieces of wood, but if they are made in negative (i. e., white on black background) the resulting layout can be photostated so that a record can be obtained without the time and expense of having a draftsman make a drawing. Technical Aid for Small Business No. 37, "Use of Templates and Scale Models in Plant Layout," gives additional pointers on use of templates.

Buy Templates Ready Made.—Several companies in the United States offer for sale templates of all production machines. A sheet of several

templates of each type is available for only a few dollars. This is much less than it would cost you to have a draftsman make the measurements and draw them up. All special equipment, of course, will require special templates. Other template aids, such as preprinted symbols on transparent adhesive tape, are available which will speed up the use of even the special templates.

Show Machine Dimensions.—Much measuring time can be saved by indicating the more important measurements on each template. The limit of travel for the bed of the machine should also be shown by dotted lines.

Show Other Space Requirements.—Other space requirements of a workplace, such as that for handling equipment, room for pallets, etc., can be shown by mounting the template of the machine on a backing of transparent plastic on which these space requirements are shown. Thus, the entire workplace layout can be moved about as a single unit in order to ascertain the best relationship of workplaces.

Plastic Layout Sheets.—One technique utilizes templates made of transparent plastic. The outline of the floor plan is made on another large sheet of transparent material which serves as the working base for the layout. When a desirable arrangement is obtained, a sheet of unexposed blueprint paper is placed under the large plastic sheet. Lights positioned overhead expose the paper which is then removed and developed in the usual manner (but without any further exposure to light). Thus a record is obtained of the layout without the necessity of a draftsman making a drawing.

Photostat Layouts.—A similar method is to make negative templates (white on black) and make a photostat of the arrangement when completed. Background marked in one-fourth inch squares provides scale and measurement.

Scale Models

Scale models provide maximum visualization, a very important feature of any method showing the complexities of a new layout. Scale models have prevented many serious mistakes in new layouts since they show relationships of machines and structures on a reduced scale.

About the only objection to their use is their cost, which shows up immediately in a purchase order. On the other hand, a company may spend many times such a cost in assembling the information shown on scale models but these costs are hidden or contained in the current payroll where they do not appear as such.

Several companies offer scale models of all current types of machine tools and handling equipment made to one-quarter inch to the foot.

However, since they cost only a few dollars a piece a company cannot make them up with the detail generally incorporated for the price usually charged. Even where the use of scale models is not contemplated it has been general experience that more than the cost of the scale models can be spent quickly on drafting time.

Make Scale Models Yourself.—A great amount of detail in the models is frequently unnecessary in order to portray your requirements in a three-dimensional way. Plain blocks of wood, cut to the proper size, may be as effective for some purposes as the most detailed scale models. One television company made blocks for all of its machines and completed the models for less than \$300. This is a good way to try out color schemes too.

Show Other Space Requirements.—By mounting the scale models or blocks on pieces of transparent plastic material the other space requirements of the machine area can be shown and the entire workplace area moved as a single unit.

Photograph the Finished Layout.—One company had the floor of its model marked off in one-inch squares (each representing 4 feet). By making overhead photographs of the finished layout the company could use the enlargements as working instructions to mechanics for moving machines and relocating utilities.

Criticize and Change

There is only one secret to a low-cost change in layout. That is careful planning and detailed checking. Don't be afraid to get critical comments before you make the change. It is cheaper than getting them after the change is made.

Scale Models Permit Critical Examination.—Every production person in the plant of supervisory level or above should have an opportunity to examine and criticize the sections of greatest interest to him. In addition, you will benefit by getting comments from all other members of the company. No one has a monopoly on ideas. Some companies have even mounted scale models in conspicuous places for examination by all the workers. Pencils and special blanks were provided so the workers would submit their comments.

Make Cost Estimates for Each Layout.—You probably will have to consider a number of alternate plans or arrangements. In addition to comparing the merits and disadvantages of each you should prepare cost estimates of making the change and of the production costs under each arrangement.

Eliminate "Bugs" in Plan Before You Move a Machine.—You can expect a certain number of "bugs" in any changes or in any new layout.

These are little (or big) things which were not considered in the plan but which affect its operation. Examples: careful arrangement of tools for easy reach by right-handed person when the operator was left handed; insufficient allowance for overhang of stock on a pallet; lack of storage for unbalanced operations or where the operator cannot get to certain parts of the machine for adjustments.

These are just a few reasons for getting critical comments from every worker in the plant before a drastic change is made. The operator of a machine may know of some element in the operations which even the supervisor doesn't realize exists. You don't have to take his advice but it might save you considerable money if you do.

Planning the Move

Allow Sufficient Lead Time—Itemize Structural Changes—Itemize Requirements for Electricity, Water, Waste and Oil Supply—Itemize All Machines To Be Moved—Plan Move So as Not To Interfere With Production—Prepare Master Schedule to Include All Details of the Move

From the working drawings completed as the last step in the previous chapter you have obtained a picture of what is to be done; the next step is how to accomplish it. This consists primarily of breaking the changes down into specific machines to be moved, the specific structural changes involved and the listing of the various changes that have to be made in the utilities.

New machines and equipment which have long delivery periods should be ordered ahead of the change-over so as to be available when needed. Any structural additions to the plant should be planned so that they can be completed in advance of all layout changes which affect production.

Allow Sufficient Lead Time

Extensive construction involves considerable lead time. While the normal lead time may be reduced, the cost in dollars, over-time, worry and anxiety on deadlines and other emergency items may be considerably increased. Usually it is not worth it unless there are compelling reasons for rushing completion.

After you select your architect, some time will be required to develop your ideas into working drawings and specifications. Plans will have to be sent to several contractors and they will require time in which to work up their bids. After the construction contract is awarded the contractor is generally given a certain period of time in which to finish his work. Inclement weather and other causes beyond his control may extend this time.

Provide Plans and Specifications.—Of course, any extensive changes and alterations will have to be based on detailed plans and specifications. In many industrial areas these must be approved in advance by the appropriate planning and building officials. In any case, the need for building permits and the satisfaction of all code requirements must be checked before any work is done.

Itemize Structural Changes

If no general contract is awarded you will want to prepare a list of the specific work to be done by each trade or by your own personnel. For example, detailed work sheets should be prepared for the brick masons, carpenters and others. If you award separate contracts for this work, this will be necessary in drawing up the contract papers and in getting bids on the work. A casual order such as "Knock a hole in the wall," may require relocation of utilities, may interfere with other aspects of the layout or may be a violation of building codes if not carefully considered. From a cost standpoint these small structural changes can quickly become very expensive unless controlled and done altogether as part of a schedule.

Itemize Requirements for Electricity, Water, Waste and Oil Supply

Your working drawings should indicate the new location of all new utilities, all utilities to be taken out or disconnected and any other changes to existing utilities. This also applies to electrical lines, water lines, waste pipes or other waste or drainage facilities and special lines of piping for steam, compressed air, vacuum, oil, paint, or any others used in your plant. In addition, there should be an itemized list of such changes prepared for each utility.

Itemize All Machines To Be Moved

Make a list which includes each machine to be moved, its present location and the new location. If the move is to be closely integrated with production you will want to prepare a priority schedule. For example, if you have two milling machines you might want to have the first one operating in its new location before you take the second one out of production. Also, you might want to indicate the type of utilities and other changes involved with each machine.

Plan Move So as Not To Seriously Interfere With Production

The loss in production caused by having machines out of use during a move is a substantial cost of a new layout which is frequently overlooked. Upset delivery schedules and customer dissatisfaction may result unless advance planning provides for this loss to be made up in one way or another.

Produce Ahead On Each Machine To Be Moved.—There are a number of ways by which you can move your machines without interfering with normal production schedules. One of them is to advance the schedule on one machine so that a surplus is built up of sufficient size to bridge the gap until the machine can be operating in its new location.

Move After Regular Working Hours.—In some cases it is feasible to make all major moves after regular working hours, on week-ends or when the plant is shut down for vacations. There are disadvantages to this, however. Overtime payments may increase the cost of the move far beyond the expense and inconvenience of a conventional daytime move. There are also advantages to moving during regular working hours. Many times questions arise about some operating aspects of the machine which have to be answered before the move can be completed. With the best laid plans there still remain certain decisions which have to be made on the spot. These can be done best by having regular supervisory personnel available during the move.

Prepare Master Schedule To Include All Details of the Move

The master schedule will include the significant dates for all the planning, the preparation of blueprints and specifications, the selection of the contractor, the respective target dates, each phase of actual movement of the new equipment and the dates for resumption of production activities in the new layout.

Supporting this master schedule will be other more detailed schedules according to the size and complexity of the changeover. If a number of machines are to be moved, the movement of each machine should be scheduled. For example, machine xx is scheduled to be moved on October 6. All necessary utilities in the new location will have to be completed by that time. This date can also be considered in developing production schedules for that immediate period.

Sources of Information

Books—Technical Magazines

There are many sources of information on layout and on other production problems which relate to and affect layout. The list of sources may look rather formidable and you may not like the idea of having to go through all of them. This is not necessary but you should reconcile yourself to the necessity for obtaining an understanding of layout and how it affects the various costs and operating aspects of your business. Most of the actual work probably will be done by your own engineers or by outside consultants brought in for the purpose, but you will still have the responsibility for making the final decisions which will be vital to the future of your business.

Books

The mere sight of a book has been known to cause a busy executive to turn pale. Some of those recommended are fairly large and there is a great mass of information and guidance in them for you. Always keep this in mind, *You don't have to read the entire book!* Sometimes, just a few minutes examination will give you ideas and clues to solutions to specific problems.

GENERAL MANAGEMENT BOOKS.—These are general reference books on industrial management and it is probable that you have most of them.

Manufacturing Management, by Franklin G. Moore. 3d ed. 1953. \$11.35.

Richard D. Irwin, Inc., Homewood, Ill.

Principles of Management, by George R. Terry. 3d ed. 1960. \$9.65

Richard D. Irwin, Inc.

Production Handbook, by Gordon B. Carson. 2d ed. 1958. \$16.00. Ronald Press, 15 East 26th St., New York, N.Y.

LAYOUT AND MATERIALS HANDLING BOOKS.—The books listed will provide you with a background of principles, methods and specific planning ideas.

Layout Planning Techniques, by John R. Immer. 1950. \$7.95. McGraw-Hill Book Co., 330 West 42d St., New York, N.Y.

Plant Layout, by Ruddell Reed, Jr. 1961. \$10.65. Richard D. Irwin, Inc., Homewood, Ill.

Plant Layout and Design, by James M. Moore. 1962. \$10.95. The Macmillan Co., 60 Fifth Ave., New York, N.Y.

Plant Layout and Materials Handling, by J. A. Apple. 2d ed. 1963. \$9.00. Ronald Press, 15 East 26th St., New York, N.Y.

Practical Plant Layout, by Richard Muther. 1955. \$9.75. McGraw-Hill Book Co., 330 West 42d St., New York, N.Y.

Technical Magazines

The greatest source of information and ideas relative to your operations is the technical magazines. Currently, they have many articles and sections of special interest to you. These articles show the use of equipment you might use, show layouts other manufacturers have developed and in many cases comprise a technically prepared case study of operations similar to your own. There is only one word of warning. Analyze each situation described in terms of your own needs—what worked fine for someone else might not be the best answer to your own requirements.

MAGAZINE AND JOURNALS OF YOUR TRADE.—There is at least one trade or professional journal or publication for almost every type of business in the United States no matter how specialized it is. In addition, there are journals for each of the major processes you utilize in your operations. In many cases, the problem is not that of having information but one of the plant manager finding the time to look at the material he receives. Larger companies have librarians who peruse all incoming magazines and mark pertinent articles for the attention of the individuals most interested. Many smaller plants have the secretary do the same thing.

MANAGEMENT PUBLICATIONS.—You can subscribe to at least one magazine of a general managerial nature. The techniques described each month will work as successfully for you as for a different type of plant. The following will be found valuable for this purpose:

Factory. McGraw-Hill Publishing Co., Inc., 330 West 42d St., New York, N.Y.

Plant Engineering. Technical Publishing Co., 308 E. James St., Barrington, Ill.

Dun's Review and Modern Industry. Dun and Bradstreet Publications, Inc., 99 Church St., New York, N.Y.

MATERIALS HANDLING PUBLICATIONS.—There are no publications devoted exclusively to layout but those publications devoted to the use of materials handling equipment are most closely concerned with layout problems.

Materials Handling Engineering. The Industrial Publishing Group, 812 Huron Road, Cleveland, Ohio.

Modern Materials Handling. Cahners Publishing Co., Inc., 221 Columbus Ave., Boston, Mass.

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- IMPROVING YOUR PRODUCT'S VALUE
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No. 85

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ANALYZING YOUR COST OF MARKETING

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SUMMARY

You may be getting less for your marketing dollar than you think. Greatly increased efficiency and dramatic cost reductions often result from marketing cost analysis. Briefly stated, this term means figuring out the unit costs of marketing and comparing them with related sales and gross margins for different segments of your business. One manufacturer, for example, learned that 98 percent of his sales were coming from only 22 percent of his customers, and that, as a result, more than three-quarters of his marketing efforts were wasted.

In simple form, marketing cost studies can be made by the boss himself from company records. Among the ones commonly used are names and locations of customers, types of customers' businesses, orders from each customer in a given period, and sales to each customer in the same period. In more advanced forms, the analysis of marketing costs requires accounting skills and supporting records in order to be able to classify costs correctly on a functional basis, and to allocate functional cost groups to the appropriate selling jobs.

Nevertheless, a great deal of flexibility exists with regard to how accurate and how frequent marketing cost studies should be in a particular firm. An accountant, auditor, or management engineer can help in making a sound decision. The real end-products of marketing cost analysis are the guideposts it gives on what to do in the future.

In most enterprises, a small proportion of the territories, customers, orders, or products are responsible for the overwhelming bulk of the profits. By the same token, a very large proportion of the money spent on marketing efforts is wasted. One manufacturer, for example, found that 78 percent of his customers yielded only slightly more than 2 percent of his volume. In another concern, 48 percent of the number of orders produced only 5 percent of sales. In yet another firm, 46 percent of the number of products manufactured accounted for only 3 percent of the income. And in a fourth business, 59 percent of the salesmen's calls were made on customers from whom only 12 percent of the sales were obtained. This sort of thing could be happening in your company.

MISPLACED MARKETING EFFORT

In the typical small business, selling, advertising, and other marketing efforts are expended in proportion to the *number* of customers, *number* of orders, and so on, rather than in proportion to actual or potential sales. This, of course, means that there is a disproportionate spreading of marketing efforts if you judge by the results.

There are many reasons why this disproportionate spreading is common. Most concerns don't know the facts. They have little idea of how much of their marketing effort goes to bring in only a minor share of sales. Why? Because in practice it is often difficult to relate unit sales to unit marketing costs. Most small firms, therefore, continue to measure the success of their marketing efforts solely by total dollar sales. Yet experience shows that, frequently, a large number of sales made by an individual firm are unprofitable even though the business as a whole shows a profit.

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A FUNDAMENTAL APPROACH

Marketing cost analysis is a key to locating unprofitable sales and to determining the losses for which disproportionate spreading of marketing effort is responsible. In a simple form, it can be made from five basic company records: (1) names and locations of customers, (2) types of businesses of customers, (3) number of each customer's orders in a given period, (4) total sales to each customer in the same period, and (5) total sales and gross profits on each product in your line. Most small plants will not find it hard to get this information.

Knowing these facts, you can shift some promotional emphasis from unprofitable to profitable accounts. Sometimes, for instance, salesman should be told to call regularly on major accounts only, with less productive accounts handled by mail or turned over to wholesalers. At other times, it may be merely a matter of re-routing an existing sales force so that the men can spend more time with the best customers. Or perhaps several territories may be consolidated and covered more intensively.

This shifting of marketing effort to bring it in line with potential profit need not—and does not—result in a smaller total sales volume. Quite the contrary. Money and effort saved in an unprofitable marketing operation can be used where it will pay off in greater volume and profit.

An actual case will serve to illustrate these points. The "Cranston Company" (name disguised) manufactured industrial products which it sold to mill

supply houses through five salesmen, each serving a separate territory. Total net sales for 1956 amounted to \$1,193,000. Compensation and expenses of the salesmen came to \$99,000. This yielded a direct selling expense ratio of 8.3 percent.

These figures provide some interesting information, but fail to disclose several important facts. A much clearer picture of actual conditions is provided when results for each territory are segregated and compared (see figures 1 and 2).

Clearly, conditions in sales areas "D" and "E" are not good. Volume in both cases is small and marketing costs are high. Therefore, it would seem likely that reduced costs and increased sales and profits could be produced by eliminating territories "D" and "E" and reassigning those two salesmen. If desired, of course, additional information could be developed as to why sales in these regions were so low and why it was so expensive to cover them.

A similar type of analysis, of course, could be made using classes of products or customers instead of salesmen. (Simplified procedures for assembling and analyzing the necessary data are illustrated in *Business Service Bulletin* No. 39, "Wholesaler's Customer Analysis," available from the U. S. Department of Commerce, Washington 25, D. C., and its field offices.)

A MORE EXTENSIVE APPROACH

For firms with greater resources in recordkeeping and accounting, a more extensive approach to marketing cost analysis is available. While these

Figure 1: Comparative Performance of Salesmen

Sales Area	Total Calls	Total Orders	Sale/Call Ratio	Sales by Salesman	Av. Salesman Order	Total Customers
A	1,900	1,140	60.0%	\$456,000	\$400	195
B	1,500	1,000	66.7%	360,000	360	160
C	1,400	700	50.0%	280,000	400	140
D	1,030	279	27.1%	66,000	239	60
E	820	165	20.1%	31,000	187	50
	6,650	3,784	44.8%	\$1,193,000	\$317	605

Figure 2: Comparative Cost of Salesmen

Sales Area	Annual Compensation	Expense Payments	Total Salesman Cost	Sales Produced	Cost/Sales Ratio
A	\$11,400	\$5,600	\$17,000	\$456,000	3.7%
B	10,800	7,200	18,000	360,000	5.0%
C	10,200	5,800	16,000	280,000	5.7%
D	9,600	12,400	22,000	66,000	33.3%
E	10,000	16,000	26,000	31,000	83.8%
	\$52,000	\$47,000	\$99,000	\$1,193,000	8.3%

refinements are more complex than the technique described above, they also yield better results. But they are not something to be used casually by beginners. Nevertheless, small plant operators who employ qualified accountants of their own, or who engage outside auditors periodically, would do well to know about the broader possibilities.

A brief description of some of the more advanced marketing cost analysis methods is presented below. Although a complete, detailed discussion of the philosophy and procedures involved, would be too lengthy and technical for this Aid, two basic principles can be readily summarized:

● **Classifying Costs.** The marketing expenses of a business, which are usually entered in the accounting records on a "natural" expense basis, are reclassified into "functional" cost groups. This brings together all the direct and indirect costs associated with each marketing activity performed by that company. For example, in a natural classification, all expenditures for supplies are grouped together; but with a functional breakdown, the costs of supplies are segregated according to the activity which used them, such as advertising, shipping, and so on.

● **Allocating Costs.** These functional cost groups are then allocated to territories, to products, to customers, and to any other desired segments of sales. Allocations are based either on known facts or on the product and customer characteristics which control the size of these costs (see figure 3).

Having your records set up to yield a functional classification for your firm's marketing costs is an indispensable step. It has a number of advantages even though you make no further analysis. Remember, of course, that your functional breakdown of

marketing costs should parallel the actual organization of your business and the responsibilities for expenditure. Once you get this done, your classification itself will help in controlling marketing expenses just by revealing how money is being spent.

DEVELOPING A CLASSIFICATION BASIS

The particular functional classification to be used by *your firm* must be developed by a qualified accountant through a detailed study of *your specific marketing activities*. If you make but one product and sell your entire output to a single customer, you can assign every marketing cost you have to that product and customer. In reality, however, things are usually not that simple. Most companies serve diverse markets and produce a number of products. Hence, they have fairly complex marketing organizations and engage in a considerable range of marketing activities. For that reason, your company will have to design its own functional classification to reflect local conditions.

It is important that the breakdown you adopt be sufficiently detailed to ensure that all work performed in any one function will be essentially the same. When this is done, you will find it easier to assign an entire functional-cost group to the appropriate segment of sales. However, you will often find it necessary to split up many natural-expense items (as they would appear in the ordinary accounting records) among several functional-cost groups. The reason is that they relate to more than one functional activity. Natural-expense items are distributed to functional-cost groups by means of time study, space measurements, actual counts, managerial estimates, and other methods.

Figure 3: Functional Cost Groups and Bases of Allocation to Commodities and Customers.

Functional-cost groups	Bases of Allocation	
	To commodities	To customers
1. Investment in finished goods	Average inventory value	(Not allocated)
2. Storage of finished goods	Floor space occupies	(Not allocated)
3. Inventory control, finished goods	No. of invoice lines	(Not allocated)
4. Order assembly (handling)	No. of standard handling units	No. of invoice lines
5. Packing and Shipping	Weight or No. of shipping units	Weight or number of shipping units
6. Transportation	Weight or No. of shipping units	Weight or number of shipping units
7. Selling	Time studies	No. of sales calls
8. Advertising	Cost of space, etc. of specific product advertising	Cost of space, etc. of specific customer advertising
9. Order entry	No. of invoice lines	No. of orders
10. Billing	No. of invoice lines	No. of invoice lines
11. Credit extension	(Not allocated)	Average amount outstanding
12. Accounts receivable	(Not allocated)	No. of invoices posted

ALLOCATING COSTS

After your indirect marketing costs have been classified by functions, they are allocated according to utilization by products, customers, and other segments of sales activities giving rise to these costs. The procedure followed is to charge each given segment of sales with the cost of the portion of marketing effort for which it is responsible. You determine for each functional-cost group (such as "order entry"), the factor which tends to increase or decrease it. For example, order entry costs would be allocated to customers on the basis of the percentage of the total number of orders for which each customer is responsible.

Generally speaking, functional-cost groups should be allocated to territories, products, or customers only when there are clear and direct relationships between those territories, products, or customers and the particular expenses. For instance, a product should bear allocated costs only when those costs are significantly influenced by changes in that product's sales volume.

STUDYING VARIOUS GROUPINGS

You will probably find it useful to have marketing cost analyses made for various groupings of customers and products. For example, the accounts of numerous individual customers may be added together to show sales, gross margin, expenses, and relative profits for sales territories, for channels of distribution, for types of dealers, and for customers grouped by size. It is also often desirable to make various product groupings.

CHECKING YOUR ACCOUNTING APPROACH

Your accounting procedures have to be designed to provide detailed figures on sales, cost of sales, and gross margin. Accurate records must be kept on what goods were sold, to whom they were sold, when, where, by whom, and under what circumstances. Manual handling of such detailed reports, if done on a current basis, will often involve prohibitive cost. However, there are machines ranging from simple devices to complex computers which can be hired as to speed up figure work and produce results at relatively low cost.

Your accounting setup must also provide sufficiently detailed data for making allocations. Such information is needed for each customer or group of customers, and for each product or product group. Among the facts required are the number of orders,

the number of calls made, the number of salesmen, the value of the average inventory, and the space used in storage. You have to collect figures for each of these and for appropriate other factors on each product or product group and on each customer or customer group.

If possible, make sure that the accounting system you use for classifying marketing expenditures provides for the direct accumulation of expenses into functional cost groups. Your increased overhead costs in preparing these classifications at the start should be more than offset by savings resulting from improved cost control. In addition, you will get the advantage of easier cost analysis, too.

Because of the expense of collecting all the information you need, you will have to decide whether to use simplified methods yielding only fair accuracy or detailed methods yielding maximum accuracy. A great deal of flexibility exists. Within quite broad limits, you can obtain highly useful and practical results for management purposes. Your accountant, auditor, or management engineer can help you in making a sound choice.

FOR FURTHER INFORMATION

Businessmen who are interested in exploring further the subject of marketing cost analysis may find helpful the books mentioned below. Other publications, of course, could have been cited. However, in keeping with the policy of the series this listing is necessarily brief and selective. No slight in intended toward authors whose works are not included.

How Manufacturers Reduce Their Distribution Costs, by C. H. Sevin. U. S. Department of Commerce. 1948. Sold by Superintendent of Documents, Washington 25, D. C. 45 cents.

Making Your Sales Figures Talk, by C. W. Smith. Small Business Administration. 1953. Sold by Superintendent of Documents, Washington 25, D. C. 20 cents.

Distribution Costs, by J. B. Heckert and R. B. Miner. The Ronald Press Company, 15 East 25th Street, New York 10, N. Y. 1953. \$6.50.

Business Management Handbook, by J. K. Lasser. McGraw-Hill Book Co., Inc. 330 West 42nd Street, New York 36, N. Y. 1954. \$8.50.

Elements of Marketing, by P. D. Converse, H. W. Huegy, and R. V. Mitchell. Prentice-Hall, Inc., Englewood Cliffs, N. J. 5th edition. 1952. \$6.50.

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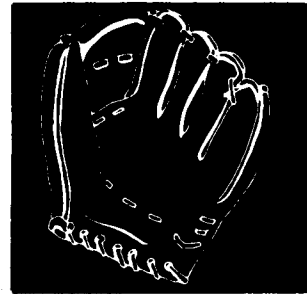
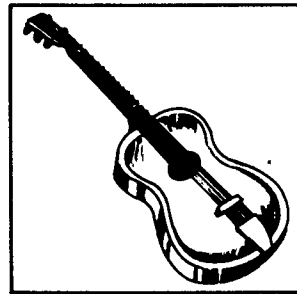
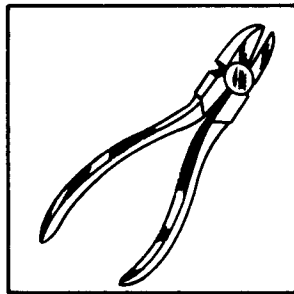
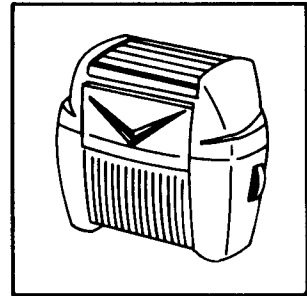
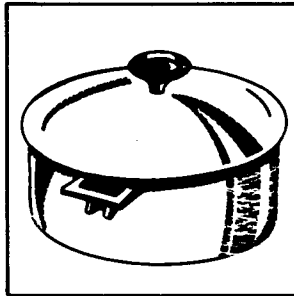
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USING CENSUS DATA IN SMALL PLANT MARKETING



By Solomon Dutka, President Audits and Surveys Inc., New York, N.Y.

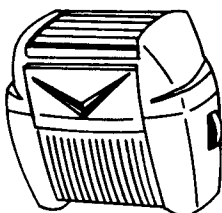
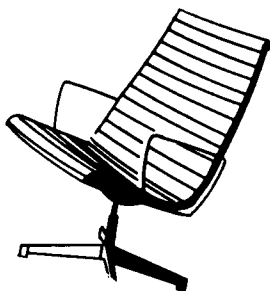
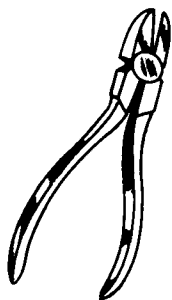
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SUMMARY

The statistics published by the Bureau of the Census concern the economic lives of people. These facts and figures are valuable marketing information for the owner-manager of a small plant.

While he will not find ready-made answers in the Census data, the owner-manager can find clues which will be useful in working out solutions to his particular problems—whether marketing consumer or industrial products.

This *Aid* stresses consumer products. However, the procedure for using Census data—breaking the marketing problem down into questions—is similar for industrial products. The *Aid* offers examples of how small manufacturers use Census statistics.



“I know I need it, but I can’t afford it,” is the way many owner-managers of manufacturing companies feel about marketing research.

They are right, in a way. Often their companies cannot afford complex studies to gather a wide range of information about markets, potential markets, their products, and new products.

Yet, small companies are the ones that often need marketing information in order to compete effectively. When the money an owner-manager can spend for product development and marketing is limited, he has to make every dollar count. For example, he cannot afford to spend a thousand dollars on advertising that goes to wrong people—ones who are only marginal prospects for his products.

In using every marketing dollar to the best advantage, the owner-manager of a small manufacturing company may be overlooking a useful source of information. It is the United States Bureau of the Census.

The statistics which this Agency gathers are a valuable natural resource. In fact, the information concerns your greatest resource for marketing—the people of the United States and their economic activities.

By knowing and applying the appropriate statistics to your problems, you can market your products to a better advantage. For example, you might use Census information to stretch your advertising dollars, to reduce the risk of new product introduction, or to improve the accuracy of marketing decisions.

KINDS OF DATA

The kinds of Census data the owner-manager uses depends on his products and the types of markets he serves. If he sells an industrial product, for example, valves, he would need information about manufacturers. On the other hand, if he makes a consumer product, such as neckties, he would need information about people—especially about men.

The various kinds of Census statistics are listed in the section, "Getting Census Reports," on page 7 of this *Aid*.

Whether the data are about manufacturing, mining, population, or housing, the pattern is the same for using the information in marketing research. In this *Aid*, the Census of Population and the Census of Housing are used as examples.

- *Population and Housing.* The Census of Population and the Census of Housing provide information about: sex, race, number of persons in household; number and types of rooms; water availability; method of house heating; availability of telephones; presence of clothes washer, dryer, television, radio, air conditioner; and number of automobiles, and other items. The Bureau gathers this information every 10 years and updates it with periodic estimates. The next Census will be in 1970.

The reports are issued by area and subject and are sold by the Superintendent of Documents, Washington, D.C. 20402. For example, the population report for the State of Missouri consists of 653 pages and is titled *Census of Population: 1960, Volume 1, Characteristics of the Population, Part 27, Missouri*. The price is \$5.00.

The summary report on the Nation's population is titled *Census of Population: 1960, Volume 1, Characteristics of the Population, Part A, Number of Inhabitants*. This book sells for \$8.75 and includes separate chapters of detailed tables for each of the 50 States, the District of Columbia, Puerto Rico, Guam, the Virgin Islands, American Samoa, and the Canal Zone.

The housing report for Missouri, for example, consists of 178 pages and is titled *U.S. Census of Housing: 1960, Volume 1, States and Small Areas, Missouri*. The price is \$1.25.

- *Business.* The Bureau also provides information on retail, wholesale, and selected services in its *Census of Business*. These reports present data, such as sales size of establishment, employment size of establishment, and sales by merchandise lines. For additional information, see the *Bureau of Census Catalog*, listed in "For Further Information" on page 8 of this *Aid*.

In addition, the Bureau of the Census, for a fee, will tabulate special data to meet a company's individual needs. The policy on such services is described in the *Bureau of Census Catalog*.

INTERPRETATION STARTS WITH QUESTIONS

In applying Census statistics to your market planning, you should keep in mind that the Bureau of the Census compiles descriptive data. You have to do the interpreting.

Interpretation starts with questions. The pieces of Census information you use depends on the questions to which you need answers. Suppose, for example, that an owner-manager wants to set up several new sales territories.

His question is: What geographical areas contain the best prospects? In working out an answer to this type of question, data extracted directly from the Census tables can be immediately useful. You can use information such as income, family size, and occupation, for example. This type of information is reported for areas as small as "census tracts" in 180 metropolitan regions. A census tract consists of about 4-5,000 persons.

A limited amount of information is provided for each block in cities of 50,000 or more inhabitants. This information includes the population count, condition of housing unit, plumbing facilities available, tenure, value of owner-occupied units, rent of rented units, color of occupants, and units with 1.01 or more persons per room.

A sales territory may be set up by using multiples of these basic units, such as city blocks. This arrangement is particularly valuable for a door-to-door sales force.

Once he has determined where to establish his territories, the sales manager can use Census data as an aid to setting equitable sales quotas. A study of detailed Census reports of employment levels, income, and population density for each unit of a salesman's territory can show the potential or lack of it for each unit.

If your type of product is actually covered in the Census, you can use the information without translating it. For example, the Census of Housing carries statistics on home appliances, such as, washing machines, and freezers.

However, when there are no Census figures on your type of product, you have to use related data. By assuming that areas with heavy concentrations of a certain product are also good prospects for a similar type product, you often make valid inferences about your market potential.

EXAMPLES OF USE

The experience of a small manufacturer of automobile dashboard accessories provides an example of using Census figures as an aid in adding new sales territories. "Where are the high concentrations of automobiles?" was his first question.

When he had the answer, he then looked to see which of the geographical areas under consideration had concentrations of auto supply stores and variety stores—the kinds of retail outlets that did the best job with his products in his established areas. He was able to find this information in the *Census of Business*.

Another example of relating Census data to an individual company's problem is the market research done by a manufacturer of paneling and room accessories. His company had franchise arrangements with local contractors who used the materials to convert basements into finished rooms.

To widen his market, he first had to find an answer to: What areas will be best for franchises? The Census statistics on housing helped him to learn: (1) the type of homes that predominated in a particular area, and (2) whether they were built on concrete slabs or with a full basement.

He quickly ruled out the areas where the houses had no basements.

His next question was: Can people in the particular area afford to finish off their basement? He examined data on family income and the number of children. Then he examined the statistics on car ownership. He looked for families that owned more than one car—an indication that they had discretionary income which might be spent for home improvement. As a result of his study of Census data, he was able to grant franchises in areas which had a good market potential.

Census data can be useful also for keeping a company in step with its customers. One apparel manufacturer, for example, studied Census statistics for possible trends that might affect his business. When the figures showed that the population in the areas where he was selling had a high concentration of teenagers and young adults, he added new styles directed at these groups.

ADVERTISING

The owner-manager of a small plant can also use Census data to help control his advertising budget. The fact that the sales of many small plants are regional rather than national makes the advertising and promotional job easier.

Even if you sell in the national market, the analysis of individual regions can be useful in plan-

ning advertising. Looking at the regions that make up the national market should indicate whether you need to design different sales strategies and advertising campaigns for each area.

Some national magazines operate on production schedules that allow advertising content to vary by type of market. In addition, spot radio and television commercials can be changed to pinpoint specific areas with tailor-made sales messages.

Thus stretching your advertising dollars becomes a matter of answering two questions: (1) In what areas should I advertise? and (2) Which media reaches the right audience—the one that contains my customers and potential customers? The answer to either question depends on the audience composition in each area.

The Census data can detail an audience profile in terms of buying power, education level, occupation, and other factors bearing on the selection and tailoring of a marketing approach. The information is available from the Government at low cost. With these facts, you can more accurately select media and relate advertising potential to cost.

An example is seen in the experience of a cosmetics company which markets its products in several sections of the Country. Its owner-manager uses Census data to keep track of the age groupings of the female population. From the Census figures, he learns what groups are prospects for certain of his products and where these groups are located. He then places his advertising in media which are used by members of the groups. He also sees that sales outlets are stocked with the advertised products.

NEW PRODUCT INTRODUCTION

When developing and introducing new products, the owner-manager can also use Census data in two ways. First, new products may be suggested because the statistics reflect the living patterns of consumers. Second, the statistics may be used in connection with marketing testing. The Census supplies demographic characteristics, such as age, sex, color, and marital status, which can be helpful in selecting test market cities.

The experience of a small meat packing plant provides an example of using Census data in new product development. Its owner-manager learned that the statistics for his sales area showed an impressive number of home freezers. In these, he saw a new market—cuts of meat sold in bulk lots for storage in home freezers.

There is no "typical" test city in which a new product can be put on sale to measure consumer reaction. The problem is to select a city or area

that will yield the information you need for deciding whether to go ahead with the product or drop it.

Because they indicate the characteristics of a city's population, Census reports can be used to help pick a test city or cities. Along with these data, you use information which you have about your product distribution and information about the available advertising media.

UPDATE WHEN POSSIBLE

In using the Bureau of Census reports, it is important to regard them as basic guides and update them with other information whenever possible. The vital thing in marketing is current, or as current as possible, information.

To make sure that you have it, you should consult sources of marketing information such as those listed in the "For Further Information" section of this *Aid*. In some cases, the owner-manager can update Census information by conducting his own survey. For example, one builder of houses believes that most people buy homes valued at approximately 2½ times their annual salary. Before he decides on the type of houses he will build in a particular area, he brings the Census data up-to-date by making his own survey of the income level and the prices of homes in that area.

GETTING CENSUS REPORTS

The Bureau of the Census issues many publications to make available the information that is gathered in the following censuses:

- POPULATION and HOUSING Censuses—taken every 10th year ending in "0", example 1960.
- GOVERNMENT Census—taken every 5th year ending in "2" and "7", example 1957, 1962. (This Census provides data on the characteristics and functions of State and local government.)
- BUSINESS, MANUFACTURES, and MINERAL INDUSTRIES Censuses—taken every 5th year. Beginning in 1967, in years ending in "2" and "7".
- AGRICULTURE Census—taken every 5th year ending in "4" and "9", example 1959, 1964.

In addition, the Bureau makes a monthly report of business conditions in a publication called *Business Cycle Development*.

The publications are listed under the following headings in the Bureau's catalog: General, Agriculture, Construction and Housing, Distribution and Services, Foreign Trade, Geography, Governments, Manufacturing and Mineral Industries, Population, and Transportation. The catalog indexes the reports by subjects. A special section describes the Census

data files and unpublished materials which can be used for special tabulations which are offered on an annual subscription basis.

The catalog is issued quarterly, with monthly supplements, available from the Superintendent of Documents, Washington, D.C. 20402. Ask for *Bureau of the Census Catalog*. Annual subscription, \$2.25.

FOR FURTHER INFORMATION

Businessmen who wish to explore further the subject of using Census data may consult the following references. This list is necessarily brief and selective. However, no slight is intended towards authors whose works are not mentioned.

THE EDITOR & PUBLISHER MARKET GUIDE. Published annually in September. \$10. Editor & Publisher Co., 850 Third Avenue, New York, N.Y. 10022.

SURVEY OF BUYING POWER. Published annually in June. \$6. Sales Management Inc., 630 Third Avenue, New York, N.Y. 10017.

THE STRATEGY OF MARKETING RESEARCH by Chester R. Wasson. 1964. \$8.50. Appleton-Century-Crofts, 440 Park Avenue, S., New York, N.Y. 10016.

JOURNAL OF MARKETING. Quarterly. \$2.50 per copy, \$8. per year. Recent issues of the publication which is published by The American Marketing Association, 230 North Michigan Avenue, Chicago, Ill. 60601.

BUREAU OF THE CENSUS CATALOG: JANUARY-SEPTEMBER 1966. Available for 45 cents from the Superintendent of Documents, Washington, D.C. 20402.

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Selecting Marketing Research Services

By William C. Gordon, Jr.

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Marketing research can be a valuable management tool for small firms. In today's conditions, it can be virtually a necessity for a business if it is to prosper and grow. But many owners and managers lack adequate knowledge of what marketing research services there are, and what they can do. They don't know how to select these services. Most of the time, a permanent, internal staff of experts is out of the question. And so the problem of finding the right outside help is important. This Aid suggests that a systematic approach to choosing outside marketing research help for small business is both possible and practical.

Suppose your business has a marketing problem. It may be that a solution can best be achieved with the help of an independent marketing research organization or consultant. How would you go about choosing this type of professional service? What factors would govern the selection; and which are the most important? How could you be reasonably sure that you had picked the right service? What would these services cost? These are just a few of the perplexing questions that confront the executive of a small business when he begins the search for professional marketing research assistance.

Before proceeding, however, a couple of definitions may be in order. The terms market (or markets) and marketing will recur several times in this Aid. The former term covers the demand for products or services which can be measured (a) quantitatively, (b) qualitatively, and (c) geographically. The latter, a broader and more inclusive term, refers to the entire process of the movement of goods and services from the point of production to the point of ultimate consumption.

WHAT MARKETING RESEARCH SERVICES DO

At the start, you need some general understanding of what a marketing research service is. Broadly speaking, it is an independent source of information, counsel, and advice. It should be able to do any one, or a combination, of the following things:

First, develop, collect, organize, and present basic statistical data about markets for goods and services and related marketing trends.

Next, provide the necessary facilities, and/or knowledgeable assistance, for the proper planning, supervision, and conduct of marketing surveys.

Then evaluate and appraise marketing policies, organization, and methods and recommend constructive programs for their possible improvement.

Finally, plan, develop, and recommend sound courses of action to strengthen the market position and sales development of goods and services--both old and new.

Most marketing research will also concern itself with one, or more, of the four major areas of marketing operations: distribution, buying and selling, advertising and promotion, market exploration and development.

In selecting a marketing research service, however, don't assume that each one can be "all things to all people." Some services, by choice, limit the scope of their activities. There are many, for instance, that specialize in studying the problems of particular industries.

Others have become highly-qualified experts in some special technical phase of marketing research such as: advertising evaluation, human motivation and behavior, product testing, or packaging. Still others largely restrict their activities to a specific survey function such as field interviewing or statistical tabulating services.

Regardless of the wide variety of marketing research services that are available,

the fundamental problem is to find one that has the proper background and experience to meet your needs, at a price you can afford.

NEED FOR MARKETING RESEARCH SERVICES

Before choosing a marketing research service you must recognize the fact that you need one. There are many reasons why your business might require this type of professional assistance. Perhaps, most importantly, these services can benefit you by providing:

(1) *Clear-cut Definition of a Problem.* You and your business associates may disagree on what the problem really is. Moreover, the true nature of a problem, when subjected to critical analysis, may turn out to be something entirely different from what you originally thought it was. Through experience, a professional marketing research service has usually developed the ability to strip the problem of non-essentials and bring it into sharper focus; establish, by mutual understanding and agreement, what the basic problem is; and suggest the best means of attack.

(2) *Impartial and Objective Analysis.* It is often difficult for key employees, or those without sufficient experience in marketing research, to maintain an unbiased and unprejudiced approach in an analysis of a marketing problem. An independent marketing research service, on the other hand, is not bound by the traditions of a business, nor by "what the boss thinks." Its primary responsibility is getting the facts, interpreting them correctly, and presenting the results impartially and objectively.

(3) *Experienced Technical Skills.* Because of their complexity, many marketing research problems require the application of special skills and techniques for their solution. Most professional marketing research services have available, or can draw upon, well-qualified technical personnel to meet any technical problem that may arise. Should an appraisal of your internal marketing research facilities suggest that they have distinct technical limitations, you should give serious consideration to using the outside services. Among other things, it protects you against the possibility of making costly mistakes.

(4) *Research Background and Know-How.* One of the important byproducts in using a professional marketing research service is the wealth of accumulated experience it can bring to bear on a study of your problem. It has probably dealt with many other problems of a similar nature in your own, or related industries. This can be reflected, also, in savings of time and cost by knowing the best way to get the job done.

(5) *Economy in Research Operations.* If the nature of your business is such that the necessity for marketing research is intermittent, it probably would not pay you to establish a department of your own. While the cost of outside research services may seem to be relatively expensive at the time, in the long run they may prove to be more economical than saddling the business with a fixed item of overhead.

TYPES OF SERVICES AVAILABLE

It would be impossible to list and describe, in detail, every single type in existence today. But for purposes of simplification, marketing research services may be grouped into three general classifications:

(1) Those that are essentially sources of statistical information; (2) those that are essentially engaged in broad gauge market planning, consultation, or survey activities; and (3) those that are essentially engaged in some specialized phase or technique of marketing research operations.

Statistical Services and Sources

As a general rule, the marketing research provided by organizations of this type cannot be purchased for the exclusive use and benefit of an individual business or firm. While there are exceptions, of course, the material they develop is usually of interest and value to a broad segment of the business community, and most of it would be available to you, in published form, at relatively little cost.

(1) *Governmental Agencies and Publications.* A vast amount of valuable marketing information is compiled and produced by Federal, State, and local government agencies. Perhaps the best known of the national sources are the various censuses prepared by the U. S. Bureau of the Census: those recording basic, comprehensive data on Population, Housing, Agriculture, Business Manufacturers, Mineral Industries, and the like. Since much of the census material is on punch cards or recorded on tape, arrangements can frequently be made for special tabulations pertinent to your business, your product lines, and your markets.

In addition, many other national Government agencies--the Departments of Commerce, Agriculture, and Labor; the Small Business Administration; the Federal Reserve Board, and others--periodically publish special statistical reports and pamphlets covering a wide range of marketing topics.

Federal Government Agencies also publish special subject reports and surveys covering industries, trades, products, geographic areas, marketing functions, and marketing operations.

Many State and city governments also publish statistical information about markets and industry developments in their respective areas. Some of the best are often the outgrowth of studies made by industrial resource and city planning commissions.

(2) *Local Business Sources.* Most cities and towns of any size will have an active chamber of commerce. Some do an exceptionally good job of gathering basic marketing information about their immediate locality. Although this is usually done as a promotional venture, the information thus developed would probably be available to you at no cost.

Local utilities, telephone companies, banks, and newspapers--particularly in the larger cities--frequently have continuing programs of marketing research. These, too, can be potential sources of statistical assistance about the area they serve. The organizations involved are usually willing to share this knowledge with others. And, if there is a college or university near you, its business research bureau or school of commerce may also have helpful data.

(3) *Trade Associations.* These are often an important source of marketing statistics. An increasing number of trade associations have developed statistical and marketing research programs about their own industries and markets. The scope of these programs, however, is not uniform. Some associations have done a better job than others.

In some cases, all or part of the available information may be restricted for the use of the association's own members; in others, it may be widely disseminated and accessible to anyone.

If you are a member of a trade association you should become familiar with what it has to offer in the way of marketing research assistance. It is quite possible you can find the answer to your marketing problem here.

More important, perhaps, is the matter of giving your support to worthwhile marketing research programs that the association sees fit to undertake. An industry-wide venture of this nature may produce far better results, and will probably be less expensive for all concerned, than would be the case if it is attempted individually.

(4) *Advertising Media.* Practically all advertising media carry on some kind of marketing research program for the benefit of their own staff and clients. Trade and consumer magazines, newspapers, radio and TV broadcasting companies are the principal advertising media of interest to small businessmen. They are also among the most fruitful sources of marketing research know-how and information, although it

has sometimes a promotional slant. In the trade publication field, especially, much of the editorial content of the magazines is devoted to new marketing developments and related trends. Many of these media also have extensive library facilities which can be helpful to you.

As a general rule, advertising media will not perform specific marketing research services for, or sell these services to, an outside organization. However, they will usually make the results of their market studies and reports available to you, in some published form, without charge or at very nominal cost.

Market Planning, Consultation, and Surveys

All of the above sources produce data for general industry or trade guidance and rarely anything tailored for a specific problem of an individual firm.

Suppose you find you have a marketing problem which cannot be solved by recourse to existing sources of information. When this happens, you may decide to seek help from marketing research services specially equipped to give you broad counsel and advice on the conduct of some type of marketing survey. There are at least four types of organizations that can do market planning, consultation, and survey work.

(1) *General Management Consultants.* As its name implies, the general management consulting firm usually has the professional staff and facilities to tackle almost any sort of management problem. Today, more and more organizations of this type are studying the marketing problems of business enterprises. Because of experience and the qualifications of their personnel, however, some have acquired a greater degree of proficiency in the area of marketing consultation than others.

General management consulting firms can, and frequently do, make surveys as part of a marketing assignment. The field work is more apt to use "conversation-type" interviews rather than formalized questionnaires. The consulting firm will usually prefer to use members of its own professional staff for this purpose.

(2) *Marketing Consultants.* In relatively recent years, there has grown up a group of professional marketing consultants. These people are management consultants who specialize in or stress marketing. Organizations in this field may consist of a single individual or may be fairly substantial in size. Included in this group are members of marketing faculties at many colleges and universities who devote part of their time to outside consulting.

The scope and quality of the services which professional marketing consultants provide

varies. Generally speaking, most have the necessary background and experience to handle a broad range of marketing problems. Like the general management consulting firm, the marketing consultant will also make surveys and may have complete facilities for doing so. If not, he will generally know where to obtain them.

(3) *Marketing Research Firms.* This type of organization usually confines most of its activities to the planning and conduct of marketing surveys. But very often it is a difficult matter to draw a fine line of distinction between the marketing research firm and the marketing consultant.

Most marketing research firms, of necessity, do a certain amount of consulting work but may not concern themselves with matters of major marketing policy and planning to the same extent that the marketing or general management consultant does. Perhaps the best way to describe the marketing research firm is to think of it as a fully integrated organization which is equipped, both by experience and facilities, to carry out all phases of a formal marketing survey.

These include: studying the problem; planning the best methods of approach; preparing and pre-testing the questionnaire; conducting the interviews; editing, tabulating, and analyzing the results; presenting the findings in a final report.

(4) *Advertising Agencies.* Most advertising agencies have marketing research services available to clients. The scope and extent of these services depends, to some degree, on the policy of the agency and its size. Some of the larger ones are tending to provide more general consultation and advice on matters of broad marketing policy than heretofore.

With the expansion of services and staff personnel to provide them, many advertising agencies are finding it necessary to make additional charges for these activities. This is especially true in those cases where marketing research operations involve any substantial out-of-pocket costs.

Specialized Research Organizations

There are many other types of organizations that are considered to be in the realm of marketing research services which tend to restrict their area of operation to some specialized phase or technique in this field. These specialists play a vital role in the entire economic pattern of marketing research service.

The use of a specialized service may be all that is needed in helping to solve a marketing problem. Again, the specialized service can be called upon by the consultant or marketing survey organization, if need be, to supplement their own research operation.

The facilities offered by the specialized service thus often eliminate the necessity for other research organizations to duplicate them, with possible savings in the over-all cost of research to a client. Here are a few of the more familiar types:

(1) *Field Interviewing Services.* Organizations of this type are primarily equipped to handle survey interviewing and supervision thereof, either in person or by telephone. Many of them will also handle surveys by mail. They are essentially independent contractors, but they include groups which may be part of a larger, established organization.

Any competent field interviewing service will have a carefully selected list of experienced people, located in various communities, whom it can call upon to carry out the detailed interviewing for a market survey. A great many have sufficient geographic and personnel coverage to operate on a national scale; others limit themselves to regional, State, or local areas.

While interviewing is still their prime responsibility, some of these firms have gradually expanded the scope of their activities to include participation in other phases of survey work. The more this latter development occurs, the more the field interviewing service tends to become an integrated marketing research agency.

(2) *Statistical Tabulating Services.* Organizations in this group are those which specialize in tabulating the results of marketing surveys from questionnaire information. They may also engage in compiling statistical information from other company marketing records; for example, sales reports, customer invoices, and territorial analyses. Tabulating operations are either done manually or by mechanical methods, usually the latter, through the use of punch cards or sensitized materials.

Tabulating service organizations are usually independent contractors, also including some affiliated with larger research organizations. Several of the larger independent tabulating firms also operate branches in various major cities throughout the country.

Tabulating the results of a marketing survey can be rather complicated. If you are planning to use an outside tabulating organization in connection with a market survey of your own, it would be a good idea to get advice from these experts *before* you start your survey.

(3) *Consumer Panel Services.* For many kinds of product and marketing situations, a consumer

panel offers a quick, effective, and economical method of getting answers to key questions.

Several firms make a specialty of operating consumer panels to the exclusion of almost any other type of research. Some of the larger marketing research agencies, and a few advertising firms, have also developed consumer panels as important phases of their main business.

Don't assume that a consumer panel will answer every marketing research problem. It won't. Nor should you use a consumer panel without first having some general understanding of its advantages and limitations.

(4) *Product Testing Services.* By product testing we mean those marketing research services that endeavor to evaluate probable market reaction to a product. This would exclude those classes of research service which are strictly engineering and scientific in nature, are usually associated with industrial products.

While most general marketing research agencies and consultants are equipped to carry out product tests, certain organizations tend to make a specialty of this type of research and are usually thought of in connection with products for home consumption.

Product tests are usually made before general marketing of the products begins. They cover new products as well as improvements to existing ones. Product tests also take a variety of forms. Perhaps the most commonly used are those associated with consumer samples, home testing laboratories, and "consumer juries."

The first of these methods involves getting the benefit of customers' opinions of the product by means of samples left at the home or picked up at a retail store in certain pre-selected test markets. Food manufacturers often use this method to good advantage.

Home testing laboratories are employed when it is desirable to observe the performance of a product under actual use conditions. Manufacturers of household appliances and supplies frequently use this method; you may be familiar with it in connection with test laboratory services conducted by some women's magazines.

The consumer jury is, in reality, one type of panel operation. In this a preselected group of people, usually housewives, are brought to a test center, exposed to the product, and their reactions and opinions of it observed under a set of controlled conditions.

If you are planning to use the services of a product testing organization, make reasonably

sure it has had the necessary experience to do a satisfactory job in *your own or related* product lines.

(5) *Packaging and Industrial Design Services.* Yet another class of specialized marketing research services concerns itself primarily with problems of packaging, and the related field of industrial design. Today's highly competitive markets mean a constant struggle for customer attention to the product, particularly at points of sale.

This fact has increased the importance of good packaging, proper use of color, and general product design. In addition, it has given added weight to the importance of visual appeal and has increased the need for research in this area. Many well-known organizations are specialists in this field. But there is also a growing tendency on the part of other marketing research agencies to expand activities in this direction.

(6) *Psychological Services.* The study of human motivation and behavior is getting closer attention from business and marketing researchers alike. Any sizable marketing research organization probably now has on its staff one or more members who are highly trained in psychological techniques.

However, some specialized groups of consultants and research organizations devote virtually all their time and efforts to studies of motivation and human behavior--especially as these relate to markets.

Many are independent organizations. A few are affiliated with leading colleges and universities. From these students of "what makes people tick" have come some of the most significant developments in marketing research.

CHOOSING MARKETING RESEARCH SERVICES

At this point let's assume you have recognized a marketing problem and have decided that you need outside marketing research assistance. Also, let's assume you have a pretty good idea which type of service can help you most in solving this problem. How, then, do you go about selecting the one that can do the best job and is suited to your purse? Outlined below are the basic steps you should pursue.

● *Step 1.* If you have had previous experience with a marketing research or consulting organization--and it proved satisfactory--you will, naturally, want to discuss the matter with them. Find out, first, if they can handle the assignment. If they can, you will be able to take advantage of an established relationship in which you already have confidence. And you will gain

the benefit of their previous knowledge of your business.

● *Step 2.* If you're getting into the field for the first time, explore the available services in your immediate city or area before considering those further away. Frequent meetings and consultations with any marketing research organization will probably be necessary before the job is finished. The selection of one near at hand, if feasible, can result in substantial savings to you both in cost of travel and in staff time.

But if you have any doubts about the ability of a local organization to perform in a competent manner, you should not hesitate to look elsewhere in spite of the additional cost. The worst thing you could do is to sacrifice good research through a desire to "pinch pennies."

● *Step 3.* If you have had little or no experience in selecting outside marketing research services, but have a marketing research staff of your own, consult them. They can be most helpful.

● *Step 4.* Talk to business friends and acquaintances who may have had experience in this area and get the benefit of their advice and suggestions. Your local bank, newspaper, Better Business Bureau, your trade association, and the business faculties of nearby colleges and universities may be able to help you with suggestions.

Many of these sources maintain lists of marketing research services or may have had experience with them. Trade publications in your field and professional associations of a marketing nature can also be valuable sources of information. Some, of course, may be hesitant about making specific recommendations.

● *Step 5.* Narrow your choice down to a reasonable limited list of prospects. Then ask them to provide you with copies of brochures explaining the scope and extent of their services. Study these carefully for additional clues to help you make your selection.

After doing this, set up personal appointments with the principals of the most interesting organizations so you can get the "feel" of their approach to your problem and the answers to any questions you may have about the details of their services.

● *Step 6.* Wherever possible, try to check the background and performance of marketing research services, preferably with clients for whom they have done work. Don't hesitate to ask for references. But don't automatically rule out a service just because it does not have an impressive backlog of clients.

Many organizations, staffed with competent people, may be relatively new to the business. Their experience and qualifications are sometimes equal to--may even surpass--those with longer records. Very often, too, the newer service may be able to give you a more favorable price.

● *Step 7.* Finally, ask the services that seem to offer the best possibilities to submit proposals, together with time and cost estimates, based on a uniform set of specifications for the research job. As a general rule, it will not be practical for you to seek estimates and proposals from a large number of organizations. Usually two or three are sufficient.

You can then compare costs, methods of approach, and probable results from each as a preliminary to your final selection.

● *Step 8.* Having done this, you are now in a position to negotiate whatever formal arrangements are necessary with the one of your choice.

WARNING SIGNALS TO WATCH FOR

Most marketing research and consulting services maintain high ethical standards. Unfortunately, however, there are some whose standards of performance and conduct do not measure up to the best traditions. How do you identify them and what are the things to look for? There are a number of ways to detect flaws in methods and practices. Here are seven.

(1) *Over-selling.* Be on your guard against those marketing research organizations that: try to "high pressure" you into buying their services; or try to sell you a research "package" which is more than you need or can afford; or make exorbitant claims about their experience and qualifications which you know, or have reason to believe, cannot be fully substantiated.

A reputable marketing research firm will not "balloon" a research project out of proportion to the needs of the problem or the client's pocketbook. To protect its professional reputation, it will not take an assignment it is not equipped to handle. It will usually be the first to tell you so.

(2) *Disparagement of Competition.* Avoid marketing research organizations that tend to "run down" their competitors. Not only is this a poor selling tactic in the professional field, but also a highly questionable business practice. If your interests can be better served by using the facilities of a competing organization, most responsible marketing researchers will tell you so. They may even recommend some one.

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(3) *Price-cutting.* View with skepticism organizations which say they are quoting a price "at or below cost," and whose competitive bid for a research job appears abnormally lower than others. Chances are that the statement is not entirely true; costs can be padded. An unusually low bid may be genuine, but may also indicate a weakness in the research method. Be skeptical, too, of the organization that tries to find out from you what prices competitors have quoted before submitting its own estimate.

(4) *Extravagant Promises and Guarantees.* Much marketing research work, like a scientific experiment, is exploratory. Results may sometimes be inconclusive. There is always danger in designing a research project with a preconceived idea of what the results should be.

Any marketing research organization that sells its services by guaranteeing precise answers to a problem is on shaky ground. It should be viewed with suspicion.

(5) *Vague Ideas of Approach and Results.* Exercise caution, too, in employing a marketing research firm that is overly vague concerning the approach and probable results of the project. Such an attitude may reflect an uncertainty about how to attack the problem. A responsible marketing research organization should be able to say, within reasonable limits, what procedures will be used and what their capabilities and limitations are.

(6) *Reluctance To Be Specific.* Beware of a research organization that refuses to put on paper the specifics about a job. It is, to be sure, general practice *not* to require a formal contract for marketing research services. Most commitments are entered into in good faith, by mutual agreement of both parties. Authorization for the work to proceed is given by letter. So, if an organization insists on a contract, satisfy yourself that the demand is reasonable.

Now and then, there is trouble as a result of misunderstandings. If neither party can point to anything in black-and-white, it may be very hard to get the point in dispute straightened out.

While there may not be a requirement for a contract, there *is* a value in writing down the major points of the project. These might include: The kind and amount of work to be done; the starting and (if agreed upon) finishing date; the probable cost; and the form in which the information will be submitted.

There is every reason for you to insist on a cost estimate. Don't give, in effect, a blank-check authorization. Within reasonable limits, a research firm or marketing consultant

should be able to estimate his costs, and should be willing to discuss them with you.

Sometimes circumstances are encountered which may necessitate a readjustment in the originally quoted price. Before any additional costs are incurred, however, the research organization should submit a revised estimate to you, together with its justification.

WHAT ABOUT COSTS?

What will marketing research services cost you? No one can say for sure. In price, marketing research projects can, and do, range from those of rather limited extent, costing a few hundred dollars, to the more comprehensive, ambitious ones which cost thousands.

For example, a survey conducted by mail or telephone is likely to be much less expensive than one of comparable size where personal interviews are used. In the latter case, one would probably have to pay not only high rates for staff, but interviewing time and cost of travel as well.

Again, a "pilot" study or one that is restricted to a limited geographic area would probably cost you less than one more nearly national in coverage. Employment of an individual consultant, or smaller firm, may sometimes be less expensive than utilizing the facilities of a larger organization with its more extensive staff and greater overhead.

Costs for marketing research services are determined in several ways. A very common method is a flat fee or "package" price for a specific project. It is based on the research firm's best estimate of all expenses necessary to complete the job, plus a reasonable margin of profit.

Sometimes prices may be quoted on a "cost plus" basis where the kind of work and need to provide for unforeseen contingencies make accurate cost estimates more difficult. In such cases, the marketing research organization will usually quote a top cost figure for the project and give the benefit of any savings to the client.

For work that is primarily consultative, prices are usually quoted at a fixed rate per day for staff members involved, plus travel and other out-of-pocket expenses. These daily charges may range from \$25 to \$250 or higher, depending upon the calibre of the manpower used. But \$50 per day is a practical minimum. You may get a graduate student for less than that, and this may be a perfectly good approach.

RETURN TO MARKETING

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— SMALL BUSINESS ADMINISTRATION —
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Publicize Your Company By Sharing Information

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SUMMARY

Publicity in trade papers, technical publications, and professional journals can help make small companies and their products better known to suppliers, customers, potential customers, and others in the industry.

This Aid points out that getting such publicity may not be as difficult as one might think because editors welcome information about new techniques and new facts about established processes. Suggestions are given on how to build an article on facts, how to use pictures, when to hire professional help, and how to find publications whose readers are interested in the technical information which the small company has to offer.

to familiarize readers of trade papers and industry journals with your company; your products; your service facilities; and particularly, with your technical competence and experience.

Second, articles under your by-line, or the by-line of one of your engineers, enhance personal reputations. Third, publicity on processes and products can promote good customer relations--especially when you describe the experiences of these customers with your product and refer to them by name in your articles.

Another benefit which may have far-reaching effects is that your article brings your products and services to the attention of potential customers. Readers of such articles sometimes think of new uses when they read of the applications described in your articles. Their experiments could result in greater sales for you.

Technical publicity on your products also makes good talking points for your salesmen. The articles, by passing on new facts which may be helpful to potential customers, demonstrate your company's interest in them and can help to win their confidence.

"We can use that technique," Jim McBoyd*, owner-manager of a small plant, thought as he finished reading a feature story in his industry's trade publication. When Mr. McBoyd used the information in his plant, he modified it to his equipment. It occurred to him that others in the industry would like to know about his modification. However, he had no experience in preparing articles nor did he think it worthwhile to hire professional help.

Helpful information thus went begging. Mr. McBoyd also lost an opportunity to let others--suppliers, customers, and potential customers--in the industry know about his company and its products.

If you've ever missed such an opportunity, look for a few moments at some of the benefits you can get by passing on technical information to readers of trade publications and technical journals through articles prepared by yourself or associates, directly or with professional help.

BENEFITS FROM TECHNICAL PUBLICITY

Your company may gain several benefits from technical publicity. First, repeated appearances of "your name in the paper" help

YOU CAN GET PUBLICITY

Getting publicity may not be as difficult as you might think even if you do it yourself, have had no experience, and get no professional help. Editors of trade papers and technical journals welcome fresh material. Their readers are interested in new ideas and facts which will save them time or money.

However, keep in mind that to attract and hold readers, editors have to judge material on its own merits. They cannot use publicity puffs or articles which are thinly disguised advertising. Even though the submitting company may be one of the publication's major advertisers, editors are not taken in by material which offers nothing of interest to their readers.

You have the kind of material editors want if you can say "yes, this method, or product, is an improved approach." What kind and how much publicity you can get depends on: (1) the amount of data you can make available, (2) how

*Names are disguised in Aids.

impressive the results are, (3) how radically new the application is, (4) the photographs and diagrams you can provide, and (5) how much has already been printed about your new technique.

With these facts in mind, look at some of the forms in which information on processes, techniques, and product-use is usually published. Keep in mind, as you read, that you can also use these forms for passing on non-technical information, such as the opening of a new sales territory and executive personnel changes.

● The Feature Article

It usually fills two or more printed pages and includes pictures, charts, graphs, and diagrams. Sometimes, if you plan ahead and contact the editor, you can get a cover story. Such a possibility is particularly good if one of the pictures is outstanding.

Readers are interested in the various stages of a project, and editors like to publish such feature articles. For example, a firm of consulting engineers got a great deal of industrial publicity out of a generating station which it built for a Southern city. Photographs were taken during construction and feature articles prepared. The result: Cover articles in two national trade publications and in one regional business paper.

Another company developed a diffusion alloy coating for refractory metals. The new coating provided higher oxidation resistance at elevated temperatures. Experimentation by one of the company's customers showed that applying this coating to molybdenum wire permitted a more reliable glass-metal seal. It was an important advance in the electronics industry.

The owner-manager felt that editors of electronics and metalworking publications would be interested in this information. The result: Feature articles in six top-notch industrial and technical publications.

Still another owner-manager gets publicity on his machinable carbides even though the subject has already been widely covered in the technical press. The reason: He is alert to applications which will save money for his customers. In his articles, he uses production figures--comparing results "before" and "after" switching to a new method, tables of speeds and feeds, and tooling-up costs.

● Short Article

The short article is similar to the feature article except for length. The short article usually fills only one printed page because fewer facts and pictures are available.

● The Round-up Article

This type of article sums up already published developments. After several feature articles on applications of the same product, trade publications sometimes run general stories covering all of the uses, but each in

less detail. For example, a manufacturer of flexible metal hose placed four or five case-histories on the use of his hose. His roundup article, "Piping Problems Solved By Flexible Metal Hose," almost wrote itself.

Keep in mind that feature articles, short articles, and roundup stories should be sent to only one editor and clearly labeled for his exclusive use.

● The News Release

The typical news release is a short piece--two double-spaced typewritten pages or less. One or two pictures should be used with it. You may send news releases to as many publications as can logically use the information.

Sometimes a news release list includes the names of almost 100 publications. A dozen or so may use it.

You do not have to come out with a new product or a new process in order to have a reason for a news release. You can send one if you have any of the following:

(1) A new application for an old product, (2) a novel use of an ordinary item, (3) new technical information from your engineering staff, (4) expansion of production facilities, (5) a new plant, (6) changes in personnel or promotions, (7) financial operating information, (8) announcement of new literature available, (9) new price lists or price changes, (10) new operational associations with other companies, and (11) results of participation in trade shows.

BUILD WITH FACTS

As you have seen in the various examples in this Aid, good technical publicity must be built on facts. An article or news release has to contain information which other business owners and their technical people want to read about. Such facts come from answering the questions: Who? What? Where? Why? and How? "How" is the most important question; answer it with specific technical information.

How does your product lead to faster production? How does it cut maintenance costs? How does it speed delivery? How does it prevent errors? How does it eliminate machine down-time? How does it improve accuracy or performance? How does it prevent accidents? How does it do something not achieved before?

In getting together the facts for a trade or industrial publication, the owner-manager should stick to what he knows best. For example, if your company produces plastic resins, write about their physical properties, unusual test results, or ideal applications.

After you have gathered your facts, the best way to put them together is: (1) jot down an outline--let your facts march in logical order; (2) keep your narrative short--omit unnecessary details; and (3) keep your language

simple--use words you would use if you were talking.

Above all, keep your article factual. Readers are not interested in undigested information, wild statements, or fancy language. Let your secretary read your finished article. Chances are if she, a nontechnical person, understands what you have written, busy technical readers won't have trouble with it.

Of course, editors of trade publications and technical journals would rather have professionally prepared material. Such articles and news releases save editing and rewriting time.

However, most of these editors do not insist on polished articles. They are interested in new information, and many helpful articles have resulted from the cooperative efforts of engineers who knew the facts and writers who knew how to develop these facts into readable form.

PICTURES SELL THE STORY

Good photographs make a strong story even more appealing to an editor. In some cases, editors run a weak release because of its worthwhile pictures.

The first requirement for a good photograph is: It must tell a story or help make a point. In using pictures, don't settle for a conventional "this is the product" shot.

Rather, try to work some human interest into your picture. Include an employee doing the job--in a pose that shows him, for example, operating an extrusion press.

If the product is small, close-up shots help. When trying to show the comparative size of a small object, try to use something that ties in with the product or the job rather than dimes or paperclips. They have been used too often.

Another important requirement of a good picture is that it must be technically correct. People and objects must be in focus. Lighting, exposure, development, and printing should be combined to give a sharp picture with strong black and white contrasts.

Good photography also means that the machine or process you are illustrating should be highlighted. The background should not be cluttered. When preparing to take the picture, make sure the floor is clean and free of scattered tools and other objects. Avoid violations of safety rules.

FINDING YOUR MARKET

The best place for publicizing your technical information is probably in the trade publications of your industry. Start by considering the publications you read yourself.

You may also want to check directories of various trade papers and technical journals. Among such works are Standard Rate and Data

Service's *Business Publication Rates and Data* and Industrial Marketing's *Media-Market Planning Guide*.

Such directories group publications according to the industries they serve. The listing includes: the publication's address, kind and number of readers, editor's name, and sometimes the kind of information the editor wants.

You will want to select publications according to their readership. Are these readers the people you want to reach? Will they be interested in your technical information? Can they specify or buy your product?

● Contacting Editors

When you start trying to place a feature article, save yourself and the editor time by sending him an outline. Indicate clearly the kind of technical information your article will cover. If you have drawings or pictures, tell the editor what they will show.

If the editor is interested, he will ask you to develop a manuscript. He will not guarantee its use, but he'll read and evaluate it more favorably if he has first been consulted.

Treat editors with courtesy and consideration. Help them when you can and make sure that they can rely on your word. "Four B's" are helpful in getting a receptive ear.

(1) Be honest. Make only legitimate claims for your product. If the editor asks an embarrassing question, answer it truthfully. Be literal in your use of the word "exclusive."

(2) Be on time. If you find you can't meet a deadline, let the editor know at once.

(3) Be useful. If an editor asks for facts, supply them even if they do not pertain directly to your company. Mail items which you think will interest editors even if they don't relate to your products.

(4) Be thoughtful. Send editors a thank-you for a story that has been well handled. When you are in the publication's city, call on the editor. He is interested in hearing what your industry is doing.

WHO WILL DO IT

In building an article, you have two choices: doing it yourself or getting outside help. Even if you have only two or three stories a year, or an occasional news release, you may save time and money by getting professional help. A competent publicity man could cost less than the time you, or your production man, spend in getting together an article and sending it to editors.

Sources of outside assistance may be more available than you might think. Some of them are: (1) local newspaper reporters and photographers who do free-lance work in their spare time, (2) advertising agencies, (3) public relations counselors, (4) journalism professors or advanced students at nearby colleges, (5) high school journalism teachers, and (6) specialists in technical publicity.

The finished article will be no better than the skills of the writer. Before hiring outside help, therefore, learn the following about the individual you are considering: his technical background, education, years of experience in industry, familiarity with your type of product or process, and editorial acceptance of his work as proved by published articles.

● Merchandise the Article

After your feature article has been published, get additional mileage by reprinting it. Send reprints as a separate mailing to your present and your potential customers. Also use reprints as envelope stuffers when you mail invoices, quotations, or answer inquiries.

Give bulk quantities of the reprint to your salesmen, distributors, and representatives, and make sure that your employees see them. In fact, some owner-managers even send out another news release announcing the fact that the reprints are available.

FOR FURTHER INFORMATION

Businessmen who wish to explore further the subject of sharing information may be interested in the following references. This list has been kept brief and selective. However, no slight is intended towards authors whose works are not included.

Persuasion for Profit by Nicholas Samstag. 1958. \$3.75. University of Oklahoma, Norman, Okla. 73069

Publicity in Action, Herbert M. Baus. 1954. \$4.75. Harper and Row, 49 E. 33rd St., New York, N.Y. 10016

"How to Handle Publicity Photo Captions," in *Industrial Marketing*, 740 Rush St., Chicago, Ill. May 1963. \$3.00 per year, 50 cents per copy. 60611

Business Publication Rates and Data (monthly). \$35.00 per year. Standard Rate and Data Service, 5201 Orchard Rd., Skokie, Ill. 60076

Media-Market Planning Guide, (Published May 15 and Nov. 15.) \$1.00 per copy. Industrial Marketing, 740 Rush St., Chicago, Ill. 60611

Editor & Publisher Newspaper Market Guide. (Annually) \$10.00 per copy. Editor & Publisher Co., 850 3rd. Ave., New York, N.Y. 10022

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RETURN TO MARKETING

RETURN TO SALES AND ADVERTISING

RETURN TO MAIN MENU

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SOCIAL SCIENCES

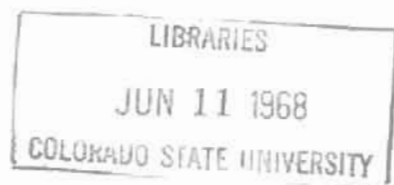
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SMALL BUSINESS ADMINISTRATION

MANAGEMENT AIDS No. 194
for small manufacturers

WASHINGTON D.C.

APRIL 1968



MARKETING PLANNING GUIDELINES

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N MARKET FACTORS SALES CONTACT BY ALVIN R. HAERR

SUMMARY

Many owner-managers neglect marketing planning even though they plan some of the other areas of their operations. Yet formalized marketing planning is an important tool for both short-term and long-range marketing. It provides a detailed, comprehensive, written plan that sets forth, *well in advance*, exactly how sales increases and gross profit increases are to be achieved. It further coordinates all the firm's resources into a single-minded direction to gain a set objective.

This *Aid* discusses several guidelines which owner-managers can use to produce a marketing plan that is tailored for their operations.

The author, Mr. Alvin R. Haerr, of Alvin R. Haerr & Company, Peoria, Illinois, is a management consultant in marketing.

“**M**arketing? It's no problem,” some owner-managers say. “I've got salesmen who bring in orders.”

This statement is echoed by others who add, “And we increase sales each year.”

These owner-managers have put their fingers on two vital aspects of marketing: getting orders from customers and increasing sales volume. However, their comments suggest a crucial question.

Are the sales increases the result of well-made plans or happy circumstances?

If the latter is true, these small companies are headed for trouble, if and when, fortune ceases to smile on them.

If you plan for your sales increases, you are on the right track. But do you plan enough? Your plans may not be sufficient for sound growth if, for example, they do not go beyond seeing that your salesmen are supplied with a list of prospects. These frontline troops can be knocked out by competition that plans its marketing efforts.

For continued expansion, marketing efforts and plans have to go beyond sales projections, sales quotas, and cost budgeting. They must include product design and manufacture as well as advertising, sales promotion, merchandising, and contact by salesmen. In the absence of a comprehensive plan, on paper, it is easy for one activity to go astray and weaken your marketing effort.

ACT NOW

The time to develop a comprehensive marketing plan is now. Begin by determining what your company can expect to do next year.

Put on paper answers to questions such as:

How much of a total sales increase should the company shoot for?

What dollar volume can we sell next year?

How will that volume break down by products?

What will be the gross profit on this dollar volume?

What will be the gross profit by products?

Determining the *profit* objectives is a most vital marketing step because your gross profit figure determines the absolute amount you can spend to *achieve* your sales objective. For example, if a 10-percent sales increase will bring you a gross profit of \$60,000, you cannot, as a rule afford to spend \$61,000 to attain it. You must know your anticipated gross profits before you can determine how much you can spend to get the sales increase.

With individual sales and profit goals for each product, your forecasting can be more accurate and more "manageable" than if you work with one goal for your total sales volume. Breaking goals out by products helps isolate problems that may be peculiar to them.

For additional information on expenses and gross profits, see *Guides for Profit Planning*. SBMS No. 25. 1960. Small Business Administration. Available for 25 cents from the Superintendent of Documents, Washington, D.C. 20402.

DEVELOP THE FACTS

Profitable marketing is based on two sets of facts. One concerns the market in which you sell your products. You must know the vital statistics, trends, and current data about *your* market for each of your types of products. It is dangerous when you make assumptions in market planning.

In this step, you are looking for both your long-range and short-term probabilities. Go back several years in your data accumulation to uncover *trends* on which you can base your potential sales increases.

U.S. Census county and "market area" figures are available for almost every worthwhile element that has a major bearing on your particular business success. Determine which market factors affect you and get the figures that have a bearing on those factors. You can interpret the figures and determine your oppor-

tunity for a sales increase and whether you'll have to go against or with the "stream."

For additional information on statistics see *Practical Business Use of Government Statistics*. SBMS No. 22. 1959. Small Business Administration. Available for 25 cents from Superintendent of Documents, Washington, D.C. 20402

The other set of facts is about *your* marketing—about what you and your people do in selling your products.

You should make a complete study of your entire marketing operation. The purpose is to find weaknesses which will hamper your drive for the sales increase. You should check your advertising, sales promotion, sales planning, sales operation, public relations, and physical set-up for producing and delivering merchandise.

You may find useful portions of *Management Audit for Small Manufacturers*. SBMS No. 29. 1963. Small Business Administration. Available for 25 cents from Superintendent of Documents, Washington, D.C. 20402

BLUEPRINT THE SEGMENTS

When you have these two sets of facts, you are ready to blueprint the segments of your marketing plan. Develop each part (for example, advertising, sales planning, and public relations) of *your* plan under a time-table—monthly, quarterly, 1 year, 5 years. Make a permanent record for each part and use it for reference. Set up guidelines to steer a set course. Don't let employees *vary* from these guidelines unless you make a change in your plan. Use as simple a method as possible for measuring the effectiveness of each part. Rely on facts rather than assumptions.

In making these blueprints for the next 12 months, be sure to include the activities that bear on your goals for the next 3 to 5 years. For example, if you hope to introduce a new product year after next, you may need to prepare a sales brochure in the last months of next year.

As you draw up blueprints for each segment, you'll have probably 4 or 5 separate plans—ones for advertising, sales promotion, public relations, sales management, and sales planning. Your overall marketing plan should spell out in detail exactly what is to be done in each of these areas. For example, the advertising plan will spell out what is to be done each month and for each product, division, or service. It, as well as each of the other separate plans, should also state who is responsible for the various actions to be done each month for each product and so on.

Your plan for each segment of your marketing operation should include specific actions for overcoming internal weaknesses, if any. For example, to correct slow deliveries to customers, you might ship on a first-in, first-out basis. In overcoming deficiencies you should rank each area to be improved as to:

- (1) The amount of contribution it can make to increase sales;
- (2) The expenditure involved to attain it;
- (3) The net profit which should result.

This ranking can help you decide where to concentrate money and time so they will really count.

In developing a plan for corrective action, you should be alert for possibilities that might offer a “competitive edge” for your company. Suppose, for example, that advertising is a weakness. Can it be corrected with additional ads that hammer home the benefits customers can get from your products?

PUT ONE PERSON IN CHARGE

Delegation is the key to making your plan work. Put one person in charge of routine day-to-day execution of the various parts of your plan. Develop a detailed monthly operations manual and give him the sections he needs. Train him on a continuous basis.

However, a caution: Don't let him assume responsibility unless: (1) he knows exactly what you're trying to do; (2) you have taken time to train him fully; (3) you are able to spend enough of your time to help correct his mistakes and to orient him to changes.

BE CONSISTENT

When you find a successful formula, intensify it FIRST before you make other changes. Make only one change at a time for control.

Don't change your *entire* program annually. Give your marketing plan a fair chance. Be sure it has proper emphasis and support—and above all, enough money to do the job.

MEASURE BY COST

Put everything on a cost vs. results basis. This method provides the best control and gets away from doing “cheap” projects that turn out “expensive” because of poor results.

Controls and followup help you to increase the efficiency of your marketing operation. They are necessary to be sure of staying within the framework of your plan. Budgets which you establish must be maintained. Moreover, they must be checked frequently to insure that your sales objectives are achieved at the profit levels you had planned. When weaknesses are revealed, you can use them to set benchmarks for improving the next marketing plan you make.

WATCH FOR CHANGES

Keep most of your own efforts as owner-manager on direction, trends, broad objectives, basic policies, and the acquiring and analysis of data for decision-making. Be alert for needed changes.

Watch the balance between personnel and the effort to help your sales. Be sure you keep a proper mix for best results. Don't be afraid to seek outside help from a professional when you feel you need it.

FOR FURTHER INFORMATION

Readers interested in exploring further the subject of preparing a marketing plan may wish to consult the references indicated below. This list is brief and selective. However, no slight is intended toward authors whose works are not listed.

PROFITABLE ADVERTISING FOR SMALL INDUSTRIAL GOODS PRODUCERS. SBMS No. 18. 1956. Small Business Administration. Available for 25 cents from Superintendent of Documents, Washington, D.C. 20402.

SALES TRAINING FOR THE SMALL MANUFACTURER. SBMS No. 11. 1954. Small Business Administration. Available for 25 cents from Superintendent of Documents, Washington, D.C. 20402

MAKING YOUR SALES FIGURES TALK. SBMS No. 8. 1963. Small Business Administration. Available for 25 cents from Superintendent of Documents, Washington, D.C. 20402

MARKETING PLANNING: APPROACHES OF SELECTED COMPANIES by Ernest C. Miller. 1967. \$7 to members; \$10 to nonmembers. American Management Association, Inc. 135 W. 50th St., New York, N.Y. 10020

"USING CENSUS DATA IN SMALL PLANT MARKETING." *Management Aid* No. 187. Small Business Administration. Free from SBA, Washington, D.C. 20416 (or nearest SBA office).

"BREAKING THE BARRIERS TO SMALL BUSINESS PLANNING." *Management Aid* No. 179. Small Business Administration. Free from SBA, Washington, D.C. 20416 (or nearest SBA office).

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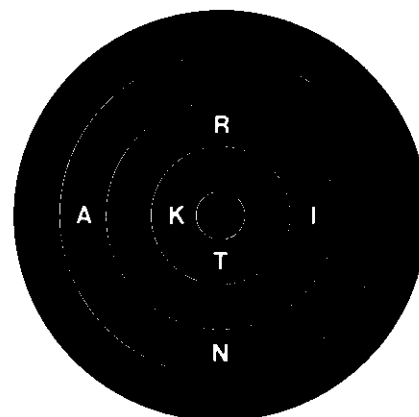
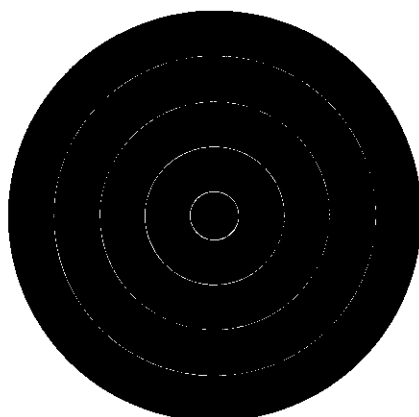
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Marketing for Small Business

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Small Business Bibliography No. 89,
Marketing for Small Business lists both U.S.
Government and Nongovernment publications
that should be of interest to businesspersons who
are marketing a product or service.

The listings given are necessarily
selective, and no slight is intended toward
reference sources not included. Publishers and
others may submit to SBA information about new
publications in this field and changes in the
present listings for consideration when this
Bibliography is revised.

The authors, Keith K. Cox and James
E. Stafford are Professors of Marketing and Art
Palmer is a doctoral student at the University of
Houston, Houston, Texas.

Revised November 1978

One of the greatest needs of managers of small businesses is to understand and develop marketing programs for their products and services. Small business success is based on the ability to build a growing body of satisfied customers. Modern marketing programs are built around the "marketing concept," which directs managers to focus their efforts on identifying and satisfying customer needs—at a profit.

The Marketing Concept

The marketing concept rests on the importance of customers to a firm and states that: 1) **All** company policies and activities should be aimed at satisfying customer needs, and 2) **Profitable** sales volume is a better company goal than maximum sales volume.

To use the marketing concept, a small business should:

- 1) Determine the needs of their customers (Market Research)
- 2) Analyze their competitive advantages (Marketing Strategy)
- 3) Select specific markets to serve (Target Marketing)
- 4) Determine how to satisfy those needs (Market Mix)

Market Research

In order to manage the marketing functions successfully, good information about the market is necessary. Frequently, a small market research program, based on a questionnaire given to present customers and/or prospective customers, can disclose problems and areas of dissatisfaction which can be easily remedied, or new products or services which could be offered successfully.

Marketing Strategy

Marketing strategy encompasses identifying customer groups (Target Markets), which a small business can serve better than its larger

competitors, and tailoring its product offerings, prices, distribution, promotional efforts and services towards that particular market segment (Managing the Market Mix). A good strategy implies that a small business cannot be all things to all people and must analyze its markets and its own capabilities so as to focus on a target market it can serve best.

Target Marketing

Owners of small businesses have limited resources to spend on marketing activities. Concentrating their marketing efforts on one or a few key market segments is the basis of target marketing. The major ways to segment a market are:

- 1) Geographical segmentation—developing a loyal group of consumers in the home geographical territory before expanding into new territories.
- 2) Product segmentation—intensively promoting existing best-selling products and services before introducing a lot of new products.
- 3) Customer segmentation—identifying and promoting to those groups of people most likely to buy the product. In other words, selling to the heavy users before trying to develop new users.

Managing the Market Mix

There are four key marketing decision areas in a marketing program. They are: 1) Products and Services, 2) Promotion, 3) Distribution and 4) Pricing. The marketing mix is used to describe how owner-managers combine these four areas into an overall marketing program.

- Products and Services—Effective product strategies for a small business may include concentrating on a narrow product line, developing a highly specialized product or service or providing a product-service package containing an unusual amount of service.
- Promotion—This marketing decision area includes advertising, salesmanship and other promotional activities. In general, high quality salesmanship is a must for small businesses due to their limited ability to advertise heavily. Good yellow-page advertising is a must for small retailers. Direct mail is an effective, low-cost medium of advertising available to small businesses.
- Price—Determining price levels and/or pricing policies (including credit policy) is the major factor affecting total revenue. Generally, higher prices mean lower volume and vice-versa, however, small businesses can often command higher prices due to the personalized service they can offer.
- Distribution—The manufacturer and wholesaler must decide how to distribute their products. Working through established distributors or manufacturer's agents is generally most feasible for small manufacturers. Small retailers should consider cost and traffic flow as two major factors in location site selection, especially since advertising and rent can be reciprocals. In other words, low-cost, low-traffic location means you must spend more on advertising to build traffic.

Marketing Performance

After marketing program decisions are made, owner-managers need to evaluate how well decisions have turned out. Standards of performance need to be set up so results can be evaluated against them. Sound data on industry norms and past performance provide the basis for comparing against present performance.

Owner-managers should audit their company's performance at least quarterly. Lists of things to look for and of danger signals are given in some of the books recommended in this bibliography.

The key questions to ask are:

- 1) Is the company doing all it can to be customer-oriented?
- 2) Do the employees make sure the customer's needs are truly satisfied and leave them with the feeling that they would enjoy coming back?
- 3) Is it easy for the customer to find what he or she wants and at a cost-effective price?

U.S. Government Publications

The publications cited in this section are books and pamphlets issued by Federal Agencies and listed under the issuing Agency. Some are free upon request, while others are offered at nominal cost.

GPO—Where availability of an individual listing is indicated by "GPO" (Government Printing Office), the publication may be ordered from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

When ordering a "GPO" publication, give the title and series number of the publication, and name of Agency.

Small Business Administration

Washington, D.C. 20416

SBA issues a wide range of management and technical publications designed to help owner-managers and prospective owners of small businesses.

Listings of currently available publications (115A free and 115B for-sale) may be requested from SBA, P.O. Box 15434, Ft. Worth, TX 76119.

Small Business Bibliographies (4- to 12-page pamphlets). Each title in this series deals with a specific kind of business or business function, giving reference sources. It consists of an introduction that gives a description of the operation, and lists references applicable to the subject covered. Free. Listed in 115A.

Selling by Mail Order (SBB 3)
Marketing Research Procedures (SBB 9)
Retailing (SBB 10)
Statistics and Maps for National Market Analysis (SBB 12)
National Directories for Use in Marketing (SBB 13)
Manufacturer's Sales Representative (SBB 67)

Small Marketer's Aids (4- to 8-page leaflets). Each title in this series gives guidance on a specific subject for owners of small retail, wholesale, and service businesses. Free. Listed in 115A.

Measuring the Results of Advertising (SMA 121)
Knowing Your Image (SMA 124)
Profit by Your Wholesalers' Services (SMA 140)
Danger Signals in a Small Store (SMA 141)
Factors in Considering a Shopping Center Location (SMA 143)
Using a Traffic Study to Select a Retail Site (SMA 152)
Using Census Data to Select a Store Site (SMA 154)
Marketing Checklist for Small Retailers (SMA 156)
Improving Personal Selling in Small Retail Stores (SMA 159)
Advertising Guidelines for Small Retail Firms (SMA 160)
Public Relations for Small Business (SMA 168)

Management Aids for Small Manufacturers (4- to 8-page leaflets). Each title in this series discusses a specific management practice to help the owner-managers of small manufacturing firms with their management problems. Free. Listed in 115A.

Effective Industrial Advertising for Small Plants (MA 178)
Using Census Data in Small Plant Marketing (MA 187)
Developing a List of Prospects (MA 188)
Measuring Sales Force Performance (MA 190)
Profile Your Customers to Expand Industrial Sales (MA 192)
What Is the Best Selling Price? (MA 193)
Marketing Planning Guidelines (MA 194)
Is the Independent Sales Agent for You? (MA 200)
Are Your Products and Channels Producing Sales? (MA 203)
Finding a New Product for Your Company (MA 216)

Small Business Management Series. Each booklet in this series discusses in depth the application of a specific management practice. The series covers a wide range of small business subjects. Prices vary. GPO. Listed in 115B.

Management Audit for Small Manufacturers

(GPO 045-000-00035-4)

Small Store Planning for Growth

(GPO 045-000-00039-7)

Selecting Advertising Media

(GPO 045-000-00154-7)

Training Salesmen to Serve Industrial Markets

(GPO 045-000-00133-4)

Bureau of the Census

Suitland, Md. 20233

Request list of publications from the Census Bureau.

Census of Business for 1977. Retail—Area Statistics—U.S. Summary. GPO. Final figures from the 1977 Census of Retail Trade, includes statistical totals for each region, State, city and standard metropolitan area—tabulated by type of establishment.

Census of Manufacturers for 1977. GPO. Five volume report about manufacturing industries. Location of manufacturing plants tabulated by State and counties.

Census of Wholesale Trade for 1977. GPO. Two volume report of wholesalers, including geographical breakdowns by States, cities over 5000 populations, and standard metropolitan statistical areas.

Census of Selected Service Industries for 1977. GPO. Two volume report of more than 150 kinds of service industries.

Census of Population for 1970. GPO. Most complete source of population data in the United States. Census is taken every 10 years.

Census Tract Manual, 5th ed. 1966. GPO. Explains what census tracts are, and their use to solve local statistical problems of area comparability or for many types of intracity analysis and study. Shows what areas are eligible and how to get established. Updating appendices have been issued.

County Business Patterns, 1972. GPO. A series of publications presenting first quarter employment and payroll statistics, by county and by industry. Separate reports issued for each of the 50 States, the District of Columbia, Puerto Rico and outlying areas of the United States.

County and City Data Book. GPO. Contains data for 50 States, 3141 counties, our county equivalents, 243 SMSA's, 840 cities of 25,000 inhabitants or more, among others.

Standard Metropolitan Statistical Areas, 1967. GPO. Gives the criteria followed in establishing standard metropolitan statistical areas. Changes after 1967 issued periodically as amendments.

Statistical Abstract of the United States (Annual). GPO. A general review of statistical data collected by the United States Government and other public and private organizations. A good source of secondary data.

Department of Commerce

Washington, D.C. 20230

Business Statistics (Biennial). GPO. A historical record of the statistics presented monthly in the *Survey of Current Business*.

Survey of Current Business (Monthly). GPO. The most current monthly and quarterly statistics on a number of general business and economic topics.

Federal Reserve System

Washington, D.C. 20551

Federal Reserve Bulletin (Monthly). Current economic indicators and analysis of changing financial conditions.

U.S. Department of Labor

Washington, D.C. 20210

Survey of Consumer Expenditures (1977 data updated from 1960-61 survey). Includes comprehensive information about consumer expenditures.

Office of Management and Budget

Washington, D.C. 20503

Standard Industrial Classification Manual, 1972. GPO. Gives the definitions of the classifications of industrial establishments by activity engaged in and by SIC codes.

Nongovernment Publications

These general marketing books were selected to cover the full spectrum of marketing and marketing management. The small business management titles include good sections on small business marketing.

General Marketing Books

- *Goodyear Publishing Company*
15115 Sunset Boulevard
Pacific Palisades, CA 90272

Marketing Principles. 2nd Ed. 1974. \$16. Enis, Ben M.

- *Houghton Mifflin Company*
One Beacon Street
Boston, MA 02107

Marketing: Basic Concepts and Decisions. 1977. \$14.
Pride, William M. and O.C. Ferrell.

- *Irwin, Richard D.*
1818 Ridge Road
Homewood, IL 60430

Basic Marketing: A Managerial Approach. 5th ed. 1975.
\$16. McCarthy, E. Jerome.

- *Prentice Hall, Inc.*
Englewood Cliffs, NJ 07602

Marketing Management: Analysis Planning and Control.
\$15. Kotler, Philip.

Small Business Books

- *Business Publications, Inc.*
4347 So. Hampton Rd., Suite 210
Dallas, TX 75224

Successful Small Business Management. 1975. \$15.
Tate, Curtis E., L.C. Megginson, C.R. Scott, and L.R.
Trueblood.

- *Houghton Mifflin Company*
One Beacon Street
Boston, MA 02107

Small Business Management: A Guide to Entrepreneurship. 1977. \$15. Siropolis, Nicholas C.

- *McGraw-Hill Book Company*
1221 Ave. of the Americas
New York, NY 10036

Small Business Management Fundamentals. 2nd ed. 1978.
\$12. Steinhoff, Dan.

- *Wadsworth Publishing Company*
10 Davis Drive
Belmont, CA 94002

Small Business Management: Essentials of Entrepreneurship. 1973. \$8. Klatt, Lawrence A.

Magazines and Journals

The following list of magazines and journals publish many articles in the marketing area that can be useful for businesspeople.

Advertising Age. Weekly. Crain Communications, 740 Rush St., Chicago, IL 60611. Weekly news of advertising agencies, campaigns, and current issues in advertising.

Business Week. Weekly. McGraw-Hill, 1221 Avenue of the Americas, New York, NY 10020. General magazine for businesspeople. Frequent articles are carried about practical marketing decisions in a variety of industrial situations.

Industrial Marketing. Monthly. Crain Communications, 740 Rush St., Chicago, IL 60611. Specialized magazine for industrial advertising situations. Frequently publishes statistics for various industrial industries.

Journal of Retailing. Quarterly. New York University, 202 Tisch Hall, Washington Square, New York, NY 10003. Publishes articles on various retailing topics, as well as book reviews and research studies.

Modern Packaging. Monthly. McGraw-Hill, 1221 Avenue of the Americas, New York, NY 10020. Presents articles on annual packaging trends as well as new packaging developments.

Progressive Grocer. Monthly. The Butterick Division, American Can Company, 708 Third Avenue, New York, NY 10017. Describes current merchandising trends in retail food stores, and issues an annual report on the grocery industry each year.

Sales and Marketing Management. Semimonthly. Sales and Marketing Management, Inc. 633 Third Ave., New York, NY 10017. Many articles address sales management problems. Subscription includes the annual "Survey of Buying Power," which estimates buying power in the United States based upon population, income, and retail sales.

Marketing Associations

Many small businesspeople interested in marketing activities should be aware of the following associations. For a more exhaustive list of associations, see the Encyclopedia of American Associations, available at most libraries or universities.

American Advertising Federation. 1225 Connecticut Ave., NW, Washington, D.C. 20036. Membership comprised of people in advertising agencies, media, and advertising management, who seek to further the understanding of advertising.

American Marketing Association. 222 South Riverside Plaza, Chicago, IL 60606. Members generally come from marketing management, researchers, and educators. The principal objectives are to disseminate knowledge about marketing and to foster additional research in the marketing discipline.

National Association of Purchasing Management. 11 Park Place, New York, NY 10017. Primarily composed of purchasing agents and other types of buyers, who are interested in the dissemination of information about efficient purchasing management.

Sales and Marketing Executives International. 380 Lexington Avenue, New York, NY 10017. One of the largest marketing associations, with members primarily from sales and marketing management. Holds frequent seminars, workshops, and clinics throughout the United States.

Local Sources

Frequently overlooked by owners of small business are the inexpensive sources of marketing information at the local level. These local sources are sometimes the best places to start in seeking marketing information.

Local Libraries
Local Chamber of Commerce Offices
Local Universities
Local City and County Governments
Field Offices of the Small Business Administration
Field Offices of the U.S. Department of Commerce

RETURN TO MARKETING

RETURN TO MAIN MENU

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MAKING A MARKETING SURVEY

By Francis E. Hummel, The Bassick Company, and Merle E. Hagen, Kimberly Clark Corporation, co-chairmen of Special Task Force on Industry Education of American Marketing Association, Inc.

What do buyers think about your product? Are there limitations in your present package design? Will a proposed new product be accepted by your customers? Marketing research surveys can supply basic information useful in attempting to answer such product, merchandising, and marketing questions. This Aid describes the steps by which a small consumer-goods or industrial-goods manufacturer can make a marketing survey.

MARKETING SURVEYS

The survey method consists of gathering data by asking questions. It is only one form of fact-gathering available for solving marketing problems. Two others not to be discussed in this Aid—the observational and the experimental methods—have their own uses and applications.

• **Types of Problems Solvable.**--The survey method can be useful in helping to solve many different types of marketing problems. For example, it can assist a small chemical manufacturer in establishing the specifications for his compounds, or a small food packer in deciding the best colors for his packages. Common applications are to problems dealing with the price of a product, the package, new uses for an old product, new product acceptance, physical specifications, dealer reactions, and consumer preferences.

• **Who Makes Surveys.** Unless there is someone in your company qualified by training and experience for marketing research, it is well to consider using the services of a specialized research firm. Outside organizations may be used for all or only for certain portions of the survey. For details on organization for marketing research work, see Management Aids for Small Manufacturers No. 59, "How Marketing Research Helps Small Manufacturers."

STEPS IN MAKING A MARKETING SURVEY

Conducting a marketing survey calls for careful planning, accurate data collection, and intelligent analysis of survey returns. A statement and definition of the problem should come first. This helps to define the kind of information needed and possible source of it. Careful planning of the entire research effort can make the marketing survey simpler, faster, more accurate, and less costly. Once you have identified the general market problem you want to solve, you can proceed according to the following steps:

1. CONDUCT A PRELIMINARY STUDY

Before trying to make an original market survey, you will usually find it both desirable and necessary to get some background on the various influences affecting your over-all marketing operation. Thus, the first step is to try to gauge how difficult your problem will be to solve, and what work has already been done on it. This sort of study accomplishes the two-fold purpose of giving you a "feel" for the problem, and of avoiding duplication of previous research.

Start with a review of company sales records and such secondary source information as industry and Government statistics. These figures often reveal facts which suggest desirable directions for the survey approach. It also may be useful to discuss the problem informally with your field representatives, dealers, and customers.

Once you know the specific problem to be solved, put the exact purposes of your survey in writing. Limit the study to a few major objectives, and list the questions which must be answered to reach these objectives. That statement will guide you in determining the type of survey to be used and will assist in

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developing a suitable questionnaire. It will also tend to insure efficient and complete analysis.

2. DETERMINE THE TYPE OF SURVEY

The next step is to select a survey method which best provides the needed information. Three methods are available: mail, personal interview, and the telephone survey. No one of them is best for every research purpose. Your choice depends upon the time and money available, plus the degree of accuracy necessary.

- **The Mail Survey** involves sending a questionnaire to members of a group who can answer (or comment intelligently) on the problem. If the group is small, it may be feasible to send a questionnaire to each person. If the group is large, a sample number of people is usually selected. The questionnaire is ordinarily accompanied by a letter explaining the purpose of the survey and requesting the respondent to answer and return the questionnaire in an enclosed postage-paid envelope. An advantage of mail surveys is their ability to get wide distribution of questionnaires at relatively low cost. They can also be used effectively to avoid possible interviewing bias.

Naturally, mail surveys do have some disadvantages. Good, up-to-date mailing lists are essential to ensure successful distribution; these are not always easy to get. Returns may not be representative because some types of people fail to reply. Questionnaire length is limited. Wording must be crystal clear because no subsequent explanation is possible.

- **The Personal Interview Survey** utilizes a personal, question-and-answer approach. The general information sought is brought out in face-to-face discussion. Additional facts also may be obtained by the interviewer from his own observation. Frequently, the interviewer has a questionnaire or schedule to guide him, although the actual form is not necessarily shown. Personal interviewing affords better control over the information being gathered in the survey. More detailed information also can be obtained, and more complete answers are possible. The reason behind this is that the interviewer has an opportunity to explain exactly what is wanted. Furthermore, useful classification data and observations can be reported.

The main problems involved in personal interviewing are three. It can be a costly method, especially when the sample requires a wide geographic spread. There is the possibility of interviewer bias which can be so serious as to jeopardize the entire findings. Also, personal-interview surveys require detailed supervision of the data-collecting process.

- **The Telephone Survey** consists of questioning people over the telephone. It has several advantages. Most importantly, it is a fast, inexpensive method of conducting interviews; the cost of an equal number of personal inter-

views would be substantially greater. The telephone survey does afford a random-type sample of telephone owners in a particular area. Moreover, telephone subscriptions in some areas have increased to the point where the number of non-subscribers is relatively small.

There are, of course, some disadvantages, too. For example, since the survey is limited to telephone subscribers only, its representativeness among low-income groups is questionable. It also has the drawbacks that only a small amount of information can be gathered, and that it can provide virtually no classification data. The fact remains, however, that a small telephone survey is much better than no market information at all.

3. DETERMINE SAMPLE PLAN

For most studies it is impossible and unnecessary to interview *all* potential consumers. Sampling—picking out a selected few persons to contact—can be used with success. If the sample is properly selected, what is discovered about the sample will be generally true of your entire market. The next step, then, is to develop a manageable sample which represents a miniature cross section of the actual market for your product. There are various sampling plans. You should select the one best suited to the needs of your particular study.

- **Personal Interview Sample Plans.** Three types of sample plans are commonly used for conducting personal interview surveys:

A random sample is one in which every person or firm has an equal chance of being selected. For example, a company desiring to sample all business firms in a certain city could select every 10th firm name from a recent city directory. Another approach would be to place on separate cards the names of each business firm in the city. These cards could then be thoroughly mixed and a sample selected by drawing out a sufficient number of cards.

Although random sampling is statistically the most reliable, it requires complete listings of people (or firms), and these listings are often unobtainable. Also, if the interviews are scattered geographically, the method is costly.

An area sample is one involving the selection of consumers according to their areas of residence. It makes possible the use of a technique called "probability sampling" which considers groups or areas as the basic sampling unit instead of single individuals. For instance, a consumer survey covering a number of States could be made by dividing the total market into counties and selecting a sample number of counties. The selected counties would then be subdivided and another sample taken. This process would continue until specific households were selected for interviewing.

Area sampling yields statistically good samples. In addition, it tends to eliminate interviewers' selection bias and the necessity

for obtaining complete listings of names of people. However, for most small manufacturers its use is also limited; it is a costly method and requires considerable time and effort to plan and conduct.

A quota sample is one in which the people or firms to be interviewed fit the characteristics of a predetermined pattern. That pattern is established by having each significant classification of people (or firms) making up a given market, represented in the sample in the same proportion as in the entire market.

To illustrate: consumer products are often classified by consumer's locations, and their age, sex, income, and so on. Assume that a product is used equally by men and women and sold predominantly (80 percent) in metropolitan markets. For a survey of 200 consumers, interviewers would be instructed to question 160 people (80 men, 80 women) in metropolitan areas, and 40 people (20 men, 20 women) residing in rural areas.

With industrial products, consumer classifications are usually established by industries, by size of plant, and by location. (For industry classifications see *Standard Industrial Classification Manual*, Volume 1, Superintendent of Documents, Washington 25, D. C.) Suppose, for instance, that an industrial product is sold equally to manufacturers of machine tools (S.I.C. 3541) and textile machinery (S.I.C. 3552) with 90 percent of sales concentrated in plants employing more than 100 workers. In sampling 100 firms, interviewers would be instructed to contact 50 plants in each industry, 45 of each employing more than 100 workers. Note that companies whose sales are concentrated among a limited number of large companies often interview all of these big customers and sample-survey the remaining ones.

The quota sampling method is used most extensively. It usually takes less time, effort, personnel, and funds to plan and execute. However, this sampling method is not so accurate as other methods for several reasons. Classifications are arbitrarily selected; complete, recent statistics on the market are often unobtainable; and the interviewer is allowed considerable freedom in selecting the respondents. Another limitation is that some studies require elaborate quotas which are more difficult to construct and fulfill than the examples given above which were simplified to facilitate understanding. For instance, an interviewer may have trouble filling a quota requiring 6 women, age 40 to 45, owning their homes, having husbands earning between \$3,000 and \$5,000 yearly, and using washing machines more than 5 years old.

• **Mail Survey Samples.**—The major problems in conducting a mail survey are getting an accurate mailing list which is representative of the market to be sampled, and obtaining sufficient returns to make the survey reliable. On the first problem, industrial or consumer mailing lists are obtainable from commercial organiza-

tions or from city and trade directories. Also, many magazine publishing firms have mailing services covering specific industries with plants classified by S.I.C., size, and location. The other main sampling problem concerns the number and unequal distribution of returns. Since not all people will answer the questionnaire, a greater proportion of some classifications of people (or firms) than others may answer. You must be sure the final sample is usefully representative of the entire market.

• **How Many To Interview.**—The number of people (or firms) to interview depends upon the accuracy you desire. With a representative sample, greater reliability is usually attained by increasing the sample size. Obviously you must balance reliability with the problems of data collection and with the limit of funds, personnel, and time.

4. DEVELOP A QUESTIONNAIRE

The next step in the survey is to develop the questionnaire for asking and recording the desired information. Since the survey accuracy will be influenced by the manner in which the questions are asked, you must plan the language and layout with care. The following approach has been found useful in developing a questionnaire: First, refer to your written survey objectives or purpose; second, write all the questions you can think of which must be answered to achieve the survey purpose; third, develop a questionnaire from these listed questions; fourth, test the questionnaire for omissions, overlapping, and misunderstandings, and make necessary revisions.

• **Questionnaire Considerations.**—You should consider the following factors when developing a questionnaire:

Wording—Use simple words and sentences.

Length—Make the questionnaire as short as possible.

Information—Attempt to ask questions which the respondent can answer with some accuracy.

For example, "What brands of breakfast cereal have you purchased over the last five years?" cannot be easily recalled.

Ease of answering—Make the questions easy to answer. A checklist is often a useful method of presenting questions when you are sure in advance that you know all possible answers.

Leading questions—Do not ask questions that suggest the answer, such as "Do you use our wonderful, Brand X gasoline?"

Order—The order of the questions should allow a direct and logical flow of thought. Usually the first questions should be general in nature and easy to answer; then proceed to the more difficult or major questions.

"Why" questions—It is sometimes helpful to attempt to determine "why" in the preliminary investigation and build a series of specific questions to follow or take the place of the broad "why" question. Reliable answers to broad "why" questions are difficult to obtain. Example—"Why do you buy Brand X?"

Often people don't know the real reasons, but will give an answer anyway.

• **Elements of Questionnaires.**—Questionnaires usually contain four basic elements: *First*, a request for cooperation, stressing the survey importance; *second*, the questions themselves; *third*, the classification data indicating consumer (or firm) description such as age, location, and so on; *fourth*, identification data, giving name and address of respondent and interviewer.

A mail-survey questionnaire presents special problems. The questionnaire must be attractively presented. It should look easy and interesting to complete. It must persuade the respondent to answer the questions. Each question must be perfectly clear to all. Product illustrations (particularly for industrial products) are helpful in clarifying the nature of the questions. A self-addressed and stamped return envelope should be included.

Mail survey returns average about 10 percent. Premiums (gifts, sample of product, and the like) are sometime offered to increase returns, but they often bias the replies and attract "souvenir hunters." Another approach is to send follow-up letters to those not responding to the initial mailing.

• **Test Investigation.**—After the questionnaire has been completed, test it before starting the survey. Even simple words and questions can be misinterpreted. What may be perfectly clear to you may not be understood by the respondents. The test is made by conducting a few trial interviews. You need no special sample to highlight questionnaire errors or difficulties. Continue testing and revising until the questionnaire is perfectly clear to anyone reading it for the first time.

5. GATHER THE DATA

Once the basic planning of the survey sample and questionnaire has been completed, you can proceed to collect the information from the field. Data gathering by mail and telephone surveys presents no special problems. However, for any large scale personal-interview survey you will need to select, train, and supervise the interviewers. Telephone surveys fall in the latter category if professional interviewers are to be used.

• **Selecting Interviewers.**—Interviewers can be selected from your own organization. However, salesmen should not usually be used for interviewing purposes. It takes valuable time away from their sales efforts, and they are so close to the field problems they may inject their own feelings into the survey. If you need outside interviewing aid, local organizations providing skilled interviewers for a fee are available in most large cities. Interviewers must be willing to work, have a good appearance and, of course, be honest.

• **Training Interviewers.**—All interviewers must understand fully the survey purpose, the sampling plan, and the questionnaire itself. They should be given complete written instruc-

tions explaining how to conduct the interview, how to classify respondents, the meaning of each question, and the manner of recording the answers. The interviewer should start by making a few practice calls with the survey supervisor.

• **Checking the Field Force.**—You must be as sure as possible that all interviews are actually conducted and reported accurately. The best way to guard against falsification of interviews is to "spot" check field work by a follow-up post card or personal call. It is good practice to tell each interviewer before he starts that his work will be checked.

6. ANALYZE THE DATA

After the information has been gathered, the sample must be verified and the data edited before the replies are tabulated. Once they are tabulated, a written report of the findings can then be prepared.

• **Verifying the Sample.**—The field information must be studied to determine whether the sample is sufficiently large and reflects the opinions of a representative cross section of your market. The sample should be checked for proportionality to determine whether each significant class of people (or firms) making up the market is represented in the sample in the appropriate proportion. Any lack of representation results in a biased survey.

You must also find out whether the sample is sufficiently large to yield reliable results. One method commonly used to determine sample reliability is: *First*, thoroughly mix the questionnaires and divide them into, say, 10 groups of equal size. *Second*, select one key question (with a "yes" or "no" answer) and tabulate the answers for each group. *Third*, calculate the percentage of "yes" answers for the first group; then add the second group's "yes" replies to the first group's and calculate the combined percentage; continue adding the returns from each successive group. *Fourth*, record the trend in the percentages as each new group is added. If the cumulative percentages of "yes" answers stay relatively stable as the last few groups are added, you can reason that the sample is sufficiently large and that additional interviews would not materially change the results.

• **Editing and Tabulating.**—Each questionnaire should be examined to eliminate any obvious mistakes, erroneous information, or inconsistencies. The returns can then be tabulated by hand or by machine. Punch card machine tabulating is advantageous when the survey is large and a number of cross-classifications are desired.

• **Written Report.**—The final step is to prepare a written report covering the survey results. This report will make the findings available for study by appropriate company executives. Points covered should include a statement of the survey purpose, the basic findings discovered, a statement of how the survey was conducted, and recommendations for company action based on the findings.

RETURN TO MARKETING

RETURN TO MAIN MENU

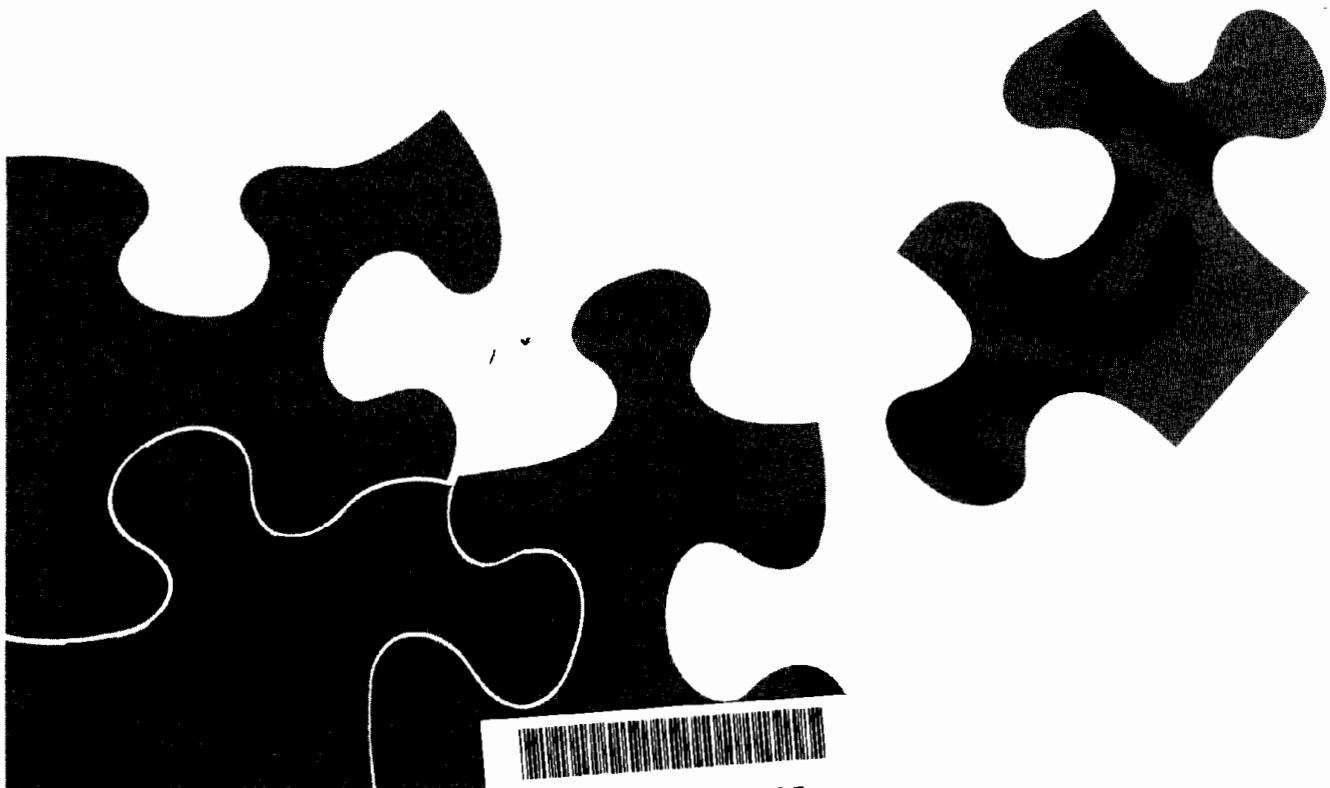
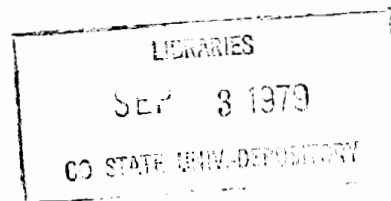
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Small Marketers Aids
U.S. Small Business Administration

Learning About Your Market

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Summary

To be successful a small business must know its market. Marketing research is simply an orderly, objective way of learning about people—the people who buy from you or might buy from you.

This Aid provides an overview of what market research is and how it's done. It introduces inexpensive techniques that small business owner-managers can apply to gather facts about their customers and the people they'd like to have for customers.

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Trash and Peanuts

Some marketing research material is nothing but garbage. Marketing research can be done for peanuts—even with peanuts. Shocking statements? Perhaps, but both of them are literally true.

Take garbage, for instance. Inspection of outgoing waste has long been a practice of many small restaurants. Initially, many people may order the flounder a la marzipan because of the novelty of the dish; but if a restaurateur finds most of it leaving the tables uneaten, it better come off the menu because it won't be in demand much longer.

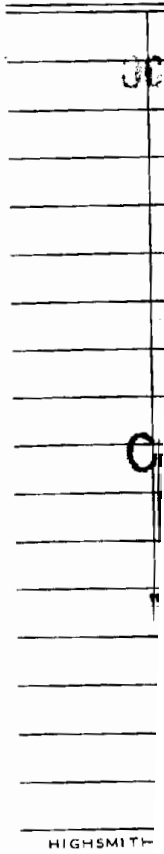
You can use trash positively, too, to find out what people like. It may not be very dignified to check trash cans for cartons and containers, but they are direct indications of what consumers are buying. You could also find out what competitors are selling (or at least ordering) by checking their trash as well.

The point here isn't to turn you into a scavenger, but to suggest that marketing research isn't done only with sophisticated staffs of statistical technicians working with powerful computers grinding up figures from elegant surveys. Marketing research doesn't have to be fancy and expensive.

It can be done with peanuts, as one creative discount merchandiser discovered. During a three-day promotion the merchant gave away free to customers "...all the roasted peanuts you can eat while shopping our store." By the end of the promotion the merchant had "litter trails" that provided information on the traffic patterns within his store. He found trampled peanut hulls littering the most heavily traveled store aisles and even heaped up in front of displays of merchandise of special interest to his customers. In short, he learned how they acted in the store and what they wanted. He observed their behavior.

What Is Marketing Research?

Basically, marketing research is just what the merchant did with his peanuts. He found out what caught his customers' attention by observing their actions and drawing conclusions from what he saw. To put it



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more formally, in the words of the American Marketing Association, marketing research is "the systematic gathering, recording, and analyzing of data about problems relating to the marketing of goods and services."

Marketing research is an organized way of finding objective answers to questions every business must answer to succeed. Every small business owner-manager must ask:

- Who are my customers and potential customers?
- What kind of people are they?
- Where do they live?
- Why do they buy?
- Can and will they buy?
- Am I offering the kinds of goods or services they want—at the best place, at the best time, and in the right amounts?
- Are my prices consistent with what buyers view as the products' values?
- Are my promotional programs working?
- What do customers think of my business?
- How does my business compare with my competitors?

Marketing research is not a perfect science; it deals with people and their constantly changing likes and dislikes which can be affected by hundreds of influences, many of which simply can't be identified. Marketing research does, however, try to learn about markets scientifically. That, simply, is to gather facts in an orderly, objective way; to find out how things are, not how you think they are or would like them to be; what people want to buy, not just what you want to sell them.

Why Do It?

It's tough—impossible—to sell people what they don't want. (Remember the Nehru jacket?) That's pretty obvious. Just as obvious is the fact that nothing could be simpler than selling people what they do want. Big business has to do marketing research to find that out. The same reason holds for small business.

For once, small business holds an edge. The giants hire experts to go out and discover what's what in the mass market in which they sell. Owner-managers of small business are close to their customers; they can learn much more quickly about the likes and dislikes of their specific customers. They can react quickly to changes in their customers' buying habits.

Small business owners often have a "feel" for their customers—their markets—that comes from years of experience. Experience can be a two-edged sword, though, since it comprises a tremendous mass of facts acquired at random over a number of years. Information about markets gained from long experience may no longer be timely enough to base

selling decisions on. In addition, some “facts” may be vague, misleading impressions or folk tales of the “everybody knows that...” variety.

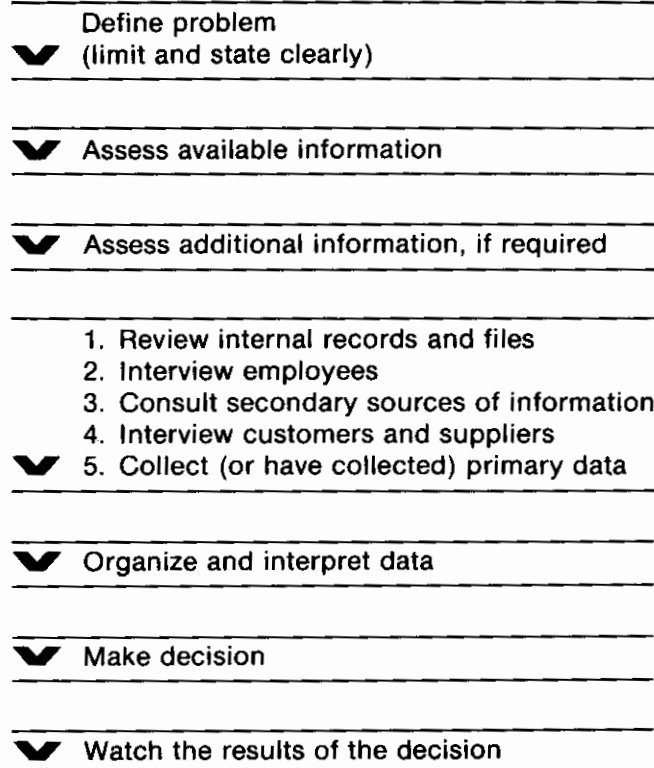
Marketing research focuses and organizes marketing information. It insures that such information is timely. It provides what you need to:

- Reduce business risks,
- Spot problems and potential problems in your current markets,
- Identify and profit from sales opportunities,
- Get basic facts about your markets to help you make better decisions and set up plans of action.

How Do You Go About It?

You probably do some marketing research every day in the course of your routine management activities without being aware of it. You check returned items to see if there's some pattern. You ask one of your old customers, who has stopped coming to your shop, why he hasn't been in lately when you run into him on the street. You look at a competitor's ad to see what that store is charging for the same products you're selling.

Marketing research simply makes this process more orderly. It provides a framework that lets you objectively judge the meaning of the information you gather about your market. The following flow chart shows the steps in the marketing research process:



Defining the Problem

This, the first step of the research process, is so obvious that it is often overlooked. Yet, it is the most important step of the process.

You must be able to see beyond the symptoms of a problem to get at the cause. Seeing the problem as a "sales decline" is not defining a cause; it's listing a symptom.

In defining your problem list every possible influence that may have caused it. Has there been a change in the area your customers have traditionally come from? Have their tastes changed? Put all the possible causes down. Then set aside any that you don't think can be measured, since you won't be able to take any action on them.

You must establish an idea of the problem with causes that can be objectively measured and tested. Put your idea of the causes in writing. Look at it frequently while you're gathering your facts to keep on track, but don't let it get in the way of the facts, either. (Incidentally, while this *Aid* speaks of "problems," the same techniques can be used to investigate potential opportunities, too.)

Assessing Available Information

Once you've formally defined your problem, you should assess your ability to solve it immediately. You may already have all the information you need to determine if your hypothesis is correct, and solutions to the problem may have become obvious in the process of defining it. Stop there. You'll only be wasting your time and money if you do further marketing research.

What if you aren't sure whether or not you need additional information at this point? What if you'd feel more comfortable with additional data? Here, you've got to make a subjective judgment to weigh the cost of more information against its usefulness.

You're up against a dilemma similar to guessing in advance your return on your advertising dollar. You don't know what return you'll get, or even if you'll get a return. The best you can do is to ask yourself how much making a wrong decision will cost and to balance that against the cost of gathering more data to make a better informed decision.

Gathering Additional Information

Think cheap and stay as close to home as possible. Before considering anything fancy like surveys or field experiments, look at your own records and files. Look at sales records, complaints, receipts, or any other records that can show you where your customers live or work or how and what they buy.

One small business owner found that addresses on cash receipts allowed the pinpointing of customers in his market area. With this kind of information he could cross reference his customers' address and the products they purchased. From this information he was able to check the effectiveness of his advertising placement.

Your customers' addresses alone can tell you a lot about them. Obviously you can pretty closely guess your customers' life-styles by knowing what the neighborhoods they live in are like. Knowing how they live can give you solid hints on what they can be expected to buy.

Credit records are an excellent source of information about

your markets, too. In addition to the always valuable addresses of real live customers, they give you information about customers' jobs, income levels, marital status. Granting credit, so it can be seen, is a multi-faceted marketing tool—though one with well-known costs and risks.

When you've finished checking through your records, go to that other valuable internal source of customer information—your employees. Employees may be the best source of information about customer likes and dislikes. They hear customers' minor gripes about your store or service—the ones the customers don't seem important enough to take to you as owner-manager. They are also aware of the items customers request that you may not stock. Employees can probably also give you a pretty good seat-of-the-pants customer profile from their day-to-day contacts.

Going Outside for Marketing Research Data

Once you've exhausted the best sources for information about your market, your internal data, where do you go? Well, the next steps in the process are to do primary and secondary research on the outside.

Secondary research first. Naturally, since it's called secondary research, you do it before you undertake any primary research. Secondary research simply involves going to already published surveys, books, magazines and the like and applying or rearranging the information in them to bear on your particular problem or potential opportunity.

For example, say you sell tires. You might reasonably guess that sales of new cars three years ago would have a strong effect on present retail sales of tires. To test this idea you might compare new car sales of six years ago with the replacement tires sales from three years ago.

Suppose you found that new tire sales three years ago were 10 percent of the new car sales three years previous to that. Repeating this exercise with car sales five years ago and tire sales for two years ago and so on, you might find that in each case tire sales were about 10 percent of the new car sales made three years before. You could then logically conclude that the total market for replacement tire sales in your area this year ought to be about 10 percent of the new car sales in your locality three years ago.

Naturally, the more localized the figures you can find the better. While, for instance, there may be a decline nationally in new housing starts, if you sell new appliances in an area where new housing is booming, you obviously would want to base your estimate of market potential on local conditions. Newspapers and local radio and TV stations may be able to help you find this information.

There are many sources of such secondary research material. You can find it in libraries, universities and colleges, trade and general business publications, and newspapers. Trade associations and government agencies are rich sources of information.*

Primary research, the last step. Primary research on the outside can be as simple as your asking customers or suppliers how they feel about your store or service firm or as complex as the surveys done by the sophisticated professional marketing research giants. It includes among its tools direct mail questionnaires, telephone or "on the street" surveys, experiments, panel studies, test marketing, behavior observation, and the like.

Primary research is often divided into "reactive" and "nonreactive" research. The "peanut shell study" at the beginning of this *Aid* is an example of nonreactive primary research: it was a way of seeing how real people behaved in a real "market situation" (in this case how they

*The Small Business Administration's SBB 9, "Marketing Research Procedures," is a bibliography listing dozens of sources of such information. Many of the publications listed may be available in your public library. See "Related SBA Publications" at the end of this *Aid* to learn how to get a free copy.

moved through the store and which displays attracted their attention) without influencing that behavior even accidentally.

Reactive research (surveys, interviews, questionnaires) is probably what most people think of when they hear the words "marketing research." It's the kind best left to the experts, since you may not know the right questions to ask. There's also the danger that either people won't want to hurt your feelings when you ask them their opinions about your business, or they'll answer questions the way they think they are "expected" to answer, rather than the way they really feel. If you feel you can't afford high-priced marketing research services, ask nearby college or university business schools for help.

What You Can Do

Marketing research is limited only by your imagination. Much of it you can do with very little cost except your time and mental effort. Here are a few examples of techniques small business owner-managers have used to gather information about their customers.

License plate analysis. In many states license plates give you information about where a car's owner lives. You can generally get information from state agencies on how to extract this information from license numbers. By taking down the numbers of cars parked in your location you can estimate your trading area. Knowing where your customers live can help you aim your advertising for good effect. Or, how about tracing your competitors' customers using the same technique? Knowing where they live may help you target your approach to win them for your business.

Telephone number analysis. Like license numbers, telephone numbers can tell you the areas in which people live. You can get customers' telephone numbers on sales slips, from checks and credit slips, and the like. As noted, before, knowing where your customers live can give you an excellent idea of the way they live and what they like.

Coded coupons and "tell them Joe sent you" broadcast ads. You can check the relative effectiveness of your advertising media by coding coupons and by including phrases customers must use to get a discount on some sale item in your broadcast ads. This technique may also reveal what areas your customers are drawn from. Where they read or heard about the discount offered in your ads will also give you information about their tastes.

People watching. You can learn a great deal about your customers just by looking at them. How are they dressed? How old do they appear to be? Are they married? Do they have children with them? This technique is obvious and most owner-managers get their feel for their clientele just this way. But how about running a tally sheet for a week keeping track of what you're able to tell about your customers from simple outward clues? It might just confirm what you've thought obvious all the time, but it might also be instructive.

Do, Don't Overdo

The key to effective marketing research is neither technique nor data—it's useful information. That information must be timely; your customers' likes and dislikes are shifting constantly. You'll never know everything about a particular problem anyway. It's much better to get there

on time with a little than too late with a lot. If you spend too much time gathering too much data going for a sure thing, you may find your marketing research is nothing but garbage.

Related SBA Publications

The following Small Business Administration publications are available free from SBA, P.O. Box 15434, Fort Worth, TX 76119 or by calling (toll free) 800-433-7212 (Texas only, 800-792-8901):

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SMA 158—A Pricing Checklist for Small Retailers

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The following booklets may be purchased from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402 (for current prices write SBA, P.O. Box 15434, Fort Worth, TX 76119 and ask for SBA-115B, *For-Sale Booklets*):

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RETURN TO MARKETING

RETURN TO MAIN MENU



Management Aids FOR SMALL MANUFACTURERS

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KEY MARKETING WORDS - - WHAT THEY MEAN

By *Ralph S. Alexander*, Professor of Marketing, Columbia University,
and The Committee on Definitions of the American Marketing Association

SUMMARY

Business communication has perhaps become more important today than ever before. Confusion, waste, and sometimes near disaster results from misunderstanding. The small businessman thinks his message is getting through only to learn later that his listener misunderstood the communication.

Sometimes such misunderstanding occurs because the two men interpret the same word differently. This difficulty with words exists in many areas, but it is often experienced in marketing where the speaker to a great extent shades the meaning of terms according to his particular outlook on the particular aspect of marketing.

This Aid lists some of the most frequently used marketing terms and the definitions which Professor Alexander and his committee compiled for the American Marketing Association. That organization published recently the complete list as *Marketing Definitions*.

-A-

ADVERTISING: Any paid form of non-personal presentation and promotion of ideas, goods, or services by an identified sponsor. It involves the use of such media as the following: magazine and newspaper space, motion pictures, outdoor (posters, signs, skywriting, and so on), direct mail, novelties (calendars, blotters, and so on), radio and television, cards (car, bus, and so on), catalogs, directories and references, programs and menus, circulars. This list is intended to be illustrative, not inclusive.

AGENT: A business unit which negotiates purchases or sales or both but does not take title to the goods in which it deals.

-B-

BRANCH HOUSE (Manufacturer's): An establishment maintained by a manufacturer, detached from the headquarters establishment and used primarily for the purpose of

stocking, selling, delivering, and servicing his product.

BRANCH OFFICE (Manufacturer's): An establishment maintained by a manufacturer, detached from the headquarters establishment and used for the purpose of selling his products or providing service.

BRAND: A name, term, sign, symbol, or design, or a combination of them which is intended to identify the goods or services of one seller or group of sellers and to differentiate them from those of competitors.

BRAND NAME: A brand or part of a brand consisting of a word, letter, group of words or letters comprising a name which is intended to identify the goods or services of a seller or a group of sellers, and to differentiate them from those of competitors.

BROKER: An agent who does not have direct physical control of the goods in which he deals but represents either buyer or seller in negotiating purchases or sales for his principal.

-C-

CHANNEL OF DISTRIBUTION: The structure of intra-company organization units and extra-company agents and dealers, wholesale and retail, through which a commodity, product, or service is marketed.

COMMISSION HOUSE (sometimes called Commission Merchant): An agent who usually exercises physical control over and negotiates the sale of the goods he handles. The commission house usually enjoys broader powers as to prices, methods, and terms of sale than does the broker although it must obey instructions issued by the principal. It generally arranges delivery, extends necessary credit, collects, deducts its fees, and remits the balance to the principal.

COMMODITY EXCHANGE: An organization usually owned by the member-traders, which provides facilities for bringing together buyers and sellers of specified commodities, or their agents, for promoting trades, either spot or futures or both, in these commodities.

C. C. WATERS

CONSUMERS' GOODS: Goods destined for use by ultimate consumers or households and in such form that they can be used without commercial processing.

COOPERATIVE MARKETING: The process by which independent producers, wholesalers, retailers, consumers, or combinations of them act collectively in buying or selling or both.

-D-

DEALER: A firm that buys and resells merchandise at either retail or wholesale.

DIRECT SELLING: The process whereby the firm responsible for production sells to the user, ultimate consumer, or retailer without intervening middlemen. The Committee recommends that when this term is used, it be so qualified as to indicate clearly the precise meaning intended (direct to retailer, direct to user, direct to ultimate consumer, and so on).

DISTRIBUTOR: In its general usage, this term is synonymous with "wholesaler."

-E-

EQUIPMENT: Those industrial goods that do not become part of the physical product and which are exhausted only after repeated use, such as machinery, installed equipment, and accessories, or auxiliary equipment. Installed equipment includes such items as boilers, linotype machines, power lathes, bank vaults. Accessories include such items as gauges, meters, and control devices. Auxiliary equipment includes such items as trucks, typewriters, filing cases and industrial hoists.

EXCLUSIVE OUTLET SELLING: That form of selective selling whereby sales of an article or service or brand of an article to any one type of buyer are confined to one retailer or wholesaler in each area, usually on a contractual basis.

-F-

FABRICATING MATERIALS: Those industrial goods which become a part of the finished product and which have undergone processing beyond that required for raw materials but not as much as finished parts.

FACILITATING AGENCIES IN MARKETING: Those agencies which perform or assist in the performance of one or a number of the marketing functions but which neither take title to goods nor negotiate purchases or sales. Common types are banks, railroads, storage warehouses, commodity exchanges, stock yards, insurance companies, graders and inspectors, advertising agencies, firms engaged in marketing research, cattle loan companies, furniture marts, and packers and shippers.

FACTOR: (1) A specialized financial institution engaged in factoring accounts receivable and lending on the security of inventory. (2) A type of commission house which often advances

funds to the consigner, identified chiefly with the raw cotton and naval stores trades.

FACTORING: A specialized financial function whereby producers, wholesalers, and retailers sell their accounts receivable to financial institutions, including factors and banks, often on a non-recourse basis.

-I-

INDUSTRIAL GOODS: Goods which are destined to be sold primarily for use in producing other goods or rendering services as contrasted with goods destined to be sold primarily to the ultimate consumer. They include equipment (installed and accessory), component parts, maintenance, repair and operating supplies, raw materials, fabricating materials.

-J-

JOBBER: This term is widely used as a synonym of "wholesaler" or "distributor."

-M-

MANUFACTURER'S AGENT: An agent who generally operates on an extended contractual basis; often sells within an exclusive territory; handles noncompeting but related lines of goods; and possesses limited authority with regard to prices and terms of sale. He may be authorized to sell a definite part of his principal's output.

MANUFACTURER'S STORE: A retail store owned and operated by a manufacturer, sometimes as outlets for his goods, sometimes primarily for experimental or publicity purposes.

MARKET: (1) The aggregate of forces or conditions within which buyers and sellers make decisions that result in the transfer of goods and services. (2) The aggregate demand of the potential buyers of a commodity or service.

MARKET ANALYSIS: A sub-division of marketing research which involves the measurement of the extent of a market and the determination of its characteristics.

MARKET POTENTIAL: (also Market or Total Market) A calculation of maximum possible sales opportunities for all sellers of a goods or service during a stated period.

MARKET SHARE: (or Sales Potential) The ratio of a company's sales to the total industry sales on either an actual or potential basis.

MARKETING: The performance of business activities that direct the flow of goods and services from producer to consumer or user.

MARKETING BUDGET: A statement of the planned dollar sales and planned marketing costs for a specified future period.

MARKETING COST ACCOUNTING: The branch of cost accounting which involves the allocation of marketing costs according to customers, marketing units, products, territories, or marketing activities.

MARKETING COSTS ANALYSIS: The study and evaluation of the relative profitability or costs of different marketing operations in

terms of customers, marketing units, commodities, territories, or marketing activities.

MARKETING FUNCTION: A major specialized activity or group of related activities performed in marketing. *Comment:* There is no generally accepted list of marketing functions, nor is there any generally accepted basis on which the lists compiled by various writers are chosen. The reason for these limitations is fairly apparent. Under this term students of marketing have sought to squeeze a heterogeneous and non-consistent group of activities. Some of them are broad business functions with special marketing implications; others are peculiar to the marketing process. The function of assembling is performed through buying, selling, and transportation. Assembling, storage, and transporting are general economic functions; selling and buying are more nearly individual in character. Most of the lists fail sadly to embrace all the activities a marketing manager worries about in the course of doing his job.

MARKETING MANAGEMENT: The planning, direction and control of the entire marketing activity of a firm or division of a firm, including the formulation of marketing objectives, policies, programs and strategy, and commonly embracing product development, organizing and staffing to carry out plans, supervising marketing operations, and controlling marketing performance.

MARKETING RESEARCH: The systematic gathering, recording, and analyzing of data about problems relating to the marketing of goods and services. Such research may be undertaken by impartial agencies or by business firms or their agents for the solution of their marketing problems.

MERCHANDISING: The planning and supervision involved in marketing the particular merchandise or service at the places, times, and prices and in the quantities which will best serve to realize the marketing objectives of the business.

MOTIVATION RESEARCH: A group of techniques developed by the behavioral scientists which are used by marketing researchers to discover factors influencing marketing behavior.

-N-

NATIONAL BRAND: A manufacturer's or producer's brand, usually enjoying wide territorial distribution.

-P-

PHYSICAL DISTRIBUTION: The management of the movement and handling of goods from the point of production to the point of consumption or use.

PRICE LEADER: A firm whose pricing behavior is followed by other companies in the same industry.

PRODUCERS' COOPERATIVE MARKETING: That type of cooperative marketing which

primarily involves the sale of goods or services of the associated producing membership. May perform only an assembly or brokerage function but in some cases, notably milk marketing, extends into processing and distribution of the members' production.

PRODUCT LINE: A group of products that are closely related either because they satisfy a class of need, are used together, are sold to the same customer groups, are marketed through the same type of outlets or fall within given price ranges. Example, carpenters' tools.

PRODUCT MIX: The composite of products offered for sale by a firm or a business unit.

PURCHASING POWER (Buying Power): The capacity to purchase possessed by an individual buyer, a group of buyers, or the aggregate of the buyers in an area or a market.

-R-

RACK JOBBER: A wholesaling business unit that markets specialized lines of merchandise to certain types of retail stores and provides the special services of selective brand and item merchandising and arrangement, maintenance, and stocking of display racks.

RESIDENT BUYER: An agent who specializes in buying, on a fee or commission basis, chiefly for retailers.

-S-

SALES ANALYSIS: A subdivision of Marketing Research which involves the systematic study and comparison of sales data.

SALES BUDGET: The part of the marketing budget which is concerned with planned dollar sales and planned costs of personal selling during a specified future period.

SALES FORECAST: An estimate of sales, in dollars or physical units for a specified future period under a proposed marketing plan or program and under an assumed set of economic and other forces outside the unit for which the forecast is made. The forecast may be for a specified item of merchandise or for an entire line.

SALES MANAGEMENT: The planning, direction, and control of the personal selling activities of a business unit, including recruiting, selecting, training, equipping, assigning, routing, supervising, paying, and motivating as these tasks apply to the personal sales force.

SALES PLANNING: That part of the marketing planning work which is concerned with making sales forecasts, devising programs for reaching the sales target, and deriving a sales budget.

SALES PROMOTION: (1) In a specific sense, these marketing activities, other than personal selling, advertising, and publicity, that stimulate consumer purchasing and dealer effectiveness, such as display, shows and exhibitions, demonstrations, and various non-recurrent selling efforts not in the ordinary routine. (2) In retailing, all methods of stimulating

customer purchasing, including personal selling, advertising, and publicity.

SELLING AGENT: An agent who operates on an extended contractual basis; sells all of a specified line of merchandise or the entire output of his principal, and usually has full authority with regard to prices, terms, and other conditions of sale. He occasionally renders financial aid to his principal.

SERVICES: Activities, benefits, or satisfactions which are offered for sale, or are provided in connection with the sale of goods. Examples are amusements, hotel service, electric service, transportation, the services of barber shops and beauty shops, repair and maintenance service, the work of credit rating bureaus. This list is merely illustrative and no attempt has been made to make it complete. The term also applies to the various activities such as credit extension, advice and help of sales people, delivery, by which the seller serves the convenience of his customers.

SHOPPING GOODS: These consumers' goods which the customer in the process of selection and purchase characteristically compares on such bases as suitability, quality, price and style. Examples of goods that most consumers probably buy as Shopping Goods are: millinery, furniture, dress goods, women's ready-to-wear and shoes, used automobiles, and major appliances.

SPECIALTY GOODS: Those consumers' goods with unique characteristics and/or brand identification for which a significant group of buyers are habitually willing to make a special purchasing effort. Examples of articles that are usually bought as Specialty Goods are: specific brands and types of fancy foods, hi-fi components, certain types of sporting equipment, photographic equipment, and men's suits.

-T-

TRADING AREA: A district whose size is usually determined by the boundaries within

which it is economical in terms of volume and cost for a marketing unit or group to sell and/or deliver a good or service.

TRAFFIC MANAGEMENT: The planning, selection, and direction of all means and methods of transportation involved in the movement of goods in the marketing process.

-U-

ULTIMATE CONSUMER: One who buys and/or uses goods or services to satisfy personal or household wants rather than for resale or for use in business, institutional, or industrial operations.

-V-

VALUE ADDED BY MARKETING: The part of the value of a product or a service to the consumer or user which results from marketing activities.

-W-

WHOLESALE: A business unit which buys and resells merchandise to retailers and other merchants and/or to industrial, institutional, and commercial users but which does not sell in significant amounts to ultimate consumers. In the basic materials, semi-finished goods, and tool and machinery trades merchants of this type are commonly known as "distributors" or "supply houses."

Filing Classification:

Marketing Research

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HOW TO PRICE A NEW PRODUCT

By Joel Dean of Joel Dean Associates and Columbia University, New York

Pricing new products is important in two ways: it affects the amount of the product that will be sold; and it determines the amount of revenue that will be received for a given quantity of sales. If you set your price too high you will be likely to make too few sales to permit you to cover your overhead. If you set your price too low you may not be able to cover out-of-pocket costs.

WHAT IS DIFFERENT ABOUT NEW PRODUCTS?

New products that are novel require a different pricing treatment from old ones because they are distinctive. No one else sells quite the same thing. This distinctiveness is usually only temporary, however. As your product catches on, competitors will try to take away your market by bringing out imitative substitutes. The speed with which your product loses its uniqueness will depend on a number of factors. Among them are the total sales potential, the investment required for rivals to manufacture and distribute the product, the strength of patent protection, and the alertness and power of competitors.

Although competitive imitation is almost inevitable, the company that introduces a new product can use price as a means of slowing the speed with which competitive products are placed on the market. Finding the "right" price is not easy, however. New products are hard to price correctly. This is true both because past experience is no sure guide as to how the market will react to any given price, and because competitive products already on the market are usually significantly different in nature or quality. Therefore, in setting a price on a new product you will want to have three objectives in mind:

- Getting the product accepted
- Maintaining your market in the face of growing competition
- Producing profits

Your pricing policy cannot be said to be successful unless you can achieve all three of these objectives.

WHAT ARE YOUR CHOICES AS TO POLICY

Broadly speaking, the strategy in pricing a new product comes down to a choice between (1) "skimming" pricing, and (2) "penetration" pricing. There are a number of intermediate positions, of course, but the issues are clearer when the two extremes are compared.

Skimming Pricing. Some products represent a drastic departure from accepted ways of performing a service or filling a demand. For these a strategy of high prices, coupled with large promotional expenditure in the early stages of market development (and lower prices at later stages), has frequently proven successful. This is known as a skimming price policy. There are four main reasons why this policy is attractive for new and highly distinctive products:

First, the quantity of the product that you can sell is likely to be less affected by price in the early stages than it will be when the product is "full-grown" and competitive imitation has had time to take effect. These early stages form the period when pure salesmanship, rather than price, can have the greatest influence on sales.

Second, a skimming price policy takes the "cream of the trade" at a high price before attempting to penetrate the more price-sensitive sections of the market. This means that you can make more sales to buyers who are willing to pay high prices for a product they want, and at the same time build up experience useful later in hitting the larger mass markets with tempting prices.

Third, you can use this as a way to feel out the demand. It is frequently fairly easy to start out with a high price which some customers may refuse, and reduce it later on when the facts of the product demand make themselves known. But it is often difficult to set a low price initially and then boost the price to cover unforeseen costs or to capitalize on a popular product.

Fourth, high prices will frequently produce a greater dollar volume of sales in the early

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stages of market development than will a policy of low initial prices. When this is the case, skimming pricing will provide you with funds for financing expansion into the larger volume sectors of your market.

Penetration Pricing. Nevertheless, a skimming-price policy isn't always the answer to your problem, however. Although high initial prices may safeguard profits during the early stages of product introduction, they may also prevent quick sales to the many buyers upon whom you must rely to give you a mass market. The alternative is to use low prices as an entering wedge to get into mass markets early. This is known as penetration pricing. This approach is likely to be desirable under the following conditions:

First, when the quantity of product sold is highly sensitive to price, even in the early stages of introduction.

Second, when you can achieve substantial economies in unit cost and effectiveness of manufacturing and distributing the product by operating at large volume.

Third, when your product is faced by threats of strong potential competition, very soon after introduction.

Fourth, when there is no "elite" market—that is, a class of buyers who are willing to pay a higher price in order to obtain the latest and best.

While the decision to price so as to penetrate a broad market can be made at any stage in the product's life cycle, you should be sure to examine this pricing strategy before your new product is marketed at all. This possibility should certainly be explored as soon as your product has established an elite market. Sometimes a product can be rescued from a premature death by adoption of a penetration price policy after the cream of the market has been skimmed.

The ease and speed with which competitors can bring out substitute products is probably the most important single consideration in your choice between skimming and penetration pricing at the time you introduce your new product. For products whose market potential looks big, a policy of low initial prices makes sense, because the big multiple-product manufacturers are attracted by mass markets. However, if you set your price low enough to begin with, your large competitor may not feel it worth his while to make a big production and distribution investment for slim profit margins. For this reason, low initial prices are often termed "stay-out" prices. In any event, you should appraise your particular competitive situation very carefully for each new product before you decide on your basic pricing strategy.

FACTORS YOU SHOULD ANALYZE IN SETTING A PRICE

Once you have decided on your basic pricing strategy, you can then turn to the task of putting a dollars-and-cents price tag on your new product. In order to do this you should analyze at least five important factors:

- Potential and probable demand for your product
- Cost of making and selling the product
- Market targets
- Promotional strategy
- Suitable channels of distribution

DEMAND

The first step in estimating market demand is to find out whether or not the product will sell at all—assuming that the price is set within the competitive range. That is, you should find out whether or not the product fulfills a real need, and whether enough potential customers are dissatisfied with their present means of filling that need. To do this, you need some measurement of the total potential market for the new product and all its competing substitutes. Then you need to estimate the portion of this total that your product is likely to get.

Following that, you should determine the range of competitive prices. This will be easier when substitutes are relatively similar to your product, or when your customers are familiar with the cost and quality of substitutes and buy primarily on the basis of performance, rather than on the basis of impulse or emotion.

The next step is to try to judge the probable sales volume at two or three possible prices within the price range. The best way to do this is by controlled experiments checking sample sales at different prices. A second best way is by a close examination of the sales volume of other similar products which potential customers might buy.

Finally, you should consider the possibility of retaliation by manufacturers of displaced substitutes. If your new product hits any one of your competitors hard enough, you may be faced with price retaliation. The limit to this price cutting is set by the out-of-pocket cost of the price-cutting competitors. Therefore, knowledge of the out-of-pocket cost of making competing products will be helpful in estimating the probable effects of a particular price.

COSTS OF MAKING AND SELLING

Before going ahead with your new product, you should estimate its effect on your investment, your costs, and your profits. First, you should estimate the added investment neces-

sary to manufacture and distribute the new product. This investment should include estimates of increased working capital that will be required at various sales volumes. Then you should estimate the added costs of manufacturing and selling the product at various possible sales volumes. Frequently, the most satisfactory way of developing these estimates is to calculate *total* costs with and without the new product, rather than attempting to arrive at *unit* costs right at the start. The difference can then be assigned to the new product. Allocations of overheads that you are already incurring should not be assigned to the new product because they will be the same whether or not you go ahead with the addition to your product line.

In building up your two sets of cost and investment figures—one showing the situation *without* the new product, and the other showing the contrasting situation *with* the new product added to your line—be sure to take into account *all* pertinent items. It often happens that companies which lose money on new products have run into trouble because of unanticipated costs or investment requirements which have absorbed most or all the profits realizable from the new idea.

New product costs may be segregated into half a dozen main categories:

- Direct labor
- Materials and supplies for production
- Components purchased outside
- Special equipment (such as jigs, dies, fixtures and other tools)
- Plant overhead
- Sales expenses

Direct Labor.—Methods of estimating direct labor may be built up in one of three ways: (1) You can compare each operation on each component with accumulated historical data, from your files, on similar operations for similar components. (2) You can develop a mock-up of the proposed work-place layout, and actually time an operator who performs the series of manufacturing operations, simulated as accurately as possible. (3) You can apply one of several systems of predetermined, basic-motion times which are currently available from private sources. Make certain, however, that you include any added time used for set-up work, or needed to take the item from its transportation container, perform the operations, and return the item again to its transportation container. When the total direct labor time is determined, multiply it by the appropriate labor rates.

Materials and Supplies for Production.—In developing reliable cost figures for materials and supplies, make a methodical list of all requirements. Having listed everything in an organized fashion you can enter the specifica-

tions and costs on a manufactured-component estimate form. Remember to include any extra costs which may be incurred as a result of requirements for particular length, widths, qualities, or degrees of finish. Allowances for scrap should also be made as accurately as possible and corrected by applying a salvage factor if the scrap can be sold or reused.

Components Purchased Outside.—In the case of parts purchased from other concerns, place your specifications with more than one reliable supplier. Get competitive bids for the work. But in addition to price considerations, be sure you give proper weight to the reputation and qualifications of each potential producer. Moreover, if you use a substantial volume of purchased parts you may want to use a "plus" factor above the cost of the components themselves to cover your own expenses involved in receiving, storing, and handling the items.

Special Equipment.—Take careful precautions against making a faulty analysis of your expense and investment in special jigs, dies, fixtures, and other tools which you need to produce the new product. To avoid trouble in this area make a table showing all cases where special equipment will be needed. The actual estimating of the costs of such equipment is best done by a qualified tool shop—your own if you have one or an outside organization. Here again, competitive bidding is an excellent protection on price. Do not include costs of routine inspection, service, and repair; these are properly charged to plant overhead.

Plant Overhead.—The overhead item may be estimated as a given percentage of direct labor, machine utilization, or some other factor determined by your accountants to be the most sensible basis. In this way you can allocate satisfactorily charges for administration and supervision, for occupancy, and for indirect service related to producing the new product. Overhead allocations may be set up for a department, a production center, or even, in some cases, for a particular machine. In calculating plant overhead make certain that in setting up your cost controls, your accountants have not overlooked any proper indirect, special charges which will have to be incurred because of the new product.

Sales Expense.—As in the previous cost categories, the critical element is the added sales expense which the new product will involve. To make sure you have included everything, it is often helpful to deal with these expenses in several segments. The following is a simplified check list: (1) Salaries, commissions, and traveling expenses; (2) Advertising and sales promotion; (3) Transportation; (4) Credit and collection expenses; (5) Warehousing and storage; (6) Sales overhead expenses—including office expenses, insurance, depreciation, and the like. Other

lists could, of course, be developed, but for greatest usefulness they should be kept as simple as possible and should be organized in terms of the specific selling activities which a company has.

Your estimates of sales revenue at various potential volumes can now be compared with your estimates of added costs at those volumes. The difference will be the added profits of introducing the new product. Although costs themselves probably should not be used as the sole basis for setting price, you should not go into any venture that doesn't produce a rate-of-return on the added investment which is (1) adequate to compensate for the added risk and (2) is still at least as high as the return you could get by investing your money elsewhere. If no price that you set will provide enough revenue to produce an adequate profit over your added costs, then you should either drop the venture, try to cut costs, or wait for a more favorable time to introduce the product.

MARKETING TARGETS

Assuming that the estimates of market demand and of cost and investment have been made, and that the profit picture looks sufficiently rosy, you are now in a position to set up some basic goals and programs. A decision must first be made about market targets—that is, what market share or sales volume should be aimed at? Among other factors, you probably should consider what effect sales expansion in varying amounts will have upon your costs, what effect it will have upon investment requirements, whether or not your existing organization can handle the new product, how it fits in with the rest of your present product line, and so forth. These decisions should be made after an objective survey of the nature of your new product and of your company's organization and manufacturing and distributive facilities.

PROMOTIONAL STRATEGY

Closely related to the question of market targets is the design of promotional strategy. As an innovator, you must not only sell your

product, but frequently you must also make people recognize their need for this kind of product. Your problem here is to determine the best way of "creating that market." You must determine the nature of the market and the type of appeal that will secure prompt acceptance by potential buyers. And you should also estimate how much it will cost you to achieve this goal.

CHANNELS OF DISTRIBUTION

Frequently, you'll have some latitude in your choice of channels of distribution. But the channel you pick must be consistent with your strategy for initial pricing and for promotional outlays. Penetration pricing and explosive promotion, for example, call for channels which can make the product widely and promptly available. Otherwise you waste advertising money or lose the effect of mass-market pricing. Distribution policy also involves how much you want dealers to do in pushing your product, the margins you must give them to get this push, and the degree of exclusiveness of territory and of inventory the dealers insist on.

YOUR DECISION

These are the factors you should analyze in setting a price. Estimating these factors shrewdly and objectively requires specialized training and experience. But good estimates will make your pricing realistic and successful. Pricing cannot, of course, be established by any cut and dried formula. Combining these factors into a pricing policy requires judgment. In the last analysis you must pull together all the estimates of the experts, and arrive at your own decision. It's your money and you're the boss as to how the business is to be run. You will want to make sure that your pricing analysis is guided by sound assumptions, and that the activities of any specialists you use are all geared toward the same end—and effective marketing and promotional program in which the price will meet the objectives of market acceptance, competitive advantage, and profits.

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Management Aids for Small Manufacturers

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HOW MARKETING RESEARCH HELPS SMALL MANUFACTURERS

By a Special Task Force on Industry Education of the American Marketing Association, Inc.

Are you planning to expand distribution of your products in an area as yet untested by you? To introduce a new product? To add to your line generally? Before you embark on any such costly ventures, you need to do some *marketing research*, or have it done for you, to estimate your chances of success and to eliminate the more dangerous elements of risk threatening your capital investment.

MARKETING RESEARCH—WHAT IT IS

Marketing research has been defined as the "gathering, recording, and analyzing of all facts about problems relating to the transfer and sale of goods and services from producer to consumer." It is a business activity which you should undertake or have professionals do for you, to serve as a basis for making sound marketing decisions.

WHY YOU SHOULD USE MARKETING RESEARCH

• **To Help You Eliminate or Reduce Business Risks.**—You as a manufacturer can and often do act on the basis of hunch or opinion, but it is rather risky to do so. You may decide, for instance, to commit thousands of dollars for tools and equipment to make a new product without determining whether there is a large enough market for it or whether the product would satisfy the prospective buyer's needs. And you may do so simply because you "feel sure" the market is there and you "know" what is wanted.

Such action is often a form of business gambling. Much of the risk can be removed by first securing the facts about the size of the market and about the kind of product wanted before tools and equipment are bought. This collection and appraisal of facts is marketing research. When you carefully and objectively gather facts and base your marketing decisions on them instead of on hunch, opinion, or prejudice, you are employing a more scientific approach to business management.

• **To Help You Make Sounder Business Decisions.**—Manufacturers who sell their products

to many different customers are often faced with the necessity of making decisions on marketing policy and procedure. This is just as true of small manufacturers as of large ones. Those of you who sell a few products within a limited area may not have as many problems as large, national concerns and your decisions may not involve such big sums of money; but it is just as important that you make wise decisions. You can't afford to lose thousands of dollars on an error of judgment. You need marketing research as much as anyone. Perhaps you need it more, for you can't afford a big staff of high-priced personnel, each specializing in some phase of your company's marketing job.

• **To Supply You With Basic Marketing Facts.**—Marketing activities are so numerous and complex, and decisions have to be made so often that it may seem as if a manufacturer who always carried out research before reaching decisions would never have time for anything else. But that is not so. There is, normally, a basic set of marketing facts you need which will serve you in many ways. In making many minor operating decisions, you run no great risk in omitting research. On the whole, however, every manufacturer, large or small, should have a clear grasp of the basic facts of his business and be prepared from time to time to undertake special research work to help him decide important and perplexing problems.

BASIC MARKETING FACTS NEEDED

It is obviously hard to generalize on this point because businesses vary so widely. Each manufacturer has to decide this question for himself. But some facts are so commonly needed that it is safe to present a tentative list. For instance, marketing research can supply basic facts and answers to the following questions:

• **How big is the market for products of the kind you make and how is the total subdivided by areas, types of buyers and their location?** It is certainly desirable to know pretty accu-

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rately just how much demand there is for the sort of things you make and how large the market is in various geographic areas, in big cities or small towns, and the like.

• **How do your sales compare with the total market as you know it and where does your business come from?** Comparison of your own sales with those of the industry will show you where your strengths and weaknesses are.

• **How much of the market is each of your competitors getting?** It is very important to know which companies are your most serious competitors. Wherever possible, this should be known by area, city size, price line, style, product form, and the like.

• **How do your competitors do business?** You need to know the channels of distribution they use, their prices and discount structures, their credit terms, the amount and nature of their advertising, the guarantees or service they offer, and many other details.

• **How do buyers and dealers rate your products as opposed to your competitors?** You need factual information about this in terms of product quality, styling, price, advertising, service, and the like.

It is easy to see how useful information of this kind can be to you. That is a typical attribute of good marketing research; it is practical, down-to-earth and directly helpful to the management of a business.

MARKETING RESEARCH vs. EXPERIENCE

Anyone in business for very long learns the answers to many of the foregoing questions just in the course of day-to-day operations. You can't actually be in the market, facing customers, and dealers daily, without learning a great deal about your competitors, their products, prices and methods of doing business or without getting some idea respecting the size and nature of your market. All of this becomes part of your experience, on which you often reach judgments. This is particularly true of smaller manufacturers.

But reliance solely on experience rather than marketing research, in reaching major marketing decisions, is very risky. This is so because "experience" often encompasses a tremendous mass of facts and opinions acquired at random over a period of years. For example, several capable men in the same company can, and often do, reach quite different conclusions as to what should be done about a specific marketing problem; presumably all rely on extensive experience. Marketing research would bring this experience into proper focus. It is an organized, systematic collection of facts, essentially thorough and objective; it is also current; it is not encumbered by prejudices nor unduly influenced by customer opinions; it does not permit gaps in the data presented and may be used as a check against gaps in your experience.

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Business in this country is highly dynamic. New products are always being introduced to the market. New competitors enter the scene. Business practices change; prices go up and down; the attitudes of buyers shift. It is never safe to sit back with confidence that because of a one-time collection of basic data through marketing research you will know all there is to know. Research data age like a mailing list; unless kept up to date, within a few years they are obsolete. The factual basis for your marketing decisions needs to be reasonably current at all times.

TYPES OF PROBLEMS REQUIRING MARKETING RESEARCH

Marketing research may be applied to almost every normal kind of marketing problem. It may be used in choosing styles, colors, materials, features or prices of a product, in arranging franchise agreements, credit terms, delivery plans, and dealer helps. It may be applied to advertising media and copy, to sales training, to establishing sales territories and quotas and to measuring sales performance. It can be employed effectively in planning new products or new markets, in choosing trade names or in devising distribution cost controls.

In addition to these, there is a wide range of other marketing problems which, though they may arise infrequently, also require factual information that can be supplied through marketing research. In short, therefore, marketing research resembles an insurance policy and should be used wherever it contributes to your efficiency in reaching sound management decisions.

GETTING MARKETING RESEARCH WORK DONE

Generally speaking, there are two ways by which a small manufacturer can get marketing research done for him: (a) by people within his own company, and (b) by outside organizations and individuals. This Aid obviously cannot say just how far any one company should carry its marketing research, which method it should use or how much it should spend. Like so many other things, this is a matter of business judgment. It is desirable, however, to collect in organized and careful fashion all those basic marketing facts which can be obtained without undue expense. Beyond this point, it is possible to say only that research is needed whenever an important marketing decision is to be made.

• **Within the Company.**—The owner himself or one of the executives must do the marketing research if any is to be done in a very small concern which has few employees not actively engaged in producing or selling goods. A somewhat larger organization may look to a sales manager for research. A still larger company

may assign these duties to an assistant sales or advertising manager. Few companies seem to feel they can afford a specialized marketing research man or department until their sales volume nears the \$1 million mark.

When individuals within a company are asked to do part-time marketing research or when research men of little technical education or business experience are employed, it is not likely that the results will always be satisfactory. Marketing research, like advertising, industrial engineering and personnel work, is a specialized field, with many pitfalls. Unless the investigator collects all the facts objectively, the data may be misleading, and an unfit basis for a decision.

Caution should be exercised in assigning responsibility for marketing research. As an illustration, some years ago a small manufacturer considered entering the business of making porcelain enamel-topped dinette tables. Before starting manufacture he investigated the market sufficiently to establish the fact that it was very large indeed. But he failed to check trends in sales. As it happened, laminated plastic-topped tables were very rapidly displacing porcelain-topped ones, resulting in a fast diminishing market and acute competition between manufacturers of the porcelain product. He lost almost his whole investment.

In another case, research was conducted among a manufacturer's dealers with respect to a proposed new product. The company individual who did the research was too enthusiastic about it to be completely impartial or unbiased. While the results indicated that the product would be favorably received, it subsequently developed that the dealers were afraid to insult or hurt the feelings of this supplier by expressing their true opinions. As a result, the manufacturer was grossly misled.

Such examples as these could be multiplied by the thousands. They are not intended to convey the impression that a small company should not do marketing research within its own organization. Rather, it is intended to impress upon you some of the difficulties involved in getting sound, thorough, objective research; it cannot be done with "a lick and a promise." Whoever is assigned the job of marketing research must be intelligent, conscientious, objective, sold on its values and reasonably well-informed as to research techniques and methods. The more important a marketing decision is, the more important it is to have the research behind it well done.

Fortunately, men with a reasonable understanding of marketing research are no longer very hard to find. Virtually every college or university which teaches marketing also instructs in research methods. Marketing research is practiced by many advertising agencies and management consulting firms and by large numbers of manufacturers, publishers,

and other business organizations. You may, therefore, expect to find, with very little effort, personnel with some knowledge of research.

• **By Outside Organizations and Individuals.**—

If you do not have trained personnel, you can secure research assistance elsewhere. Generally speaking, you can have the whole job done by marketing research firms, consultants or advertising agencies. Or you can get help from libraries, Government agencies, associations, and other sources.

Those Who Will Do the Entire Job

In addition to professional marketing research firms, professional management consultants, and advertising agencies, there are many college professors who teach marketing and are frequently available to carry out individual research assignments for a reasonable fee.

The professional marketing research firm, as its name implies, is usually an organization which specializes in the field of individual problems for clients. Such an organization generally has both the experience and facilities for studying the problem, planning the approach, gathering data, conducting interviews, tabulating and compiling the results and presenting the findings in a final report. This type of firm charges a fee for its services which is largely determined by the nature and scope of the job to be done. This fee is often quoted as a flat charge based on estimates of time, manpower and facilities required for the job or it may be on a more variable basis such as a charge per interview, the final cost to be determined by the number of interviews obtained. As a general rule, the buyer of such service is expected to pay for all additional travel expenses unless these have been included in the original quotation.

Professional management consultants in recent years have been expanding their marketing research services for clients. These services are quite similar, in most respects, to those of the professional marketing research firm. The essential difference is that the management consulting firm does not restrict its activities to marketing research whereas the professional marketing research company usually does. Fees charged by consultants for their services are generally based on a fixed rate per diem for the manpower involved with the final quotation determined by an estimate of the time required to do the job. Travel and other out-of-pocket expenses are usually extra.

Advertising agencies. Many of them have available marketing research facilities for their clients. These may range from consultation and advice on marketing problems to the gathering and compilation of marketing data or the planning and execution of a survey. In many instances, this type of service is available to small manufacturer clients at no extra cost or at a moderate additional charge. In

those cases where a marketing research job involves a substantial out-of-pocket cost to the agency, the client may be expected to pay all or a part of the expenses. The amount of such charges and fees for these services will usually depend on the nature of the research job and the policy of the advertising agency.

Those That Will Furnish Material

Many outside organizations can supply basic marketing information and material. These sources of assistance are particularly valuable to you if you are planning to engage in marketing research within your own company. Included in this classification are public libraries, advertising media, Government agencies, trade associations, trade publications, universities and colleges, and the American Marketing Association.

Public libraries. Most good public libraries have available a wealth of basic marketing information in the form of Government reports, trade periodicals and textbooks. Very often, too, the public library or other organizations in your community will have developed special business libraries to which you have access. Normally, there is no charge for these library services.

Advertising media. National and sectional magazines, radio and television broadcasting companies, local newspapers, and other media are also important sources of information. Many of these have for years maintained competent research staffs whose job it is to study the markets they serve and the audiences they reach. Most of them have compiled and published numerous reports containing valuable marketing information which are available to you on request or for a very nominal charge.

Government agencies. Numerous Government agencies are engaged in collecting, compiling and disseminating basic marketing information. While it is impossible to list all of them here, probably the best known and most important are the U. S. Department of Commerce, the U. S. Department of Agriculture, the U. S. Department of Labor, and the Small Business Administration. The various data and reports which they prepare and publish are available to you. While a small charge is made for some of these publications, many are free.

Trade associations. Quite a few trade associations gather marketing data and conduct studies pertaining to their industries. Such material is usually available to members and, unless highly confidential in nature, to others as well. In most instances, too, trade association executives are well-posted on developments in their field and provide a valuable contact for the small manufacturer seeking help on his marketing problems. As a rule, trade associations make no charge for this marketing advice and assistance.

Trade publications. Leading industry and marketing trade journals are one of the most fruitful sources of information for marketing

data. Virtually all of them follow trends and developments in their fields very closely and carry on rather extensive research activities. They provide, also, an excellent sounding board for industry attitudes, opinions and experiences. Much of the information may be obtained by you at little or no cost.

Universities and colleges. The marketing departments of universities and colleges and university bureaus of business research often develop information helpful to the small manufacturer. Reports, articles and theses on marketing topics are frequently available for the asking or at a nominal charge. One difficulty is in locating this material. Sometimes, too, its distribution is limited. But very often merely by contacting the educational institutions in your immediate area, you will be able to obtain valuable leads.

American Marketing Association. This Association, composed of over 5,000 individual and company members in the field of marketing, is also in a position to help the small manufacturer in many ways. It publishes a quarterly *Journal of Marketing*, available to anyone on a subscription or single copy basis, which contains timely articles on marketing and marketing research topics. It also issues other publications, at a moderate cost, on various phases of marketing. Through its chapters, located in 37 major cities, the small manufacturer can develop contacts with leaders in the field in his particular area. The Association's central office (located at 1525 East 53rd Street, Chicago 15, Ill.) also will assist in every possible way.

LIMITATIONS TO MARKETING RESEARCH

Research will not solve your marketing problems all alone. There still remains the much more important task of forming judgments and decisions on the basis of facts. Research is no substitute for sound management in business. It is simply an important management tool.

Perhaps the wisest course of action for most small manufacturers would be to undertake periodic collection of certain basic marketing facts by company personnel—such facts as distribution of company sales by salesmen, by type of customer, by order size, and the like. (See the Small Business Administration publication, "Making Your Sales Figures Talk," Superintendent of Documents, Government Printing Office, Washington 25, D. C., price 20¢.) Company personnel may be able to get data on competitors' products, prices, methods of sale. They may also handle any other fact gathering involving simple tabulation of company sales or collection of facts and opinion from trade sources. These data will serve management well in day-to-day operations. Especially important issues may best be handled by specially trained company personnel or by outside organizations and consultants experienced in marketing research.

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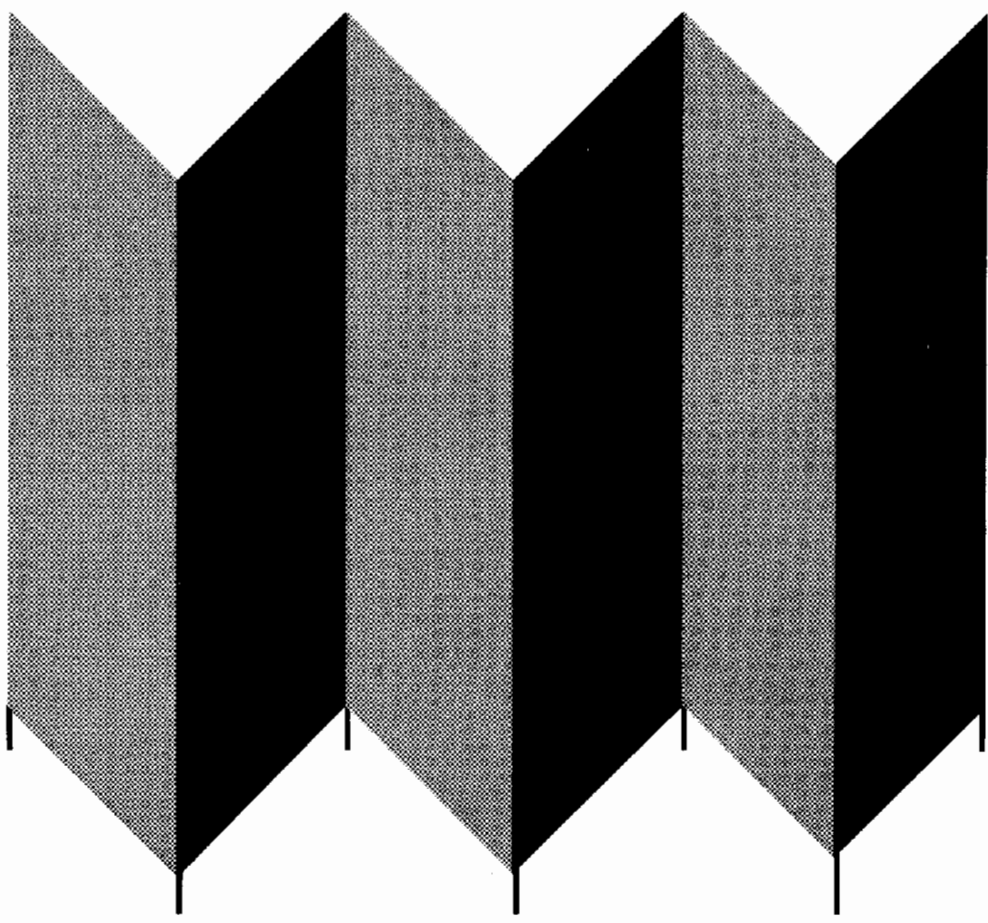
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Management Aids for Small Manufacturers
U.S. Small Business Administration

Exhibiting at Trade Shows



By **Robert B. Konikow**
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Summary

The small manufacturer may find that trade shows can provide a boost that helps in an overall marketing plan. Like other advertising and sales promotion media, trade shows have strengths and weaknesses that must be considered before attempting to exhibit at them.

This Aid discusses how to exploit the strengths of such exhibitions. It offers practical tips on how to get the most out of the medium and suggests sources of assistance to small business owner-managers interested in demonstrating their products at trade shows.

In pre-Biblical times, merchants, manufacturers, and artisans from all parts of the then-civilized world would gather at specified times of the year to exchange their goods. Ever since then, in spite of new ways to communicate, business people have been getting together to display their wares at trade fairs or, as they are more commonly known in the United States, trade shows.

Advantages of Trade Shows

Each of the various advertising media like newspapers, magazines, radio and television has its strengths and advantages. So, naturally, has the trade show. It offers manufacturers:

- An opportunity for the seller and the buyer to meet face-to-face, where the products being shown can be demonstrated and handled;
- A pre-selected audience, with specified interests, and at the show for the purpose of learning about new products;
- An opportunity to reach people who are ordinarily not accessible to sales representatives, and to uncover unknown buying interests;
- A place where buyers can do comparative shopping, can discuss their problems with many technical people, and thus a place where the buying process can be shortened.

Setting Objectives

A trade show offers the small manufacturer who knows how to use it an opportunity to achieve one or a number of objectives. One major user of trade shows has listed the following possibilities:

- To make sales;
- To maintain an image and continuing contact with customers;
- To create an image, initiate contact with potential customers, and qualify buyers;
- To introduce a new product;
- To demonstrate nonportable equipment;

- To offer an opportunity for customers to bring their technical problems and get solutions;
- To identify new applications for an existing or projected product by obtaining feedback from booth visitors;
- To build the morale of its local sales force and of dealers;
- To relate to competition;
- To conduct market research;
- To recruit personnel or attract new dealers;
- To demonstrate interest in and support of the sponsoring association or industry.

Before you get involved in a trade show, you should decide which of these objectives is the primary one that you should strive for. Unless you have a good idea of what you wish to achieve, you have no way of evaluating a particular show, no guidelines for deciding what you should show and how you should show it, and no way to determine afterwards whether or not your investment (which may be considerable) was worthwhile.

Picking a Show

There are more than 7,800 trade shows a year in the United States, which means that you should have little trouble in finding one* that will deliver the kind of audience you want to reach.

Once you have found a show that sounds right, you must get more information about it. Start by writing show management for the literature it has prepared for prospective exhibitors. This is a selling document, designed to present the show in its strongest light, but it should give you a better idea of the nature of the audience the show attracts. You want to know more than how many attend; you also want to know where they come from, which industries they represent, what their titles and their job responsibilities are. Most shows issue detailed breakdowns of attendance. If these reports are independently audited, they are somewhat more reliable, but you can usually depend on many show managements to issue accurate figures.

But reports, audited or not, must be read with care. While they look much like the reports issued by magazines and newspapers, they are less useful in predicting the future. Publication readership changes little from year to year, but shows that move from one part of the country to another often reflect their location, since there is a tendency on the part of all shows to draw more heavily from the immediate surroundings.

For most marketing objectives, you should try to find a show attended by the kinds of people that resemble your present customers most closely. If your sales are almost completely confined to New England, for example, you might find it a waste of time and money to participate in a show in Texas, unless you consider it part of a determined effort to open up a new territory.

One of your better sources of information is the list of exhibitors at previous shows, whose names you may find in the promotional

*You can start by looking in **Exhibit Schedule**, published by **Successful Meetings** magazine, 1422 Chestnut Street, Philadelphia, PA 19102, or in **Trade Show Convention Guide** from Budd Publications, Box 7, New York, NY 10004. You will also find references to trade shows in business magazines that cover your industry. You can check with your local convention and visitor bureau to find out what shows will be held in your community.

good prospects for whatever you are showing. The most visible part of your display must act like a headline in a good ad—it must attract the attention of the right people in the few seconds it takes them to walk past your booth.

- You want to use the unique advantages of the medium, which means that you should show your product in action, fully and three-dimensionally, so your prospect can see and touch and handle it.

An exhibit booth is neither a warehouse nor a store window, although it has some of the characteristics of both. Like an ad, it needs something to catch the eye. This can be a picture or a headline, or better yet, something active and three-dimensional.

Once the interest of the visitor has been obtained, the exhibit must lead into a selling story. In an ad, this is the body copy; in an exhibit, it may be copy on the back wall, but it is more often a demonstration or the presentation of a sales representative.

Finally, there should be a call to action. An ad tries to get the reader to visit a store or send in a coupon. At an exhibit, you may want to close by making an appointment for a later sales call, get a name and address for a mailing list, or perhaps make an actual sale.

Each Show Has Rules . . .

When you sign up for space at a trade show, your rental usually includes nothing more than a draped area and a sign with your name on it hung on the rear wall. You can use this space any way you want, subject to the show rules. Be sure to read these carefully, or get your exhibit designer to go over them with you. They tell you how high you can build your display; how much of the cubic footage of the display area you can use; how to order electricity, lights, furniture, etc.; and what you can and cannot do. The exhibitor's manual also tells you when you can get into the exhibit hall and when you have to get out. It includes order blanks for labor and equipment.

Follow these instructions to the last detail. You can get yourself and even the whole show in great trouble if you try to take shortcuts. Most trade show operations are covered by union and management rules, which occasionally make little sense to a newcomer, but which have grown up as the result of many years experience in putting together the complex structure of trade shows. In addition, the rules vary from city to city, so each show must be approached on the basis of its own rules.

. . . But It's Your Exhibit

The kind of exhibit that you end up with depends, to a large extent, on the kind of message you are trying to put across, its complexity, the nature of your audience, and your budget. Some exhibitors do very well with little more than a table or two on which to lay out goods or conduct a simple demonstration. Others need elaborate structures, custom designed and built, which may include a theater or conference rooms.

Between these two extremes, you can get simple custom-made displays; or you may purchase or rent modular units, semi-permanent structures to which you apply your own graphics. Modular units come in both

plastic and cardboard, and each has advantages and disadvantages which only you can weigh for your particular needs.

There are also kits of rods and panels, held together by joining members, which can hold shelves and graphics. These can be bought directly from manufacturers, as well as through local exhibit designer/producers, who may recommend them when they feel that the combination of your objectives and your budget indicate this kind of standard unit. If you are just beginning an exhibit program or will exhibit only occasionally, you might consider renting your exhibits from a display house or exhibit service contractor.

Building Traffic to Your Booth

When you take space at a trade show, for the three or more days of that show, you have a place of business, a place where you can meet and talk to customers and prospects. Like any other place of business, it will be busier if you encourage people to come specifically to see you and do not rely on accidental passers-by.

Promotional material. The first thing to do is simply to let people know that you'll be at the show. Many show managements prepare promotional material, like posters for your show windows, stickers to add to your correspondence, insignia to drop into your magazine ads, admission tickets to the show for special customers, and so on. The very fact that you're participating in a show can build your image in your customers' eyes, even if they don't go to the show and see you.

Special prices. Many exhibitors offer special show prices on merchandise bought at the show. Make your special prices known in advance, and they will help to build traffic. Special prices are especially effective if your products are not expensive and do not require a large commitment.

Advertising specialties. Some companies use advertising specialties, often called giveaways, to increase the impact of their participation. Specialties are too often passed out indiscriminately; they add to the cost of participating in a show, but contribute little to sales. The best specialty appeals almost exclusively to potential users of your products, the sort of item that the recipient will keep for a long time. Be sure to check show rules; not all shows permit distribution of these items.

Targeted special giveaways. One effective way to use specialties is to help bring specific people to a booth. You can make up a list of the names and addresses of some very important prospects whom you are eager to lure to your booth. Then send each of them something like one of a pair of handsome cufflinks or earrings, perhaps designed around your trademark, if you have one. Your covering letter would promise the other of the pair when the recipient visits you at the show. If you have selected both your list and the specialty item carefully, you can expect a high proportion of responses. A good specialty advertising counselor can help you develop a creative promotion.

New product introduction. A trade show is an excellent place to introduce a new product. People come to trade shows to learn what is new. If you can get the word out, you should develop a valuable list of booth visitors.

Tell people, especially your old customers and good prospects, that you will have something new at the show, and given them an idea of what it is. See that advance announcements are sent out to the publications

that cover your industry. Most of them run both previews and follow-up articles on important shows. While many need their material eight to ten weeks before a show, it is worth the special effort to decide that early what you will be showing. At the show, leave press releases in the show press room, and have an extra supply in the booth for those editors who stop by.

People in Your Booth

The effectiveness of your booth depends to a great degree on the effectiveness of the people you have working in it. It is a different and sometimes bewildering place for most sales representatives, who are more used to visiting prospects one at a time in their offices, not having prospects come up and ask for information.

Booth personnel must be friendly, must be able to tell good prospects from curiosity-seekers, and must be able to move quickly towards advancing the sale. You must let your people know what your objectives are, so that they can work towards reaching your goals, whether it is setting up appointments, getting literature into the right hands, giving a demonstration, or making a sale.

Working a trade show booth is hard work, and you cannot expect people to keep at it steadily all day long. Develop a schedule of duty hours, so that everybody has some time to unwind and recuperate.

But when your people are on duty, they should be fully on duty. That means: being up front, ready to welcome visitors, not talking in a corner with others on the staff and not sitting down except when a visitor prefers to sit and talk.

Follow-up and Evaluation

We started out by saying that you should always have an objective before you enter a show. Whenever possible, this objective should be stated numerically—so many appointments, so many new names for your mailing list, so many orders, so many new wholesalers.

After the show, look at the results. Did you reach the numbers you have aimed for? Did you stay within your budget? If you didn't, where did you go wrong? Was it the wrong show? Was your exhibit adequate? Did you have too much space? Too little? Were your people functioning adequately?

It is only by looking at these factors that you can improve your record. You will learn from experience only if you study your experience systematically. Those who use shows correctly have found that it is a productive, economical medium.

For Further Information

Readers interested in further exploring the subject of trade shows may wish to consult the references given below. The list is necessarily brief and selective, and no slight is intended toward authors whose works are not mentioned. (Write to the publisher for current prices.)

Creative Selling Through Trade Shows by Al Hanlon. 1977. Hawthorn

Books, Inc., 260 Madison Avenue, New York, NY 10016.

The Exhibit Medium by David Maxwell. 1978. Successful Meetings Magazine, 1422 Chestnut Street, Philadelphia, PA 19102.

How to Participate Profitably in Trade Shows by Robert B. Konikow. 1977. Dartnell Corporation, 4660 Ravenswood Avenue, Chicago, IL 60640.

You may also get valuable help from the following organizations:

Health Care Exhibitors Association and the American Veterinary Exhibitors Association, 90 Bagby Drive, Birmingham, AL 35209;

National Trade Show Exhibitors Association, 4300-L Lincoln Avenue, Rolling Meadows, IL 60008; and

Trade Show Bureau, 200 Park Avenue, Suite 303E, New York, NY 10017.

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RETURN TO MARKETING

RETURN TO SALES AND ADVERTISING

RETURN TO MAIN MENU



Management Aids FOR SMALL MANUFACTURERS

120

CHECKING YOUR MARKETING CHANNELS

By Dr. Richard M. Clewett

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A marketing channel is the pipeline through which a product flows on its way to the consumer. The manufacturer puts his product into the pipeline, or marketing channel, and various marketing people move it along to the consumer on the other end of the channel.

Marketing channels change often because they are interlocked between the various firms and people they serve, such as the wholesaler, the retailer, and the consumer. When conditions cause changes in the desires and needs of any of these people, the others in the channel, including the manufacturer, have to adjust to meet those changes.

This fact means that channels of distribution need periodic checking to keep them in line with current needs. Unless you have thoroughly checked yours fairly recently you probably will find it profitable to review them soon. Delay in adjusting channels to changing conditions can reduce profit and make adjustment more difficult later.

WHY CHANNELS ARE IMPORTANT

• **Need for Speed.** The Daily Salad Company manufactured perishable salads which it sold direct to retail food stores. The salads required frequent delivery and close control to insure freshness. Daily Salad's owner-manager, Fred Mall, was so familiar with this channel that he assumed it was the one for his two new lines--pickles and jelly.

As sales of these new products increased in the stores, Fred felt that territories should be revised. Closer analysis revealed it to be a channels problem. Pickles and jelly had a longer shelf life than the old line and could be put into a separate and less expensive channel. They did not need speed. Fred then began distributing them through wholesalers and chain warehouses.

• **Buyer Attitudes.** Changes in consumer attitude may drastically effect the channels for existing products. For instance, the tremendous growth of baking mixes switched large quantities of lard and shortening from retail store or consumer channels to baking mix manufacturers or industrial channels. This situation changed the relative importance of the two markets and the two channels. A periodic analysis of trends will help you detect such changes before your product feels their full force.

One manufacturer added an infant cereal to his line, and sold it through drug channels. As infant cereals became more common, consumers regarded them as a food item and bought them at food stores. The manufacturer's sales kept declining until he started using food brokers.

• **New Approaches for New Products.** In the early stage new products commonly require

different distribution from that needed after they are well established and widely accepted. For instance, the XYZ Company started distributing its new high priced germicidal toilet soap through drug stores and prestige department stores. When consumer acceptance had made the soap more of a staple, the company moved it to food stores. In time this became the main type of retail outlet for this soap.

A manufacturer of low cost special tools for working laminated plastic sheets added to his line a forming press selling for several thousand dollars. He soon learned that his distributors were not in touch with a large part of the potential press market. Also, they were not able to instruct operators in using the press and could not service it. Here, again, the marketing channel was wrong.

Another case is a paper company which added to its line a patented mulch paper for agricultural use. It initially sold the new product direct to users. Attempting to get widespread distribution the company decided to sell the product through selected coarse-paper wholesalers who were already selling the company's other products. At first, the plan seemed successful because the wholesaler bought carload lots. Later the company realized he was only building up his inventory. Also, the wholesaler could not sell the mulch paper to final users because his contacts with the market were limited. The new product did not fit the old channel, and the company withdrew it from the wholesale outlets.

New markets may require new channels. A pneumatic drill manufacturer found that the channel used and services provided in selling direct to the mining industry were not adequate. He learned that a different channel, distributors,

was needed to meet the construction market's special requirements.

A paint manufacturer distributed a new household floor wax through his existing outlets, hardware and paint stores. Sales increased for a while but leveled off at a small percentage of the total sales for this type of product. His investigation showed that the old channel exposed the new product to only a small part of the market. Actually, most consumers bought their floor wax in food stores.

•**Conflicts Can Cause Trouble.** Multiple channels sometimes contain conflicts. If they are not resolved beforehand, these conflicts can wreck your distribution.

One manufacturer learned this the hard way when he tried to use scrap materials by introducing a ladder attachment through one of the large mail-order houses. He ran up against two unforeseen problems:

(1) Instead of receiving a few orders for large shipments, the company was asked to ship small quantities to many points. This small order problem and added inventory increased costs beyond those anticipated.

(2) Later the manufacturer tried to increase sales by selling through the hardware trade. Here he found the discounts required by wholesalers and retailers were greater than he had planned on. This meant a much higher retail price in hardware stores than the price in the mail-order catalog. The hardware trade objected to the mail-order price and competition. Hardware stores refused to sell the product, so the manufacturer could not expand into this channel. Hindsight indicates that more information and a clearer idea of possible channels might have allowed him to operate in both channels.

In contrast, a manufacturer of "do-it-yourself" woodworking equipment introduced his product through a large mail-order house. He let it be the sole seller for a definite period as a reward for introducing the product. He planned to sell through customary channels in the second phase of marketing his new product. He minimized possible conflicts between the two channels before he made arrangements with the mail-order house.

REASONS FOR NEGLECT

Channels represent one of the keystones of marketing success, yet they are frequently neglected. Why? Some of the more important reasons are:

•**No "Flags."** Channels are not "flagged" (identified by name) on your operating records. No item on the profit and loss statement makes you focus attention on distribution channels, as is the case of advertising, personal selling, and other expenses. The problems caused by channel weaknesses are usually first diagnosed as problems of advertising, sales, or pricing. Only after checking out these more obvious activities is the possibility of weakness in marketing channels considered.

•**Long-Run Aspects Create Confusion.** Marketing channels are generally considered a long-run problem. This results in such assumptions and attitudes as:

(1) Channels are fixed and that other marketing activities must be planned around them.

(2) The need for channel changes will be considered in the future. Of course, the future never comes unless (1) some definite time is set for a periodic review, or (2) serious trouble makes immediate attention imperative. Under emergency conditions short-run measures generally prevail.

(3) The channel problem consists of getting the most desirable outlets of a *Specific type*, such as hardware wholesalers or electrical distributors. Viewed this way, significant trends may be ignored. Shifts in buying habits of final purchasers and increasing importance of new outlet types may be overlooked.

INFORMATION YOU NEED

To solve distribution channel problems you need information about who buys the product as well as where, when, and how it is bought. You may get this information from market studies made by your company, or from other sources such as trade associations, trade publications, and Government agencies. In addition, you should know something of the characteristics of the selling methods your outlets use and their selling costs. This knowledge helps you to determine what you can expect from them in return for a given margin.

You should also know the relative importance of different channels in terms of sales volume and profit. It helps you also to know the importance of different classes of buyers especially if direct sale is involved.

You will want to do some sales analysis as well as distribution cost analysis based upon your records. You can get the methods used for these analyses from books, such as those listed at the end of this Aid.

•**Council Can Help.** As a manufacturer you may find it useful to form an advisory council of some of the middlemen handling your product so you can obtain detailed information about opportunities for improving your marketing. This committee could help in your search for information about:

(1) Changes in buyer preference.

(2) Changes in location of buyers. For instance, a manufacturer of pumps for domestic water systems was losing sales because his channels served the farm market instead of the suburban market. The growth market was in suburban areas not yet connected to water mains. He added outlets serving these areas and increased his sales.

(3) Changes in concentration of buyers. Many manufacturers have found that the rapid growth of the Far West and Southwest has made it profitable to shift channels. They stopped using

agents and started selling directly to wholesalers or distributors.

(4) Changes in consumer income.

***Be Aware of Problems.** If you are thinking about selling a new product in your existing channels, you will want to be sure that those channels meet the new product's requirements. If the channels do not suit the product, you may be creating serious problems by using them. Those problems can be:

(1) Introduction of new selling problems which your sales force is not able to handle,

(2) Overloading your sales force and causing it to neglect either the new or old product,

(3) Inadequate market coverage because the markets for the old, and new products are not the same,

(4) Excessive costs because the channel provides more services and skills than the new product needs, and

(5) An unrealistically low cost because the channel provides less services and skills than the new product needs.

Sometimes a company's sales growth may be restricted by its distribution plan. This situation may exist because of:

(1) Incomplete information about the consumer's buying desires,

(2) Eagerness to get a product on the market without thinking about future opportunities,

(3) Eagerness to get a product on the market without thinking about possible conflicts created by a given channel, or

(4) Failure to provide for the addition of new channels that may be needed to reach new types of customers.

MAKING NEEDED CHANGES

***Changing Distributors.** You may be forced to add new types of outlets or make other changes in distribution because of changing conditions. You may have to do this even at the risk of creating some ill will among your existing dealers or distributors. Appliance manufacturers, for instance, could not ignore the discount houses. Health and beauty aid manufacturers had to decide whether to sell through food outlets in spite of drug store opposition.

In the industrial field you cannot overlook the highly specialized middlemen. Neither can you forget that you may have to help service your product. This is especially true when your products and services become more complex, and your competitors are offering service. Here you will be by-passing your existing distributors and dealers, and your main problem will be to minimize their dissatisfaction.

When you examine the buying habits and attitudes of consumers or industrial users, you may find that you need to eliminate gradually exclusive distributors. Your sales volume may be restricted if you continue to sell through them where they are no longer needed.

Or your case may be like that of a materials handling equipment manufacturer with limited

finances. He initially sold through distributors because this allowed him to tie up a minimum of capital. As he improved his financial position, he removed the original limitation and added manufacturers' agents. In this way he achieved better market coverage, greater control of his product, and reduced his costs.

***Shifting Channels.** What are some of the indicators that may reveal the need for channel changes? Your checklist of them should include:

Consumers or Users

- (1) Shifting trends in buying habits:
 - (a) Types of sources from which they buy,
 - (b) How they buy--amounts, frequency, terms, and other products bought along with yours,
- (2) Development of new needs in relation to service, parts, or technical help.

Middlemen

- (1) Change in relative importance of outlet types applicable to your product,
- (2) Changes in the amount of profit distributors and dealers can make with your product,
- (3) Changes in policies and activities of each type of outlet in relation to your product on the following points:
 - (a) Priority of customer types and areas to which type of outlet sells,
 - (b) Inventory--what and how much will be stocked,
 - (c) Promotional effort devoted to product.

Manufacturer's Own Organization

- (1) Change in financial strength,
- (2) Higher or lower sales volume of existing products,
- (3) Changes in marketing personnel or organization,
- (4) Revised marketing activities:
 - (a) New objectives in terms of the relative importance of different customer groups and areas to be sold,
 - (b) Addition of new products,
 - (c) More personal selling and advertising effort,
 - (d) Different order-filling procedures, physical distribution arrangements, and inventory policies.

Competitors

If your competitors have changed their distribution plans you may need to adjust your own plan. You may not want to copy their arrangements. What is effective for your competitors may not be effective for you because of different policies, personnel, management experience, distribution points, and other differences. You should be alert to the possibility that your competitor may have started on a new course at the

most opportune time. Poor timing may doom an otherwise useful plan.

PUTTING PLANS ON PAPER

Importance. In checking your marketing channels, you need to write out your distribution plan. A short, clear-cut statement will help you to determine if your plan is sound. Upon reading it you may discover loopholes that will demand drastic revision of the plan.

Your written plan should show how each marketing person in the channel from your plant to the consumer will benefit by pushing your product through the pipeline. In other words, put yourself in their shoes when writing down how they and the consumer will benefit from your product. If you can show these benefits on paper, chances are the agent, wholesaler, retailer, and the consumer will have little trouble recognizing them when they are considering your proposition.

Elements to Include. A satisfactory distribution plan will include the following:

- (1) A clear statement of geographic markets and customer-types to be sold, arranged in order of importance,
- (2) The types of resellers to be used on all levels of distribution,
- (3) The coverage plan; that is, whether distribution will be through as many outlets as possible, through a selected number in each area, or through exclusive distributors and dealers,
- (4) The kind and amount of marketing effort expected of each type of outlet,
- (5) The kind and amount of marketing effort you, the manufacturer, will contribute,
- (6) Policy statements regarding any areas of conflict, such as special or "house" accounts,
- (7) Provision for a flow of information back to you so you can tell how well you are doing,

(8) Adequate incentives to cause resellers to do the job you expect of them.

FOR FURTHER INFORMATION

Businessmen who wish to explore further the subject of marketing channels may be interested in the references indicated below. In keeping with the editorial policy of this series, this list is necessarily brief and selective. No slight is intended towards authors whose works are not mentioned.

"Fight for Sales Changes Marketing Methods"
Nation's Business. July 1960. Reprints 15 cents each from *Nation's Business*, 1615 H St., N. W., Washington 6, D. C.

"How to Sell Through Industrial Distributors"
Industrial Marketing. May 1960. Reprints 50 cents each from Reprint Editor, *Industrial Marketing*, 200 E. Illinois St., Chicago, Ill.

"Three Step Method to Better Distribution Channel Analysis" by Richard C. Christian in *Journal of Marketing*. October 1958.

"Your Guide to the New Industrial Markets"
Dun's Review and Modern Industry. July 1960. Reprints available at 15 cents each from Readers' Service Dept., *Dun's Review and Modern Industry*, 99 Church St., New York 8, N. Y.

Marketing Handbook edited by P. H. Nystrom. The Ronald Press Co., 15 E. 26th St., New York 10, N. Y. 1948. \$12.00.

Marketing Channels for Manufactured Products edited by Richard M. Clewett. (see especially chapters 16 and 17.) Richard D. Irwin, Inc.

Filing Classification: *Marketing Research*

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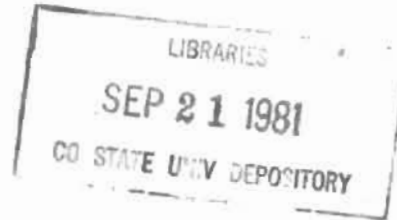
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Management Aids for Small Manufacturers
U.S. Small Business Administration



are your products and channels PRODUCING SALES?

SUMMARY

In a rapidly changing world, it is important for owner-managers of small plants to keep their sales efforts on target. Products, in addition to appealing to customers, must be distributed through channels that make it easy for customers to buy.

This *Aid* discusses means by which owner-managers can examine their products and their channels of distribution for weaknesses and strengths. The purpose is to correct the former and exploit the latter.

By Leonard J. Konopa Professor of Marketing,
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Keeping a small plant's sales "on target" involves watching trends, anticipating changes, and acting at the right time. The action may be making changes in products, in channels of distribution, or in both.

A case in point is provided by poultry processors in one section of the country. They had to change their product to dried and frozen eggs when the broiler industry shifted to another section of the Nation. They sell their "new" products direct to bakeries, schools, hospitals, and other institutions. Their former distributors were meat wholesalers and retail grocery stores.

Keeping products and services beamed at customers and prospects is a combination of looking backward and forward. Examination of present and past records and practices is needed to determine weaknesses and strengths in marketing. Looking ahead and planning for the necessary changes help to correct weaknesses and exploit strengths.

EXAMINING RECORDS

Some small companies fail to reach their target market because their owner-managers do not look for weaknesses in their products. Or if they look, they do not look soon enough. A product becomes "weak" when it is no longer suited to its market or when consumers' preferences change.

For example, a brewery owner watched the trend for packaged beer for home consumption grow, while he continued to make keg beer for taverns. When he finally tried to sell packaged beer, many stores refused to take on that line. They already were stocking several established brands. Moreover, that firm's salespeople lacked experience in getting good shelf space, in checking packaged stock, and in setting up displays for packaged goods in retail stores.

Product situations should be examined periodically to determine how well they are holding up. Your examination should start with your sales records. They should be kept by product (or product line) and by territory. Sales expenses should also be recorded in the same manner.

Even when your total sales are ahead of last year's, it can be dangerous to assume that your products don't have weaknesses. The sales of one or more of them may be falling off. A product may be in the declining stage of the product life cycle. (See box on page 3.) That cycle provides a convenient way of thinking about your products in a market where products come and go.

In checking each product, sales records should help you to answer questions such as:

- Is the percent increase in sales of this product declining? (For example, an increase last year of 5 percent against an increase of 10 percent, the year before last.) What is causing this decline? If sales are remaining the same, is this a good sign in a growing economy?
- Are present territories saturated? Should present territories be expanded before you find new ones?
- Did the percent of selling expense (including advertising) for this product increase? If so, why?
- If sales, profits, or prices have slipped, why?
- Is competition now putting out a new product that is causing the decline?

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PRODUCT LIFE CYCLE

Many products go through a life cycle. The typical product life cycle has four stages.

Stage 1

Stage 1 is a *testing*, or introductory, period. In it, the new product has low consumer awareness, low consumer acceptance, and small sales.

Stage 2

Stage 2 is a *growth* period. In it, sales gains are rapid.

Stage 3

In Stage 3, the product has reached *maturity*. Unit sales are stable.

Stage 4

In Stage 4, the product is on the *decline*. Sales fall off.

Not all products go through a complete life cycle. Many never get beyond Stage 1. They fail to be accepted by customers in this testing period.

In addition, the length of each stage varies according to the nature of the product. Because of rapid advances in technology, the length of each stage for electronic products, for example, is growing shorter. Companies using new technologies tend to introduce an increasing number of new products.

In dealing with product life cycles, part of the skill is in determining the peak of Stage 3—the maturity period—and being prepared to replace mature products before they enter Stage 4—the period of declining sales.

CORRECTING WEAKNESSES

How you correct a product's weakness depends on what is causing its sales to slip. For example, if a competitor's product is eating into your market, you should compare your product critically with your competitor's. Examples of questions to ask are:

- Is your product of as good quality as your competitor's product?
- Is it as easy to use? As attractive?
- Is it readily identified by consumers?
- Is the competing product priced lower? Or higher? (Higher price sometimes means higher quality and produces higher sales.) How is it promoted? How is it distributed?

You may not always be able to answer these questions yourself, especially those requiring answers from consumers. Market tests may be needed.

One manufacturer of replacement parts made such a comparison when he discovered that sales were declining and those of a competitor were apparently rising. What he found was that the competitor had added certain new items. To bring his product line "on target," he dropped several slow-moving items and added faster-moving items such as those offered by the competitor.

He also learned that his retailers and wholesalers were pushing his competitor's items because they carried an attractive gross margin. He had to follow suit and meet the competition.

SEGMENTED MARKETS. Sometimes, the solution for an ailing product lies in *segmented markets*. Suppose, for example, that you have a standardized "mature" product. For years it has brought in—and continues to bring in—substantial sales. But many companies make your product and, to meet competition, you have had to reduce your margin to the point of "squeezing" profits. You have to fight constantly to cut the product's manufacturing costs.

Often you may think "If only I could take this product back to the years when only a few companies made it and I sold it easily and at a good price." Of course, you can't turn time back, but perhaps you can turn to a different kind of market with a modification of your old standard product. You can look for an opportunity to aim a more specialized product at a segment of the general market.

Food processors provide an example. Some still turn out staple canned or packaged goods. But many others have changed successfully to specialized products. Some make baby food. Others sell geriatric food for senior citizens. Still others push gourmet foods for the epicures. And many others specialize in preparations such as premixed or frozen foods.

Both opportunity and costs, in segmenting your market, have to be kept in mind, however. The change would involve expense. Also, since you would restrict the size of your market, you would need to expect a better price, a longer lasting market, or some other advantage to compensate you.

One hosiery maker increased sales by disregarding fashion trends. He manufactures warm heavy-denier hose for older women—neglected customers as far as other hosiery manufacturers were concerned.

Whether segmented markets offer a solution for you depends, of course, on your situation. The point is to keep the possibility in mind.

SUBSTITUTE PRODUCTS. Established products can sometimes drift "off target" when a substitute product, with more appeal to consumers, appears on the market. When this occurs, the sales as well as the profits of established products decline. The appeal of the substitute product may be in price and convenience—for example, ballpoint pens, which are inexpensive and disposable. Or it may be ease of use—for example, decals and press-on paper finishes which are easier to apply than decorative paint.

The small manufacturer, in some cases, can overcome an established product's weakness by adopting the substitute. However, some owner-managers hesitate to use this remedy. Some are sentimental about their old products. Others are apprehensive about the potential problems and risks in introducing new products. The longer the hesitation, the more likelihood of entering the market after the profit potential of the substitute product has been passed. Although small companies often can't afford to be first in the market, the point is to get there while the new product still has steam—growth and profit.

Not always is it necessary to use a substitute when sales of an established product decline. You sometimes can find a *new application* for a declining product. The manufacturers of butyl rubber provide an example. The demand for their product dropped considerably when producers of automobile tires introduced tubeless tires. To offset the loss of sales which was due to the elimination of inner tubes, the butyl rubber people looked for new uses for their product. They found new applications for it in automobile manufacturing—for example, hoses and oil-resistant insulation.

EXAMINING CHANNELS

A small manufacturer should also check marketing channels for weaknesses. Your channels of distribution may be getting your products to the ultimate consumer. Or they may be “off target.”

Consumer and industrial goods are channeled to their ultimate consumers either *directly* or *indirectly* although some use a combination of both ways. When a manufacturer uses the direct method, the sale to the user is made by your sale people, by mail solicitation, by employing house-to-house sales people, or by operating (direct retail) outlets. When a manufacturer uses the indirect method, the sale is made through a middleman—a wholesaler and/or jobber, an independent agent, a retailer, or any combination of them.

In a changing world, distribution channels can lose their effectiveness. Consumer buying habits may change; new competition may develop; company objectives may be altered. As a result, what were once considered the most effective channels of distribution can become totally inadequate. Therefore, they should be checked periodically even though facts about channel effectiveness are difficult to obtain.

Means to an End. Look at your channels of distribution as a means to an end—a way to get your products to the user. When you go to the heart of the situation, the questions to answer are:

- Who buys my products?
- Where do they buy them?
- How do they buy them? (in single lots, by the dozen)
- When do they buy them? (weekly, monthly)
- Are my ultimate product users satisfied in buying through present channels?

You can get such information from an analysis of your orders. Warranty cards returned by purchasers provide another way to determine where and when they bought the product. If you use distributors, they can provide information. Other sources outside of your company such as trade associations, trade journals, and Census and other Government publications, can provide you with helpful information: shifts in population, population characteristics, sales concentrations, customer preferences, income data, and so on. These can all help keep you informed about your consumers.

In addition, a small manufacturer should keep up in a general way with the many factors that affect distribution. Some of them are business trends, income and consumption trends.

EXAMPLES OF CHANGES

In applying information about your customers and prospective customers to your channels of distribution, look for changes. For example, does your information indicate changes in customers' purchasing patterns, changes in customers' locations, changes in the practices of resellers, or changes in your competitors' methods?

Changes in customer purchasing. Often a manufacturer has to make major adjustments in channels of distribution because customers have changed their buying habits. The growth of convenience foods, such as prepared potatoes, frozen orange juice, and baking mixes, is an example of this type of change. As a result of this development, instead of going directly to the retail store, potatoes, oranges, and

flour are channelled through food processors before they reach the retailer. Similarly, changes in customer purchasing can cause changes in the type of retail outlets used. For example, many of the old-line hardware-store items are now sold in drug stores and supermarkets, and garden furniture and supplies have become a staple in hardware stores. Such selling is often called "scrambled merchandising."

Changes in customer locations. People are on the move all the time. And so are the markets for products. One manufacturer of electrical appliances formerly needed only farm equipment distributors to market his product. However, he found that the urban migration made it necessary for him to recruit a substantial number of dealers in the cities.

Even customers in the cities may change their locations. Many of the large cities are bracketed with shopping centers that get the suburban customers who formerly purchased their needs in downtown stores.

Changes in location of customers are not confined to consumer markets. New firms that may be customers are being created all the time and old firms are constantly adding new locations. One industrial equipment manufacturer had to expand channels of distribution because of such changes in customer locations. Originally sales people sold only to customers in the northeast where his plant was located. On learning that there were potential customers in the far west, the owner decided to get that business by using a manufacturer's representative—a new type of channel.

Resellers' changes. Your sales can rise or fall when your resellers—wholesalers and jobbers—change their practices. For example, suppose they decide to reduce inventories of your products and to rely on you to help them by filling orders promptly. Do you comply? Or do you look for new channels?

You also need to know when resellers cut back or make other changes in service, technical help, and the sales efforts that they devote to your product.

Competitors' changes. Is your competition changing its channels—adding different types of outlets or shifting to new resellers? What, if anything, is competition doing to make its products more attractive to resell? For example, competitors may be assuming more of the inventory function for resellers, or more of the service function (such as setting up company service centers, offering technical help directly to buyers). Or they may be offering attractive gross margins to their resellers, or extended credit terms.

You may need to change your distribution policies as your competitors change theirs. On the other hand, what is best for them may not be best for you. Be sure that the competitors you observe are similar in size to what you want your plant to be.

Your company's changes. Because a small manufacturer is closely involved in the company's day-to-day operations, you may overlook internal changes that can affect your channels of distribution. For example, you may use your established channels without considering their suitability to a new product you are introducing. An industrial chemical company provides an example of this kind of problem. It tried to distribute a new line of farm and home fertilizers with the same channels that it used to distribute its industrial chemicals. When the expected sales volume did not materialize, the company rechanneled the new product so it would reach small retail consumers.

Changes in a company's financial resources and its management "know-how" may also cause changes in distribution. One food processor who had distributed products through franchised restaurants increased sales substantially by buying out marginal franchises and opening new establishments with franchise earnings as the firm acquired "know-how" in restaurant management.

A desire for closer company control of the selling or service functions may produce changes in channels of distribution. For example, a manufacturer of outboard motors distributed through marine hardware and sporting goods wholesalers. These middlemen were interested in sales rather than service. The manufacturer wanted to get closer to the consumer and strengthen the market position by opening retail outlets which would offer top-notch service to customers.

IMPROVING CHANNELS

Sometimes the sales yield from an existing channel of distribution can be increased by working more closely with resellers. Some owner-managers don't realize that they have to earn their resellers' cooperation. They expect jobbers and wholesalers to "run with" a "no-name" product that needs much selling.

Providing resellers with selling tools, such as counter cards and displays, can help them to promote your products. Dependable items that need little or no service are easier to move from reseller to customer than items that need periodic servicing. In addition, gross margins should be in line with the job you expect your resellers to do.

One company gets better cooperation from distributors by offering them technical aid and by helping them with inventory control. Another company finds that competitors are suggesting higher list prices. To compete for the resellers' attention, this owner-manager had to adjust his prices and resellers' margins.

SEEKING NEW CHANNELS

In some situations, the only way to keep your sales "on target" is by seeking and using a new channel of distribution. For example, a publisher, who added paperbacks to the firm's line, could not get mass distribution from bookstores—the established channel for hard-cover books. The firm had to use new channels—magazine wholesalers who could provide mass distribution at newsstands, drug stores, and supermarkets. In this example, the publisher had to answer questions, such as: Where do customers buy paperback books? How do I get my paperbacks to those retail outlets?

One producer of inexpensive throw-away pens needed broader distribution. By changing to distribution through tobacco wholesalers, the pen got into many of the smallest stores and obtained about 70 percent coverage of the possible outlets.

However, problems can arise in setting up new channels. Old-established relationships may have to be broken. Or moving into new channels may interfere with relationships already existing there.

Sometimes a manufacturer may set up his or her own organization to overcome such problems. Such action can be costly. For example, one company in trying to by-pass the distribution specialists found it didn't have the necessary know-how to sell directly to retail outlets. The owner learned this fact only after dropping the firm's distributors. Several years later, it had to find new distributors.

As market changes persist, they sometimes force a company to change a long-standing policy on channels. For example, a long-standing policy of an ethical drug company was to refuse to sell to

discount houses. "To keep in step with changes in marketing" the company decided to sell to any retailer of drugs who had a licensed pharmacist.

LOOKING AHEAD

In keeping your sales "on target," it is vital to look ahead. Planning that involves product or channel changes requires considerable lead time. How much lead time depends on your situation.

However, you should keep in mind that new technology has shortened the life expectancy of many products. Of today's products, 60 percent came on the market as "new" products within the last 10 years. The rate of change is apt to be faster in the future with an even shorter life span for some products. Part of the skill in keeping your product's sales high is timing—knowing when to make changes and being prepared to make them.

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RETURN TO MARKETING

RETURN TO MAIN MENU

SBA 1

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no. 193

AGRICULTURE
SOCIAL SCIENCES

MA

SMALL BUSINESS ADMINISTRATION

MANAGEMENT AIDS No. 193

for small manufacturers

WASHINGTON, D.C.

MARCH 1968

**WHAT IS
THE BEST
SELLING
PRICE**

*By Victor A. Lennon
Chairman, Lennon/Rose and Company, Inc.
Chicago, Illinois*

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SUMMARY

In setting prices, the goal should be to maximize profit. Although some owner-managers feel that an increased sales volume is needed for increased profits, volume alone does not mean more profit. The ingredients of profit are costs, selling price, and the unit sales volume. As in baking a cake, they must be in the proper proportions if the desired profit is to be obtained.

No one pricing formula will produce the greatest profit under all conditions. To price for maximum profit, the owner-manager must understand the different types of costs and how they behave. He also needs up-to-date knowledge of market conditions because the "right" selling price for a product under one set of market conditions may be the wrong price at another time.

The "best" price for a product is not necessarily the price that will sell the most units. Nor is it always the price that will bring in the greatest number of sales dollars. Rather the "best" price is one that will *maximize the profits* of the company.

The "best" selling price should be cost oriented and market oriented. It should be high enough to cover your costs and help you make a profit. It should also be low enough to attract customers and build sales volume.

A FOUR LAYER CAKE

In determining the best selling price, think of price as being like a four layer cake. The four elements in your price are: (1) direct costs, (2) manufacturing overhead, (3) nonmanufacturing overhead, and (4) profit.

Direct costs are fairly easy to keep in mind. They are the cost of the material and the direct labor required to make a new product. You have these costs for the new product only when you make it.

On the other hand, even if you don't take the new product, you have manufacturing overhead such as janitor service, depreciation of machinery, and building repairs, which must be charged to old products. Similarly, nonmanufacturing overhead such as selling and administrative expenses (including your salary) must be charged to your old products.

DIRECT COSTING

The direct costing approach to pricing enables you to start with known figures when you determine the price for a new product. For example, suppose that you are considering a price for a new product whose direct costs — material and direct labor — are \$3. Suppose further that you set the price at \$5. The difference (\$5 minus \$3 = \$2) is "contribution." For each unit sold, \$2 will be available to help absorb your manufacturing overhead and your non-manufacturing overhead and to contribute toward profit.

PRICE-VOLUME RELATIONSHIP

Any price above \$3 will make some contribution toward your overhead costs which *are already there* whether or not you bring the new product to market. The amount of contribution will depend on the *selling price* which you select and on the *number of units* that you sell at that price. Look for a few moments at some figures which illustrate this price-volume-contribution relationship:

Selling price	\$5	\$4	\$4
Projected sales in units	10,000	30,000	15,000
Projected dollar sales	\$50,000	\$120,000	\$60,000
Direct costs (\$3 per unit)	\$30,000	\$ 90,000	\$45,000
Contribution	\$20,000	\$ 30,000	\$15,000

In this example, the \$4 selling price, assuming that you can sell 30,000 units, would be the "best price" for your product. However, if you could sell only 15,000 units at \$4, the best price would be \$5. The \$5 selling price would bring in a \$20,000 contribution against the \$15,000 contribution from 15,000 units at \$4.

With these facts in mind, you can use a market-oriented approach to set your selling price. Your aim is to determine the combination of selling price and unit volume which will provide the greatest contribution toward your manufacturing overhead, nonmanufacturing overhead, and *profit*.

COMPLICATIONS

If you ran a nonmanufacturing company and could get as much of a product as you could sell, using the direct costing technique to determine your selling price would be fairly easy. Your success would depend on how well you could project unit sales volume at varying selling prices.

However, in a manufacturing company, various factors complicate the setting of a price. Usually, the quantity of a product that you can manufacture in a given time is limited. Also whether you ship directly to customers or manufacture for inventory has a bearing on your production and financial operation. Sometimes your production may be limited by manpower. Sometimes by equipment. Sometimes by the availability of raw materials. And sometimes by practices of your competition. You have to recognize such factors in order to maximize your profits.

The direct costing concept enables you to key your pricing formula to that particular resource—manpower, equipment, or material—which is in the shortest supply. The Gail Manufacturing Company* provides an example of doing it.

*All names in *Aids* are disguised.

ESTABLISH CONTRIBUTION PERCENTAGE

In order to use the direct costing approach, Mr. Gail had to establish a contribution percentage. He set it at 40 percent. From his past records, he determined that, over a 12-month period, a 40-percent contribution from each price would take care of his manufacturing overhead, his nonmanufacturing overhead, and profit. In arriving at this figure, he considered sales volume as well as his overhead costs.

Determining the contribution percentage is a *vital* step in using the direct costing approach to pricing. You should review your contribution percentage periodically to be sure that it covers *all* your overhead (including interest on money you may have borrowed for new machines or for building an inventory of finished products) and to be sure it provides for profit.

Mr. Gail's 40-percent contribution meant that his direct costs—material and indirect labor—would be 60 percent of the selling price ($100 - 40 = 60$). Here is an example of how he computed his minimum selling price:

Material	27¢
Direct labor	+ 10¢
	<hr/> 37¢

The 37 cents was 60 percent of the selling price which worked out to 62 cents (37 cents divided by 60 percent). The contribution was 25 cents (40 percent of selling price):

Selling price	62¢
Direct costs	- 37¢
	<hr/> 25¢

In this approach, raw material is given the same importance as direct labor in determining the selling price.

VALUE OF MATERIAL

The value of the material used in manufacturing the product has a bearing on the contribution dollars that will accrue from each unit sold. Suppose, in the example above, that the material costs are only 15 cents instead of 27 cents while the direct labor costs remain the same—10 cents. Total direct costs would be 25 cents.

In order to get a maximum contribution of 40 percent—as Mr. Gail did—the direct costs must not exceed 60 percent of the selling price. To arrive at the selling price, divide the total direct cost by 60 percent (25 cents divided by .60). The selling price is 42 cents. With this new selling price, the contribution is 17 cents (42 cents minus 25 cents for direct costs).

The point to remember is that when the material costs are less, the contribution will be less. This is true even though the *same* amount of direct labor and the same amount of machine use is required to convert the raw material into the finished product.

CONTRIBUTION - PER - LABOR - HOUR

What happens if Mr. Gail is unable to man his equipment fully at all times? In order to *maximize* profits, he must realize the same dollar contribution per direct labor dollar, *regardless* of the cost of materials. To do this, Mr. Gail could use the "Contribution per Labor Hour" Formula for setting his selling prices.

In this formula, you determine a mark-on percentage to use on your direct labor costs. This mark-on will provide the required contribution as a percentage of selling price. For example, if direct labor is 10 cents and contribution is 25 cents, then contribution as a percentage of direct labor will be:

$$\frac{.25}{.10} = 250\%$$

The mark-on factor to use on direct labor costs is 250 percent of direct labor costs.

Now suppose that material cost is 15 cents and direct labor cost is 10 cents. The selling price would be 50 cents, figured as follows:

Material costs	15¢
Direct labor	+ 10¢
	<hr/>
	25¢
Contribution	+ 25¢
Selling Price	<hr/>
	= 50¢

The "Contribution per Labor Hour" approach assures Mr. Gail a 25-cent contribution for each 10 cents of labor (250 percent) used to make a product regardless of the value of the raw material used.

CONTRIBUTION - PER - POUND

If, and when, *raw materials* are in short supply and are the limiting factor, then the base to use is the dollar contribution-per-pound of material. This formula is similar to the one for contribution per labor hour. The difference is that you establish the contribution as a percentage of material cost rather than as a percentage of direct labor cost.

CONTRIBUTION - PER - MACHINE - HOUR

Determining the contribution-per-machine-hour can be a more involved task than figuring the contribution-per-pound. If different

products are made on the same machine, each may use a *different* amount of machine time. This fact means that the total output of a certain machine in a given time period may vary. As a consequence, the dollar contribution-per-machine-hour, which a company realizes, may vary from product to product. For example, products A, B, and C are made on the same machine and their contribution-per-machine-hour is:

\$28.80 for product A
\$26.00 for product B
\$20.00 for product C

When machine capacity is the *limiting factor*, you can maximize profit by using dollar contribution-per-machine-hour when setting prices. When selling to customers, you should give priority to products which give the greatest dollar contribution-per-machine-hour. In the above example, your salesmen would push product A over products B and C.

To use this pricing approach means that you have to establish a base dollar contribution-per-machine-hour for each machine group. You do it by determining the total number of machine hours available in a given time period. You then relate these machine hours to the manufacturing and nonmanufacturing overhead to be absorbed in that period. For example:

Total machine hours available in 12 months = 5,000
Total manufacturing and nonmanufacturing overhead = \$100,000
Contribution required per machine hour to cover manufacturing and nonmanufacturing overhead = \$20*

* \$100,000 divided by 5,000 hours

In this example, during periods when the company can sell the output of all of its available machine hours, it must realize a return of \$20 per machine hour in order to cover its manufacturing and nonmanufacturing overhead. When the full 5,000 hours are used, the \$20 per-hour return will bring the company to its break-even point. When all of the company's available machine hours cannot be sold, its return per-machine-hour must be more than \$20.

Notice that in the above example, only the breakeven point is considered. There is no provision for profit. How do you build profit into this pricing formula?

Return-on-investment is a good approach. If the Gail Manufacturing Company, for example, has \$300,000 invested and wants a 10-percent return, its profit before taxes would have to be \$30,000. Mr. Gail can relate this profit goal to the machine-hour approach by dividing the \$30,000 by 5,000 (the available machine hours). This means that he needs \$6 per machine hour as a mark-up for profit.

SELLING PRICE FOR PRODUCT C

Now suppose that Mr. Gail wants to use the contribution-per-machine-hour and profit-per-machine-hour approach to set a price for product C. For product C, the direct labor cost per unit is \$1.80. Machine output (or units per hour) is \$1.25, required contribution per machine hour is \$20, and desired profit per machine hour is \$6. The formula to set the unit selling price is:

Material cost	\$21.37	
Direct labor	1.80	
Contribution per Unit	16.00*	
Price before profit	\$39.17	
Desired profit	4.80	(\$6 X .80*)
Desired selling price	\$43.97	

*Calculated as follows: With a machine output of 1.25 units per hour, .80 of a machine hour is needed to produce 1 unit; the required contribution per-machine-hour is \$20; therefore, $\$20 \times .80 = \16 .

If Mr. Gail is to get a 10-percent return on his investment before taxes, the selling price must be \$43.97.

But suppose competitive factors mean that Mr. Gail cannot sell product C at \$43.97. In such case, he might:

(1) Not make product C if he can use the machine time to manufacture another product which will give his company its profit of 10 percent—provided, of course, that he has orders for the second product.

(2) Reduce the selling price, if refusing orders for product C means that the machines will be idle. Any price greater than \$39.17 will generate some profit which is better than no profit.

But suppose that \$39.17 is also too high. Should Mr. Gail turn down all orders for product C at less than \$39.17? Not necessarily. If he has no orders to run on the machines, he should accept orders for product C at less than \$39.17 because \$16 of that price are a contribution to his manufacturing and nonmanufacturing overhead. He has to pay these costs even when the machines are idle.

Keep in mind that the direct costing method of setting a price gives you flexibility. For example, Mr. Gail has to get \$43.97 for product C in order to make his desired profit. But his price for that product can range from \$23.17 to \$43.97 (or higher, depending on market conditions).

Any price above \$39.17 brings in some contribution toward profit. Mr. Gail can break even at \$39.17. Any price between \$39.17 and \$23.17 brings in some contribution toward his overhead. And in a pinch, he can sell as low as \$23.17 and recover his direct costs—material and direct labor.

However, Mr. Gail must use his flexibility with care. It takes only a few transactions at \$23.17 (recovering only his direct costs) to keep him from maximizing his profits over a 12-months period.

RETURN TO MARKETING

RETURN TO MAIN MENU

SALES AND ADVERTISING

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- DEVELOPING NEW ACCOUNTS
- DIRECT MAIL ADVERTISING FOR THE SMALL MANUFACTURER
- DO YOU KNOW THE RESULTS OF YOUR ADVERTISING ?
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That May Slow Midwest Economy

By Lee Hawkins Jr.

DETROIT—In moves that could slow the Midwest manufacturing economy—particularly in election-year battleground states such as Michigan and Ohio—the two titans of the U.S. auto industry, General Motors Corp. and Ford Motor Co., said they will cut fourth-quarter vehicle production.

The announcement followed a disappointing August for auto makers, which saw American consumers steer clear of large, fuel-guzzling sport-utility vehicles as oil prices surged. Sales of GM's big Chevrolet Suburban SUV fell 39%, amid a decline of 14% in overall sales, and Ford's large Expedition SUV slumped by 23%, despite discounts of as much as \$6,000 per vehicle, amid a 17% decline in overall sales.

Sales of Toyota Motor Corp.'s big Sequoia SUV plummeted 38.7% and the Japanese auto maker, which has been doing well against its U.S. rivals, saw overall sales decline by 10%. DaimlerChrysler AG's Chrysler Group said its monthly sales fell 6% from a year earlier.

GM and Ford executives played down the August declines in demand for large SUVs, saying the segment is volatile. But the abrupt decline is of deep concern for the industry, given the large profit margins on those models.

The monthly sales numbers were somewhat less alarming. August is historically a volatile month in the U.S. industry, and auto makers cautioned that the

year-to-year comparison is skewed because Labor Day is included in August in 2004 but not in 2003. Some car makers blamed Hurricane Charley for depressing sales in Florida.

Downshift

Seasonally adjusted annualized sales rate for U.S. cars and light trucks, in millions of units.



But the decision to ratchet back production is a significant step, because the auto makers play a huge role in the country's manufacturing economy. GM said it will cut production at its North American factories by about 7% during the fourth quarter. *Please Turn to Page A16, Column 1*

Company	2003	2004	Change
10.34 Ford F150	1.8	1.8	0.0
10.35 Ford F250	1.8	1.8	0.0
10.36 Ford F350	1.8	1.8	0.0
10.37 Ford Expedition	1.8	1.8	0.0
10.38 Ford Excursion	1.8	1.8	0.0
10.39 Ford Super Duty	1.8	1.8	0.0
10.40 Ford Taurus	1.8	1.8	0.0
10.41 Ford Taurus X	1.8	1.8	0.0
10.42 Ford Focus	1.8	1.8	0.0
10.43 Ford Focus SE	1.8	1.8	0.0
10.44 Ford Focus ZS	1.8	1.8	0.0
10.45 Ford Focus ZX4	1.8	1.8	0.0
10.46 Ford Focus ZX5	1.8	1.8	0.0
10.47 Ford Focus ZX6	1.8	1.8	0.0
10.48 Ford Focus ZX7	1.8	1.8	0.0
10.49 Ford Focus ZX8	1.8	1.8	0.0
10.50 Ford Focus ZX9	1.8	1.8	0.0
10.51 Ford Focus ZX10	1.8	1.8	0.0
10.52 Ford Focus ZX11	1.8	1.8	0.0
10.53 Ford Focus ZX12	1.8	1.8	0.0
10.54 Ford Focus ZX13	1.8	1.8	0.0
10.55 Ford Focus ZX14	1.8	1.8	0.0
10.56 Ford Focus ZX15	1.8	1.8	0.0
10.57 Ford Focus ZX16	1.8	1.8	0.0
10.58 Ford Focus ZX17	1.8	1.8	0.0
10.59 Ford Focus ZX18	1.8	1.8	0.0
10.60 Ford Focus ZX19	1.8	1.8	0.0
10.61 Ford Focus ZX20	1.8	1.8	0.0
10.62 Ford Focus ZX21	1.8	1.8	0.0
10.63 Ford Focus ZX22	1.8	1.8	0.0
10.64 Ford Focus ZX23	1.8	1.8	0.0
10.65 Ford Focus ZX24	1.8	1.8	0.0
10.66 Ford Focus ZX25	1.8	1.8	0.0
10.67 Ford Focus ZX26	1.8	1.8	0.0
10.68 Ford Focus ZX27	1.8	1.8	0.0
10.69 Ford Focus ZX28	1.8	1.8	0.0
10.70 Ford Focus ZX29	1.8	1.8	0.0
10.71 Ford Focus ZX30	1.8	1.8	0.0
10.72 Ford Focus ZX31	1.8	1.8	0.0
10.73 Ford Focus ZX32	1.8	1.8	0.0
10.74 Ford Focus ZX33	1.8	1.8	0.0
10.75 Ford Focus ZX34	1.8	1.8	0.0
10.76 Ford Focus ZX35	1.8	1.8	0.0
10.77 Ford Focus ZX36	1.8	1.8	0.0
10.78 Ford Focus ZX37	1.8	1.8	0.0
10.79 Ford Focus ZX38	1.8	1.8	0.0
10.80 Ford Focus ZX39	1.8	1.8	0.0
10.81 Ford Focus ZX40	1.8	1.8	0.0
10.82 Ford Focus ZX41	1.8	1.8	0.0
10.83 Ford Focus ZX42	1.8	1.8	0.0
10.84 Ford Focus ZX43	1.8	1.8	0.0
10.85 Ford Focus ZX44	1.8	1.8	0.0
10.86 Ford Focus ZX45	1.8	1.8	0.0
10.87 Ford Focus ZX46	1.8	1.8	0.0
10.88 Ford Focus ZX47	1.8	1.8	0.0
10.89 Ford Focus ZX48	1.8	1.8	0.0
10.90 Ford Focus ZX49	1.8	1.8	0.0
10.91 Ford Focus ZX50	1.8	1.8	0.0



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SMALL BUSINESS ADMINISTRATION

MANAGEMENT AIDS No. 188
for small manufacturers

WASHINGTON D.C.

MAY 1967

**DEVELOPING
A LIST OF
PROSPECTS**



LIBRARIES
AUG 15 1967
COLORADO STATE UNIVERSITY

written by ernest l. loen

SUMMARY

A list of prospects is a tool which salesmen can use to bring in new accounts. It must be built on three facts: the kinds of customers the small company wants to reach, their location, and the channels of distribution necessary for reaching them.

This *Aid* suggests ways for getting names for a preliminary list which can be screened to include only true prospects. It also provides sample questions which should be helpful in eliminating marginal names and gives suggestions on using prospect cards.

“And be sure to contact some prospects next week,” George Bullon* urged as the Saturday morning meeting of his small sales force broke up.

In a nearby city, one of his competitors, Tom Cowman, was also meeting with his salesmen. The first item of business was a discussion of prospects. He gave each salesman the names and addresses and other information on several prospects. “These people use our type of product,” he said, “so I’ll expect to hear how you made out when we meet next Saturday.”

The two owner-managers about whom you’ve just read illustrate the right and wrong way to use a salesman’s prospect list. The shotgun approach—Mr. Bullon’s method—neither helps the salesmen nor guides them to use a prospect list.

The rifle approach—Mr. Cowman’s method—insists that salesmen contact prospects. But more important, it provides the salesmen with information—in this case, assurance that the names on the list are currently using a product which Mr. Cowman’s salesmen have to sell. This approach also requires salesmen to report the results of using the prospect list.

* All names in *Aids* are disguised.

A prospect list for salesmen must provide a "hotter" potential customer than a prospect list for direct mail selling. The time of salesmen is more costly than postal rates. A salesman's list must contain more information than one you would use for direct mail selling if you want your salesmen to use it to bring in new accounts. It must be constructed with specific types of customers in mind as well as the channels through which they are to be reached.

USE A RIFLE

Your first thought in developing a list of sales prospects should be to shoot as close to the bull's-eye as possible. Your regular salesmen should aim at buyers who use your type of product or service. If the prospect has never used your type of product, missionary salesmanship should do the job. Keep in mind that one salesman may do both types of selling but the information he needs about the prospect is more detailed for missionary sales.

The effectiveness of the markmanship depends on the ammunition salesmen get from headquarters. It can be outstanding when they get a sound list of prospects. To determine the kinds of customers you want to seek, you have to study your present customers. In so-doing, you will be able to classify potential customers on the basis of your experience. Listing present customers by Standard Industrial Classification numbers makes it easier to find similar ones in directories which are organized by S.I.C. numbers.

Why do your present customers buy your products? How do they buy them—in large or small quantities? How do they buy—daily, weekly, monthly, or irregularly? Are they cash or credit customers?

Where are your customers located? In a concentrated area? In scattered areas?

There may be other people or companies in your present territories who could use your products. For example, your products might have features which would allow you to try to reach a new type of customer.

The answers to these questions will provide guidelines to selecting names for your prospect list.

Guidelines will be provided also by the channel of distribution you use. For example, if your product is bought in food stores and you do not sell direct, your list of prospects will be made up of wholesale grocers, buyers for food chains, food brokers, and buyers for cooperatives. On the other hand, if you sell to retailers, your prospect list would be made up of the names of buyers for stores.

A list for industrial products may consist of middlemen who sell to manufacturers. Or it may consist of individual companies and institutions that use or could use your type of product and to which you sell direct.

WHERE WILL PROSPECTS BE LOCATED?

Geography also enters into using a rifle approach to prospects. Before you start to develop a list, you have to decide in what geographic areas you will look for prospects.

Will your prospecting be done only in present sales territories? In new areas that are close enough to present territories so that your salesmen can call on prospects along with their regular work? In both cases, no additions to the sales force will be needed.

Will you look for prospects in areas that are entirely new to your company? If so, will you look only for the "cream" in specific regions? Or will you look for as many prospects as possible in the new area and launch a full-scale sales campaign? And if you do, will you make a pilot run with one or two salesmen before setting up additional territories?

HOW DO YOU GET NAMES?

Once you know the kinds of customers you want to reach, where they are located, and the channels through which it is best to reach them, you are ready to get names for your prospect list. At this point, your goal is first to assemble as many names as possible. Later you can refine this list to include only the most likely prospects.

Names for a preliminary list might come from trade or general directories, keyed advertisements, general inquiries, or from salesmen. It depends upon your situation.

For example, if all of your selling is concentrated in one city, it will be fairly easy to develop your first basic list. Often the classified telephone directory can provide the names you need of firms similar to those you are already selling. Also the local chamber of commerce may have directories which will contain names you can use.

However, if your sales work is regional or national, getting names for a preliminary list will take more work. The number and the types of companies to which your products may be useful will have a bearing on the amount of work. If your products and services are used mainly in one industry, the industry's trade association may publish a directory which you could use. A publication that serves that industry also may have a directory or a buyer's guide. Another possibility may be trade shows and business conventions. Sometimes they publish a list of exhibitors and attendees.

Many states and cities have directories, and some of them are organized by the S.I.C. system. Also there are mailing lists which are categorized by industry and directories printed by commercial publishers. (For additional information see *SBB* No. 13 and *SBB* No. 29 in the "For Further Information" section of this *Aid*.)

If no directories exist for the kinds of customers you

want to reach, you might use keyed advertisements to get names. Attractive ads in various media can pull in names by offering readers an incentive to write in for something—a brochure, sample of your product, or a souvenir gift.

Salesmen offer another method of getting names of prospects. They can be encouraged to ferret out prospects. You might want to run a contest with prizes for the salesmen who turn in the most names.

PREPARING PROSPECT CARDS

When you have a list of names, you are ready to prepare cards for the most promising prospects on it. In effect, you cull your preliminary list by answering questions about each name.

You will need to work up your own questions. Some samples to head you in the right direction follow:

Does the name represent a customer who is already buying from you? If so, is there a chance of increasing his volume?

Is the name a former customer? If so, do you know why he stopped buying from you? Should you try to get him back?

Does the name represent a user of your type of products? Is it one who now buys from your competitors? How much does he buy from them? At what prices? At what terms?

If it is a name that represents a company you have never heard of before, what product lines and services does it handle. Who uses its products?

What is the company's primary industry? Is it also engaged in other businesses? Does the name represent a main operation, headquarters, branch, service, or a subsidiary?

What is the company's sales volume? Number of employees? Branch operations? Floor space?

What is company's credit rating?

Does the company sell to the Government? To a prime contractor? (In such case, design specifications and perhaps buying decisions may be influenced or determined elsewhere.)

Who are the company's main known suppliers? (Some of them might be your acquaintances or customers who can give you additional information or a help in contacting the company.)

Are there other sources which might offer your salesmen direct or indirect assistance? (For example, the company's advertising agency, banker, accountant, outside design-engineering or architectural service.)

Who is the purchasing agent? Has he sole responsibility or will you have to make your initial contact with a different company official?

Obviously, you will need to learn the exact name, address, and telephone number of the names you keep from your preliminary list. Once you determined the true pros-

pect by asking questions, such as the above samples, it is a routine matter to have a card typed up for each of them.

USING THE CARDS

Your prospect cards carry the information which your salesmen need when they plan and effect sales calls. In addition, you and/or your sales manager can use the cards to keep up with the progress of the sales force. Recording actions on them gives the sales manager a running control of his operations.

Cards can be adapted to your sales plan. They can be arranged alphabetically by types of prospects, by geographic areas, by inactive and active customers, by types of accounts, by sales territories, and/or by regular calling dates.

In addition, prospects cards provide the source data for electronic data processing (EDP). Some smaller companies find it economical to use an EDP service center for keeping records of sales and inquiries. Some service centers also offer help with prospect-list compilations.

FOR FURTHER INFORMATION

Readers who wish to explore further the subject of developing a list of prospects may be interested in the following references. This list is brief and selective. However, no slight is intended toward authors whose works are not mentioned.

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RETURN TO SALES AND ADVERTISING

RETURN TO MAIN MENU



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MEASURING THE RESULTS OF ADVERTISING

By Elizabeth M. Sorbet

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If you are new to the retail or service business, you may still be learning about advertising through trial and error. Perhaps you watch your competitors and run ads when they do. Or you run an ad only when you can offer a bargain.

Whether you are a newcomer or a veteran advertiser, you should always keep one question foremost in your thinking: How much good is my advertising doing?

In a small firm, neither time nor money is sufficient to engage in complicated ad-measurement methods. But even so, you can use certain rule-of-thumb devices to get a better idea than you may now have about the results of your advertising.



WHAT RESULTS DO YOU EXPECT ?

Essentially, measuring results means comparing sales with advertising. In order to do it you have to start early in the process--before you even make up the advertisement. The question to answer is: What do you expect the advertising to do for your store?

In thinking about the kinds of results to expect, it is helpful to divide advertising into two basic kinds: immediate response advertising and attitude advertising.

Immediate response advertising is designed to cause the potential customer to buy a particular product from you within a short time--today, tomorrow, the weekend, or next week. An example of such decision-triggering ads is one that promotes regular price merchandise with immediate appeal. Other examples are ads which use price appeals in combination with clearance sales, special purchases, seasonal items (for example, white sales, Easter sales, etc.), and "family of items" purchases.

Such advertising should be checked for results daily or at the end of 1 week from

appearance. Because all advertising has some carry-over effect, it is a good idea to check also at the end of 2 weeks from appearances, 3 weeks from appearances, and so on to insure that no opportunity for using profit-making messages is lost.

Attitude advertising is the type you use to keep your store's name and merchandise before the public. Some people think of this type as "image-building" advertising. With it, you remind people week after week about your regular merchandise or services or tell them about new or special services or policies. Such advertising should create in the minds of your customers the attitude you want them to have about your store, its merchandise, its services, and its policies.

It is your reputation builder. To some degree, all advertising should be attitude advertising.

Attitude (or image-building) advertising is harder to measure than immediate response advertising because you cannot always attribute a specific sale to it. Its sales are usually created long after the ad has appeared and are triggered by the customer some time after having seen the ad. However, you should keep in mind that there is a lead time relationship in such advertising. For example, an ad or a

SUMMARY

Because his budget is limited, the owner-manager of a small retail or service firm must see that his advertising does the job he intends it to do. Measuring the results on a continuing basis can help him to see that his ads keep the store's name before the public and contribute to increasing sales.

Planning is important. Before he can evaluate results, the owner-manager has to know what purpose he expects the ad, or ads, to accomplish. This Aid gives pointers on planning ads and discusses several devices which can be used to compare advertising and sales.

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series of ads that announces you have the exclusive franchise for a particular brand probably starts to pay off when you begin to get customers who want that brand only and ask no questions about competing brands.

In short, attitude advertising messages linger in the minds of those who have some contact with the ad. These messages sooner or later are used by people when they decide that they will make a certain purchase.

Because the purpose of attitude advertising is spread out over an extended period of time, the measurement of results can be more leisurely. Some attitude advertising--such as a series of ads about the brands which the store carries--can be measured at the end of 1 month from the appearance of the ads or at the end of a campaign.



PLANNING FOR RESULTS

Whether you are trying to measure immediate response or attitude advertising, your success will depend on how well the ads have been planned. The trick is to work out points against which you can check after customers have seen or heard the advertisement.

Certain things are basic to planning advertisements whose results can be measured. First of all, advertise products or services that have merit in themselves. Unless a product or service is good, few customers will make repeat purchases no matter how much advertising the store does.

Many people will not make an initial purchase of a shoddy item because of doubt or unfavorable word-of-mouth publicity. The ad that successfully sells inferior merchandise usually loses customers in the long run.

Small marketers, as a rule, should treat their messages seriously. Humor is risky as well as difficult to write. Be on the safe side and tell people the facts about your merchandise and services.

Another basic element in planning advertisements is to know exactly what you wish a particular ad to accomplish. In an immediate response ad, you want customers to come in and buy a certain item or items in the next several days. In attitude advertising, you decide what attitude you are trying to create and plan each individual ad to that end. In a small operation, the ads usually feature merchandise rather than store policies.

Plan the ad around only one idea. Each ad should have a single message. If the message needs reinforcing with other ideas, keep them in the background. If you have several important things to say, use a different ad for each one and run the ads on succeeding days or weeks.

The pointers which follow are designed to help you plan ads so they will make your store stand out consistently when people read or hear about it.

Identify your store fully and clearly. Logotypes or signatures in printed ads should be clean-lined, uncluttered, and prominently displayed. Give your address and telephone number. Radio and television announcements to identify your sponsorship should be full and as frequent as possible without interfering with the message.

Pick illustrations which are all similar in character. Graphics--that is, drawings, photos, borders, and layout--that are similar in character help people to recognize your advertising immediately.

Pick a printing type face and stick to it. Using the same type face or the same audio format on radio or television helps people to recognize your ads. Also using the same sort of type and illustrations in all ads allows you to concentrate on the message when examining changes in response to ads.

Make copy easy to read. The printed message should be broken up with white space to allow the reader to see the lines quickly.

Use coupons for direct mail advertising response as often as possible. Coupons give an immediate sales check. Key the coupon in some manner so that you can measure the response easily.

Get the audience's attention in the first 5 seconds of the radio and TV commercial. Also, get your main message in the first sentence if possible.

TESTS FOR IMMEDIATE RESPONSE ADS



In weighing the results of your immediate response advertisements the following devices should be helpful:

Coupons brought in. Usually these coupons represent sales of the product. When the coupons represent requests for additional information or contact with a salesman, were enough leads obtained to pay for the ad? If the coupon is dated, you can determine the number of returns for the first, second, and third weeks.

Requests by phone or letter referring to the ad. A "hidden offer" can cause people to call or write. Include--for example, in the middle of a paragraph--a statement that on request the product or additional information will be supplied. Results should be checked over a 1-week through 6-months or 12-months period because this type ad may have considerable carry-over effect.

Split runs by newspapers. Prepare two ads (different in some way you would like to test) and run them on the same day. Identify the ads--

in the message or with a coded coupon--so you can tell them apart. Ask customers to bring in the ad or coupon. When you place the ad, ask the newspaper to give you a split run--that is: to print "ad A" in part of its press run and "ad B" in the rest of the run. Count the responses to each ad.

Sales made of particular item. If the ad is on a bargain or limited-time offer, you can consider that sales at the end of 1 week, 2 weeks, 3 weeks, and 4 weeks came from the ad. You may need to make a judgment as to how many sales came from display and personal selling.

Check store traffic. An important function of advertising is to build store traffic which results in purchases of items that are not advertised. Pilot studies show, for example, that many customers who are brought to the store by an ad for a blouse also bought a handbag. Some bought the bag in addition to the blouse, others instead of the blouse.

You may be able to use a local college or high school distributive education class to check store traffic. Class members could interview customers as they leave the store to determine: (1) which advertised items they bought, (2) what other items they bought, and (3) what they shopped for but did not buy.

TESTING ATTITUDE ADVERTISING



When advertising is spread out over a selling season or several seasons, part of the measurement job is keeping records. Your aim is comparing records of ads and sales for an extended time.)

An easy way to set up a file is by marking the date of appearance on tear sheets of newspaper ads, log reports of radio and television ads, and copies of direct mail ads. The file may be broken down into monthly, quarterly, or semi-annual blocks. By recording the sales of the advertised items on each ad or log, you can make comparisons.

In attitude (or image-building) advertising, the individual ads are building blocks, so to speak, which make up your advertising over a selling season. The problem is trying to measure each ad and the effects of all of the ads taken together.

One approach is making your comparisons on a weekly basis. If you run an ad, for example, each week, at the end of the first week after the ad appears, compare that week's sales with sales for the same week a year ago. At the end of the second week, compare your sales with those of the end of the first week as well as year-ago figures.

At the end of the third week, 1 month, 3 months, 6 months, and 12 months from the

appearance of the ad, repeat the process even though additional ads may have appeared in the meantime. For each of these ads, you will also make the same type of comparisons. You will, of course, be measuring the "momentum" of all of your ads as well as the results of a single ad.

After a time, you probably will be able to estimate how much of the results are due to the individual ad and how much to the momentum of all of your advertising. You may then make changes in specific details of the ad to increase response.

When comparing sales increases over some preceding period, allowances must be made for situations that are not normal. For example, your experience may be that rain on the day an ad appears cuts its pulling power by 50 percent. Similarly, advertising response will be affected by the fact that your customers work in a factory that is out on strike.

Some of the techniques which you can use for keeping on top of and improving attitude advertising follow:

REPEAT



Repeat an ad. If response to an ad is good, run it--without change--two or three times and check the responses of each appearance against previous appearances.

Keep repeating the process. Much advertising loses effectiveness because the advertiser doesn't keep reminding people. Repetition helps increase knowledge of, and interest in, the product. You can soon estimate how often you should repeat each ad--exactly or with minor changes.

Analyze all ads in relation to response. Divide ads into at least two classes: high-response ads and low-response ads. Then look for differences between the two classes.

The time the ad was run may be responsible for a particular response level. Other factors, however, may be just as much or more influential than time. Consider the feature subject used in the illustration, persons shown, activities shown, types of merchandise, settings or backgrounds, different colors used. Also consider the message and how well it was expressed. Did the copy stick to the theme? Or did it wander? If slogans were used, did they help make the point?

Graphic elements may be important. Check to see which response category is associated with the presence of coupons, borders, display lines, small or incidental illustrations. Check response in relation to any variation in the way each appears. Compare any difference in type size and design or the boldness of the type.

Emphasis on brand names should also be checked. Price figures should be analyzed. If

price lines are involved either in the ad or in the merchandise line of which the advertised product is a part, you should consider them also.

Check the size of the ad. It usually has a bearing on response. As a general rule, the larger the ad, the greater the response.

Try to see a pattern of dominance. Your analysis of high-and-low response ads, may show that certain details--such as certain picture subjects--make the difference between a high or low response. Try to find the combinations which work best for your firm and merchandise.

Note changes occurring over time. A small retailer should never take a winning combination for granted. There is no single formula that will insure high response ads every time. Advertising changes. Therefore, you should watch the ads of others to see what changes are occurring. Continue to analyze your own ads, make small changes occasionally, and note any variations in response.

Listen to what people say about your ads. In doing so, try to discover the mental framework within which any comment about your ad was made. Then try to find points which reinforce believability and a feeling that your product fulfills some wish or need.

However, you should not be misled by what people say. An ad can cause a great deal of comment and bring in practically no sales. An ad may be so beautiful or clever that as far as the customer is concerned the sales message is lost.



WHEN YOU USE SEVERAL MEDIA

When your ads appear simultaneously in different media--such as the newspaper, on radio and television, in direct mail pieces, and as handbills--you should try to evaluate the relative effectiveness of each. You can check one printed medium against the other by using companion (the same or almost identical) ads in the newspaper, direct mail, and handbills.

You can make the job of analyzing and comparing results from among the media easier by varying your copy--the message. Your ad copy, thus, becomes the means of identifying your ad response.

You can check broadcast media--radio and TV--by slanting your message. Suppose, for example, that you advertise an item at 20 percent reduction. Your radio or TV ad might say something like this. "Come in and tell us you want this product at 20 percent off."

You can compare these responses with results from your "20 percent off" newspaper ad. Require the customer to bring in the newspaper ad--or a coupon from it.

Some of the ways to vary the copy are: a combination of the brand name with a word or some words indicating the product type; picture variations; size variations; and color variations. You might use the last three to check your printed ads against each other as well as against your radio and TV ads.

Be careful that the copy variation is not so great that a different impression is received from each medium. Here you would, in effect, have two different ads.

FOR FURTHER INFORMATION

Readers interested in exploring further the subject of measuring advertising may wish to consult the references indicated below. This list is necessarily brief and selective. However, no slight is intended toward authors whose works are not mentioned.

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EXECUTIVES EQUIPMENT PROCESSES MARKET*

By Edwin E. Bobrow—Bobrow Lewell Associates, Inc. New York, New York

SUMMARY

The independent sales agent may be the answer for owner-managers who have problems with selling. In some cases, the problem may be that there are not enough prospects to justify putting a full-time sales force on the factory's payroll. In other cases, because of heavy schedules, the sales staff may be missing opportunities to cultivate new accounts.

This *Aid* provides guidelines that should help the owner-manager of a small company to determine whether or not a sales agent is needed. Pointers are also given on how to choose an agent and how to work profitably with him or her.

If selling your product requires a salesman's or saleswoman's call, using an agent may be more efficient than having sales personnel on your payroll. Which is better depends on your situation.

Selling for others is the business of independent sales agents. They make their money by representing several clients on a commission basis. They solicit orders for clients in territories upon which they have agreed. Some agents have employees who help them cover a wide area.

The manufacturers, as a rule, ship and bill the customer directly. They set prices, terms, and other conditions of sale.

Sales agents go by various names. A few examples are manufacturer's agent, manufacturer's representative, and "rep." The labels vary according to industries.

Also, the marketing functions which agents perform vary from one industry to another.

COST AND CONTROL

Whether it is better to use your own sales force (direct selling) or a sales agent depends mainly on cost and control. Which method is more economical for you? Which method gives you the control of your marketing that you need?

When you add sales personnel, what do they cost? In considering this cost, you should include items such as the paperwork necessary to keep them on the road; your part of Social Security; and fringe benefits, such as vacations, hospital and other insurance, which you provide.

On control, the question is: What degree of control do you need to achieve your sales objectives? When an agent represents you, the agent controls the approach to customers. In effect, they are your agent's customers rather than yours.

In many cases, such a relationship may be as good as, or better than, using your own sales force. For example, if your products are attractive to distributors and retailers, it may make little or no difference whether they buy from a factory salesperson or an independent sales agent. When it makes no difference, the owner-manager who insists on maintaining a sales force for the sake of ego may be kidding himself or herself. You may be paying too great a price for the satisfaction of saying, "I have my own sales force. They are my employees."

On the other hand, when products require a special personal touch or service, the owner-manager may need to control the entire selling job. You may need to build an image by training and coaching your own technical sales staff rather than by offering your products through a manufacturer's agent who cannot usually be expected to do this type of work.

THE SELLING JOB

In considering whether a direct sales staff or an independent agent is better, examine your company's selling job. The questions that follow are designed to help you think about the various aspects of that job.

TERRITORIES

In a given geographic area, does your company dominate, or does it lag way behind, competition? How near are you to your estimated potential sales volume?

What is your goal for that specific territory? If you had the best sales force money could buy, could your goal be achieved? If you could get only mediocre employees, what maximum dollar volume would you set for their quota?

What is your present dollar volume in the territory? What does it cost to bring in that volume? Based on these cost figures, what would your cost of sales be for achieving your ultimate sales quota?

How many dollars do you have to invest to build up a specific territory? Does this investment (for salaries, traveling expenses, and supervisory expenses) run over a long enough time period to enable even a mediocre sales staff to reach your objectives?

SELLING

Is your selling mostly service selling? (Service selling often requires technicians who can explain equipment and processes to middle management.) Is your selling nontechnical? (This type of selling does not require detailed knowledge of equipment and processes.)

What are the selling practices in your industry? Is there a good reason why the industry leans a particular way? Or is it just a custom which no one has thought of changing?

MARKET PENETRATION

How well do you know the market you are trying to penetrate? Do you know it well enough to guide your sales personnel? Or will you be relying on them because of your lack of knowledge of certain territories?

How often must the trade be seen? Can one employee handle all the calls? Or will several employees be needed because the area or number of accounts are too big for one person to cover regularly?

How quickly do you want to penetrate the market? (Someone with a knowledge of the field and personal contact with buyers will, of course, obtain this penetration more quickly than new employees.)

COST

What is your cost for executive and clerical personnel to manage a direct sales staff in all your territories? (Break this cost down by territories.) What will it cost for executives and clerical people to manage an agent?

If you maintain a training program for your sales force, what does it cost? Does it pay off in increased sales?

COMPARE THE TWO

The statements that follow are designed to help you consider the advantages and disadvantages of direct sales staff and independent agents.

TRAINING

DIRECT SALES. Finding and training new sales personnel can be time-consuming. Moreover, the cost can be high when employees quit shortly after they have received their training.

SALES AGENTS. With agents you can put them in the field quickly, and the training cost is nominal.

TYPE OF SELLING

DIRECT SALES. The sales person is, or becomes, a specialist in selling your line. It is easier to choose a person for a specific type of selling, such as service selling.

SALES AGENTS. They are specialists in selling only. They can seldom afford to offer service selling. Usually, they sell in a given territory and in a given product line and know their customers' needs. Often customers heed their advice because of the other items the agent sells them.

EXPERIENCE

DIRECT SALES. You can hire a direct sales staff with any degree of experience. The degree depends on how much you are willing to spend and

on what your situation calls for. The staff may not have the depth of knowledge of the territory and industry that you can draw upon.

SALES AGENTS. Normally, they will be experienced. Most agents are experienced professionals. Agents must have a depth knowledge of their territory and industry to exist, and it is there for your use.

SELLING TIME

DIRECT SALES. More time is devoted to selling your products.

SALES AGENTS. They devote only part of their time to your products because they handle a number of lines. But, in many cases, an agent has several people working so that you are buying their talents and time also.

OPENING NEW TERRITORIES

DIRECT SALES. It often takes a direct sales staff a good deal of time to develop a following in a new territory. Even an experienced person needs time to accumulate detailed knowledge about a new territory. Investment can be high in starting a new territory or waking up an old one. Cash must be spent for the employees' salaries and travel, sometimes for months, in order to build a profitable sales volume.

SALES AGENTS. Established agents offer a built-in following in given territories. They and their assistants have depth knowledge of the territory and the customers they serve. Moreover, an agent only gets paid on results.

COST

DIRECT SALES. Employees' pay, if you want to hold them, has to be a living wage regardless of results. In an established territory, as sales go up, the results should more than pay for salaries and travel expenses. However, the cost of maintaining a direct sales staff may sometimes mean increasing their territory with diminishing penetration—loss of sales because of less frequent calls on customers.

SALES AGENTS. Their pay is a percent of sales. They pay their own travel expenses. In opening up new territories and maintaining sales coverage in territories with a limited yield, you pay for results. Coverage is concentrated in a given geographic area.

PAPER WORK

DIRECT SALES. Payroll and other clerical work is necessary to maintain direct sales staff.

SALES AGENTS. Only commission statements need be issued. The agents handle their own expenses, taxes, and have their own clerical staff.

CONTROL

DIRECT SALES. You have complete control and direction of your own employees.

SALES AGENTS. The agent is free to operate according to the terms of your agreement with him or her.

TO SUMMARIZE

ADVANTAGES of using a sales agent:

They can give you immediate entry into a territory

They can make regular calls on customers and prospects.

They can provide quality salesmanship.

Their cost is a predetermined selling expense—a percent of sales as their commission.

DISADVANTAGES of using a sales agent:

Your control over their selling techniques is more limited than when you train and use your own employees.

On a large volume of sales, the selling expense may be excessive—greater than it would be with your own employees.

Agents' allegiance to your company and its products is not total because they serve other clients also. They have to have extra financial incentives to push your products.

If, and when, you cancel a contract, the agent may take many of your customers to a new client.

SELECTING AN AGENT

If you decide that you need an independent sales agent in a specific territory, how do you select one who is right for your company? Every agent, no matter how good, is not right for every manufacturer. Selecting the one that can be an extension of your firm to the trade is not easy. To the customer, the agent is your company.

Here are some points to consider in matching an agent to your company's character and image.

What sort of selling skills are necessary for selling my products? Does the agent need technical knowledge and experience in addition to personal selling ability?

What marketing functions, if any, do I need in addition to selling?

Must the agent service my products as well as sell it?

Do I need a one-man or one-woman agency or an organization? If the latter, how large an organization?

What is the agent's record of success in products and territories similar to mine?

How long has the agent been in business? What is the agent's reputation?
How well can I trade on it?

Are the other lines carried by the agent compatible with mine? Will the agent's contacts for his existing lines help gain entry for my line?

Is the trade the agent specializes in the one I want to reach?

Does the agent cover the geographic area I need covered and in what depth?

Do the character, personality, values, and integrity of our two organizations correspond?

Can the "reps", who are employees of the sales agent, sales-manage their own territories or will they need management and guidance from the agent? Or from me?

Is the agent the type that merely follows instructions? Or does the agent have a reputation for offering constructive suggestions? Which type do I need?

Is the "chemistry" right? Will we enjoy working together?

SOURCES OF AGENTS

Once you know the kind of agent you are looking for, it becomes relatively easy to target in on the right one. You know what questions to ask the prospective agent. You know what qualities will satisfy your need. It is a matter of getting prospects from several sources. Those sources are:

Classified ads in trade papers whose readership is geared toward the type of manufacturer's representative you seek.

Recommendations from customers and sales managers or owners of non-competing companies in your industry. Also, editors or salesmen and saleswomen from trade magazines can often offer recommendations.

Listings of agents. They are available from the Manufacturer's Agents National Association, Irvine, California; National Council of Salesmen's Organizations, New York City; and directories often published within your industry.

You will probably come up with several choices. Agents are not hard to find.

However, selecting the right one for you requires careful study on your part. Don't rush into a relationship. Getting the right partner is vital. Once the agent and manufacturer become associated, they are truly "married," so to speak. Their common goal is to get maximum sales from the territory.

WORKING WITH AN AGENT

A written contract is the start of harmonious relations with an agent. It should spell out what each of you is to do.

But don't stop after you've signed on an independent sales agent. Look for ways to get the most out of your relationship.

How do you motivate your agent to peak results? Unfortunately, here is where many manufacturers fail. They don't know how to work with a good agent. Often they blame the agent for their own shortcomings.

Actually, the formula for working harmoniously with an agent is fairly simple. Companies that work successfully with an independent sales agent accept the agent as a professional arm of their organization. Their owner-managers respect the talents of their agents.

Involve the independent sales agent in various phases of your marketing. For example, the agent may have constructive suggestions on packaging, sales promotion, and advertising. Many sales agents have strong ego drives and thrive on involvement. When other clients lean heavily on the agent, you may have to fight to capture the agent's interest and get constructive advice. Hold your agent by making the agent part of your team.

Your communications must be clear and concise. The agent depends on you for information about your products, processes, and other matters that bear on selling for you.

The agent's interest, challenge, and profit—as does your profit—comes from making sales. Don't burden your agent with detail. Rather help cut through to the heart of what you expect your rep to accomplish—sales.

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RETURN TO SALES AND ADVERTISING

RETURN TO MAIN MENU



Management Aids FOR SMALL MANUFACTURERS

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EFFECTIVE INDUSTRIAL ADVERTISING FOR SMALL PLANTS

By Harold Marshall

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SUMMARY

Effective industrial advertising can help owner-managers of small companies to achieve benefits such as increased sales, sustained sales volume, and reduced selling costs. The secret to such results is not so much the amount of money budgeted for advertising, the Aid points out, but how it is spent. In spending advertising money economically the owner-manager should set goals and determine what it is worth in dollars to reach the goals.

The Aid also discusses: what makes a successful industrial advertisement, the cost of an individual advertisement, placing the advertisements, selecting an advertising manager, and choosing an advertising agency.

When you manufacture industrial products that are competitive, advertising can be a useful and flexible selling tool. It offers your company opportunities to be distinctive and to do a selling job that is entirely within your control whether you base your sales appeal on quality, service, price, or a combination of the three.

But even so, industrial advertising may not be practical for some small companies. Some owner-managers may not need to advertise because of the kind of selling they do or the nature of their market.

WHY ADVERTISE?

If you are not already advertising and think that perhaps you need to, probably the best way to decide whether or not you should is by considering the reasons for advertising. Briefly, a small company should advertise when its owner-manager can obtain practical benefits from promoting his company and products.

Increased sales is one of the basic benefits of advertising. If you are not selling all the

volume your plant can handle, advertising can help to bring in additional orders.

Sustained sales volume is another benefit of advertising. In a competitive market, advertising helps you to continue selling regularly to those customers with whom you prefer to deal. It also enables you to pick up new customers to replace those who may fall by the wayside for various reasons.

Reduced sales costs is another benefit of advertising. Properly used, your ads make it possible for you to reach customers and prospects with an effective sales message at a lower cost than having the message delivered by a salesman. Furthermore, they can reach people whom salesmen can't always see and, indeed, often don't even know about. They also "prime" a prospect so that he requires less of a salesman's time.

An improved profit level is an indirect benefit of industrial advertising. In a growing company, an advertising program contributes to reaching a good profit level by helping to increase sales and reduce selling costs. In a stable situation--where the company has all the sales it can handle or is doing all it can to reduce sales costs--advertising helps maintain that stability.

HOW MUCH SHOULD YOU SPEND FOR ADVERTISING?

The secret to successful industrial advertising is not so much the amount of money you spend but how you spend it. In thinking about an adequate advertising budget, the owner-manager should have a clear understanding of what he wants his advertising to accomplish.

● Setting Goals

In setting goals, you have to determine your problems, your overall objectives, and what you can reasonably expect from advertising. For example, if your greatest need is for increased sales, the volume of leads you expect to get from advertising must be geared to the availability of salesmen or representatives to

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follow them up and to your capacity for delivering your product and serving customers properly.

If your prime objective is to reduce sales costs, consider carefully how you will use advertising coverage to reach more prospects with the same number of salesmen. If your aim is to strengthen an overall good trend in your business, think carefully about advertising which can further your company's reputation among customers and suppliers.

• What Is It Worth?

After you know what you are asking advertising to do for you, you have to determine--in dollars--what is it worth to get the job done? In industrial advertising, there are no standard formulas or highly scientific tables for measuring how much a company should spend. Rather you have to weigh the value of achieving your goal against the amount of money you can afford to spend.

In picking a beginning figure, you should think about the following ways for determining an advertising budget: (1) the percent-of-sale method, and (2) the per-unit-assignment method. Some industrial advertisers also look at a third method--the job-requirement method.

In the percent-of-sale method, you decide in advance how much you will spend for advertising by using a fixed percentage of your sales--1 percent, 2 percent, and so on, depending upon what you think you can afford. Most companies use the estimated sales for the coming year when setting this percentage.

In the per-unit-assignment method, you establish an advertising expense figure for each product. Again, your figure is based on what you think your company can afford.

Notice that both of these methods provide a starting point rather than a detailed program. The owner-manager who is inexperienced in their use may want to get help from someone who is familiar with setting advertising budgets. These methods give a dollar figure within which you plan your advertising budget for the coming year.

The job-requirement method is another technique which you should know about even though you are not likely to use it when you first start advertising. Sometimes called the task method, it allocates a specific amount for a specific advertising job. In order to use this method effectively, a company needs experience in advertising.

• Adjusting the Budget

When you have the figure you plan to spend for advertising, you can measure accurately the value of your advertising in terms of your goal. Such measurement helps you to adjust your budget on the basis of the preliminary results of your advertising. You raise your budget when the advertising response is good and lower it when you see that you can get maximum benefit for less money.

WHAT IS A SUCCESSFUL INDUSTRIAL ADVERTISEMENT?

An understanding of what makes a successful advertisement can be helpful in working with an advertising agency. It is even more important if you plan to operate your own advertising program.

The key to a good advertisement is knowing what the customer wants to know.

An effective advertisement cannot be built on your interest. It must tell the reader something that will help him in his work. For example, an industrial buyer is likely to care little about your new production methods in themselves. However, he is interested in what your product or methods can do for him--for example, give him better order-to-delivery time, better tolerances, more durable material, and so on.

It is a good idea to try to give the readers of your ads some practical help even in institutional advertising where your objective is to build appreciation of your company rather than to promote a specific product. The case study--stories of how your customers use your product, for example--provides an excellent way to make this kind of advertising carry positive selling points.

Keep in mind that the philosophy of good industrial advertising is to be helpful. Show your reader-customer how your company's products can help him to succeed at his job.

WHAT SHOULD AN ADVERTISEMENT COST?

How much money you spend on a particular advertisement in order to make it a good one should be dictated by only two considerations. One is the amount of space needed--on a continuing basis--to tell your story clearly. The other is the cost of obtaining that space either in publications, in brochures, or direct mailers.

Some companies make the mistake of arbitrarily using a large space. They fail to realize that large space does not make a poor advertising message better. On the other hand, you lose readers if a very small space is used when the sales message requires a full explanation. The important thing is to use the right amount of space for your message and run the ad often enough to keep your company's name before prospects.

In using space effectively, try to keep your small budget flexible. One way is by careful selection of subjects for your advertisements and the media by which you distribute them.

WHERE WILL YOU PLACE YOUR ADVERTISING?

The general effectiveness of your advertising and the control of your advertising money will depend largely on your decisions about placing your ads. What sort of media will you use? For example, business publications? Direct mail? In-house printed materials?

Timing also affects the amount of money you spend. Will you run one advertisement a week? Two each month? One a month? One every two months? The sections which follow are designed to give you information which should be useful in answering questions on timing and media.

- Business Publications

In industrial advertising, business or trade publications provide the most economical way to obtain wide coverage for your sales message. As a rule, business-publication advertising is the core around which a well-organized program is built. The reason is that your customers and prospects read their trade papers.

Your problem is to find out which publications they read and place your advertisements in them. You can determine this by studying the audited circulation figures of various publications. Naturally, if you have shipping problems or freight differentials to contend with, you will choose media which have heavy concentrations of readers near your plant.

Determine the concentrations of editorial space devoted over the years to your type of product because editorial content directly reflects reader interest. Reader interest is the major objective for your advertising.

Most business publications offer discounts for advertising in volume, and you do not have to contract in advance to earn them. Thus, you can test the effectiveness of various publications. Using your budget figure, you might want to set up a tentative media schedule--one that stresses continuity in several publications--for 6 or 12 months and check results against it.

Keep in mind that even though a publication meets all your qualifications for type of readers, number of readers, and editorial interest, a small company's ads may sometimes fail to produce orders and inquiries. Often when this happens, the reason may be that the company's advertisements were not prepared correctly.

The owner-manager, for example, stressed a product benefit which was not helpful to specific types of customers--such as maintenance engineers or purchasing agents--who read the magazine or paper.

- Direct Mail

Direct mail is another advertising media which you should consider. It enables you to pinpoint a segment of your market and hit it with great impact.

However, direct mail usually is more expensive per customer reached than publication advertising. But with the former you control timing. You mail when you want, and the mail piece does not compete for attention with other ads as in a publication.

For additional information you may want to read "Direct Mail Advertising for the Small Manufacturer," *Management Aids for Small Manufacturers*, No. 172, available free from SBA offices or SBA, Washington, D.C. 20416.

- In-House Material

In considering an effective industrial advertising program, don't overlook in-house materials, such as sales bulletins, brochures, catalogs, and price lists. They are logically part of advertising and should be included in the advertising budget.

- Blending Media

A good blend of available media for an advertising program will call for about 50 percent in business publications, and 20 percent in direct mail. Another 20 percent should be used for in-house printed materials. You should not commit the remaining 10 percent until it becomes evident where it will do the most good.

Publicity can work along with advertising, and its cost is often carried in the advertising budget. Product releases can be helpful in attracting attention. For additional information on this subject, see "Publicize Your Company by Sharing Information," *Management Aids for Small Manufacturers*, No. 165, available free from SBA offices and SBA, Washington, D.C. 20416.

- Timing Your Advertising

The timing of your advertising should be done so as to give maximum support to your personal selling program. Direct mail, in particular, should be received by customers and prospects shortly in advance of the salesman's planned call.

Publication advertising can be timed to make personal selling easier during normally heavy seasons and to search out new business during slow periods. You may also want to place some advertisements in special issues which publications devote to the uses and developments of your type of products.

SHOULD YOU ROLL YOUR OWN?

Probably not in the beginning but as the volume of advertising increases, you may want to consider "rolling your own"--that is operating your advertising program within the company. In thinking about this possibility, two considerations are important.

One is financial. Will running your own show cost more than working through an advertising agency? If so, will the benefits from an internal program offset the increased expense? Some experts think not, but you have to decide for yourself.

Personnel--the other fact in the consideration--will have an effect on cost and results. Advertising is best created and managed by people who know the field. And in the long run, the most effective and economical program is achieved by a qualified advertising manager.

Of course, an inexperienced man will sometimes learn to be a competent advertising manager through trial and error. But his employer pays for this type of on-the-job training. Not only is advertising money wasted in such practice, but sometimes sales are lost.

Picking a person with training and practical experience means that the owner-managers of most small companies have to go outside for an advertising manager. An advertising agency may be helpful in recommending applicants.

HOW DO YOU FIND THE RIGHT AGENCY?

If you decide to use an advertising agency to handle the details for you, your problem will be getting the right one for your type of company.

You should look for three things in an agency: (1) Does the agency have experience in selling to the kinds of customers who make up my market? If not, does it have the ability to adapt its experience to my type products? (2) Will it assign some of its most skilled people to my account? and (3) Is it financially responsible?

You can get an answer to the first question fairly easy. You ask the agency for samples of its past and present work with your type of products.

You can answer the second question by asking for experience resumes of the people who will do the day-to-day planning and creative work on your advertising.

Financial responsibility is important because the agency will represent you in financial dealings with media. In looking for an agency principal or account executive whose integrity you can respect, publications such as *The Agency List of the Standard Advertising Register* can be helpful. This directory lists advertising agencies, the accounts they serve, and the associations to which they belong. Association membership usually indicates financial responsibility which you can verify further by checking with several of the agency's accounts.

Respect for the agency principal or account executive is also important because you will

be sharing ideas and opinions with the agency man. Such an exchange is essential for effective advertising. The owner-manager should also be willing to modify his own thinking when the agency can show that a different approach is better.

FOR FURTHER INFORMATION

Businessmen interested in exploring further the subject of effective industrial advertising may be interested in the following references. This list is brief and selective. However, no slight is intended toward authors whose works are not mentioned.

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Advertising

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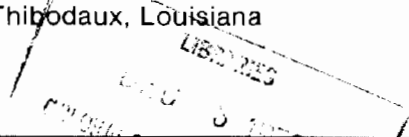
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Summary

Because your budget is limited, you, as the owner-manager of a small retail or service firm, must see that your advertising does the job you want it to. Measuring the results on a continuing basis can help you see that your ads keep your business's name before the public and contribute to increasing sales.

Planning is important. Before you can evaluate results, you must decide what purpose your ads should accomplish. This Aid gives pointers on planning ads and discusses several ways you can compare advertising and sales.

Advertising is necessary today. Whether you have a small business or a large one, you must tell groups of people about who you are, what you sell, and where you are located. You must tell them when they wish to hear or read about such things. So you must place ads in newspapers, on radio, TV, and on outdoor posters, or send out direct mail pieces.

As a small business owner-manager, you know the money that you spend on advertising must return enough sales and profits in added business to justify the cost of the advertising. In small firms, neither time nor money is sufficient to engage in complicated ad measurement methods. Even so, you can use certain rule-of-thumb devices to get a good idea about the results of your advertising.

What Results Do You Expect?

Essentially, measuring results means comparing sales with advertising. In order to do it you have to start early in the process—before you even make up the advertisement. The question to answer is: What do you expect the advertising to do for your store?

Immediate response advertising is designed to cause the potential customer to buy a particular product from you within a short time—today, tomorrow, the weekend, or next week. An example of such decision-triggering ads is one that promotes regular price merchandise with immediate appeal. Other examples are ads which use price appeals in combination with clearance sales, special purchases, seasonal items (for example, white sales, Easter sales, etc.), and “family of items” purchases.

Such advertising should be checked for results daily or at the end of 1 week from appearance. Because all advertising has some carry-over effect, it is a good idea to check also at the end of 2 weeks from advertising runs, 3 weeks from runs, and so on to insure that no opportunity for using profit-making messages is lost.

Attitude advertising is the type you use to keep your store's name and merchandise before the public. Some people think of this type as “image-building” advertising. With it, you remind people week after week about your regular merchandise or services or tell them about new or special services or policies. Such advertising should create in the minds of your customers the attitude you want them to have about your store, its merchandise, its services, and its policies.

To some degree, all advertising should be attitude advertising.

It is your reputation builder.

Attitude (or image-building) advertising is harder to measure than immediate response advertising because you cannot always attribute a specific sale to it. Its sales are usually created long after the ad has appeared. However, you should keep in mind that there is a lead time relationship in such advertising. For example, an ad or a series of ads that announces you have the exclusive franchise for a particular brand probably starts to pay off when you begin to get customers who want that brand only and ask no questions about competing brands.

In short, attitude advertising messages linger in the minds of those who have some contact with the ad. These messages sooner or later are acted upon by people when they decide that they will make a certain purchase.

Because the purpose of attitude advertising is spread out over an extended period of time, the measurement of results can be more leisurely. Some attitude advertising—such as a series of ads about the brands which the store carries—can be measured at the end of 1 month from the appearance of the ads or at the end of a campaign.

Planning for Results

Whether you are trying to measure immediate response or attitude advertising, your success will depend on how well the ads have been planned. The trick is to work out points against which you can check after customers have seen or heard the advertisement.

Certain things are basic to planning advertisements whose results can be measured. First of all, **advertise products or services that have merit in themselves**. Unless a product or service is good, few customers will make repeat purchases no matter how much advertising the store does.

Many people will not make an initial purchase of a shoddy item because of doubt or unfavorable word-of-mouth publicity. The ad that successfully sells inferior merchandise usually loses customers in the long run.

Small marketers, as a rule, **should treat their messages seriously**. Humor is risky as well as difficult to write. Be on the safe side and tell people the facts about your merchandise and services.

Another basic element in planning advertisements is to **know exactly what you wish a particular ad to accomplish**. In an immediate response ad, you want customers to come in and buy a certain item or items in the next several days. In attitude advertising, you decide what attitude you are trying to create and plan each individual ad to that end.

Plan the ad around one idea. Each ad should have a single message. If the message needs reinforcing with other ideas, keep them in the background. If you have several important things to say, use a different ad for each one and run the ads on succeeding days or weeks.

The pointers which follow are designed to help you plan ads so they will make your store stand out consistently when people read or hear about it:

Identify your store fully and clearly. Make sure your radio and television ads identify your sponsorship as fully and frequently as possible without interfering with the message. Logotypes and signatures in visual ads should be clean-lined, uncluttered, and prominently displayed. Give your address and telephone number. It's possible to use a musical or sound effect signature identified with your store to create a "logo" on radio, too.

Pick illustrations which are similar in character. Graphics—that is, drawings, photos, borders, and layouts—that are similar in character help

people to recognize your advertising immediately.

Pick one audio format or type face and stick to it. Using the same type face or the same audio format for radio or television helps people to recognize your ads quickly. Using the same format or kind of type and illustrations also allows you to concentrate on the message when checking ad response changes.

Make copy easy to understand. Printed messages should be broken up with white space to allow the reader to see the lines quickly.

Broadcast messages should be written conversationally. Remember, these messages are human beings talking to human beings.

Tell your listeners how what you're advertising will help them. Consumers buy benefits, not products.

Get the main message in the first sentence, if you can. Sentences should be short. Be direct. Go straight to the point. Get the audiences' attention in the first five seconds of the radio or TV commercial.

Try out your script on somebody else or read it into a tape recorder. When you play the tape back, you'll easily spot phrases that are hard to understand (or believe!). Your ears are better than your eyes for judging broadcast ads.

Use coupons for direct mail advertising response as often as possible. Coupons give an immediate sales check. Key the coupon in some manner so that you can measure the response easily. In your radio ads, you can have listeners create their own "coupons." One fast food chain asked listeners to hand draw a coupon and bring it in for a free hamburger.

Tests for Immediate Response Ads

In weighing the results of your **immediate** response advertisements the following devices should be helpful:

Coupons brought in. Usually these coupons represent sales of the product. When the coupons represent requests for additional information or contact with a salesperson, were enough leads obtained to pay for the ad? If the coupon is dated, you can determine the number of returns for the first, second, and third weeks.

Requests by phone or letter referring to the ad. A "hidden offer" can cause people to call or write. Include—for example, in the middle of an ad—a statement that on request the product or additional information will be supplied. Results should be checked over a 1-week through 6-months or 12-months period because this type ad may have considerable carry-over effect.

Testing ads. Prepare two ads (different in some way you'd like to test or set for different stations or broadcast times) and run them on the same day. Identify the ads—in the message or with a coded coupon—so you can tell them apart. Ask customers to bring in the coupon or to use a special phrase. Run two broadcast ads at different times or on different stations on the same day with different "discount phrases." Ask a newspaper to give you a "split run"—that is, to print "ad A" in part of its press run and "ad B" in the rest of the run. Count the responses to each ad.

Sales made of particular item. If the ad is on a bargain or limited-time offer, you can consider that sales at the end of 1 week, 2 weeks, 3 weeks, and 4 weeks came from the ad. You may need to make a judgment as to how many sales came from in-store display and personal selling.

Check store traffic. An important function of advertising is to build store traffic which results in purchases of items that are not advertised. Pilot studies show, for example, that many customers who are brought to the store by an ad for a blouse also bought a handbag. Some bought the

bag in addition to the blouse, others instead of the blouse.

You may be able to use a local college or high school distributive education class to check store traffic. Class members could interview customers as they leave the store to determine: **(1)** which advertised items they bought, **(2)** what other items they bought, and **(3)** what they shopped for but did not buy.

Testing Attitude Advertising

When advertising is spread out over a selling season or several seasons, part of the measurement job is keeping records. Your aim is comparing records of ads and sales for extended time.

An easy way to set up a file is by marking the date of the run on tear sheets of newspaper ads (many radio stations now provide "radio tear sheets", too), log reports of radio and television ads, and copies of direct mail ads. The file may be broken down into monthly, quarterly, or semiannual blocks. By recording the sales of the advertised items on each ad or log, you can make comparisons.

In attitude (or image-building) advertising, the individual ads are building blocks, so to speak, which make up your advertising over a selling season. The problem is trying to measure each ad and the effects of all of the ads taken together.

One approach is making your comparisons on a weekly basis. If you run an ad, for example, each week, at the end of the **first week** after the ad appears or is broadcast, compare that week's sales with sales for the same week a year ago. At the end of the **second week**, compare your sales with those of the end of the first week as well as year-ago figures.

At the end of the **third week**, 1 month, 3 months, 6 months, and 12 months from the running of the ad, repeat the process even though additional ads may have appeared or been aired in the meantime. For each of these ads, you will also make the same type of comparisons. You will, of course, be measuring the "momentum" of all of your ads as well as the results of a single ad.

After a time, you probably will be able to estimate how much of the results are due to the individual ad and how much to the momentum of all of your advertising. You may then make changes in specific details of the ad to increase response.

When comparing sales increases over some preceding period, allowances must be made for situations that are not normal. For example, your experience may be that rain on the day an ad appears cuts its pulling power by 50 percent. Similarly, advertising response will be affected by the fact that your customers work in a factory that is out on strike.

Some of the techniques which you can use for keeping on top of and improving attitude advertising follow:

Repeat an ad. If response to an ad is good, run it—without change—two or three times and check the responses of each appearance or broadcast against previous ones.

Keep repeating the process. Much advertising loses effectiveness because the advertiser doesn't keep reminding people. Repetition helps increase knowledge of, and interest in, the product. You can soon estimate how often you should repeat each ad—exactly or with minor changes.

Analyze all ads in relation to response. Divide ads into at least two classes: high-response ads and low-response ads. Then look for differences between the two classes.

The time the ad was broadcast or run may be responsible for a particular response level. Other factors, however, may be just as influential as time or even more so, though in radio time is often crucial.

Consider the message and how well it was expressed. Did the copy stick to the theme or did it wander? If you used slogans, did they help make the point? For print, consider the effects of illustrations, type size, color, and ad location. In broadcast, consider whether or not the voice of the person doing the ad or music used may have had an effect.

Emphasis on brand names should also be checked. Price figures should be analyzed. If price lines are involved either in the ad or in the merchandise line of which the advertised product is a part, you should consider them also.

Check the effect of the length of broadcast ads. Did you get the best results with 10-second, 30-second, or 60-second announcements?

Check the size of print ads. Size often has a bearing on response. As a general rule, the larger the ad, the larger the response.

Try to see a pattern of dominance. Your analysis of high-and-low response ads, may show that certain details make the difference between a high or low response. Try to find the combinations which work best for your firm and merchandise.

Note changes occurring over time. A small retailer should never take a winning combination for granted. There is no single formula that will insure high response ads every time. Advertising changes. Therefore, you should watch the ads of others to see what changes are occurring. Continue to analyze your own ads, make small changes occasionally, and note any variations in response.

Listen to what people say about your ads. In doing so, try to discover the mental framework within which any comment about your ad was made. Then try to find points which reinforce believability and a feeling that your product fulfills some wish or need.

However, you should not be misled by what people say. An ad can cause a great deal of comment and bring in practically no sales. An ad may be so beautiful or clever that as far as the customer is concerned the sales message is lost.

When You Use Several Media

When your ads appear simultaneously in different media—such as the newspaper, on radio and television, in direct mail pieces, and as handbills—you should try to evaluate the relative effectiveness of each. You can check one printed medium against the other by using companion (the same or almost identical) ads in the newspaper, direct mail, and handbills.

You can make the job of analyzing and comparing results from among the media easier by varying your copy—the message. Your ad copy, thus, becomes the means of identifying your ad response.

You can check broadcast media—radio and TV—by slanting your message. Suppose, for example, that you advertise an item at 20 percent reduction. Your radio or TV ad might say something like this: “Come in and tell us you want this product at 20 percent off.”

You can compare these responses with results from your “20 percent off” newspaper ad. Require the customer to bring in the newspaper ad—or a coupon from it.

Some of the ways to vary the copy are: a combination of the brand name with a word or some words indicating the product type; tone of voice; speed of delivery; picture variations; size variations; and color variations. Check your printed ads against each other as well as against

your radio and TV ads.

Be careful that the copy variation is not so great that a different impression is received from each medium. Here you would, in effect, have two different ads.

Short-Term and Long-Term Effects of Advertising

Even one ad or commercial or highway poster can result in sales for one product and attention for your business. You should remember, however, that a series of ads that are related will result in sales over a longer period of time than the campaign lasts. Your business name will become very much better known. Your expenditures for advertising, therefore, should be scheduled over a period of three, six, or twelve months. Avoid deciding to advertise this week and putting off the decision about when you will next advertise.

Where to Get Help

Most newspaper offices have at least one person who can help you plan the overall layout, design of your ad, provide illustrations for your ad, and make suggestions about the copy that will be contained in the ad. Radio stations will frequently help write copy and provide a music background for the commercial. Television stations may produce your commercial, usually for a fee. Outdoor advertising agencies may paint or design a poster or bulletin for you, again at a price. Specialty advertising firms may recommend gift items, some at very low cost.

Many small towns, as well as all cities, will have one or more advertising agencies that are organized to create and place retail advertising or that of small advertisers. These agencies will probably charge you a specific fee, as local media may not pay an ad agency fee.

If a college, university, or other school is near you, you might find that students will be happy to create your ads and even plan your campaign.

If there is a local American Advertising Federation Ad Club where you live or in a nearby city, you should consider becoming a member. Speeches and presentations made at the meetings of these clubs may provide ideas that you can use.

Government Regulations

Advertising is now being more closely regulated by the U.S., State, and local governments than ever before. You should make it a practice to search for news items about such regulations that apply to your business. Here, too the local Ad Club might be a source of ideas and information.

Consumer Groups

Most cities and towns now have organizations that are entirely or in part concerned with the consumer movement. Know about such groups in your community and if possible, work with them in relation to the words, illustrations, and even forms of your advertising. The opinions of the members of these groups can determine the success or failure of both your advertising and your business.

For Further Information

Readers who wish to explore this subject further may be interested in the references listed below. The list is necessarily brief. No slight is intended to authors whose works are not mentioned. (Write for prices.)

Advertising by James S. Norris. 1977. Reston Publishing Company, 11480 Sunset Hills Road, Reston, VA 22090.

Advertising Procedure by Otto Kleppner and Norman Govini. 7th ed. 1979. Prentice-Hall, Inc., 301 Sylvan Avenue, Englewood Cliffs, NJ 07632.

How to Get Big Results from a Small Advertising Budget by Cynthia S. Smith. 1973. Hawthorn Books, Inc., 260 Madison Avenue, New York, NY 10016.

The Marketing Communications Process by M. Wayne De Lozier. 1976. McGraw-Hill Book Company, 1221 Avenue of the Americas, New York, NY 10020.

The following free Small Business Administration publications are available from SBA, P.O. Box 15434, Fort Worth, TX 76119:

SMA 156 — Marketing Checklist for Small Retailers

SMA 160 — Advertising Guidelines for Small Firms

SMA 163 — Public Relations for Small Business

SMA 164 — Plan Your Advertising Budget

SBB 20 — Advertising—Retail Store

The following booklets may be purchased from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402. (For current prices and a mail order form, write SBA, P.O. Box 15434, Fort Worth, TX 76119 and ask for **SBA-115B, For-Sale Booklets.**)

SBMS 33 — Small Store Planning for Growth

SBMS 34 — Selecting Advertising Media

Copies of this Aid are available free from SBA, P.O. Box 15434, Fort Worth, TX 76119. Aids may be condensed or reproduced. They may not be altered to imply approval by SBA of any private organization, product, or service. If material is reused, credit to SBA will be appreciated. Use of official mailing indicia to avoid postage is prohibited by law. Use of funds for printing this publication approved by the Office of Management and Budget, March 20, 1975.

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Management Aids FOR SMALL MANUFACTURERS

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Washington, D.C.

March 1965

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DOCUMENTS DIRECT MAIL ADVERTISING FOR THE SMALL MANUFACTURER LIBRARIES

SOCIAL SCIENCES

By R. M. Lovejoy

Professor, College of Business Administration
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MAY 25 1966
COLORADO STATE UNIVERSITY

SUMMARY

This Aid discusses uses to which the owner-manager of a small manufacturing company can put direct mail advertising. It points out that to be profitable the mailing pieces must convince the reader (customer or prospect). The importance of using an up-to-date mailing list and of personalizing the advertisements are also emphasized.

Direct mail advertising is a tool for obtaining additional sales from regular customers and new business from prospective customers. It may be used in a variety of ways and, for each use, there are many different kinds and types which a small manufacturer may want to consider in his efforts to increase sales. Direct mail advertising can range from a single postcard announcement to a complete campaign of weekly mailings, using letters, folders or flyers, stuffers, price sheets, catalogs, broadsides, brochures, and other printed materials.

USES YOU SHOULD CONSIDER

In thinking about direct mail, start by reading about some of the ways in which you can use it. It can be used to:

(1) To carry on a mail order business--without any salesmen's calls. Forcefully written sales messages--whether they take the form of catalogs, flyers, brochures, or letters--are required when you rely solely on direct mail advertising to "get the order for you."

(2) To presell prospects before a salesman's call--to "soften up" the buyer by acquainting him with your company and products. This kind of direct mail can take several different forms. For example, it can be a general sort of mailing piece, mass-produced, and widely mailed to a large number of prospects--perhaps in a new market which you are invading.

Or it can be in the form of an invitation to selected prospects. You urge them to ask for further information, to request a catalogue or price list, or to ask a salesman to call. The proportion of returns you receive from any one mailing of this type will probably be low; however, if you can get such inquiries, they are apt to be above-average prospects for a sale. In such solicitations, you must be prepared to answer promptly each inquiry you receive.

(3) To increase the "full-line selling" of your salesmen. If you have some small-volume, large-profit items which salesmen, for some reason or another, fail to push--the answer may be direct-mail promotion to your regular customers.

(4) To "announce" new models, new designs, new lines, new items, or any changes in your products. Of course, a new address, new equipment, new people in your company, all should be "announced" with fanfare and with emphasis on the "benefits" to the customer. The ad should tell why the new development will be important to the reader.

(5) To notify your customers of price increases. Let them know how much, when, and why. If you give them the opportunity to buy in advance of a price increase, you may increase your sales volume. This type of direct mail advertising also may be used to induce prospects to buy for the first time.

(6) To notify customers of price decreases--which you may offer to close out discontinued models, or to clear year-end inventory, or to stimulate off-season orders, or as a seasonal promotion.

• Other Uses of the Mails

In addition to sending advertisements, the mails can also be used to achieve other sales promotional objectives. Some people think of such uses as direct mail advertising even though the mailing may consist of a highly personal message to only one customer or prospect.

Several of these uses are:

(1) To advise customers of a salesman's call. Many customers like to know in advance, when a salesman is coming, especially if they think he may have a profitable message for them. A postcard will do the job, but once you start, such announcements should be continued.

(2) To substitute for a salesman's regular call on a regular customer. If you have more small-volume customers than you can afford to call on regularly and frequently, try calling on some of them half as often, and write them a letter the other times.

Explain in advance so they will realize that you are not slighting them. Each letter should cover what the salesman would have said--and "ask for an order."

(3) To follow up on salesman's calls to prospects and new customers. Prospects should be reminded of the reasons why it is profitable for them to buy from you. New customers especially should be told that you appreciate their business and hope it will continue.

(4) To thank all customers for their business at least once each year. Such letters are goodwill builders. Christmas, New Year's, or special anniversaries are good times for this type of message. Be sure the message has a personal tone.

(5) To help regain lost customers. Analyze your lost accounts to see why competition wooed them away from you and to determine how best to get them back. Perhaps a direct-mail campaign will be the answer.

(6) To provide a personal "selling tool." Prepared properly, direct mail advertising pieces can serve as visual aids during a salesman's personal solicitation and can be left with the customer after his call. Thus, they become a continuing sales "pitch" for your products.

(7) To create an image by your regular correspondence. Each piece of mail that leaves your company should be considered as a direct mail advertisement--for it is going to make a favorable (or an unfavorable) impression on each person who reads it. Care with all routine correspondence provides an easy way to build and improve the "image" you wish to project.

MAKING UP YOUR MAILING LIST

The right kind of mailing list is important to the success of direct mail advertising. A guideline in making up a good list is: Are the persons on your lists sources of potential sales? Generally speaking, the quality of direct mail advertising will be no better than the

mailing list to which it is sent. You can get names for your mailing list from the following sources:

- Your own invoice file, ledger cards, or accounts receivable file. If they list only the company name and address, get the name of the company's buyer.

- Salesmen's call reports. Your salesmen can probably also give you the names of many other people who influence purchases in the companies on which they call.

- Commercial lists. Directories of various sorts, and commercially available lists from mailing list houses can provide you with additional names. For additional information see "National Mailing-List Houses," *Small Business Bibliography* No. 29, available free from SBA, Washington, D.C. 20416.

Keep in mind that regardless of the source, your mailing list must contain the names of the buyers who actually place orders for your type of products. Your mail pieces must go to the right man. In addition, other people may also influence the decision of this buyer. Find out who they are and put them on your list.

Finally, your lists of addressees should be revised often to insure that they contain the correct names, titles, and addresses. You will need to make this review regularly because men and women change jobs frequently, companies expand, move, merge, and change names, and address lists go out-of-date rapidly.

MAKE DIRECT MAIL WORK FOR YOU

When you have your mailing list, you are ready to think about putting direct mail advertising to work for your company. It can be a powerful tool if you: set a specific, measurable goal to be achieved by it; plan it correctly; and execute it effectively. The logical steps to follow in making direct mail work for you are:

(1) Decide exactly what you expect the mailing (or series of mailings) to accomplish. Is it to get one order or a number of orders? Is it to get requests for further information? Write down the purpose to guide your thinking and to remind you of it.

(2) Decide on what amount of dollar sales or unit sales will be a satisfactory result. For example, should the advertisement bring in \$100, \$1,000 or \$10,000 in sales? Or in units, should it bring in orders for 10, 100, or 1,000 units? This setting of a desired quantity of results will help you figure out how much to spend on the mailing, how elaborate it should be, and to how many individuals it should go. More important, it will also give you a "yardstick" by which to measure the actual results of the mailing.

Remember that a bulk mailing to prospects with whom you have never done business will

draw only a light response. Returns can be increased somewhat by personalizing the mail with devices such as first-class postage, air mail, individual addressing, and so on.

Keep in mind also that regular customers tend to respond more readily than infrequent customers. A carefully screened group of "ideal" prospects respond better than a "blanket" mailing.

(3) Plan every phase of your mailing carefully. Once you have decided the quantitative results you want, then you must determine what you have to do to obtain them. Essentially, you have to make your message sound so profitable to the reader (customer or prospect) that he cannot afford to ignore your request for action--that is for an order. In doing this, decide what part of your "story" will appeal most strongly.

How can you tell this story so that the reader will grasp it immediately and appreciate it fully? Should you tell it in pictures or in a text? How much space will your story require? What will be the "quality" of the mail piece--the finished advertisement? Should it be printed in four colors or in black and white? On expensive or cheap paper?

(4) Work up the sales message. Later, you may want to use an advertising agency, letter shop, or other professional help. However, if you have never developed a message for direct mail, the following suggestions should be helpful:

- Write down the main appeal--the reason why he should buy--you want to make to the reader.

- Make a rough outline of the material you want to include and list the supporting facts.

- Whether you write your own direct mail, delegate it to one of your employees, or get help from the outside, your message should conform to your products. It should have an easy, personal, and friendly style. Some of the best direct-mail copy reads like a personal letter or a face-to-face conversation. It should cover the subject completely because it must convince, if it is going to sell. Yet it should be as concise as possible.

- Your completed sales message should (a) get the attention of the reader, (b) get his personal interest and make him want what you have to sell, (c) convince him that it is a good value, and (d) ask for the order. Urge him to act promptly.

KINDS OF DIRECT MAIL PIECES TO CONSIDER

Direct mail advertisements can take a broad variety of forms. Some of them are:

(1) The POSTCARD--It can be handwritten and used, for example, to announce a salesman's call a few days in advance.

(2) The SELF-MAILER--A bulletin which is folded and mailed without an envelope, it can be used to describe your product, including prices, terms, and an order blank.

(3) The PAMPHLET--It can be a mimeographed sheet folded once to make a cover or it can be several mimeographed pages stapled to make a booklet. Most pamphlets do not carry pictures.

(4) The BROCHURE--Similar to the pamphlet, it is printed, usually on fairly expensive paper, often with color and pictures. Its dignified appearance makes the brochure ideal for major announcements such as a new line of products or the opening of a plant addition.

(5) CATALOG SHEETS and PRICE LISTS--They can be mailed to steady customers and selected prospects cheaper than any other way of distribution.

(6) INQUIRY LETTERS--Such letters make a sales pitch and offer further information rather than ask for an order. They can be used to cultivate an interest in the minds of new prospects. They are "door-openers" to try to locate interested prospects.

(7) ANSWER TO INQUIRIES--It is a sales letter for answering inquiries, including those who reply to your INQUIRY LETTER. Use strong selling arguments and develop this letter in advance so that answers can be sent out promptly as inquiries come in.

(8) HOUSE ORGAN--Many companies send news about themselves to get sales leads.

Keep in mind that the kinds of direct mail you use depend on your company's needs and on what you are trying to accomplish. In addition, many times the kind of direct mail advertising you use will depend on: your customers, (for example, industrial or consumer); your product (for example, quality versus price); your salesmen (for example, high or low pressure); and your competition (for example, high or low budget advertisers).

Your local printer can help you to select the type of direct mail to use. Whatever he does, the owner-manager should never try to sell a "mink coat" with an ordinary postcard--especially if his competitors are using beautiful ads. The "vehicle" should be consistent with your message and product.

TESTING YOUR DIRECT MAIL

Keep in mind that a good broad guideline in using direct mail advertising is your personal attitude about the direct mail you receive. Do you read every piece that comes to you? Or do you throw some of it--items that look cheap--away? Customers and prospects are probably enough like you to do the same.

On the other hand, what happens when you get an advertisement that is attractive to you because it is addressed to you personally and tells a story in which you are interested? You read it, of course. Most customers and prospects will do the same if your well-presented messages tell a convincing profit story.

In order to get an idea of whether a particular direct-mail piece will get action from the reader, test it on a small sample of names from your list before you send it out to the entire list, for example, send it to every 20th name. The more the mailing will cost, the more you need to insure that the mailing will be successful.

FOR FURTHER INFORMATION

Readers who wish to explore further the subject of direct mail advertising may be in-

terested in the references indicated below. This list is necessarily brief and selective. However, no slight is intended toward authors whose works are not mentioned.

Direct Mail File of 100 Ideas. 1957. \$2.50 members; \$5.00 nonmembers. Direct Mail Advertising Association, 230 Park Ave., New York, N.Y.

Successful Direct Mail Advertising and Selling, by Robert Stone. 1955. \$5.75. Prentice-Hall, Inc., Englewood Cliffs, N.J.

Profitable Advertising for Small Industrial Goods Producers. SBMS No. 18. Small Business Administration. 1956. Available for 35 cents from the Superintendent of Documents, Washington, D.C. 20402.

"Neglecting Direct Mail Basics" in *Sales Management*, August 21, 1964. 75 cents per copy; \$12 per year. Sales Management, Inc., 630 Third Ave., New York, N.Y. 10017.

WANT TO HELP A FRIEND?

If you have a friend who is thinking of starting his own business, you can help him by giving him a copy of "Checklist for Going Into Business."

He can use this *Small Marketers Aid* to work out answers to questions such as: How much capital will he need? Where should he locate? How will he price his products and services?

This leaflet is free from any SBA field office or from SBA Washington, D. C. 20416. Ask for:

- *Small Marketers Aid* No. 71--"Checklist for Going Into Business"

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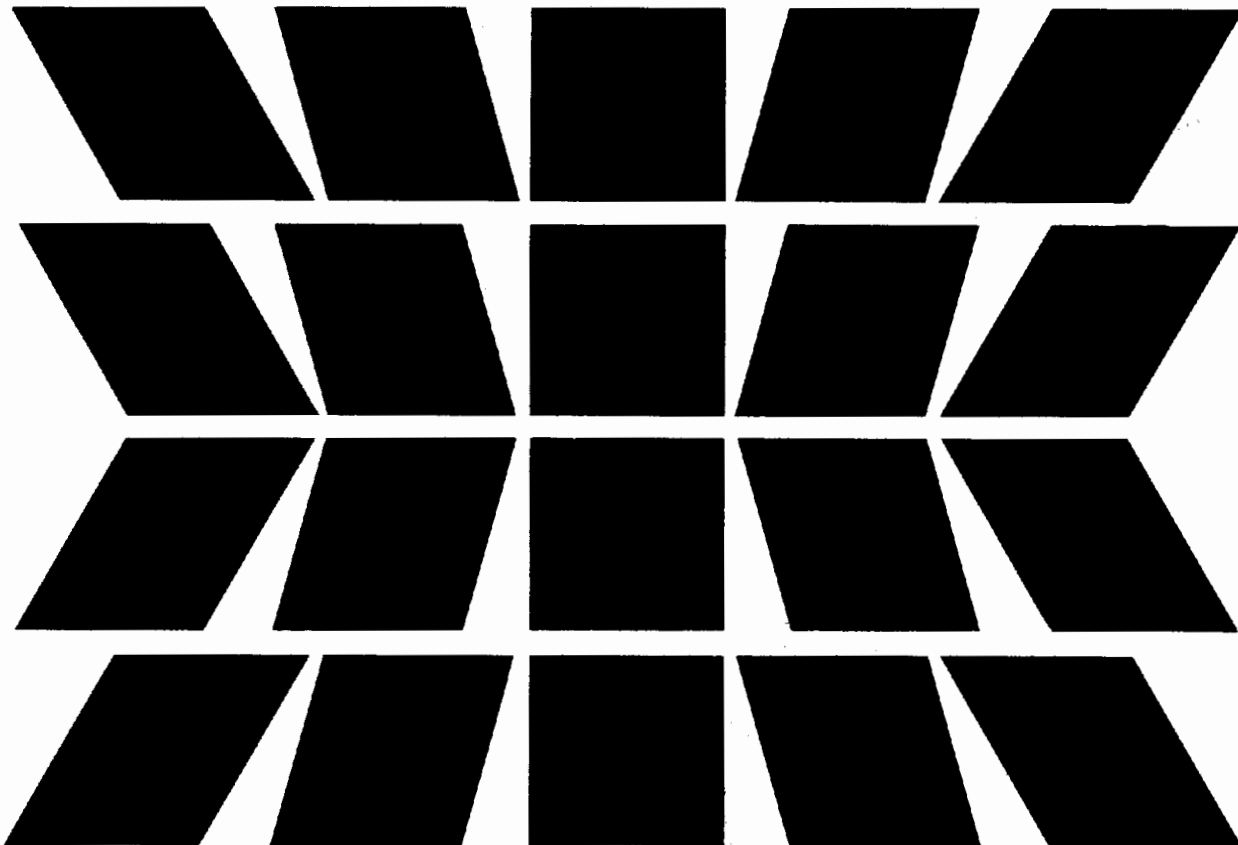
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Management Aids for Small Manufacturers
U.S. Small Business Administration

Developing New Accounts

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Cleveland, Ohio

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Summary

New Customers and more sales are essential for profit and growth. The small business owner/manager especially should have a specific program for regularly developing new accounts. This Aid presents a systematic approach to finding, getting, and keeping customers whose sales volume produces profit for you.

First Printed May 1979

Developing New Accounts

The problem of developing new accounts is a common one. A frequent lament of sales managers is "we just don't have enough new accounts to provide the volume we need." In most companies a five percent improvement in sales volume will have a most favorable profit effect. It will equal or exceed, for example, a comparable percentage improvement in costs of material and services, productivity, inventory management or control of receivables.

How to acquire the accounts to provide such added volume becomes a matter of prime importance to survival and growth. In a great many businesses, small and large, the matter of new customer acquisition is approached in a haphazard, intermittent, unplanned, and uncoordinated way. The results are understandably often less than satisfying, more expensive than expected, and generally inadequate from the standpoint of contribution to profit.

Useful insight into the problem of getting new customers can be obtained by considering the sales department as a purchasing function, spending company resources by investing in customers and sales volume. The controls, systems, thought, and effort devoted to finding the right source of materials, providing for the most effective delivery performance at a favorable price, is a continuing and evident management concern relative to its purchasing activities. Disciplines are established and controls are in place to measure supplier and purchasing effectiveness. Alternate bids are secured and potential suppliers critically tested for quality and service. Capital expenditures are closely evaluated. Yet the problem of investing to get a new customer, one who is expected to deliver profitable sales over an extended period of time, is often reduced to the simple charge to the sales department of "more customers!"

In most cases the **investment** in customer acquisition is heavy, scattered, unmeasured, and unplanned. The monies spent in this type of effort consist of advertising dollars, sales salaries and expenses, phones, samples, administrative time, and often expensive engineering costs.

The alternative to the shotgun approach to customer or account development is usually less expensive and substantially more productive. It involves some straightforward initial analysis and planning inexpensive enough for the smallest business. It may likewise involve a change in attitude and emphasis that says that the business of investing in a customer ought to be a selective, investigative, consistent, and planned process, worthy of the closest attention of the managing sales executive. Finding and developing a worthwhile customer is a different objective than simply "more sales" or "more accounts."

The procedure involves ten steps, formalized to the degree necessary for the needs of the enterprise. These are:

1. **Specify**
2. **Quantify**
3. **Identify**
4. **Qualify**
5. **Convince**
6. **Service**
7. **Collect**
8. **Measure**
9. **Expand**
10. **Repeat**

The first seven are initially critical. A substantial account who does not pay is no "customer."

Specify

The first step is to decide what kind of customer is needed. This involves a brief customer "specification." No one just buys steel or a machine tool or a truck. The kind of steel, its characteristics, its yield are matters of instant concern. Are we trying to buy a simple drill press or a numerically controlled multiple spindle processing unit? Does the truck have to carry one ton or ten tons, and what is to be hauled? Good analysis of the strengths or deficiencies of your **present** customer accounts can help in preparing your customer specification.

The customer specification might read:

Must be within 100 miles. Must be potentially capable of repeat purchases of product "x" totaling \$50,000 per year. Must appreciate value of service as opposed to being strictly a price buyer. May be an intermittent process operation where downtime is a critical concern. Frequent changeovers. Quality conscious buyer. Pays promptly on terms. Probably in the Standard Industrial Classification (SIC) _____ or _____, (or describe) _____. May currently be using product supplied by National or Atlas. Size indicator: at least 100 employees, reasonable in-house maintenance program, evidence of sales growth. Objective: profit contribution rate of 30%

Or the specification might be simply:

Companies in the meat processing industry, in Michigan, Ohio, Indiana, Kentucky, Pennsylvania (beef, lamb, pork, fowl) engaged in slaughter and/or portion pack, handling over 100 head/day equivalent;

Or:

Independent distributors of products associated with the material handling industry in major trading centers in the southeastern region, having a sales force of no less than five, and carrying recognized domestic truck brands calling on local industry, particularly food processors. Must have repair facilities.

Quantify

How many this quarter or this year? "To provide the type of business required, two new accounts with volume potential of \$50,000 each are need in each of the remaining quarters of the year, plus five new smaller accounts in each quarter with a potential of \$25,000 to \$30,000 annually." Or, "Need an average of three new small machine accounts each territory, each quarter, with potential of supply sales of \$2,500 each per year following installation."

Comment: The new account is admittedly a necessary consideration for growth. Some businesses, however, become so concerned with the new account syndrome that they overlook the very real, often untapped, potential of **existing** accounts. By proper attention to maintenance selling, accounts on the books can be upgraded, expanded to new applications, and in effect become new for all practical purposes. The maintenance aspect of selling is often minimized because the battle has been won—the customer is on the books. Neglect gives your competitors the opportunity to develop a new account by taking away one of your customers. In most cases, developing an **existing** account is much less costly than acquiring a new one.

Identify

Having specified and quantified the type and number of accounts wanted, the next step is to identify and rough screen the most likely candidates in the most direct and least expensive way.

A few days devoted to secondary research can prove rewarding. The precise method depends on the scope of the project, the number of required new accounts, and the geographic area involved.

For the smaller local business, the telephone directory is an obvious, available, and well organized reference for new accounts. In fact, a study of the directories for several cities provides a fast, comprehensive, and specific source of information for the significant trading centers in a regions.

Such listings display products and services offered for sale, the nature of the services offered (like wholesaling, retailing, or manufacturing), the specific location, phone, and zip code reference. If the listings are regarded as definitive or what is **sold**, they likewise are definitive, with a little deduction, of what such firms **buy** for resale or as original equipment manufacturers, or for use in their businesses. For example:

Acme Rat Exterminating Products: Rentals, Service, Parts—Rat Poison, Roach Spray, Ant Bait, Bird Repellant, Rat Guards, Animal Traps, Chimney Screens, Sprayers (all types), Electric Fly and Mosquito Killers, etc., including map, address, phone, and brands handled.

Under "Mailing Lists" the yellow pages also give substantial listings of sources who provide lists of various types, often very specific as to Standard Industrial Classification (SIC) number, address, and names of relevant contacts. Purchase of one or more lists across the developed specification provides a fast way to be selective.

All things considered, like today's average cost of \$75-\$100 for

an in-person industrial sales call, the time and money devoted to even modest preplanning data research is well spent.

Lists that can be bought generally key on SIC numbers that, depending upon the number of classification digits, give names, size indicators, etc. Such lists are available from:

D & B
Market Share
Dunhill
Ohio Industrial Directory (Harris)
Thomas's Register

to name a few.

Other useful and readily available secondary sources of names are directories of associations, clubs, laboratories, manufacturers, Chamber of Commerce releases, mail order catalogs, and the like. The limit is only imposed by the extent of creative imagination of the researcher. The various desks in the federal and state offices and the public and university libraries are extremely helpful. Often license, permit, and registration data are available and useful.

A typical listing of forgings users for example would include these SIC numbers: 3623, 3624, 3629, 3711, 3713, and 3714. Each listing in one instance would look like this:

Data—	SIC Number	Area Code	Telephone Number
	Company Name		
	Street Address		
	City, State	Zip Code	
Listing—	3714	000	000-0000
	YXZ Motive Company, Inc.,		
	123 Any Street		
	Cleveland,	Oh	44111.

Basic usage information to identify industries using forgings (by SIC number) was developed from a government report, "Census of Manufacturers." The scope of companies in those SIC groups was obtained for a specific geographic area from "County Business Patterns." A specific mailing list was then obtained from a directory publisher for specific SIC groups in those areas. A rough screening of the list eliminated obvious unlikely prospects (Qualify). Two hundred phone calls were made to the remainder, asking the specific question, "How much do you buy of this type of forging?" Eight-seven users were identified, large users were coded, and a program of selective selling on twenty-two accounts (some unsuspected users) was undertaken.

Qualify

One of the better sources of new accounts among existing users of a product or service is your direct or indirect competitor.

Examination of the sales literature, catalogs, and trade releases of a competitor often reveals his pattern of distribution, a listing of his good reference accounts, and often the details of his best applications. Review of his advertising likewise points up many useful areas of concentration, selling methods, and coverage of what he regards to be his major markets.

Placing your self in the role of a **buyer** of your own product or service is useful in identifying a competitor's influence points, likely user references, other applications that might not have occurred to you. Your own representatives can be helpful. In other words, shop around for your own product and see who else touches end users in the distribution process. Each is a potential source of useful information. A frank discussion with some of your good customers will produce names of *their* competitors who might become your customers as well. Even on a limited local basis such efforts are most rewarding.

Your purchasing agent can be a most useful source of qualifying information because the agent talks to salesreps who talk to your competitors. In the field of selling, detailed attention to your competitors' activities can be equally as rewarding as attention to your own customers from the standpoint of identifying new customer opportunities, advantages, deficiencies, and needs. The cost is reasonable—an open eye or ear.

When the list is reasonable—identified, broadly qualified, and **manageable**, the personal contact or specific qualification phase begins. This takes time, but the effort will be spent on a modest group of targets that have been screened against your broad specification, qualified roughly at minimum cost and have a high probability of productivity.

Good mailing lists tied to selected group targets can help identify new accounts. By a proper offering (i.e., to conduct a free survey, to provide a sample, to solve a specific problem, to offer a study result, to provide a modest prize for best new applications, etc.,) a user response can be obtained. From these responses you can qualify the potential of prospective new accounts.

Learning more about your end users can also uncover buyer habits and identifying characteristics indicative of a larger group. For instance, return warranty or registration cards could give you this information from comments or answers to a few basic questions about the product by users. This information can be matched to a larger group, expanding your viewpoint.

Look also for customers among users of alternative products or services to yours. For example, users of plastics are currently converting to die castings for various reasons. Gray iron castings can often be converted to stamped parts or forgings. Automobile buyers are acquiring motor bikes and supermarket shoppers are buying less at the store and eating out more at fast food restaurants. Such changing habits may bring you some of your lost customers back to you or make you vulnerable to pressures from indirect competition.

Convincing a potential user to try your product or service is the next step after you have found and qualified your prospects. This step is the pay off for all your efforts and investment to attract **qualified** customers. Qualifying in detail to meet your specification and convincing the potential user to try your product or service often involves similar logic.

You search in a specific market area for customers that are stable companies with solid needs for your products or services. They will do repeat business and pay their bills. And you are able to come to terms and do business with them.

Keeping customers involves giving service, getting paid, measuring account profitability, expanding customer buying, and then repeating all the steps to get and to keep good customer accounts.

Remember, treat old customers the way you service new ones and you may not need so many new ones.

The Profit Evaluation

How did you do against the measure you set out for yourself? Is the *trend* better? Are your new customers delivering the quality of volume that you want? Tracking your progress is very important. Let's say you were shooting for no increase in fixed costs and \$70,000 more profit contribution on the bottom line from new accounts. Chart your actual results:

New Customer	Net Sales Volume	Variable Costs to Make and Sell	Contribution to Fixed Costs and Profit		Evaluation
			\$	%	
A	\$100,000	\$ 90,000	\$10,000	10%	Poor
B	50,000	30,000	20,000	40%	Excellent
C	100,000	70,000	30,000	30%	Satisfactory
D	80,000	72,000	8,000	10%	Poor
	\$330,000	\$262,000	\$68,000	20.6%	Average

There is more to getting new accounts than just chasing the *volume* they produce. Obviously the quality of the volume is more important. Measure your required standard, not just for the *amount* of volume, but for the **profit yield** of the volume and the trend for the future.

The new customer development method proposed here emphasizes the who, what, why, when and where of volume rather than merely the how much. This takes thoughtful planning, detailed research and screening, and some expense but you do get profitable results.

Further Reading

Readers who wish additional information may be interested in these SBA publications.

The following Small Business Administration publications are available free from SBA, P.O. Box 15434, Ft. Worth, TX 76119:

- MA 190**—Measuring Sales Force Performance
- MA 192**—Profile Your Customers to Expand Industrial Sales
- MA 194**—Marketing Planning Guidelines
- MA 200**—Is the Independent Sales Agent For You?
- MA 203**—Are Your Products and Channels Producing Sales?
- MA 216**—Finding a New Product For Your Company
- MA 230**—Selling Products on Consignment
- MA 232**—Credit and Collections
- SBB 9**—Marketing Research Procedures
- SBB 12**—Statistics and Maps for National Market Analysis
- SBB 13**—National Directories for Use in Marketing

The following Small Business Administration publications are for sale by the Superintendent of Documents, Government Printing Office, Washington, DC 20402:

- SBMS 22**—Practical Business Use of Government Statistics
- SBMS 36**—Training Salesmen to Serve Industrial Markets
- SBMS 39**—Decision Points in Developing New Products

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**SELLING
PRODUCTS
ON
CONSIGNMENT**

By

Patricia L. Burr
College of Business Administration
The University of Texas at San Antonio
San Antonio, Texas

SUMMARY

Sellers seeking new and expanded wholesale and retail markets for goods can use consignment selling to economic advantage in many cases.

This **Aid** provides a discussion of the advantages, disadvantages, aspects of consignment selling to be aware of, and general comments about how to use it as an effective selling tool for the small business operation.

June 1976

What happens to a manufacturer who has developed a new consumer product that is thought to be a best-seller, but no retailer or wholesaler is willing to invest enough capital to stock a small number of the items in inventory?

What happens to a manufacturer who is talking with a buying committee of a retail chain when he is told that the seasonal product involved is such a capital risk that there is probably no chance that it will make the retail shelves during the Christmas season?

How can manufacturers in these cases and similar cases make the products and terms of sale sufficiently attractive to have the merchandise on retail shelves for exposure to the buying market?

Perhaps through the use of consignment selling on a trial basis?

Selling goods on consignment is described as a situation whereby goods are shipped to a dealer who pays you, the consignor, only for the merchandise which sells. The dealer, referred to as the consignee, has the right to return to you the merchandise which does not sell, at any time, and without obligation.

As you can see, this may not be an ideal arrangement. The dealer is not obligated to "push" the merchandise; he has no money in it. It is yours.

PURPOSE OF CONSIGNMENT SELLING

Even with obvious disadvantages, there may be times when you may decide that consignment selling can serve your purpose. It can be used as a marketing tool which creates no obligation on the part of the dealer to whom you deliver goods in the event they do not sell. As a result, such a practice can provide an attractive incentive for the dealer, at least to stock your merchandise in inventory. He has no risk and you have your merchandise before the buying public.

Examples of goods which very often are sold on consignment include light bulbs, produce, eggs, poultry, magazines, newspapers, seasonal items such as Christmas decorations, garden seeds, batteries for flashlights, and potted plants such as those found in supermarkets.

In the case of perishable merchandise (either in quality or in seasonal appeal) dealers are often more inclined to consider placing it in their stock if they have no great threat of financial loss on investment in the event it does not sell.

In the case of a newly-designed and manufactured product for which there is no sales record, dealers might be more enthusiastic about promotion if their investment loss is not an issue.

ADVANTAGES OF CONSIGNMENT SELLING

Now that you've read some general facts about consignment selling, look at the specific advantages to you as a manufacturer.

1. It allows a seller (manufacturer) to place merchandise in retail and wholesale outlets for additional exposure to the buying market.
2. It can provide an incentive for the retailer and wholesaler to stock goods in inventory because no capital on their part is tied up in inventory.
3. It can encourage retailers and wholesalers to stock seasonal or otherwise newly-introduced merchandise which they might not usually buy because of lack of demand.
4. It provides the manufacturer the opportunity to have the merchandise exposed to the buying market, instead of having it stored and isolated in a warehouse while waiting for an order from a buyer.

DISADVANTAGES OF CONSIGNMENT SELLING

In deciding whether or not to use consignment selling, you need to look at the disadvantages.

1. While your merchandise is being exposed on the shelves of a retailer or wholesaler, you get no money until and unless they sell.
2. As the manufacturer you must have enough cash on hand to wait extended periods for payment of merchandise sold.
3. Since the goods are out of your physical control, you cannot control the damage and shopper abuse which inventory merchandise is generally subject to.
4. You can not always affect shelving decisions which retailers and wholesalers make concerning maximum exposure of the mer-

chandise. Since consignees do not have any capital invested in the inventory, they may be inclined to place their outright-owned inventory in the most advantageous display spots in order to realize a fast return-on-investment. They are aware that they do not lose any investment if the consigned goods do not sell. They do lose if the inventory they own does not sell.

5. Where personal selling is important, out-right owned merchandise might be promoted over consigned goods since, again, return-on-investment matters where investment exists.

6. If the gross margin to the seller is greater than the percentage commission with the sale of consigned goods, then the seller might tend to favor selling the out-right owned goods. For this reason, the consignor is introduced to the importance of providing an attractive incentive in the form of a commission for the consignee. In other words, the consignee needs a strong reason to sell the merchandise, since the motive to recoup investment is not present.

A FEW WORDS OF CAUTION

Consignment selling may or may not be attractive to you. It depends on your situation. You might use consignment selling for market testing. It might be a fairly inexpensive way to learn how or, if, a new product will sell.

Keep in mind, however, that you tie up your funds waiting for merchandise to be sold. Also, the dealer may be a poor credit risk. Moreover, there may be other hazards inherent in a situation where the dealer does not have his funds tied up.

In brief, the various factors over which you have less control than in other marketing situations could mean that the risks may be greater than your resources can absorb.

To evaluate whether consignment selling can be advantageous to you, consider the following discussion of the consignment relationship, special considerations, and examples of operational aspects.

THE CONSIGNMENT RELATIONSHIP

The relationship which exists between you, the consignor, and another seller, the consignee, is an agency relationship. That is, the consignee never takes title to the merchandise but acts as the agent of the consignor to pass title to the buyer.

Since title does not pass to the consignee in the absence of an agreement, liability of loss for the merchandise remains with the consignor.

This means that you and the consignee can agree to specific statements for assuming a share of the loss in case of shoplifting or other damage to the merchandise. However, in the absence of such an agreement, you, the consignor are responsible for the loss involved, even though the merchandise might have been shoplifted from the premises of the seller while the consignee exercised normal care in the display and handling of the merchandise.

Because of the details and legal implications involved in consignment selling you, as a consignor, should give careful attention and planning to selling products on consignment.

GIVE SPECIAL CONSIDERATION TO . . .

Contractually speaking, you and your consignee dealer can agree to a variety of mutually-advantageous measures. That is, you might agree in writing that the merchandise will be placed in the retail or wholesale business where it is exposed to an estimated 50 percent of foot traffic which enters the store.

Also, you should agree as to the exact commission to be awarded to the consignee upon sale of the merchandise. The length of time (days, weeks, etc.) which the consignee will agree to keep the merchandise will probably be specified. Also, the intervals at which the consignee will make payments for good sold should be considered.

Agreement concerning delivery and pick-up of the merchandise might be included, as well as conditions of storage of any merchandise which is not on display particularly in the event of perishable merchandise. Concerning the payment for goods sold, your contractual agreement might specify that you will be paid for "inventory sold," where

INVENTORY DELIVERED LESS INVENTORY COLLECTED
EQUALS INVENTORY SOLD.

Yet, the formula for payment noted above assumes that all merchandise will be either sold or claimed by the consignor and completely rules out the possibility of disappearance of the merchandise from the sales floor. Since shopper damage and shoplifting are sobering realities of doing business, it is wise to consider them and plan for their occurrence beforehand.

As was pointed out before, the merchandise still legally belongs to the consignor in a consignment sale, and liability of loss is a necessity. Still, some consignees will be willing to share the responsibility involved in loss due to shoplifting if the issue is handled tactfully.

In some cases, the consignee will assume responsibility for damaged goods. When this is the case, you, the manufacturer, will suffer no loss. However, such cases are rare. At best, you can expect a sharing of the loss with the consignee.

When you assume part or all of the loss, ask for and keep the damaged goods for your own records. Also, never rule out the consignee who will claim that some of your merchandise was damaged and he "swept out the rest of it with the trash" when he, in fact, sold it and pocketed the revenue.

Consider such damage as that caused by sun rays in window displays which can fade colors and make the merchandise unfit for sale.

EXAMPLES OF CONSIGNMENT SELLING

Consider the wholesaler of artificial floral merchandise who sells to numerous small and medium retail floral establishments. Such a wholesaler often stocks mostly staple merchandise with a limited assortment of infrequently-selling items.

A manufacturer who has developed a novel item for that industry and has no sales history to use as a basis for showing the wholesaler that the item will sell, probably will have a difficult time getting the item into the wholesaler's inventory.

If a potential consignee such as the wholesaler in this example, is comfortable with his current sales level and gross margin, the manufacturer will find it difficult to convince the wholesaler that he needs this item in his inventory.

Yet, in a consignment sale, the manufacturer can always ask, "What do you have to lose?" The answer is, of course, "Nothing."

If the manufacturer makes it easy enough for the wholesaler to stock the item and the wholesaler is aware of his possible commission for exerting very little effort, the merchandise usually has a very good chance of being placed in stock. As a result, the merchandise has wide exposure in the market place and the wholesaler feels no risk associated with "trying" the merchandise. If it sells well, chances are good that it will be placed again. Even if the wholesaler had bought the items outright the first time around, and they did not sell, they would not be reordered. Thus, the marketability of the merchandise is at stake in either situation and the positive aspect in consignment selling is that the wholesaler is assured that he has no investment to lose.

In another example, consider a manufacturer of a seasonal item such as Easter baskets, Christmas ornaments, Halloween items, or beach toys. Often, retailers and wholesalers order these items far

in advance and make a strong effort not to over-order since the market is defined in terms of days, weeks, etc.

Manufacturers can promote their products in these industries by assuring the retailer and wholesaler that whatever is not sold will be picked up by the manufacturer.

In such cases as these, shopper density is usually heavy during a short period of time. That is, there are several peak shopping days during which crowds of shoppers are likely, by their number alone, to cause significant damage to at least some of the merchandise on the shelves.

An agreement concerning shoplifting and damage becomes particularly important in such cases.

CONSIGNOR'S LIABILITY

A serious issue to consider in consignment selling is that of liability for the merchandise. Since the consignor remains owner and title does not pass to the consignee, legally, the liability rests with the consignor, in the absence of any other agreement.

This means that whenever merchandise is destroyed by water, fire, etc., while in the inventory of the consignee, the loss is that of the consignor.

The importance of the issue calls for special attention at this point because there is a sales situation which has been viewed by some as similar to consignment selling and can become a legal problem for the consignor. "Sales or return" as it is called, is a situation in which the risk of loss passes to the consignee when the goods are in his possession.

"TRUE CONSIGNMENT"

From court decisions over the years, certain points have surfaced which are important in the determination of "true consignment." They are:

1. The consignor is authorized to demand return of the goods at any time.
2. The title rests with the consignor until the goods are sold, at which point, title moves directly to the buyer and never passes through the consignee.
3. The consignee is permitted to return unsold goods at will and without obligation.
4. The consignee is authorized to sell the goods only at a specified price or not less than the invoice amount.

5. The consignee is required to meet certain standards in keeping of the goods, such as their segregation from goods wholly owned or held under a claim of ownership or interest.

6. The consignee is required to forward proceeds of sale immediately to the consignor or to deposit them in a special account.

The title issue becomes critical because creditors of the consignee will have claim to the merchandise if the title has passed to the consignee in a "sale or return" situation. In a true consignment sale, the title always remains with the consignor.

If you plan to sell on consignment, your attorney can provide guidance on the legal aspects and your accountant can advise on the recordkeeping and accounting aspects of this type of selling.

FOR FURTHER INFORMATION

Owners of small businesses may wish to consult the following references for information on various aspects of selling.

"Is the Independent Sales Agent For You?" **Management Aids for Small Manufacturers** No. 200, Available free from the Small Business Administration, Washington, D.C. 20416 (or nearest SBA office).

"Are Your Products and Channels Producing Sales?" **Management Aids for Small Manufacturers** No. 203, Available free from the Small Business Administration, Washington, D.C. 20416 (or nearest SBA office).

"Using Census Data in Small Plant Marketing," **Management Aids for Small Manufacturers** No. 187, Available free from the Small Business Administration, Washington, D.C. 20416 (or nearest SBA office).

Training Salesmen to Serve Industrial Markets, **Small Business Management Series** No. 36, Small Business Administration. For current price write to Superintendent of Documents, Washington, D.C. 20402.

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RETURN TO SALES AND ADVERTISING

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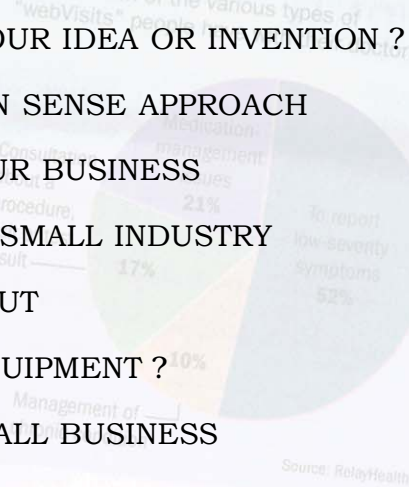
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OF YOUR OWN

- THINKING ABOUT GOING INTO BUSINESS ?

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The Virtual Office



That May Slow Midwest Economy

By LEE HAWKINS JR.

DETROIT—In moves that could slow the Midwest manufacturing economy—particularly in election-year battleground states such as Michigan and Ohio—the two titans of the U.S. auto industry, General Motors Corp. and Ford Motor Co., said they will cut fourth-quarter vehicle production.

The announcement followed a disappointing August for auto makers, which saw American consumers steer clear of large, fuel-chugging sport-utility vehicles as oil prices surged. Sales of GM's big Chevrolet Suburban SUV fell 38%, amid a decline of 14% in overall sales, and Ford's large Expedition SUV slumped by 23%, despite discounts of as much as \$6,000 per vehicle, amid a 13% decline in overall sales.

Sales of Toyota Motor Corp.'s big Sequoia SUV plummeted 38.7% and the Japanese auto maker, which has been doing well against its U.S. rivals, saw overall sales decline by 10%. DaimlerChrysler AG's Chrysler Group said its monthly sales fell 6% from a year earlier.

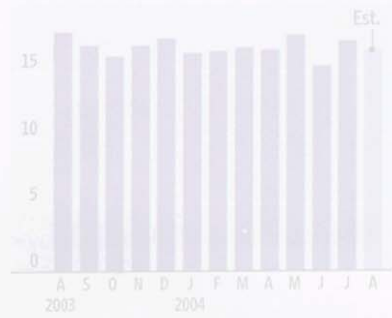
GM and Ford executives played down the August declines in demand for large SUVs, saying the segment is volatile. But the abrupt decline is of deep concern for the industry, given the large profit margins on those models.

The monthly sales numbers were somewhat less alarming. August is historically a volatile month in the U.S. industry, and auto makers cautioned that the

year-to-year comparisons were skewed because Labor Day weekend sales were included in August last year, and weren't included in the latest results. Some car makers blamed Hurricane Charley for depressing sales in Florida.

Downshift

Seasonally adjusted annualized sales rate for U.S. cars and light trucks, in millions of units



But the decision to ratchet back production is a significant step, because the auto makers play a huge role in the country's manufacturing economy. GM said it will cut production at its North American factories by about 7% during the fourth quarter.

Please Turn to Page A14, Column 1

16.94	PocoHldg POM	1.00	4.9	15	8000	20.00	0.01
20.39	PepsiBtting P66	20	7	16	10020	26.00	0.01
13.78	PepsiAm PAS	08	4	16	4340	20.24	0.40
44.10	PepsiCo PEP	92	1.8	23	27769	49.74	-0.26
11	Perdigao ADS PDA	55a	1.8	--	56	30.47	-0.23
6.26	PeriniCp PCR	--	--	7	1427	15.23	0.13
15.05	PerkinElmer PNI	28	1.6	30	2930	17.55	0.07
7	PermRlyTr PBT	78a	7.9	--	608	9.90	-0.19
9.67	PerotSys A PER	--	--	29	3810	13.51	0.20
7.50	Petrobras ADS PZE	--	--	--	684	9.42	0.01
38.54	PetroCnda PCZ x	40g	--	--	366	47.91	1.25
30.80	PetroChao ADS PZR	356a	7.0	--	1998	50.99	0.63
15.51	PetroKishoto A PTK	208g	1.0	6	3947	30.41	0.44
21.06	Petrubras ADS PBR	1.76a	5.7	6	9421	31.05	0.30
19.36	Petrubras ADS PBR A	1.76a	6.3	--	5654	27.96	0.07
29.80	PfeifferViac PV	25e	2.2	--	2	38.61	-0.25
29.50	Pfizer PFE	68	21	31	142882	32.35	-0.32
46.04	PhelyDodge PD	25e	3	17	12440	81.75	0.19
23.20	PhilaOutInd POB	1.64	6.5	--	34	25.31	0.01
10	PhilaOutDct PHI	--	--	--	906	23.34	0.47
21.89	PhilaEl PHG	44e	1.9	--	4794	23.32	0.12
7	PhillipsVanH PVH	15	7	6d	1255	29.01	-0.15
14.10	PhoenicCos PNX	16e	1.6	14	3110	14.28	-0.25
30.52	PhoenicCos PNX	1.81	5.7	--	3	31.99	-1.30
9	Phosphites PNP	--	--	6d	387	1.18	0.01
38.32	PidemInc PNY	1.72	3.9	15	1846	48.02	0.42
14	Pier 1 PIR	40	2.3	14	12567	37.10	-0.25
12.11	Pilgrim PPR x	06	2	18	3430	35.21	0.81
6.15	PinnacleEnt PHK	--	--	6d	3047	13.12	0.72
20.40	PioneerCp PPD	23e	1.1	--	30	21.69	-0.31
23.70	PioneerHRes PPD	20e	6	11	6098	34.50	1.05
38.70	PierJeffrey PJC x	--	--	--	72	42.46	-0.64

-11.8	45.83	30.30	SAP ADS SAP	24e	7	--	7701	34
-0.3	27.73	21.16	SBC Comm SBC	1.25	4.8	16	60551	30
-22.9	6.12	2.82	SG Carbon SGG	1.59a	47.8	6	10131	19.4
5.5	25.15	17.15	SK Tele ADS SKM	26a	1.3	--	10131	19.4
28.8	51.15	35.07	SL GenRly SLG	2.00	4.0	18	1382	49.4
2.8	43	35.60	SLM Co SLM x	76	2.0	12	10742	38.1
-38.4	63.16	35.76	SPX Co SPW	1.00	2.8	10	9331	38.1
55	47.51	34.90	SRA Intl A SRX	--	--	32	597	45.4
18.2	39.06	25.81	SabineRyl A SBR	2.57e	7.5	29	207	34.1
6.9	28.85	19.50	SadIn ADS SDA	30	1.3	27	9906	23.1
25.6	52.77	24.30	SadIn ADS SDA	2.30e	4.4	--	37	51.1
-94.2	6.25	1.61	SafegrdScl SRE	--	6d	2473	1	1
-6.6	25.83	18.99	Safeway SWY	--	6d	11619	20.1	1
-2.6	26.73	16.50	SagaCom A SGA	--	25	201	18.1	1
27.4	49.08	31.10	SJ Joe JOE	5d	1.2	42	6926	47.1
11.7	79.03	51.40	StJudeMed STJ	--	34	14055	68.1	1
24.2	37.19	24.45	StMaryLand SM	10	3	14	1287	35.1
-15.7	79.10	59.05	StPaulUn	2.25	3.6	--	247	62.1
-14.3	43.63	32.31	StPaul Trvl STA	88	2.6	16	27147	33.1

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by
Wendell O. Metcalf

Small Business Administration
Washington, D.C. 1973



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This third edition was prepared by Wendell O. Metcalf, Chief, Education Division, Office of Management Assistance, retired. The author of the two previous editions, Mr. Metcalf worked closely with small business during his long career in providing management assistance. Art was designed and prepared by James Truett.

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before you do . . .



**you should know
the answers to
these questions**

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So You Are Thinking of Going Into Business

S YOU ARE thinking of going into business. To run a business of your own will bring a sense of independence — an opportunity to use your own ideas. You will be boss. You can't be fired. You will have a chance for higher income because you can collect a salary plus a profit or return on your investment. You will experience a pride in ownership — such as you experience if you own your own home or your own automobile. You can achieve the great satisfaction of building a valuable investment for which there will be a market.

By being boss you can adopt new ideas quickly. Since your enterprise undoubtedly will be a small business — at least in the beginning — you will have no large, unwieldy organization to retrain each time you wish to try something new. If the idea doesn't work you can drop it just as quickly. This opportunity for flexibility will be one of your greatest assets.

These are some of the advantages and pleasures of operating your own business. But let us take a look at the other side.

If you have employees you must meet a payroll week after week. You must always have money to pay creditors — the man who sells you goods or materials, the dealer who furnishes you fixtures and equipment, the landlord, if you rent, or the mortgage holder if you are buying your place of business, the publisher running your advertisements, the tax collector, and many others. You must accept sole responsibility for all final decisions. Wrong judgment on your part can result in losses not only to yourself but, possibly, to your employees, creditors, and customers as well. Moreover, you must withstand, alone, adverse situations caused by circumstances beyond your control, such as depressed economic conditions or strong competition.

To overcome these disadvantages and keep your business profitable means long hours of hard work. Invariably when you become your own boss you will work longer hours than when you were working for someone else. At least, this will be necessary in the beginning.

Then, after all, you will not be entirely your own boss. No matter what business you choose — whether a manufacturing, wholesaling, retailing, or service business — you must satisfy your customers. Your creditors and your competitors will dictate to you. Health authorities and insurance people will see that you meet certain standards and follow certain regulations. You will have to abide by wage and hour laws and keep records in accordance with the requirements of the tax system.

Are You The Type?

So the first question you should answer after recognizing that there is a dark side as well as a bright side to the prospect of establishing your own business is "Am I the type?"

You will be your most important employee. It is more important that you rate yourself than it is that you rate any prospective employee. From the viewpoint of operating your own business, appraise your strong points and weak points. If you recognize you are weak in salesmanship, for example, you should know it and cover that deficiency by hiring the best sales talent you can afford.

One study made of small business managers showed that successful managers possessed superior amounts of certain person-

ality characteristics. "Success" was measured by the satisfaction of the owners, community, government, customers, suppliers, competitors, creditors and employees. In other words no one person or one factor, such as the owner's dollar profit, was used to indicate success. For instance, in ranking the satisfaction of owners, security and psychic rewards were measured as well as absolute amounts, such as, dollar return on the amount of money invested, the dollar return per hour of work, and the dollar return in comparison with that of other similar businesses. Five characteristics showed a significant correlation to success. They were drive, thinking ability, human relations ability, communications ability, and technical knowledge.

Drive, as defined in the study, is composed of responsibility, vigor, initiative, persistence, and health. *Thinking ability* consists of original, creative, critical, and analytical thinking. *Human relations ability* is comprised of ascendancy, emotional stability, sociability, cautiousness, personal relations, consideration, cheerfulness, cooperation, and tactfulness. *Communications ability* is composed of verbal comprehension, oral communications, and written communications. *Technical knowledge* is the information a manager has about the physical process of producing goods or services, and his ability to use his information purposefully. Psychological testing devices, surveys and questionnaires were used to measure the various traits of these five characteristics. In the measurement of none of them was sole reliance placed upon the opinion of the manager himself.

Motivation or drive has long been considered important to effective performance. Psychologists now claim that an individual can increase his "drive" or "need to achieve." If you desire to do so, you can develop the motivation and the personal capacities that will help you improve your effectiveness and increase your chances for success. Much of the development of such achievement motivation depends on setting the right kind of goals for yourself. This will be discussed in greater detail in a later chapter.

Now, although you are biased, try to evaluate yourself objectively to help determine whether you are the type to run your own business. On pages 4 and 5 are 10 questions, most of which relate to "drive." Add others that you think are significant for the

Rating Scale for Personal Traits Important to a Business Proprietor

INSTRUCTIONS: After each question place a check mark on the line at the point closest to your answer. The check mark need not be placed directly over one of the suggested answers because your rating may lie somewhere between two answers. Be honest with yourself.

ARE YOU A SELF-STARTER?

I do things my own way. If someone gets me started, I keep going all right. Easy does it. I don't put Nobody needs to tell me to get going.

Most people bug me. I have plenty of friends. I don't need anyone else.

HOW DO YOU FEEL ABOUT OTHER PEOPLE?

I like people. I can get along with just about anybody.

I let someone else get things if I drive them. I let someone else get things moving.

CAN YOU LEAD OTHERS?

I can get most people to go along without much difficulty.

I let someone else get things if I drive them. I let someone else get things moving.

CAN YOU TAKE RESPONSIBILITY?

I like to take charge of and see things through. I'll take over if I have to, but I'd rather let someone else be responsible.

There's always some eager beaver around wanting to show off. I say let him. I just take things as they come.

HOW GOOD AN ORGANIZER ARE YOU?

I like to have a plan before I start. I'm usually the one to get things lined up.

I do all right unless things get too goofed up. Then I cop out.

HOW GOOD A WORKER ARE YOU?

I can keep going as long as necessary. I don't mind working hard.

I'll work hard for a while, but when I've had enough, I can't see that hard work gets you anywhere.

CAN YOU MAKE DECISIONS?

I can make up my mind in a hurry if necessary, and my decision is usually o.k.

I can if I have plenty of time. If I have to make up my mind fast, I usually regret it.

CAN PEOPLE TRUST WHAT YOU SAY?

They sure can. I don't say things I don't mean.

I try to be on the level, but sometimes I just say what's easiest. What's the sweat if the other fellow doesn't know the difference?

CAN YOU STICK WITH IT?

If I make up my mind to do something, I don't let anything stop me.

I usually finish what I start. I turn off. Why beat your brains out?

HOW GOOD IS YOUR HEALTH?

I never run down.

I have enough energy for most things I want to do. I run out of juice sooner than most of my friends seem to.

5

6

type of business you desire to establish. Then rate yourself. This, in no sense, is designed as a scientific, psychological test. It is merely for the purpose of calling your attention, a little more vividly than usual, to your own characteristics. After rating yourself, you will do even better by asking a friend to have you rated anonymously by several people who know you. These should be people who can and will evaluate you objectively. The results may startle you.

Now rate yourself. Be honest. Remember, in starting your own business, you are risking your money and your time.

Are most of your check marks on the left-hand side of the page? That is where they should be. But look them over carefully and be sure none of them is on the left-hand side because of wishful thinking. You will do well to recognize your weak points before opening your business. Perhaps you can compensate for them by hiring the right help or obtaining associates whose strong points offset your weak ones. If you are weak in too many of the traits needed for managing a business, do not undertake the venture.

What Business Should You Choose?

Now, what business should you choose? For many, this is no problem. Others are constantly seeking an answer to this question from counselors and Small Business Administration offices.

You might start by writing out a summary of your background and experience. Include that obtained on jobs, in school, and from your hobbies. Then write down what you would like to do. Try to match up what you would like to do with what you have done. If you do not like the business you choose, your lack of enthusiasm may lead to failure. But, in making your selection, remember that the more experience and training you have had which can be put to direct use in operating a particular enterprise, the better your chances of success.

So pick the field you know most about. The best way to obtain knowledge of a business is through actual experience in it. If you feel otherwise qualified, but lack sufficient training, seek a job working for somebody else in the business you are con-

WHAT BUSINESS SHOULD YOU CHOOSE?

CONSIDER:

**your own
background
education - experience
hobbies**

other peoples' needs

**opportunities
for growth**

sidering. Try to find a position in a well-managed, successful company. Then absorb as much management know-how as you possibly can.

You will need every minute of experience you can get. Exactly how much you will need as a minimum depends upon the business and upon your general business knowledge. Experience in other types of work may teach you something about general business policies and operating methods. The transfer of experience from one type of business to another is often practicable.

Education will help, too. While there are usually no educational requirements for starting your own business, the more schooling you have had the better equipped you should be. For example, in most businesses you must know how to figure interest and discounts, keep simple and adequate records, and conduct necessary correspondence. Knowledge of these and many other helpful subjects may be acquired through formal education.

Next, make a sincere effort to determine as best you can whether customers or clients will like the type of business or service you wish to establish. The business should be in tune with the trend of the times. Choose a field in which expansion is logically expected. Study surveys and seek advice and counsel.

In conclusion, start with what you are prepared or equipped to offer. What can you do with your present preparation? Does anyone want the services you can render? May these services be adapted to present trends in the market?

Your Chances of Success

What are your chances of success if you go into business? For one thing the number of businesses in this country is growing. In 1900 there were about 1-2/3 million business firms in the United States. In 1972 there were approximately 8 million small businesses. While population is growing, too, the number of businesses is growing somewhat faster, with 27 firms per 1000 population in 1971 as contrasted to 22 per 1000 in 1900. This does not mean that the number increases at a steady pace year-after-year. For instance a year of poor business conditions is likely to be followed by a greater than average number of failures or discontinuances, causing the total number of business

firms to drop. On the other hand a year or years of good business conditions tends to be followed by large increases in the total number of businesses. In general the number of firms increases along with increases in human population, total personal income and per capita income.

This growth is not free of growing pains, however. At the same time that new businesses are being born other businesses are being discontinued. Some of these discontinuances are legally business failures, others give up to avoid or minimize losses and are not failures in the strict sense. Still others discontinue for other reasons; such as the death or retirement of the proprietor, the dissolution of a partnership, or the sale of the business to a new owner.

The younger businesses tend to discontinue first. Of all new firms started, about one-third are discontinued within one year; about 50 percent are discontinued within 2 years; and approximately two-thirds within 5 years. After 5 years, the discontinuation rate drops rapidly. So, your chances of success improve the longer you stay in business.

The largest single cause of business failures is attributed to poor management. Year after year the lack of managerial experience and aptitude has accounted for around 90 percent of all failures analyzed by Dun & Bradstreet, Inc.

Many factors adversely affect individual firms over which the owners have little control. But even in such cases, the astute manager can often soften the blow or, sometimes, change adversity into an asset. Examples of factors over which the owner has little control are overall poor business conditions, relocations of highways, sudden changes in style, the replacement of existing products by new products, and local labor situations. While these factors may cause some businesses to close, they may represent opportunities for others. One local market place may decline in importance, but at the same time new shopping centers are developing. Sudden changes in style or the replacement of existing products may bring trouble to certain businesses but open doors for new ones. Adverse employment situations in some areas may be offset by favorable situations in others. Ingenuity in taking advantage of changing consumer desires and technological improvements will always be rewarded.

In the final analysis, it is up to you. Will your management be competent? Will you be able to judge, and then satisfy, your customers' wants? Can you do this so accurately and quickly that risks due to factors beyond your control will be more than compensated for? Such accomplishment requires expert management.

Your Return On Investment

Will the rate of return on the money you invest in your business be greater than the rate you could receive if you invested the money elsewhere? While your decision to go into business for yourself may not depend entirely upon this, it is one of the factors which will interest you. Too frequently a person has invested money in his own business under the misapprehension that the financial return will be far greater than the return he can expect from other investments. Some investigation of the average annual returns in the line of business in which you are interested is worthy of your time.

Table I, page 11 shows the percentage return on investment for 54 lines of business. The percentages were computed by dividing the amount of net profit before taxes by the tangible net worth for the line of business. Three ratios are shown for each line of business. The first shows the percentage return for the particular firm which was one-fourth down from the highest percentage earned by any firm in the group. This means, for example, that of all the firms whose figures were used in the coating, engraving and allied services manufacturing business one-fourth of them had a higher return than 21.2 percent and three-fourths had a lower return. The second column shows the median or half-way mark. The third column reveals the lower quartile, that is one-fourth of the firms had a greater loss than 18.8 percent for coating, engraving and allied services manu-

RMA cannot emphasize too strongly that their composite figures for each industry may not be representative of that entire industry (except by coincidence), for the following reasons: (1.) The only companies with a chance of being included in their study in the first place are those for whom their submitting banks have recent figures. (2.) Even from this restricted group of potentially includable companies those which are chosen, and the total number chosen, are not determined in any random or otherwise statistically reliable manner. (3.) Many companies in their study have varied product lines; they are "mini-conglomerates," if you will. All they can do in these cases is categorize them by their primary product line, and be willing to tolerate any "impurity" thereby introduced. In a word, don't automatically consider their figures as representative norms and don't attach any more or less significance to them as indicated by the unique aspects of the data collection.

TABLE I. — Profitability for Selected Lines of Smaller¹ Business for the Year 1970

Line of Business	Percent Return on Investment?		Line of Business	Percent Return on Investment?	
	Up- per quartile ²	Low- er quartile ²		Up- per quartile ²	Low- er quartile ²
Coating, engraving and allied services	21.2	8.0 -18.8	Foot and Sect. farm and garden supply	23.9	9.4 .0
Commercial Printing (except lithographic)	33.8	15.7 .0	Floor coverings	40.8	15.1 7.9
Commercial Printing (lithographic)	33.4	17.6 2.0	Flowers	18.7	8.3 .0
Electric Components and Accessories	36.7	5.3 -21.8	Furniture	27.2	9.9 1.9
Fabricated Structural Steel	25.8	8.6 3.5	Groceries and meat	54.8	29.1 3.7
Machine Shops — Jobbing and Repair	35.6	9.7 .0	Hardware stores	32.1	13.3 3.7
Miscellaneous Plastic Products	94.4	34.3 4.7	Household appliances	42.7	12.5 1.8
Special dies and tools, die sets, jigs and fixtures	34.1	15.4 .0	House trailers	42.2	16.6 .0
Wholesaling			Jewelry	33.9	11.3 4.2
Automotive equipment	32.8	18.8 6.4	Liquor	38.8	23.1 10.8
Building materials	24.7	8.6 .0	Lumber yards	17.0	3.4 .9
Electrical supplies and apparatus	35.0	16.7 8.5	Men's and Boys' clothing	21.8	11.7 2.4
Fruits and vegetables	40.2	15.3 1.7	Musical instruments and supplies	19.2	8.8 .0
General merchandise	30.4	16.7 4.4	Office supplies and equipment	28.3	14.8 5.4
Heavy commercial and industrial machinery and equipment			Radios, television and record players	30.8	15.0 .0
Hardware and paints	26.5	11.0 2.4	Restaurants	75.2	28.1 5.2
Industrial chemicals	28.9	15.7 5.3	Shoes	25.8	14.0 2.4
Jewelry	33.3	16.0 8.0	Sporting goods	29.1	17.7 8.6
Lumber and millwork	16.9	7.3 .0	Women's ready-to-wear	31.5	12.3 1.2
Meats and meat products	58.6	24.4 10.4	Advertising agencies	101.0	35.7 11.1
Metal products (except scrap)	51.4	21.6 2.5	Auto and truck rental and leasing	66.5	19.9 5.4
Mill supply houses	28.8	11.3 .9	Business and management consulting	100.0	51.0 9.8
Plumbing and heating equipment and supplies	36.9	16.0 8.8	Engineering and architectural services	53.8	25.1 5.2
Wine, liquor and beer	35.4	33.7 11.2	Equipment rental and leasing	59.4	27.1 10.6
Retailing			Laundries and dry cleaners	22.4	2.8 -12.0
Automobiles, new and used	27.9	12.2 1.7	Local trucking — without storage	46.3	18.7 6.7
Drugs	64.0	18.4 6.1	Long distance trucking	34.6	12.2 1.4
Family clothing stores	25.9	16.2 7.5	Real estate agents and brokers	36.5	11.4 2.6

1 The ratios of only those businesses with total assets under \$250,000 are quoted here.
 2 The amount of net profit before taxes divided by tangible net worth. This ratio expresses the relationship between the owners' share of operations before taxes for the year and the capital already contributed by the owners.
 3 These are not averages but rather are shown as the upper quartile, median and lower quartile figure. Ratios presented in this manner preclude the undue influence of extreme ratios which would result if merely an average ratio figure were presented. Also, and more importantly, they give you some idea of the "spread" or range of ratio value in each case.
 Source. — Robert Morris Associates, the National Association of Bank Loan Officers and Credit Men, Financial Statement Studies for close to 300 lines of business are prepared each year by Robert Morris Associates. For information on the availability of this material write Robert Morris Associates, Research Department, Philadelphia National Bank Building, Philadelphia, Pa. 19107.

factors while three-fourths of the firms had a smaller loss or a profit. By showing three percentages in this manner, you can gain an idea of the range of returns on investment in each line of business. Caution must be used in considering these ratios, because they come from a relatively small sample and show results for one year only. However, it is important to have some idea of what the experience has been in the line of business you are considering.

Your decision to go into business may not depend entirely on financial rewards. The potential return on investment may be overshadowed by your desire for independence, the chance to do the type of work you would like to do, the opportunity to live in the part of the country or city you prefer, or the feeling that you can be more useful to the community than you would be if you continued working for someone else. Such intangible considerations must not be overlooked. Nevertheless, you cannot keep your own business open unless you receive a financial return on your investment.

Starting a New Business

SAY THAT YOU HAVE now decided that you are the type who can operate a business of your own. You have given some attention to the overall chances for success and have chosen the business you wish to establish. What are some of the practical problems of starting the business? How much money will you need? Where can you obtain it? What form of business organization will you have? Where should you locate the business?

How Much Money?

First, how much money will you need? Your answer to this question deserves careful study and investigation. No average amount can be specified, since circumstances differ so widely. For instance, money needs will vary according to the type of operation (manufacturing, wholesaling, retailing, or servicing), kind of merchandise or services handled, income level of your customers, your personal trade connections, the location of your business, general economic conditions at the time of starting, and many other factors.

To estimate the amount of money you need to start, one method is to fill out worksheets similar to those shown on pages 16, 17, and 19. Try to obtain typical operating ratios for the kind of business in which you are interested. Among the sources for such ratios are Robert Morris Associates, Dun & Bradstreet, Inc., The Accounting Corporation of America, trade associations, publishers of trade magazines, specialized accounting firms, industrial companies (for example, National Cash Register Co.), and colleges and universities. The typical ratios for your type of business multiplied by your estimated sales volume will serve as bench marks for estimating the various items of expense. However, you should not rely exclusively on this method for estimating each expense item. You should verify and modify these estimates through investigation and quotations within the particular market area where you plan to operate.

You first estimate your sales volume. The volume will depend on the total amount of business in the area, the number and ability of competitors now sharing that business and your own capability to compete for the consumer's dollar. You may obtain assistance in making your sales estimate from wholesalers, trade associations, your banker, and other businessmen. The counsel of others can be compared with your independent estimate of what you believe is needed to make the effort worthwhile to you. One approach for your independent estimate is to start with the income you desire. Suppose you hope to earn annual profits of \$15,000. Your research reveals that the percentage of net profit on sales for the type of business you plan to operate is 4 percent. Then, to bring an annual return of \$15,000, sales of \$375,000 ($\$15,000 \div .04$) will be required.

In reaching your final estimate of sales do not be over-enthusiastic. A new business generally grows slowly at the start. If you over-estimate sales you are likely to invest too much in equipment and initial inventory and to commit yourself to heavier operating expenses than your actual sales volume will justify. Your estimated sales per year should be entered at the top of column 1 on Worksheet No. 1.

The next 14 entries on Worksheet No. 1 are monthly expenses rather than yearly. Therefore, should you apply typical expense ratios to estimated annual sales the resulting dollar amount for each expense item must be divided by 12. If you know that a particular expense is going to run unusually high during your first months of operation you should raise your estimate accordingly.

Some proprietors draw a regular monthly salary and take out the rest of their net profits either at irregular intervals, or regularly at the end of each year. Others reinvest a part of net profits in the business. In any event a regular allowance should be made for your salary and entered as the first item of expense.

Other salaries and wages contemplated should be entered as the second item. If any of your family assist you, he or she should be paid the prevailing wage rate, or the value of these services should be added to your drawings as the proprietor.

In addition to continuing monthly expenses you must add costs which occur only once in order to find out how much cash you need to start the business. The first item under this section of Worksheet No. 1 is "Fixtures and equipment." Worksheet No. 2 on page 19 should be completed to compute this amount. The total on Worksheet No. 2 is then transferred to Worksheet No. 1. Sources for advice on layout and selection of fixtures and equipment are representatives of equipment manufacturers and trade associations.

Similarly, in estimating inventory for a wholesaling or retailing business, suggestions may be sought from prospective suppliers of merchandise. Such an estimate should be checked against the typical ratio of inventory in relation to sales if you have such a ratio for your kind of business. For example, assume that net sales in your type of business is typically six times inventory. Then, for annual net sales of \$375,000 your inventory should approximate \$62,500. You should make some calculation of this type to establish a maximum dollar figure for inventory and, then, not go above it. Otherwise, your suppliers or you are likely to be over-enthusiastic about the amount of merchandise you should stock for your initial inventory.

WORKSHEET NO. 1

ESTIMATED MONTHLY EXPENSES		What to put in column 2 (These figures are typical for one kind of business, you will have to decide how many months to allow for in your business.)
Item	Your estimate of monthly expenses based on sales of _____ per year \$ _____ Column 1	Your estimate of how much cash you need to start your business (See column 3.) Column 2
Salary of owner-manager	\$ _____ Column 1	\$ _____ Column 2
All other salaries and wages		
Rent		
Advertising		
Delivery expense		
Supplies		
Telephone and telegraph		
Other utilities		
Insurance		
Taxes, including Social Security		
Interest		
Maintenance		
Legal and other professional fees		
Miscellaneous		

Continued on page -17

WORKSHEET NO. 1, continued

Starting Costs You Only Have to Pay Once	Column 2	Fill in Worksheet 2 on page 19 and put the total here
Fixtures and equipment		Talk it over with a contractor
Decorating and remodeling		Talk to suppliers whom you buy these
Installation of fixtures and equipment		Suppliers will help you estimate this. For total amount use typical ratio to sales.
Starting inventory		Find out from utilities companies
Deposits with public utilities		Lawyer, accountant, and so on
Legal and other professional fees		Find out from city offices what you have to have
Licenses and permits		Estimate what you'll use
Advertising and promotion for opening		What you need to buy more stock until credit customers pay
Accounts receivable		For unexpected expenses or losses, special purchases, etc.
Cash		Make a separate list and enter total
Other		Add up all the numbers in column 2
Total Estimated Cash You Need to Start With		

For estimating the money needed to start a small factory, the procedure is substantially the same although somewhat more complex. For example, suppose you wish to start a small plant making an automobile part and desire to make an annual net profit of \$20,000. Yearly sales of \$500,000 will be necessary, computed at a 4 percent net profit. How many units must be produced to attain this volume? Assume you plan to manufacture one part which will sell for an average of \$20.00. To reach a sales volume of \$500,000 you must sell 25,000 units. This means an average of 500 units per week for 50 weeks. How much machinery and equipment will be required to produce 500 units per week? How much down payment for the equipment will be necessary? Should you lease some of the equipment? How many operators will be needed? Help in answering these and other questions can be obtained from equipment suppliers. You must add to the equipment costs estimates for materials, wages, rent, sales, office and other expenses for a period necessary to produce enough units for one complete turn; that is, the annual production (25,000 units in this case) divided by the expected number of stock turns per year.

Estimating the money needed to start a service establishment will involve a combination of the methods used for merchandising and manufacturing businesses. To the extent that the service business carries goods for resale, estimates could be made in the manner outlined for wholesaling and retailing concerns. To the extent that it sells labor or machine work, money needed for equipment and wages could be estimated in much the same way as for a factory.

Your available money should exceed the estimated cash you need to start with (as computed on your work sheet) by a safe margin. This is because you not only need money to get started, but also enough in reserve to carry the business until it becomes self-supporting. In some instances this time may be from 4 to 6 months; in others it may be much longer.

If you do not have sufficient cash, remember you may be unable to:

WORKSHEET NO. 2
LIST OF FURNITURE, FIXTURES, AND EQUIPMENT

Estimate of the cash you need for furniture, fixtures, and equipment		Counters	Storage shelves, cabinets	Display stands, shelves, tables	Cash register	Safe	Window display fixtures	Special lighting	Outside sign	Delivery equipment if needed
If you plan to pay cash in full, enter the full amount below and in the last column.	\$									
	Price	\$	\$	\$	\$	\$	\$	\$	\$	\$
If you are going to pay by installments, fill out the columns below. Enter in the last column your downpayment plus at least one installment.	Down-payment									
	Amount of each installment	\$	\$	\$	\$	\$	\$	\$	\$	\$
TOTAL FURNITURE, FIXTURES, AND EQUIPMENT (Enter this figure also in worksheet 1 under "Starting Costs You Only Have To Pay Once," page 17.)										

1. Afford enough employees to keep the business operating.
2. Invest in proper equipment.
3. Maintain an adequate stock of merchandise or materials in order to build sales volume.
4. Take advantage of discounts offered by creditors and, thereby, be burdened with heavy interest penalties.
5. Grant customer credit to meet competition.

Getting the Money

Now that you have computed your initial capital requirements, where will you get the money? The first source is your personal savings. Then relatives, friends, or other individuals may be found who are willing to "venture" their savings in your business. Before obtaining too large a share of the money from outside sources, remember that you should have personal control of enough to assure yourself ownership. Once you can show that you have carefully worked out your financial requirements, and can demonstrate experience and integrity, a lending institution may be willing to finance part of your operating capital needs. This may be done on a short term basis of from 60 days to as much as 1 year.

The main outside sources of money in the early days of your business are: (1) the commercial bank and (2) the trade creditor or equipment manufacturer. Other sources, such as small loan companies, factoring companies, commercial credit companies, sales finance companies, and insurance companies will not be discussed here. Information concerning the Small Business Administration as a loan source may be obtained from your nearest local field office (See page 95 for listing).

Your banker. You should become well acquainted with your banker. In selecting a banker consider his progressiveness, his attitude toward your business, the credit services he offers, the size and management policies of his bank.

Is the bank progressive? The physical appearance of the bank may give you some indication. When the employees are reason-

ably young, interested in your problems and active in civic affairs the bank is likely to be progressive. Also, the character of the bank's advertising may be a clue to its progressiveness.

Does the banker have an interested, helpful attitude toward your problems? If he is to be effective he will be interested in helping you to become a better manager. He will want to build a continuing relationship that will mean profitable business for the bank over the years.

Will the bank offer you the kind of credit you need? For example, if seasonal accumulations of inventory become a problem will the bank make a loan against public or field warehouse receipts? Or, if your capital is tied up in accounts receivable during your heavy selling season will the bank take receivables as security for a loan? If you need it will the bank consider a term loan? The credit services offered by the bank will be important to you.

Finally, you will be interested in the size and management policies of the bank. Will your maximum requirements fall well within the bank's "legal limit?" If you plan to do some export business does the bank have a foreign exchange department? If your dealers sell on installment terms does the bank have facilities for handling their installment paper? How deeply is the bank concerned with the growth and prosperity of your local community? You will be interested in answers to these kinds of questions.

When you deal with your banker, sell yourself. Whether or not you foresee the need for a bank loan, make it a practice to visit your banker at least once a year. Openly discuss your plans and difficulties with him. It is his business not to betray confidence. If you need financial assistance, carefully prepare, in written form, complete information so that he may gain a thorough understanding of your entire proposition. Many businessmen or prospective business operators have destroyed their chances of obtaining financial help by the failure to present their proposition properly. Remember that before a banker is

prepared to make a loan he must feel satisfied with answers to these questions:

1. What sort of person are you?
2. What are you going to do with the money?
3. When and how do you plan to pay it back?
4. Does the amount requested make suitable allowance for unexpected developments?
5. What is the outlook for you, for your line of business, and for business in general?

Trade creditor or equipment manufacturer. The companies from which you buy equipment or merchandise may also furnish you capital in the form of credit. Manufacturers of equipment, such as store fixtures, cash registers, and industrial machinery, frequently have financing plans under which you may buy on the installment basis and subsequently pay for the equipment out of income. Moreover, the wholesalers or suppliers from which you purchase merchandise extend credit. You are not required to pay for the goods at once. If goods are for resale, no security other than repossession rights of the unsold goods is involved. However, too extended use of such credit may prove expensive. Usually cash discounts are quoted if a bill is paid within 10, 30, or 60 days. For example, a term of sale quoted as "2-10; net 30 days" means that a cash discount of 2 percent will be granted if the bill is paid within 10 days. If not paid in 10 days, the entire amount is due in 30 days. If you do not take advantage of the cash discount, you are paying 2 percent to use money for 20 days, or 36 percent per year. This is high interest.

One of the principal causes of failures among businesses is inadequate financing. If you do go into business, remember it is your responsibility to provide, or obtain from others, sufficient money to supply a firm foundation for the enterprise.

Sharing Ownership With Others

Now that you have decided what business to start and about how much capital will be required, you may find it necessary to join with one or more associates in launching the enterprise.

You may lack certain technical or management skills which are of major importance to the business you have chosen. A partner with these skills may prove the most satisfactory way of covering the deficiency. Or you may need more money. Sharing the ownership of the business is one way of obtaining it. Great care, however, should be taken in deciding upon a partner. Personality and character, as well as ability to render technical or financial assistance, affect the success of a partnership.

If you have associates, should your legal organization be a partnership or a corporation? In a partnership the liability for the debts of the firm is unlimited, just as it is in a single proprietorship. This means that the owners are personally responsible for the debts of the firm, even in excess of the amount they have invested in the business. In a corporation the liability of the owners is limited to the amount they pay for their shares of stock. A partnership, as does a single proprietorship, lacks continuity. This means that the business terminates upon the death of the owner or a partner or upon the withdrawal of a partner. The corporation is a legal entity and its continuity is unaffected by death or transfer of stock shares by any or all of the owners. A disadvantage of the corporation is double taxation. Income tax is levied upon corporate profits and, in addition, upon dividends after they are paid to the stockholders. In the cases of single proprietorships and partnerships no income tax is levied on the businesses as entities, but only on the owners. Even with no partners you may decide a corporation with minor stockholders is better than a single proprietorship — primarily because of the limited liability of a corporation.

The principle advantages and disadvantages of the three most commonly used business forms of organization are presented in the chart on page 24. Some other forms are the limited partnership, the statutory partnership association, the joint-stock company, the Massachusetts or business trust, and modifications of the corporate form, such as the close corporation and the Subchapter S corporation. Your selection depends upon the circumstances of your particular case. Since partnership agreements and incorporation papers should be prepared by a lawyer, consultation with a lawyer is highly desirable in helping you determine the best type of organization to fit your situation.

WHAT FORM OF BUSINESS ORGANIZATION?

SINGLE PROPRIETORSHIP



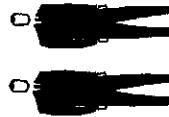
ADVANTAGES

1. Low start up costs
2. Greatest freedom from regulation
3. Owner in direct control
4. Minimal working capital requirements
5. Tax advantage to small owner
6. All profits to owner

DISADVANTAGES

1. Unlimited liability
2. Lack of continuity
3. Difficult to raise capital

PARTNERSHIP



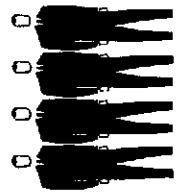
ADVANTAGES

1. Ease of formation
2. Low start up costs
3. Additional sources of venture capital
4. Broader management base
5. Possible tax advantage
6. Limited outside regulation

DISADVANTAGES

1. Unlimited liability
2. Lack of continuity
3. Divided authority
4. Difficulty in raising additional capital
5. Hard to find suitable partners

CORPORATION



ADVANTAGES

1. Limited liability
2. Specialized management
3. Ownership is transferable
4. Continuous existence
5. Legal entity
6. Possible tax advantages
7. Easier to raise capital

DISADVANTAGES

1. Closely regulated
2. Most expensive form to organize
3. Charter restrictions
4. Extensive record keeping necessary
5. Double taxation

Where To Locate?

Once you have decided what type of business you will start and the amount of money you expect to invest, you are ready to select a location. You may have already picked the community — your home town or some other part of the country in which you would like to live. While it is important to choose a spot in which you will be happy, you should make sure the community needs the business you plan to open.

Picking your location may be considered in three steps: (1) The selection of the town or city, (2) the choice of the area within the town or city, and (3) the selection of a specific site in the chosen area.

Selecting the Town

Large companies spend a great deal of time and study on the problem of selecting a new location, attempting to choose it on a scientific basis. The small operator may be unable to afford such a detailed scientific study, but he should evaluate the town to the best of his ability.

If the location of a retail store or service establishment is being considered, assistance may be had from wholesalers or manufacturers who supply merchandise and equipment; Federal, State, and local governments; and other sources.

Consider population. How fast is the town or city growing? What is the composition of the population by age, occupation and income? These facts will have a bearing on your sales volume if your business is retailing or servicing. If you are starting a manufacturing or wholesaling business with a market extending far beyond the town or city, local population statistics may not be as significant from the standpoint of sales potential, but you will be interested in the local labor supply and prevailing rates of pay.

Can the city or town be readily reached by freight carriers of your merchandise for resale or raw materials and parts? Are the transportation rates reasonable?

The number of directly competitive businesses already located in the city or town should influence your choice of location. Such data may be found in the Bureau of the Census figures. For example; there is a relationship between the number of inhabitants and the number of businesses of various kinds. Table 2 shows how the number of inhabitants per store varies by kinds of business. For instance one gasoline service station exists for every 1195 inhabitants and one grocery store for every 1534 inhabitants. On the other hand only one optical goods store exists for every 62,878 inhabitants. These are country-wide averages and are not necessarily indicative of the ideal number of inhabitants per store in your community. They are presented in Table 2 to show how much the number of inhabitants per store may vary in different lines of business.

Factors other than the potential market, availability of employees and number of competitive businesses must be considered in selecting a location. For instance, how adequate are utilities (sewer, water, power, gas), parking facilities, police and fire protection, housing for employees, and environmental factors, such as schools, cultural and community activities? And what is the cost of the location in terms of taxes and average rents? Also, you will be interested in zoning regulations, the enterprise of the local businessmen, and the aggressiveness of civic organizations. In short, what is the town spirit? Such factors should give you a clue to the city or town's future which is a factor of vital interest when you plan to invest in a business there.

Chambers of Commerce, state development agencies and others may have made, or be familiar with local community surveys which provide information to help answer the above and other questions.

Selecting the Area Within the Town or City

Next you must decide in what part of town to locate. If the town is very small and you are establishing a retail or service business, there will probably be little choice. Only one shop-

TABLE 2

Number of Inhabitants per store by Selected Kinds of Business
[National averages]

Kind of business	Number of inhabitants per store	Kind of business	Number of inhabitants per store
Food stores		Building material, hardware, and farm equipment dealers	
Grocery stores	1,534	Lumber and other building materials dealers	8,124
Meat and Fish (sea food) markets	17,876	Paint, glass, and wallpaper stores	22,454
Candy, nut, and confectionery stores	31,409	Hardware stores	10,206
Retail bakeries	12,563	Farm equipment dealers	14,793
Dairy products stores	41,587		
Eating, drinking places		Automotive dealers	
Restaurants, lunchrooms, caterers	1,583	Motor vehicle dealers — new and used cars	6,000
Cafeterias	19,341	Motor vehicle dealers — used cars only	17,160
Refreshment places	3,622	Tire, battery and accessory dealers	8,764
Drinking places (alcoholic beverages)	2,414	Boat dealers	61,526
		Household trailer dealers	44,746
General merchandise		Gasoline service stations	1,195
Variety stores	10,373		
General merchandise stores	9,837	Miscellaneous	
		Antique and secondhand stores	17,169
Apparel and accessory stores		Book and stationery stores	28,584
Women's ready-to-wear stores	7,102	Drug stores	4,268
Women's accessory and specialty stores	25,824	Florists	13,531
Men's and boy's clothing and furnishing stores	11,832	Fuel oil dealers	25,425
Family clothing stores	16,890	Garden supply stores	65,118
Shoe stores	9,350	Gift, novelty and souvenir shops	26,313
		Hay, grain and feed stores	16,978
Furniture, home furnishings and equipment stores		Hobby, toy and game shops	61,430
Furniture stores	7,210	Jewelry stores	13,495
Floor covering stores	29,543	Liquor stores	32,803
Drapery, curtain and upholstery stores	62,460	Liquid petroleum gas (bottled gas) dealers	6,359
Household appliance stores	12,585	Liquor stores	44,554
Radio and television stores	20,346	Mail order houses	44,067
Record shops	112,144	Merchandising machine operators	62,878
Musical instrument stores	46,332	Optical goods stores	27,063
		Sporting goods stores	

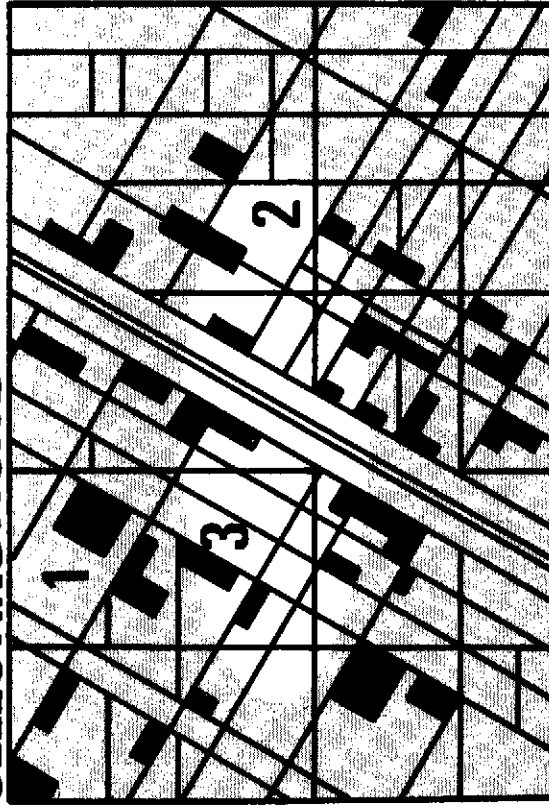
Source: Bureau of the Census, U.S. Department of Commerce. Number of establishments with payroll from 1967 Census of Retail Trade. Number of inhabitants residing in the United States (excluding Armed Forces overseas), as of July 1, 1967.

ping area exists. In the city, outlying shopping centers appear in addition to the central shopping area, and stores spring up along principal thoroughfares and neighborhood streets.

A shopping center is different from the other types of locations in that the shopping center building is pre-planned as a merchandising unit. The site is deliberately selected by a developer. On-site parking is a common feature. Customers may drive in, park, and do their shopping in relative safety and speed. Some centers provide weather protection. Such conveniences make the shopping center an advantageous location. There are some limitations to the merchant, however. As a tenant, you must be part of a merchant team and must pay your pro rata share of the budget for the team effort. You must keep store hours, light your windows, and place your signs within established rules. Moreover, if you are considering a shopping center for your first store you may have trouble in locating there. Developers and owners of shopping centers look for successful retailers. If you can convince them that you will be successful but the owner-developer thinks you do not qualify financially, you may be able to overcome this through the lease-guarantee program of the Small Business Administration. For detailed information about the program, visit or write your nearest SBA office.

The kind and variety of merchandise carried helps to determine the type of shopping area which you should choose. For example, clothing stores, jewelry stores and department stores are more likely to be successful in shopping districts. On the other hand, grocery stores, drug stores, filling stations, and bakeries do well on principal thoroughfares and neighborhood streets outside the shopping districts. Some kinds of stores customarily pay a low rent per square foot, while others pay a high. In the former category are furniture, grocery and hardware stores, while in the latter are cigar, drug, women's furnishings, and department stores. No hard and fast rule can be laid down, but it is well to observe in what type of area your kind of store most often appears to flourish.

SELECTING A SITE



CHOOSE:

1. town

2. area within town

3. actual site

The size of your store will also help determine the area to be chosen. Your original investment may be so small that it would be impossible to obtain sufficient sales volume to pay the high rent of a downtown location. It would then be necessary to select the outlying neighborhood area of a large city — or to locate in a small town.

After determining a likely area best suited to your type of business, be sure to obtain as many facts as you can about it. As pointed out above, you will be interested in the competition. How many businesses of the same kind are located in the area? Can you find out something about their sales volume? If you are establishing a store or service trade, from how many blocks do people come to trade in the area?

If your business is to come primarily from local inhabitants, what is the population of the area? Is the trend of population increasing, stationary or declining? Are the people native-born, mixed or chiefly foreign? What do they do for a living? Are they predominantly laborers, clerks, executives or retired persons? Are they all ages or principally old, middle aged, or young? To help you gauge their buying power find out the average rents for homes in the area, the average real estate taxes for homes, the number of telephones, number of automobiles, and, if the figure is available, the per capita income.

The zoning ordinances, parking availability, transportation facilities and natural barriers — such as hills and bridges — are important in considering the location of any kind of business. How important depends upon the business.

Possible sources for this information are Chambers of Commerce, trade associations, real estate companies, local newspapers, banks, city officials, and personal observation. If the United States Bureau of the Census has developed census tract information for the area in which you are interested, you will find this especially helpful. A census tract is a small, permanently established, geographical area within a large city and its environs. The Census Bureau provides population and housing characteristics for each tract. This information can be valuable in measuring your market or service potential.

Selecting a Site

Choosing the actual site within an area may well result in taking what you can get. Not too many buildings or plants will be suitable, and at the same time available, for use in a given locality. If you do have a choice, be sure to weigh the possibilities carefully.

For a manufacturing plant, consider the condition and suitability of the building, transportation, parking facilities, and the type of lease.

For a store or service establishment, check on the nearest competition, traffic flow, parking facilities, street location, physical aspects of the building, type of lease and the amount, speed, cost and quality of transportation. Also investigate the history of the site by which is meant finding answers to such questions as: Has the building remained vacant for any length of time? If so, why? Have various types of stores occupied it for short periods? If so, it may have proved an unprofitable site for them. Sites on which many enterprises have failed should be avoided. Moreover, vacant buildings are generally regarded as bad neighbors, so similar investigation should be made about unoccupied buildings next door.

Use a Score Sheet

To help choose your location use some type of a "score sheet" in evaluating different sites. See page 32 for a suggested score sheet. Depending upon your kind of business and situation some factors will have more importance than others. You may wish to eliminate altogether some factors listed in the sample. You may wish to add others. But some sort of score sheet will help you to make that vital decision about where to locate your business.

Time and effort devoted to the selection of (a) the town or city, (b) the area within the town or city, and (c) the particular site for the location of your business can well mean the difference between success and failure.

Score Sheet on Sites

Grade each factor: "A" for excellent, "B" for good, "C" for fair, and "D" for poor.

Factor	Grade
1. Centrally located to reach my market	_____
2. Merchandise or raw materials available readily	_____
3. Nearby competition situation	_____
4. Transportation availability and rates	_____
5. Quantity of available employees	_____
6. Prevailing rates of employee pay	_____
7. Parking facilities	_____
8. Adequacy of utilities (sewer, water, power, gas)	_____
9. Traffic flow	_____
10. Taxation burden	_____
11. Quality of police and fire protection	_____
12. Housing availability for employees	_____
13. Environmental factors (schools, cultural, community activities, enterprise of businessmen)	_____
14. Physical suitability of building	_____
15. Type and cost of lease	_____
16. Provision for future expansion	_____
17. Overall estimate of quality of site in 10 years	_____

Buying A Going Business

TO BECOME THE OWNER of a business you may decide to buy a going business. If you do, most of the same factors already discussed should be considered. But additional points must be checked.

Advantages and Disadvantages

Certain advantages may be gained in buying a going business.

1. You may be able to buy the business at a bargain price. For personal reasons, an owner may be sufficiently anxious to sell to give you a favorable buy.
2. Buying a business will save you time and effort in setting up your establishment with equipment and stock.
3. You may acquire customers who are accustomed to trading with the establishment. Thus you eliminate an initial waiting period for business while you are getting started.
4. The owner should be able to give you the benefit of his experience in the business and in the community.

Such benefits may be offset by disadvantages, however.

1. You may pay too much for the business because of your inaccurate appraisal or the former owner's misrepresentation.
2. The owner may have had a bad reputation. You would then be battling prejudices of former customers and, perhaps, of merchandise and equipment suppliers.
3. The location may be poor. (Before buying, the points concerning the selection of a location outlined in the preceding chapter should be checked. This is most important!)
4. The former owner's choice of fixtures and equipment may have been poor. Or they may be outmoded or in bad condition.
5. Too much of the merchandise or materials on hand may have been poorly selected.

How Much to Pay?

In deciding how much you should pay for a going business you should consider its profit potential. To be sure, the tangible assets, such as equipment and inventory, are important to you, but only to the extent that they contribute to future profits. If the seller is asking something for the intangible asset of good will take care in estimating how much it will add to your future profits. Furthermore, you must assess the cost of any liabilities you will be expected to assume.

Profit Potential

What you are concerned with is the *future* possibility of the business. Therefore, you should carefully estimate the sales and profits for the next few years. For how many years, depends on your expected return on investment. For example, if you expect a 10 percent return on your initial investment it will take 10 years to recover the investment. So, you would be interested in trying to forecast sales and profits for 10 years.

To estimate future profits you should start by analyzing balance sheets and profit and loss statements of the present owner for at least 5 years back. Going back 10 years would be even better. Some businesses may have inadequate records, but all should have copies of their income tax returns. What has been the rate of return on investment? Does it compare favorably with the rate you can obtain from other investment opportunities? How

does it compare with averages for other businesses of the same kind? (See such averages as shown in Table 1 on page 11.)

Have sales over the years been increasing or decreasing? What share of the market is the business obtaining within its market area? To find out this requires an analysis of the local market for the particular firm in which you are interested. What is the competition in the area, the population, the purchasing power? What are the trends? What is the outlook for increasing sales?

Are the profits satisfactory? If not, what are the chances of increasing them? Have profits been consistent over a period of years? If the last year's profit was unusually high in comparison with previous years, why was it? What is the profit trend? Have profits been increasing consistently or have they leveled off or started to decrease? What are the reasons for the profit trend, whatever it may be? Such questions should be answered to your satisfaction before you buy.

Study the expense ratios. How does the percentage for each expense classification compare with the average for the trade? The availability of average operating ratios for certain trades has already been mentioned. Comparison of the figures of the business offered for sale with standard ratios will bring out any discrepancies. In discussing these discrepancies with the seller you may become aware of operating problems which will help in making up your mind to buy or in deciding how much to pay for the business.

You will not necessarily be discouraged from buying the business if past profit records are not favorable. Very often the reason a business is for sale is because of recent records of poor earnings. Your examination may reveal that these have been brought about by poor management — and you may be convinced that your management will improve the situation. By the same token, an excellent past earnings' record, in itself, should not cause you to pay a large amount for the business without further investigation.

You should ask the seller to prepare a projected statement of profit and loss for at least the next 12 months. This means he will prepare his estimate of sales along with estimates of cost of goods sold and operating expenses. The seller has access to data about the business not available to you. However, this must be

compared with your own estimate, recognizing that the seller's estimate of profits is likely to be less conservative than yours. With a detailed estimate of the next 12 months' operation you can compute working-capital requirements for each month. Then estimate the value of assets and liabilities as of the end of that period. Find the estimated return on investment. Do this by dividing the projected net profit by the price asked for the business. If you believe additional investment will be needed immediately to make the business run profitably, add this to the price. The highest price for the firm which brings you a return with which you are satisfied is the maximum price you will wish to pay. Thus an estimate of future profitability gives you the basis of a logical offer for the business.

If you are not familiar with accounting and income tax records, so that you may verify records of past operations and make a reasonable forecast of future operations, have an experienced accountant do this for you.

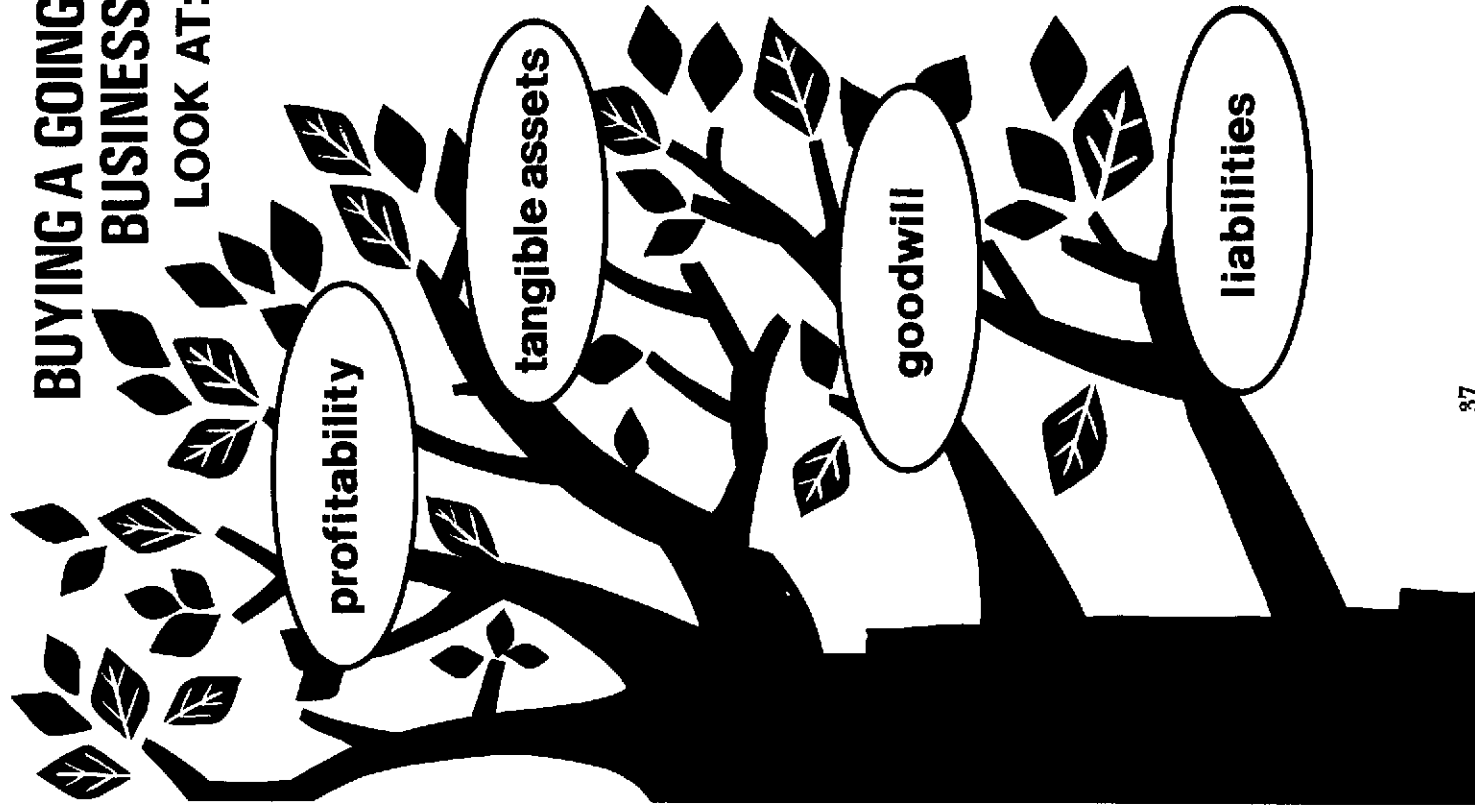
Tangible Assets

The most commonly purchased tangible assets are merchandise inventory, equipment and fixtures, and supplies. If the business you plan to purchase sells on credit you probably will take over accounts receivable.

What is the condition of the inventory you are buying? Is the stock of goods made up of timely, fresh, well-balanced selections of materials or merchandise? How much of it will have to be disposed of at a loss? A careful appraisal of the stock must be made. Each item should be separately priced and given a reasonable value. If at all possible, the inventory should be "aged"; that is, the length of time each group of items has been in stock should be determined. Then, the total dollar value of stock over 18 months old, 1 year to 18 months, 6 months to 1 year, and less than 6 months should be calculated. Usually, the older the inventory, the less value it has.

Equipment and fixtures should be carefully examined. Remember that you are buying second-hand furnishings with only a percentage of their original value. You must be sure equipment is in working order. Find out its age and obtain

BUYING A GOING BUSINESS LOOK AT:



evaluations of similar equipment from dealers in new or second-hand equipment. Not only do you want to know how much equipment and fixtures have depreciated, but you must know how obsolete they may be. Office equipment may be in working order, but so obsolete that to use it instead of modern devices would be inefficient. Also, it may be difficult to obtain repair parts for old models in case of a breakdown. Many store fixtures quickly become out of date. New, modernized fixtures are necessary to attract customers. Machines used in factories may have been superseded by far more efficient equipment. To pay an exorbitant price for the old type machine, no matter how good its condition, would be most unwise. You must make certain that all items of fixtures and equipment are fairly valued, after allowing for depreciation and obsolescence. Also, consider how much money is tied up in furniture, fixtures and equipment. Perhaps the business does not warrant the investment which the owner has made. And, finally, find out if there is a mortgage on any of the fixtures or equipment.

If you are taking over other assets, such as accounts receivable, credit records, sales records, mailing lists, or leases, investigate them closely. Accounts receivable should be aged to determine how many of them may be so old that collection will be difficult or improbable. Records and contracts involving favorable leases all have real value, and you should make certain that these are included in the sale.

Goodwill

Over and above the total appraisal of inventories, fixtures, equipment, and other assets, there will usually be an amount asked for good will. This is the amount which the owner is asking for the favorable public attitude toward his going concern. It is not to be confused with "net worth," which is the difference between the dollar values of the assets and liabilities of the business. Rather it is the ability of the business to realize a higher rate of return on the investment than ordinary in the particular type of business. When good will exists it is a valuable asset.

You should be realistic in determining how much you should pay for good will. No fixed formula can substitute for good judgment. Since it is payment for favorable public attitude, you

should make some effort to check this attitude. You might question customers, bankers and others whom you feel have unbiased opinions. Then you must consider who will have the good will after the business changes hands. Does it belong to the business, or is it personally attached to and will it go with the seller?

A test of the payment asked is to compare it with past profits of the business. How many months or years will it take before the price of the "good will" can be paid out of profits? During that period you will, in effect, be working for the seller rather than for yourself. Another way of judging the value of this intangible asset is to estimate how much more income you will receive through buying the going business than by starting a new one.

Compare the price asked for good will with that asked for good will in similar businesses. In other words, if you are "shopping around" for a business, compare not only total prices asked, but the amounts asked over and above the reasonable value of net tangible assets. This will work in the reverse, too. If others are interested in buying the business, what they offer may determine what you will have to pay.

Liabilities

You should be sure that the seller pays off accumulated debts before paying the money agreed upon in the terms of the sale. Find out if there are mortgages, back taxes, liens upon the assets, or other creditors' claims. Obtain full information about any undelivered purchases. Although it is generally not desirable to assume any liabilities, it may be necessary in some instances. If liabilities are assumed, their value must be subtracted from the agreed-upon value of the assets to determine the net value.

The Price

After you have determined what you believe to be the net value this does not mean that you have reached the final price to be paid for the business. Value relates to what the business is worth. Other factors affect the final price. It is determined through negotiation and bargaining.

Endeavor to find out what the seller's reputation has been among employees and suppliers. Poor relationships may require extra effort on your part to establish a smoothly running organ-

ization. Make sure that suppliers will deal with you. If a franchise is involved, you should obtain satisfactory assurance from the supplier that it will not be withdrawn.

Why does the owner wish to sell? This should be one of your first questions. Is the reason given (such as a death in the family, poor health, or a needed change in climate) the really decisive factor? Or does the seller know that the neighborhood is changing so that need for his specific type of business will soon cease to exist; or that a new civic development, or zoning law, will affect the business unfavorably? You should search for his true reasons for selling by questioning not only him but others whom you know to be reliable.

Some business owners have sold out only to start a new business in competition with the buyer. Careful consideration should be given to placing limitations upon the seller's right to compete with you for a specific period of time and within a specified area.

Legal Advice

As a safeguard against costly errors, legal advice should be obtained before any agreement is made. The agreement should be drawn up by a lawyer to insure that it covers all essential points and is clearly understood by the parties. Among the items covered in a typical contract covering the sale of a small business are:

1. A description of what is being sold.
 2. The purchase price.
 3. The method of payment.
 4. A statement of how adjustments are to be handled at the time of closing (for example, adjustments for inventory sold, rent, payroll and insurance premiums).
 5. Buyer's assumption of contracts and liabilities.
 6. Seller's warranties (for example, warranty protection for the buyer against false statements of the seller, inaccurate financial data, and undisclosed liabilities).
 7. Seller's obligation and assumption of risk pending closing.
 8. Covenant of seller not to compete.
 9. Time, place and procedures of closing.
- The seller and buyer must comply with the bulk sales law of the State in which the transaction takes place. The purpose of

such a law is to make certain that the seller does not sell out, pocket the proceeds, and disappear, leaving his creditors unpaid. The seller must furnish a sworn list of his creditors and you, as the buyer, must give notice to the creditors of the pending sale. Otherwise the seller's creditors may be able to claim the personal property which you purchased.

As soon as possible after signing the contract, take possession. Otherwise, the seller may deplete the inventory and, in some cases, create ill-will for you.

Investing In a Franchise

MANY SMALL BUSINESS OWNERS have been helped in getting a sound start by investing in a franchise. You may want to consider such an investment. Franchising can minimize your risk. It will enable you to start your business under a name and trade-mark which have already gained public acceptance. You will have access to training and management assistance from experienced people in your line of business. Sometimes, you can obtain financial assistance which will make it possible to start your business with less cash than you would have needed otherwise.

On the other hand you must make some sacrifices when entering a franchised operation. You lose a certain amount of control of your business. You will no longer truly be your own boss in some situations. And, of course, you must pay a fee or share profits with the franchiser.

This chapter will present some of the advantages and disadvantages of franchising, where to look for a franchise and how to evaluate one. But, first, what is franchising?

Definition Of Franchising

Essentially, franchising is a plan of distribution under which an individually owned business is operated as though it were a part of a large chain. Services or products are standardized. Uniform trade marks, symbols, design and equipment are used. A supplier (the franchisor) gives the individual dealer (the franchisee) the right to sell, distribute, or market the franchisor's product or service by using the franchisor's name, reputation, and selling techniques. The franchise agreement (or contract) usually gives the franchisee the exclusive right to sell, or otherwise represent, the franchisor in a specified area. In return for this exclusive right the franchisee agrees to pay either a sum of money (a franchise fee), a percentage of gross sales, or to buy equipment or supplies from the franchisor — or some combination of these considerations.

Advantages Of Franchising

Some advantages of franchising to you, as a franchisee, are that you can start a business with:

1. *Limited experience.* You are taking advantage of the franchisor's experience which you might otherwise have to obtain the hard way — through trial and error.
2. *A relatively small amount of capital and a strengthened financial and credit standing.* Sometimes the franchisor gives financial assistance making it possible for you to start with less than the usual amount of cash. For example, the franchisor may accept a down payment with your note for the balance of the needed initial capital. Or, the franchisor may allow you to delay in making payments for royalties, purchases, or other fees in order to help you over the "rough spots." With the name of a well-known, successful franchisor behind you, your standing with financial institutions and credit associations will be strengthened.
3. *A well developed consumer image and goodwill with proven products and services.* The goods and services of the franchisor are proven and well-known. Therefore, your business has "instant" pulling power. To develop such pulling power on your own might take years of promotion and considerable investment.

4. *Competently designed facilities, layout, displays and fixtures.* The franchising company has designed effectively facilities, layout, displays and fixtures based upon experience with many dealers.

5. *Chain buying power.* You may receive savings through chain-style purchasing of products, equipment, supplies, advertising materials and other business needs.

6. *The opportunity for business training and continued assistance from experienced management in proven methods of doing business.* You can normally expect to be trained in the mechanics of the particular business, and guided in its day-to-day operation until you are proficient at the job. Moreover, management consulting service is provided by the franchisor on a continuing basis. This often includes help with record keeping as well as other accounting assistance.

7. *National or regional promotion and publicity.* The national or regional promotion of the franchisor will help your business. Also, you will receive help and guidance with local advertising. The franchisor's program of research and development will assist you in keeping up with competition and changing times.

All of these factors can help increase your income and lower your risk of failure.

Disadvantages of Franchising

Now, what are the disadvantages of franchising? Some of them are the:

1. *Submission to imposed standardized operations.* You cannot make all the rules. Contrary to the "be your own boss" lures in franchise advertisements, you may not truly be your own boss. In the first place, you must subjugate your personal identity to that of the name of the franchisor. If an important satisfaction to you is to have your business known by your name, a franchise operation is not for you. The franchisor exerts control and pressure on you (1) to conform to standardized procedure, (2) to handle specific products or services which may not be particularly profitable in your marketing area and (3) to follow other policies which may benefit others in the chain but not you. This means that you lose the freedom to make decisions -- in other words to be your own boss.

2. *Sharing of profits with the franchisor.* The franchisor nearly always charges a royalty on a percentage of gross sales. This royalty fee must ultimately come out of the profits of the franchisee -- or be paid whether the franchisee makes a profit or not. Sometimes such fees are exorbitant -- way out of proportion to the profit. The report of a Federal Government-sponsored study, entitled *The Economic Effects of Franchising*, published in September 1971, showed that royalty payments ranged from a low of 1.0 percent to a high of 18 percent of gross sales in the fast food franchising industry. The median royalty fee was 4 percent of gross sales. The study revealed that a large number of fast food franchisors were misleading potential franchisees as to expected profits. Required purchases from the franchisor of merchandise, supplies or equipment might be obtained elsewhere for less. The study of fast food franchising showed that many franchisees who were required to buy a large proportion of supplies from their franchisors were paying higher prices than they could obtain on their own. Or, you might be paying more than other franchisees for the same services -- a situation which exists in some franchising operations.

3. *Lack of freedom to meet local competition.* Under a franchise you may be restricted in establishing selling prices, in introducing additional products or services, or dropping unprofitable ones, regardless of local competition.

4. *Danger of contracts being slanted to the advantage of the franchisor.* Clauses in some contracts, imposed by the franchisor, provide for unreasonably high sales quotas, mandatory working hours, cancellation or termination of the franchise for minor infringements, and/or restrictions on the franchisee in transferring his franchise or recovering his investment. The territory assigned the franchisee may be overlapping with that of another franchisee or may be otherwise inequitable. In settling disputes of any kind the bargaining power of the franchisor is usually greater than that of the franchisee.

For example, the same study referred to above, showed that fast food franchisees worked a median of 60 hours a week, and some families as much as 120 hours. Alleged infringement of the franchisee's exclusive territory was a major source of friction between franchisee and franchisor. The power imbalance in

favor of the franchisor is due not only to the franchisee's smaller financial resources but to his lack of information — information which the franchisor has. For example, the franchisor understands thoroughly the implications of the agreement he, himself, has devised and he has experience in negotiating under this agreement.

5. *Time consumed in preparing reports required by the franchisor.* Franchisors require specific reports. The time and effort in preparing these may be inordinately burdensome. On the other hand, you should recognize that if these reports are helpful to the franchisor they probably will help you to manage your business more effectively.

6. *Sharing the burden of the franchisor's faults.* While ordinarily the franchisor's chain will have developed good will among consumers there may be instances in which ill will has been developed. For example, if a customer has been served a stale roll, a burnt hamburger or received poor service in one outlet he is apt to become disgruntled with the whole chain. As one outlet in the chain, you will suffer regardless of the excellence of your particular unit. Furthermore, the franchisor may fail. For example, at least 54 fast food franchise systems went out of business during 1968-69, spelling disaster for the franchisees. You must bear the brunt of the chain's mistakes as well as share the glory of its good performances.

Minority Participation in Franchising

A number of franchise systems have developed special programs for minority individuals who seek to go into business for themselves. One such program asks the minority individual for only a 2 percent down payment. The franchisor matches this with 98 percent financing and up to a year of training. Another program is a joint venture between a minority-owned business and an established franchising company. The joint venture is not a merger of the two companies. Rather it is a plan whereby each company contributes an equal amount of dollars, but all responsibility for day-to-day operations is left with the minority-owned company.

In spite of the opportunities in franchise operation to help minorities, the Federal report on *The Economic Effects of Fran-*

chising, referred to above, foresees that "the relative level of minority participation in franchising at the end of the present decade will be little higher than it is at present."

Franchising can help the minority individual to start and manage a small business but it does not guarantee success. The challenges and problems of running a business remain whether or not the business is a franchising operation.

Finding Franchise Opportunities

Now that you've looked into what franchising is and considered its advantages and disadvantages where do you look for a franchise opportunity? Some of the sources are:

Newspapers. Classified sections of most daily metropolitan newspapers carry franchise offers under the "Business Opportunities" section. Sometimes the franchisor runs a "blind ad," not giving his name but listing a box number. This enables him to perform a preliminary screening in an effort to eliminate the "shoppers" from the "buyers."

Trade Publications. If you are interested in going into business in a particular trade seek out the trade publications for that trade. Franchisors advertise in the trade publications related to their franchised businesses.

Franchising Publications. Publications devoted strictly to franchising are another source of information, for example, "National Franchise Reports" published by Continental Reports of Denver, Colo.

Franchisor Exhibitions. Attendance at franchisor exhibitions, held in major cities, will give you the opportunity to meet franchisor representatives face-to-face and to compare a number of offers at one time. You should be wary of any franchisor who is willing to sign a contract on the spot. Your reason for attending is not to make commitments but to engage in give-and-take discussions directly with franchisor representatives and to obtain brochures and printed materials for further study.

Franchise Marketing Agencies. Franchise marketing agencies and franchise consultants serve to help prospective investors locate a profitable franchise. Also, they furnish information on the reputation and profitability of particular franchisors and their franchisees.

BEFORE INVESTING IN A FRANCHISE

CHECK:

The Franchisor

Franchising Companies. Once you have narrowed your interest down to one or two fields you can prepare a list of the top franchising companies in the fields and write directly to them for details. You should give some background information about yourself and the sincerity of your interest. Hastily and sketchily written inquiries are often ignored by franchisors.

Other Sources. While the above are the most important sources of information there are other direct and indirect leads concerning franchise opportunities. These include radio, television, direct mail, as well as suggestions from bankers, friends, business brokers, equipment and product suppliers.

Once you have located an opportunity in which you are interested, the next job is to evaluate it.

The product or service

Evaluating A Franchise Opportunity
A franchise costs money. One can be purchased for as *little* as a few hundred dollars, or as *much* as a quarter of a million dollars or more. Hence it is vital that you investigate and evaluate carefully any franchise before you invest.

The franchise contract

Beware of the "fast buck" artists. The popularity of franchising has attracted an unsavory group of operators who will take you if they can. Sometimes known as "front money men" they usually offer nothing more than the sale of equipment and a catchy business name. Once they sell you the equipment they do not care whether you succeed or fail. If you are promised tremendous profits in a short period of time, be wary.

The market

The following check list will aid you in selecting the right franchise. Check each question when the answer is "yes." Most, if not all, questions should be checked before you sign a franchise contract.

The affect on YOU - the Franchisee

Questions To Answer Affirmatively Before Going Into Franchising

check if
answer
is "yes"

The Franchisor

1. Has the franchisor been in business long enough (5 years or more) to have established a good reputation? _____
2. Have you checked Better Business Bureaus, Chambers of Commerce, Dun and Bradstreet, or bankers to find out about the franchisor's business reputation and credit rating? _____
3. Did the above investigations reveal that the franchisor has a good reputation and credit rating? _____
4. Does the franchising firm appear to be financed adequately so that it can carry out its stated plan of financial assistance and expansion? _____
5. Have you found out how many franchisees are now operating? _____
6. Have you found out the "mortality" or failure rate among franchisees? _____
7. Is the failure rate small? _____
8. Have you checked with some franchisees and found that the franchisor has a reputation for honesty and fair dealing among those who currently hold franchises? _____
9. Has the franchisor shown you certified figures indicating exact net profits of one or more going operations which you have personally checked yourself? _____
10. Has the franchisor given you a specimen contract to study with the advice of your legal counsel? _____
11. Will the franchisor assist you with:
 - a. A management training program? _____
 - b. An employee training program? _____
 - c. A public relations program? _____
 - d. Obtaining capital? _____
 - e. Good credit terms? _____

check if
answer
is "yes"

- f. Merchandising ideas? _____
- g. Designing store layout and displays? _____
- h. Inventory control methods? _____
- i. Analyzing financial statements? _____
12. Does the franchisor provide continuing assistance for franchisees through supervisors who visit regularly? _____
13. Does the franchising firm have an experienced management trained in depth? _____
14. Will the franchisor assist you in finding a good location for your business? _____
15. Has the franchising company investigated you carefully enough to assure itself that you can successfully operate one of its franchises at a profit both to it and to you? _____
16. Have you determined exactly what the franchisor can do for you that you cannot do for yourself? _____

The Product Or Service

17. Has the product or service been on the market long enough to gain good consumer acceptance? _____
18. Is it priced competitively? _____
19. Is it the type of item or service which the same consumer customarily buys more than once? _____
20. Is it an all-year seller in contrast to a seasonal one? _____
21. Is it a staple item in contrast to a fad? _____
22. Does it sell well elsewhere? _____
23. Would you buy it on its merits? _____
24. Will it be in greater demand five years from now? _____
25. If it is a product rather than a service:
 - a. Is it packaged attractively? _____
 - b. Does it stand up well in use? _____
 - c. Is it easy and safe to use? _____
 - d. Is it patented? _____

check if
answer
is "yes"

- e. Does it comply with all applicable laws? _____
- f. Is it manufactured under certain quality standards? _____
- g. Do these standards compare favorably with similar products on the market? _____
- h. If the product must be purchased exclusively from the franchisor or a designated supplier, are the prices to you, as the franchisee, competitive? _____

The Franchise Contract

26. Does the franchise fee seem reasonable? _____
27. Do continuing royalties or percent of gross sales payment appear reasonable? _____
28. Is the total cash investment required and the terms for financing the balance satisfactory? _____
29. Does the cash investment include payment for fixtures and equipment? _____
30. If you will be required to participate in company sponsored promotion and publicity by contributing to an "advertising fund," will you have the right to veto any increase in contributions to the "fund?" _____
31. If the parent company's product or service is protected by patent or liability insurance, is the same protection extended to you? _____
32. Are you free to buy the amount of merchandise you believe you need rather than being required to purchase a certain amount? _____
33. Can you, as the franchisee, return merchandise for credit? _____
34. Can you engage in other business activities? _____

check if
answer
is "yes"

35. If there is an annual sales quota, can you retain your franchise if it is not met? _____
36. Does the contract give you an exclusive territory for the length of the franchise? _____
37. Is your territory protected? _____
38. Is the franchise agreement renewable? _____
39. Can you terminate your agreement if you are not happy for some reason? _____
40. Is the franchisor prohibited from selling the franchise out from under you? _____
41. May you sell the business to whomever you please? _____
42. If you sell your franchise, will you be compensated for the goodwill you have built into the business? _____
43. Does the contract obligate the franchisor to give you continuing assistance after you are operating the business? _____
44. Are you permitted a choice in determining whether you will sell any new product or service introduced by the franchisor after you have opened your business? _____
45. Is there anything with respect to the franchise or its operation which would make you ineligible for special financial assistance or other benefits accorded to small business concerns by Federal, State, or local governments? _____
46. Did your lawyer approve the franchise contract after he studied it paragraph by paragraph? _____
47. Is the contract free and clear of requirements which would call upon you to take any steps which are, according to your lawyer, unwise or illegal in your state, county or city? _____

check if
answer
is "yes"

48. Does the contract cover all aspects of your agreement with the franchisor? _____
49. Does it really benefit both you and the franchisor? _____
- Your Market**
50. Are the territorial boundaries of your market completely, accurately and understandably defined? _____
51. Have you made any study to determine whether the product or service you propose to sell has a market in your territory at the prices you will have to charge? _____
52. Does the territory provide an adequate sales potential? _____
53. Will the population in the territory given you increase over the next 5 years? _____
54. Will the average per capita income in the territory remain the same or increase over the next 5 years? _____
55. Is existing competition in your territory for the product or service not too well entrenched? _____

YOU — The Franchisee

56. Do you know where you are going to get the equity capital you will need? _____
57. Have you compared what it would take to start your own similar business with the price you must pay for the franchise? _____
58. Have you made a business plan — for example:
- a. Have you worked out what income from sales or services you can reasonably expect in the first 6 months? The first year? The second year? _____
 - b. Have you made a forecast of expenses including a regular salary for yourself? _____

check if
answer
is "yes"

59. Are you prepared to give up some independence of action to secure the advantages offered by the franchise? _____
60. Are you capable of accepting supervision, even though you will presumably be your own boss? _____
61. Are you prepared to accept rules and regulations with which you may not agree? _____
62. Can you afford the period of training involved? _____
63. Are you ready to spend much or all of the remainder of your business life with this franchisor, offering his product or service to the public? _____

Conclusion

In conclusion, franchising creates distinct opportunities for the prospective small business owner. Without franchising it is doubtful that thousands of small business investors could ever have started. The American consumer might well have been denied ready access to many products and services. The system permits these goods and services to be marketed without the vast sums of money and number of managerial people possessed only by large corporations. Therefore, it opens up economic opportunities for the small business.

But not even the help of a good franchisor can guarantee success. You will still be primarily responsible for the success or failure of your venture. As in any other type of business your return will be related directly to the amount and effectiveness of your investment in time and money.

Because of this, most of the suggestions and information in other chapters of this book are appropriate even though you plan to operate under a franchise.

Buying

Skillful buying is an important essential of profitable operation. This is true whether you are a wholesaler or retailer of merchandise, a manufacturer, or an operator of a service business.

In the operation of your business you will be constantly called upon to answer the questions of what, from whom, when, and how much to buy.

Determining what to buy means finding out the type, kind, quality, brand, size, color, and style which will sell the best. This requires close attention to salesmen, trade journals, catalogs, and any signs indicating the likes and dislikes of your customers. Analysis of your own sales records is particularly helpful. Even the manufacturer should view the problem through the eyes of his customers before he decides what materials, parts, and supplies to purchase.

Determining from whom to buy involves locating suitable sources. You may buy directly from producers, from wholesalers who own the goods they sell, or through other middlemen who do not take title to the goods they sell. You will select the suppliers who carry the kind and quality of goods you have decided as best suited to the desires of your customers.

As a policy, you may spread your purchases among many suppliers to gain the advantages of the most favorable prices and best promotional material offered at any given time. With this policy, you can purchase the items from each supplier which are the most popular with your customers.

On the other hand, you may concentrate your purchases with as small a number of suppliers as possible. This policy gives you the advantages of:

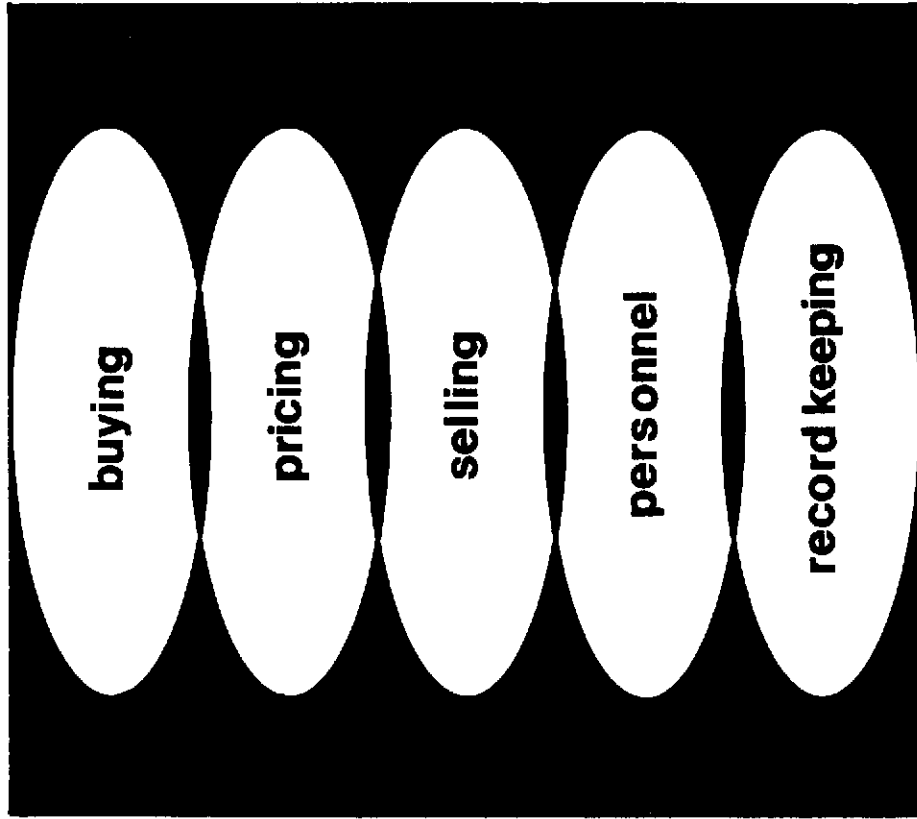
1. Receiving more attention and help from your suppliers, who know you are giving them most of your business.
2. Having a smaller inventory investment.
3. Having larger purchase orders which may permit larger discounts.
4. Simplifying your credit problems.
5. Becoming known in the community as the seller of a certain brand or line of merchandise, if you are buying merchandise for resale.

Managing Your Business

THIS BOOK OFFERS GUIDANCE in starting a business. But you are not ready to start your own business until you have made some study of the problems of managing it. What types of management problems will you face? Are you familiar with the buying techniques and markets for the materials and supplies you will need? Do you know how to price your merchandise or services? What are the best methods of selling them? Have you given thought to selecting and training the personnel you will need to help you run your business? Are you prepared to keep adequate records?

Inadequate and inefficient management causes more business failures than any other factor. There are few operators of small businesses who can afford not to make constant effort to improve management skills. Some of the problems will be touched upon here. But you should not limit your reading or investigating to these few pages. Through observation, conversation and reading you should continually search for better management methods which may be adapted to your particular business.

MANAGING YOUR BUSINESS



6. Maintaining a fixed standard in your products, if you are buying materials to be used in making other goods.

In spite of arguments in favor of placing orders among many suppliers, it is usually better for the small business to concentrate its purchases and work closely with a few.

The question of when to buy deserves attention in the many businesses having seasonal variations in sales volume. More merchandise for sale must be in stock prior to the seasonal upturn in sales volume. As sales decline, less merchandise is needed. This means that purchases of goods for resale and materials for processing should vary accordingly.

Also, speculative buying is closely related to the question of when to buy. Should a buyer stock up when he believes prices are unusually low in order to take advantage of a possible price rise? Ordinarily, you should avoid speculative buying because it interferes with the normal operations of your business. While inordinate profits may sometimes be made, substantial losses are equally likely.

How much to buy should be answered by your own records as soon as you have had enough experience to judge. Do not overbuy. This will lead to serious financial trouble. On the other hand, you cannot sell merchandise if you do not have it. Careful analysis of your records plus good judgment will determine the quantities you should buy.

To help with these problems of buying, you should keep some records. Set up some system of stock control. Stock control is a method of keeping stock in balance — neither too large nor too small — with a proper proportion and an adequate assortment of products, sizes, colors, styles and qualities. Fundamentally, there are two types of stock control: control in dollars and control in physical units. Dollar controls show the amount of money invested in each merchandise category. Unit controls indicate the number of individual items or pieces of merchandise by category. Thus, dollar controls tell how much and unit controls tell how much of *what* and *from whom*. Since the controls show the time of orders, receipts and sales, they also provide help in determining *when* to buy. This means that a stock control system guides you in determining what, from whom, when, and how much to buy.

Pricing

Much of your success in business will depend on how well you price your goods or services. If your prices are so low that your margin does not cover expenses, or so high that you can't build up sales volume, you will fail to make profits.

Before you open your business you will have decided upon the general price level you expect to maintain; that is, whether you expect to cater to people buying in the high, medium, or low price range. This is tied up with your choice of location, quality of goods handled, and services to be offered.

After establishing the general price policy, you are ready to price individual items. To be certain that you do not underprice, you should know the percentage of gross margin to sales needed in the total of all items to cover expenses and profit. If you have been in business a year or longer, you can analyze your past records and find out the percentages for operating expenses and net profit. If you are just starting a business, you will have to estimate your sales and expenses carefully. Suppose you figure the margin you need to be 30 percent of sales. To obtain a 30 percent gross margin on an item you must mark up its cost to you by 42.9 percent. This is because margin is a percentage of sales, while markup is a percentage of cost of merchandise. Many wholesalers furnish tables to retailers showing markup percentages on cost price for different margin percentages of sales price.

However, in this example, you would not obtain 30 percent margin if each individual item were marked up only 42.9 percent. No allowance has been made for markdowns and shrinkage in this markup. Markdowns are reductions from the original selling prices. Among the reasons for them are overstocking as a result of unwise buying, sudden changes in style, unseasonable weather, soiled and faded goods used for displays, and broken lots, and odd sizes left at the end of the season. "Shrinkage" is the term used for losses due to theft, spoilage, and breakage. Allowances for markdowns and shrinkage must be added if you expect to maintain an average markup of 42.9 percent, or, to put it another way, a margin of 30 percent.

While the discussion of pricing may appear, in some respects, to be directed only to the pricing of merchandise in retail stores it can be applied to other types of businesses as well. For services the markup to cover selling and administrative costs should be placed over the direct cost of performing a particular service. If you are manufacturing a product, the costs of direct labor, materials and supplies for production, parts purchased from other concerns, special equipment (such as jigs, dies, fixtures, and other tools), plant overhead, selling and administrative expenses, must be carefully estimated. To compute a cost per unit will require an estimate of the number of units you plan to produce. Before your factory becomes too large you will be wise to consult an accountant about a cost accounting system.

Not all items are marked up by the average mark-up. Some will take more, some less. For instance, increased sales resulting from a lower-than-average mark-up on a certain item may bring a higher gross profit. On the other hand if the price is lowered too much, the resulting increase in sales will not raise the total gross profit enough to compensate for the low price. Sometimes, if you are operating a store, you may wish to sell some article at a low mark-up in order to increase store traffic with the hope of increasing sales of regularly priced merchandise. Above all, competitors' prices will govern your prices. You cannot sell a product if your competitor is greatly underselling you. These and other reasons may cause you to vary your mark-up among items and services. There is no magic formula that will work on every product or every service all of the time. But you should keep in mind the over all average mark-up which you need to make a profit.

Selling

Whether you operate a factory, wholesale outlet, retail store, or service shop, you will have to sell. Probably, there is no other business function about which so much has been written. For that reason little is presented here.

Your direct methods of selling are through personal sales efforts, advertising and, for most businesses, display (including

the packaging and styling of the product itself.) Establishing a good reputation with the general public through courtesy and special services is an indirect method of selling. While the latter should never be neglected, in this brief discussion comments will be confined to the direct methods of selling.

To establish your business on a firm footing requires a great deal of aggressive, personal selling, except possibly in a mail-order business. You will have well-known competition to overcome. Or, if your idea is new with little or no competition, you have the extra problem of convincing people of the value of the new idea. Personal selling work is almost always necessary to accomplish this. If you are not a good salesman, seek an employee or associate who is.

Another method of building sales is by advertising. This may be done through newspapers, trade papers, the classified section of the telephone directory, and other published periodicals; radio and television; handbills, and direct mail. The media you select, as well as the message and style of presentation, will depend upon the particular group you wish to reach. Do not advertise unless you plan and prepare the advertising carefully. Otherwise, it will be ineffective. This method of selling can become highly expensive and it is wise to place a limit upon the amount you plan to spend, then stay within that limit. To help you in determining how much to spend, study the operating ratios of similar businesses. You may find it wise to employ the services of an advertising agency.

A third method of stimulating sales is effective display. If you have had no previous experience in the art of display, you will want to study the subject. You should observe displays of other businesses and read books, trade magazines, and the literature supplied by equipment manufacturers. It may be wise to hire a display expert or obtain the services of one on a part-time basis.

The proper amount and types of selling effort to use vary from business to business. What is effective in one business may be bad taste in another. In any event, this business function will consume a considerable amount of your time and effort.

While this important function deserves a great deal of attention, do not overemphasize it at the expense of long-range objec-

tives. If so much time is devoted to selling effort that you neglect records and lose sight of your plans for profit, disaster may result. Many retail operators, for example, have stimulated high sales volume while failing to record markdowns as they were taken. At the end of the season, shortages due to unrecorded markdowns have been known to wipe out net profit.

On the other hand there can be no profit without selling. The right type of personal selling, advertising and display can bring repeat business, attract new trade, and establish your business favorably in the minds of the public.

Selecting and Training Personnel

If your business is going to be large enough to require outside help, one of the first jobs will be to select and train one or more employees. You may start out on a small scale with only members of your family or business partners to help you. But if the business grows (as you hope it will) the time will come when you must select and train personnel.

Careful choice of personnel is essential to protect the reputation of your business. To select the right employee, you should plan beforehand what you want him to do, and then look for the applicant to fill your particular needs.

Often one of the major mistakes in choosing an employee is to hire him without a clear knowledge beforehand of exactly what you want him to do. It is true that in a small business you will need flexible employees who can shift from task to task and who may be called upon to perform unexpected tasks. Nevertheless, you should plan your hiring to assure an organization capable of performing every essential function. Write down the job descriptions. For example, you should answer such questions as these before hiring: If you are running a retail store, will a salesperson also do stockkeeping or bookkeeping? In a restaurant, will a waitress also perform some of the duties of a hostess? Will the sawyer in a sawmill also be required to pile lumber?

After you have written down the duties, look for an applicant who can perform them. It is better to seek and select rather than wait for applications. Lining up suitable candidates prob-

ably is the most difficult step in the selection process, but it is indispensable to good selection. Some sources of new employees are:

1. Suggestions of friends, business acquaintances, employment men, and others.
2. Your nearest United States Employment Service office.
3. Placement bureaus of high schools, business schools, and colleges.
4. Trade and industrial associations.
5. Employment agencies.
6. Clergymen, the YMCA, the YWCA, and similar sources.
7. Want ads in local newspapers.
8. The voluntary applicant.

Once you have secured applicants your next task is to screen them. Application forms filled out by the applicants will help. Some applicants may be eliminated right away from a study of the forms. For each of the others, the application will serve as a basis for the interview. Each interview should be conducted in private. You may put the applicant at ease by describing your business in general and the job in particular. But once you have done this, encourage the applicant to talk. Do not make the mistake of doing all or most of the talking. Selecting the right person is extremely important to you and you must find out everything you can about the applicant that is pertinent to the job.

You will want to check some of the references of an applicant before making a final decision. Check through a personal visit or by a phone call, directly to the applicant's immediate supervisor, if possible. You are not so much interested in finding out that the reference thinks the applicant is a "good guy." You wish to verify that the information given you by the applicant is correct. You will wish to consider, with judgment, (1) any negative comments you hear and (2) what is *not* said. Checking references can bring to light significant information which may save you money and future inconvenience.

An employee well selected is only a potential asset to your business. Whether or not he becomes a real asset depends upon the way you train him. Much faulty training may be avoided if you remember —

1. To allow sufficient time for training.
2. Not to expect too much from the trainee in too short a time.
3. To have the employee learn by performing under actual working conditions, with close supervision.
4. To follow up on your training.

An illustration of the importance of these points in a retail store is the story of a salesgirl who was trained in a special training session. Methods of filling out sales checks and operating the cash register were not only explained and demonstrated, but were taught by having her perform hypothetical sales transactions. Location of stock and points about the merchandise were explained. Then the girl was placed on the selling floor. During the noon hour she was left alone in one section. Customers swarmed around her asking questions and demanding service. She became more and more confused, forgetting what she had learned under quiet, artificial conditions. In desperation, she walked off the floor and never returned.

While the merchant in this case thought he was giving attention to training, he was actually violating the rules enumerated here. First, he had not allowed sufficient time for training. Second, he expected too much to be absorbed by the trainee in too short a time. And, finally, he had neglected to continue the training on the job under close supervision.

You must check the employee's performance after he has been on his own and has had practice. Re-explain key points, suggest knacks or short cuts, bring him up to date on new developments, and encourage him to ask questions. Training is a continuous process. This becomes supervision. And supervision is the third essential of personnel control — the first two being hiring and training. Good supervision reduces the cost of operating your business by cutting down on the number of mistakes. Not only do you gain but, if errors are corrected early, employees get more satisfaction from their jobs.

You may think that too much care in selecting, training and supervising an employee is unnecessary. After all, if he doesn't prove satisfactory you can fire him, you will say. But remember that selecting an employee, training him, and breaking him in as a member of your organization is an expensive process.

Besides the cost of the time involved, this expense is hidden

in a number of other costs, such as wasted supplies, damaged equipment, and low quality work. And, most important, if your employee is unsatisfactory, your greatest expense may be that of overcoming customer ill will and a poor business reputation.

Other Management Problems

You will be faced with other types of problems besides those concerned with buying, pricing, selling, and personnel. Many of them will depend upon the kind of establishment you open. For example, if you extend credit to customers, you will become interested in the proper management of credits and collections. If you are a retailer or wholesaler, you may have delivery problems. If you are a manufacturer, efficient production is a major factor.

Each of these demands special treatment which cannot be described in a booklet of this size. However, many of these problems are discussed in other Small Business Administration booklets listed on page 96.

Importance of Adequate Records

Studies of business failures show that reasons for failure can frequently be attributed to inadequate records. Absence of records is not itself the cause of difficulties, but it accounts for the businessman's inability to see in advance the direction in which he is going. With up-to-date records, he may foresee impending disaster in time to take steps to avoid it. While extra work may be required to keep an adequate set of records, this work will more than repay you for the effort and expense. If you are not prepared to see that this chore gets done, you should not try to operate a small business.

You need records to substantiate:

1. Your returns under Federal and State tax laws, including income tax and social security laws;
 2. Your request for credit from equipment manufacturers or a loan from a bank;
 3. Your claims about the business, should you wish to sell it.
- But, most important to you, you need them to help increase your profits. With an adequate, yet simple, bookkeeping system you can answer such questions as these:

1. How much business am I doing?
2. What are my expenses? Which expenses appear to be too high?
3. What is my gross profit margin; my net profit?
4. How much am I collecting on my charge business?
5. What is the condition of my working capital?
6. How much cash do I have on hand and in the bank?
7. How much do I owe my suppliers?
8. What is my net worth; that is, what is the value of my ownership of the business?
9. What are the trends in my receipts, expenses, profits, and net worth?
10. Is my financial position improving or growing worse?
11. How do my assets compare with what I owe? What is the percentage of return on my investment?
12. How many cents out of each dollar of sales are net profit?

These and other questions may be answered by preparing and studying balance sheets and profit-and-loss statements. To prepare these fundamental statements you need to record information about transactions as they occur. By keeping this information in an orderly fashion and in sufficient detail you can answer other vital questions about your business; such as, "What products, or services, do my customers like best, next best, and so on? Do I have the right merchandise in stock to give them what they like? Am I prepared to render the services they demand most? How many of my customers are slow in paying their bills?"

What kinds of records and how many you need depend upon your particular operation. For example, a boy selling newspapers, part-time each day, does not need inventory records. He buys and sells his entire stock each day. But a shoe store or a dress shop operator will soon find that he or she cannot keep the needed inventory information by memory alone. Below is a list of records, grouped according to their use. None will be needed by all businesses. You may need only a few of them. As a matter of fact, you should not maintain a record without answering to yourself the questions: (1) How will this record be used?, (2) How important is the information likely to be?, and (3) Is the information available elsewhere in an equally

accessible form? However, the list below may call your attention to some records you could use to great advantage.

Inventory and Purchasing (These records provide facts to help with buying and selling.)
Inventory Control Record
Item Perpetual Inventory Record
Model Stock Plan
Out-of-Stock Sheet
Open-To-Buy Record
Purchase Order File
Open Purchase Order File
Supplier File
Returned Goods File
Price Change Book
Accounts Payable Ledger

Sales Records (These records reveal facts to determine sales trends.)

Record of Individual Sales Transaction
Summary of Daily Sales
Sales Plan
Sales Promotion Plan

Cash Records (These records show what is happening to cash.)
Daily Cash Reconciliation
Cash Receipts Journal
Cash Disbursements Journal
Bank Reconciliation

Credit (These records keep track of who owes you and whether they are paying on time.)
Charge Account Application
Accounts Receivable Ledger
Accounts Receivable Aging List

Employees (These records maintain information legally required and are helpful in the efficient management of personnel.)

Record of Employee Earnings and Amounts Withheld
Employee's Withholding Exemption Certificate (Form W-4)
Record of Hours Worked

Record of Expense Allowances
Employment Applications
Record of Changes in Rate of Pay
Record of Reasons for Termination of Employment
Record of Employee Benefits
Job Descriptions
Crucial Incidents Record

Fixtures and Property (These keep facts needed for taking depreciation allowances and for insurance coverage and claims.)
Equipment Record
Insurance Register

Bookkeeping (These records, in addition to some of the above, are needed if you use a double-entry bookkeeping system.)
General Journal
General Ledger

For efficient operation you need information from records to keep stocks in line with sales, to watch trends, and for tax purposes. Furthermore, you should use records to plan. With a well thought-out business plan as a guide you strengthen your chances for success. A record to show the statistics of your business plan is the budget. Working up a budget helps you to determine just how much increase in profit is reasonably within reach. The budget will answer such questions as: What sales will be needed to achieve my desired profit? What fixed expenses will be necessary to support these sales? What variable expenses will be incurred? A budget enables you to set a goal and determine what to do in order to reach it.

Of course, you should compare your budget periodically with actual operations. With effective records you can do this. Then, where discrepancies show up corrective action may be taken before it is too late. The right decisions for the right corrective action will depend upon your knowledge of management techniques in buying, pricing, selling, selecting and training personnel, and handling other management problems.

Looking Into Special Requirements

YOU ARE NOT READY TO START your business until you have considered special requirements in connection with your proposed new enterprise. For instance, you must become generally familiar with the kinds of legal, tax and insurance problems you will face in your particular business. What laws and regulations will affect you? To what taxes will your business be subject? How many kinds and how much insurance should you carry? Are there other special requirements which pertain to the line of business you propose to enter?

Laws and Regulations

The more common types of laws and regulations are reviewed briefly here under the headings of licensing, regulations for consumer protection, laws to protect the environment, laws encouraging competition, and labor relations. The information given is not intended to substitute for legal advice and cannot be considered as making it unnecessary to obtain such advice. The services of a competent person should be sought when you require legal assistance.

Licensing

Licensing controls directly affect many small businesses. The degree of regulation will vary, depending upon the type and location of the enterprise. If your operations are intrastate you will be concerned primarily with State and local, rather than Federal licensing. Among the businesses frequently subject to State or local control are retail food establishments, drinking places, barber shops, beauty shops, plumbing firms and taxi companies. Most of these are servicing businesses. They are subject to regulation for the protection of public health and morals.

Retail stores, devoted exclusively to handling merchandise, may not be required to have a license but are subject to regulations such as those dealing with fire, safety, and zoning restrictions.

Most licenses require payments of fees and are usually issued on an annual basis. Ordinarily, as a prerequisite to the issuance of a license, a written application is required. State, municipal and county authorities should be contacted for complete information regarding licensing.

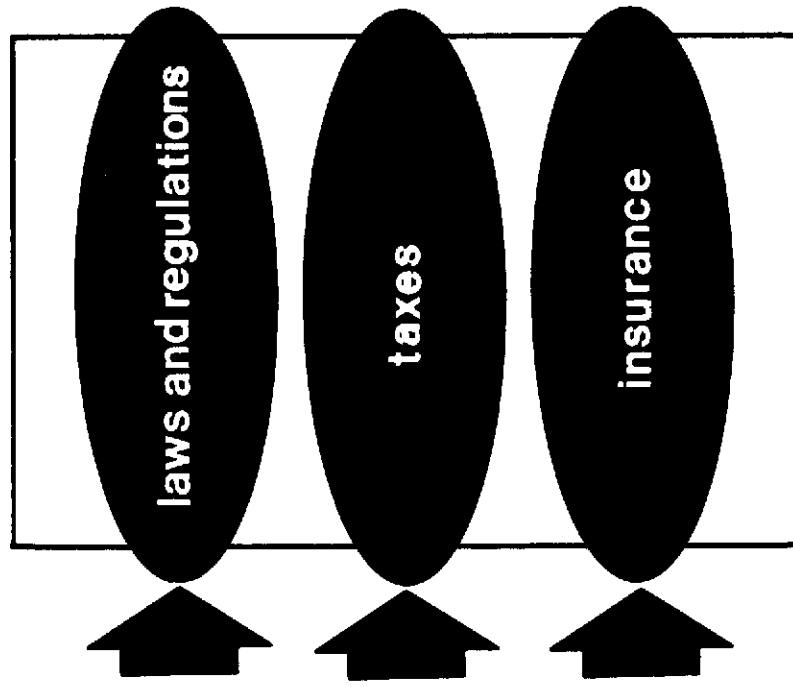
Regulations for Consumer Protection

In addition to licenses referred to above, which are required for consumer protection, other laws and regulations are designed for this purpose. Some of these may directly affect your business practices. For example, the Consumer Credit Protection Act became the law of the land on July 1, 1969. This is commonly designated as the "Truth-in-Lending" act. If you extend credit to your customers you will be affected by this law. The stated purpose of the legislation is to assure a meaningful disclosure of credit terms so that the consumer will be able to compare more readily the various credit terms available to him. You must disclose your credit terms in prescribed standard terminology.

"Truth in fabrics" legislation, also, has been enacted for consumer protection. This legislation requires informative labeling and advertising of textile fiber products. If you sell or advertise textile products you, as a retailer or wholesaler, share with the manufacturer the responsibility for seeing that the

LAWS, TAXES, and INSURANCE

check on:



goods are properly labeled and advertised as to fiber content. For example, if you advertise wearing apparel or household fabric products in newspapers having interstate circulation or offer for sale cloth items previously shipped in interstate commerce, the Federal legislation applies to you. It applies regardless of whether you actually market goods across State lines or not. This means that the vast majority of retailers handling textiles have definite responsibilities under labeling law.

Other laws are designed to protect the consumer, such as the Food, Drug and Cosmetic Act and the Flammable Fabrics Act. The consumer indirectly benefits, too, from laws intended to provide freedom of competition, discussed below.

Laws Protecting the Environment

In recent years, concern about protecting the environment has increased. Ways and means are sought to decrease pollution to air, water, and other parts of the environment. Various branches of government — local, State, and Federal — have passed regulations designed to help protect the environment. On the National level, a new Agency, the Environmental Protection Agency, has been established. You should determine what pollution laws and regulations, if any, apply to the type of business you plan to go into. Good starting points for this check are the trade association for your line of business and the offices of the various branches of government.

Laws Encouraging Competition

Some business practices are prohibited or restricted by Federal and State legislation to encourage competition. Federal laws govern dealings in interstate commerce, while State legislation regulates transactions in intrastate commerce. The broad body of Federal legislation encouraging free private enterprise includes the Sherman, Clayton, and Federal Trade Commission Acts. A substantial number of comparable State laws have been passed. The purpose of these antitrust and related laws is to encourage competition by prohibiting or restricting certain types of business activities; such as: contracts, combinations, and conspiracies in restraint of trade; price discrimination

between different purchasers of commodities of like grade and quality which injures competition; false advertising, disparagement of competitors, and misrepresentation.

From time to time these statutes are amended, and new interpretations are made by the courts. Your lawyer, chamber of commerce or business association should be good sources of guidance on how such laws or proposed laws may affect you.

Labor Relations

Federal and State legislation affecting employer-employee relations deals with settlement of labor disputes; wages, hours and working conditions; fair employment practices; and economic security.

The National Labor Relations Act, the Taft-Hartley Act and the Labor Management Reporting and Disclosure Act are three major Federal acts dealing with settlement of labor disputes. This legislation guarantees the right of employees, engaged in interstate commerce, to organize and bargain collectively with their employers, or to refrain from such activities. States, also, have enacted laws designed to uphold collective bargaining and to define unfair labor practices.

Wages, hours and working conditions are regulated by the Fair Labor Standards Act. The act provides for minimum wages, maximum hours, overtime pay, equal pay, recordkeeping and child labor limitations. In addition to this Act the Walsh-Healey Public Contracts Act, the Davis-Bacon Act, and other related acts establish wages, hours, and working conditions which are applicable to Government contractors. Whether your employees will be covered depends on the facts in your situation. Specific information can be obtained from your nearest office of the Wage and Hour and Public Contracts Division, Department of Labor.

You should also be aware of the Occupational Safety and Health Act of 1970. Under this law each employer has the general duty to furnish each of his employees places of employment, free from recognized hazards causing, or likely to cause, death or serious physical harm. The employer also has the specific

duty of complying with safety and health standards promulgated under the Act. Each employee has the duty to comply with these safety and health standards, and all rules, regulations, and orders issued pursuant to the Act which are applicable to his own actions and conduct. Specific information can be obtained from your nearest office of the Occupational Safety and Health Administration.

Fair employment practices are established by the Federal Civil Rights Act of 1964 which makes it unlawful, as a condition of employment, to discriminate on the basis of race, religion, age, or sex. Also many States have enacted fair employment practice laws. You, as a small business owner, will be concerned with the standards in soliciting and selecting employees, as established by such laws.

Legislation dealing with economic security is designed (1) to minimize losses an employee might sustain from industrial accidents, occupational diseases and involuntary unemployment; (2) to provide hospital and medical care for the employee; and (3) to furnish some income to the employee after his retirement. Protection from income loss from industrial accidents and occupational diseases comes through workmen's compensation laws. Provisions of these laws vary from State to State so you should consult local sources for information about them. Involuntary unemployment benefits are required by both State and Federal legislation. The Federal Social Security Act encourages all States to enact such laws and all States have done so. The Federal Social Security Act requires a separate payroll calculation to finance hospital and medical care for people 65 years of age and older. The same law provides for income to be paid to an employee upon his or her retirement at the legal retirement age.

To conclude, you should check with local, State and, if you expect to engage in interstate activities, Federal authorities regarding laws covering your operations, whatever your business.

Taxes

Before starting your business, some time should be devoted to investigating the tax situation. Your business will be subject to Federal, State, and local taxes. Among the Federal taxes for which you may be liable are social security taxes (referred to

above and shared by you, as employer, and your employees), excise taxes, and, if your business is incorporated, the corporate income tax. From your employees' wages you must deduct their share of the old-age, survivor's, hospital and medical insurance taxes as well as unemployment compensation contributions. Also, you must withhold an amount from their wages for payments of their individual Federal income tax and, where required, State and local income taxes. If you are an employee of your own corporation, the withholding provisions of the social security and individual income taxes apply to you, too.

If you are a sole proprietor or partner, your personal income tax payments must be prepaid or kept current on a quarterly basis. Under the Self-Employed Individual Tax Retirement Act you are allowed an income tax deduction if you set up retirement plans for yourself and employees. Go to the local office of the Director of Internal Revenue for information about your Federal tax obligations. An excellent booklet (revised from year-to-year) on this subject is *Tax Guide for Small Business*, prepared by the Internal Revenue Service.

You will have other State and local taxes. The more common types levied by States are income, property, sales, occupation or business license, and unemployment compensation taxes. Information concerning State and local taxes and fees which apply to your particular business can be obtained from your State and municipality. After you have obtained information on the various kinds of taxes for which you will be responsible you will find it helpful to set up a worksheet for meeting these tax obligations. See sample on page 78.

Insurance

Before opening your business you should arrange for adequate insurance protection. Otherwise a part or all of your investment may be lost. You should insure against those risks over which you have no control; such as, fire, windstorm, liability judgment, or the death of a key man. On the other hand you should not insure against a potential loss which would be trivial even if it did occur, or pay for protection which costs so much that the premium is a substantial proportion of the value of the insured property. Some major types of insurance are fire, gen-

eral liability, automobile liability, automobile physical damage, workman's compensation, crime, business interruption, glass, business life (on key men), group life, group health and disability.

The subject of proper insurance coverage is involved, and you should consult a reliable insurance agent, broker, or company representative for advice. You should select such an insurance consultant with care. Make inquiries among business friends and others who have had experience with different agents. Are the agent's contacts sufficiently wide to supply all the coverage you need at reasonable prices? Is he or she known as a competent professional person? Will the agent devote enough time to your individual problems to justify the commission? At no extra cost will the agent survey your entire situation and recommend alternative methods of insurance, pointing out the advantages and disadvantages of each? Does he or she have a good reputation of service to clients in time of loss? Positive answers to such questions are desirable.

In conclusion, you should have a reasonable understanding of legal, tax, insurance and other special requirements pertaining to your line of business. For detailed knowledge, and in important and unusual situations, you should seek competent counsel on these matters.

WORKSHEET FOR MEETING TAX OBLIGATIONS

This worksheet is designed to help the owner-manager to manage his firm's tax obligations. You may want your accountant or bookkeeper to prepare the worksheet so you can use it as a reminder in preparing for and paying the various taxes.

Date For Writing The Check	Pay to	Due Date	Amount Due	Kind of Tax
				FEDERAL TAXES
				Employee Income Tax and Social Security Tax
				Excise Tax
				Owner-Manager's and/or corporation's income tax
				Unemployment Tax
				STATE TAXES
				Unemployment Taxes

				Income Taxes
				Sales Taxes
				Franchise Tax
				Other
				LOCAL TAXES
				Sales Tax
				Real Estate Tax
				Personal Property Tax
				Licenses (retail, vending machine, etc.)
				Other

Source: *Small Marketers Aids* No. 142, "Steps in Meeting Your Tax Obligation," Small Business Administration.

- How much should you pay for it?
- Should you invest in a franchise?
- Have you worked out plans for buying?
- How will you price your products and services?
- What selling methods will you use?
- How will you select and train personnel?
- What other management problems will you face?
- What records will you keep?
- What laws will affect you?
- How will you handle taxes and insurance?
- And now, in conclusion, two more are added. These are:
- Will you set measurable goals for yourself?
- Will you keep up to date?

Setting Goals And Keeping Up To Date

YOU NOW HAVE a broad, but sketchy idea of what is involved in starting your own business. There are definite disadvantages, as well as advantages, to such a venture. It is filled with risks. But knowledge and sound planning can minimize these risks. Diligent effort in searching out answers to questions such as those posed in this booklet is necessary to obtain the knowledge and make a sound business plan. This booklet has given you a start, and some suggestions toward answering the following questions:

- Are you the type?
- What business should you choose?
- What are your chances for success?
- What will be your return on investment?
- How much money will you need?
- Where can you get the money?
- Should you share ownership with others?
- Where should you locate?
- Should you buy a going business?

Setting Goals

In chapter I setting the right kind of goals was suggested as a method for increasing achievement motivation. Such motivation must be sustained if you are to be successful in starting and running your own business. Set goals for yourself for the accomplishment of the many tasks necessary in starting and managing your business. Be specific. Write down the goals in terms of performances which can be measured. Major goals should be broken down into sub-goals, showing what you expect to achieve in the next 2 to 3 months, the next 6 months, the next year, and the next 5 years. Beside each goal and sub-goal place a specific date showing when it is to be achieved.

Plan the action you must take to attain the goals. While the effort required to reach each sub-goal should be great enough to challenge you, it should not be so great or unreasonable to discourage you. Take care not to plan too much action to reach too many goals all at one time. You must establish priorities.

Be sure you plan how to measure results so that you can know exactly how well you are doing. This is what is meant by "measurable" goals. If you can't keep score as you go along you are likely to lose motivation. Re-work your plan of action to allow for obstacles which may stand in your way. Try to foresee obstacles and plan ways to avert or minimize them.

GOALS IN YOUR BUSINESS PLAN

Generate measurable goals and sub-goals

Organize action steps to achieve goals

Allow for obstacles

Line up actual performance against goals

Set new goals and sub-goals to keep up to date

To help prospective owner-managers of small firms SBA has developed publications on the business plan. These publications are narrative and worksheets and are designed to be used in gathering and evaluating facts and figures. They are in the *Small Marketers Aids* series and the *Management Aids for Small Manufacturers* series and are free from the nearest SBA office or SBA, Washington, D. C. 20416.

Setting goals should include developing a specific plan for the business you hope to start and manage. Such planning helps you to avoid mistakes before you invest money in the business.

Even though you are careful in establishing realistic goals, unanticipated events may occur or new opportunities may develop. You may find it expedient to modify your goals and re-set your sub-goals. You must, then, do what is needed to bring your business plan up to date.

Keeping Up To Date

To keep up to date continue to look for information before and after you start your business. Get all the pertinent facts from everybody you can. Some of your sources are:

Your own customers.

Merchandise and equipment suppliers with whom you deal.

Trade associations and trade papers.

Commercial and industrial banks.

Chambers of commerce.

Better business bureaus.

Credit bureaus.

Business sections of libraries.

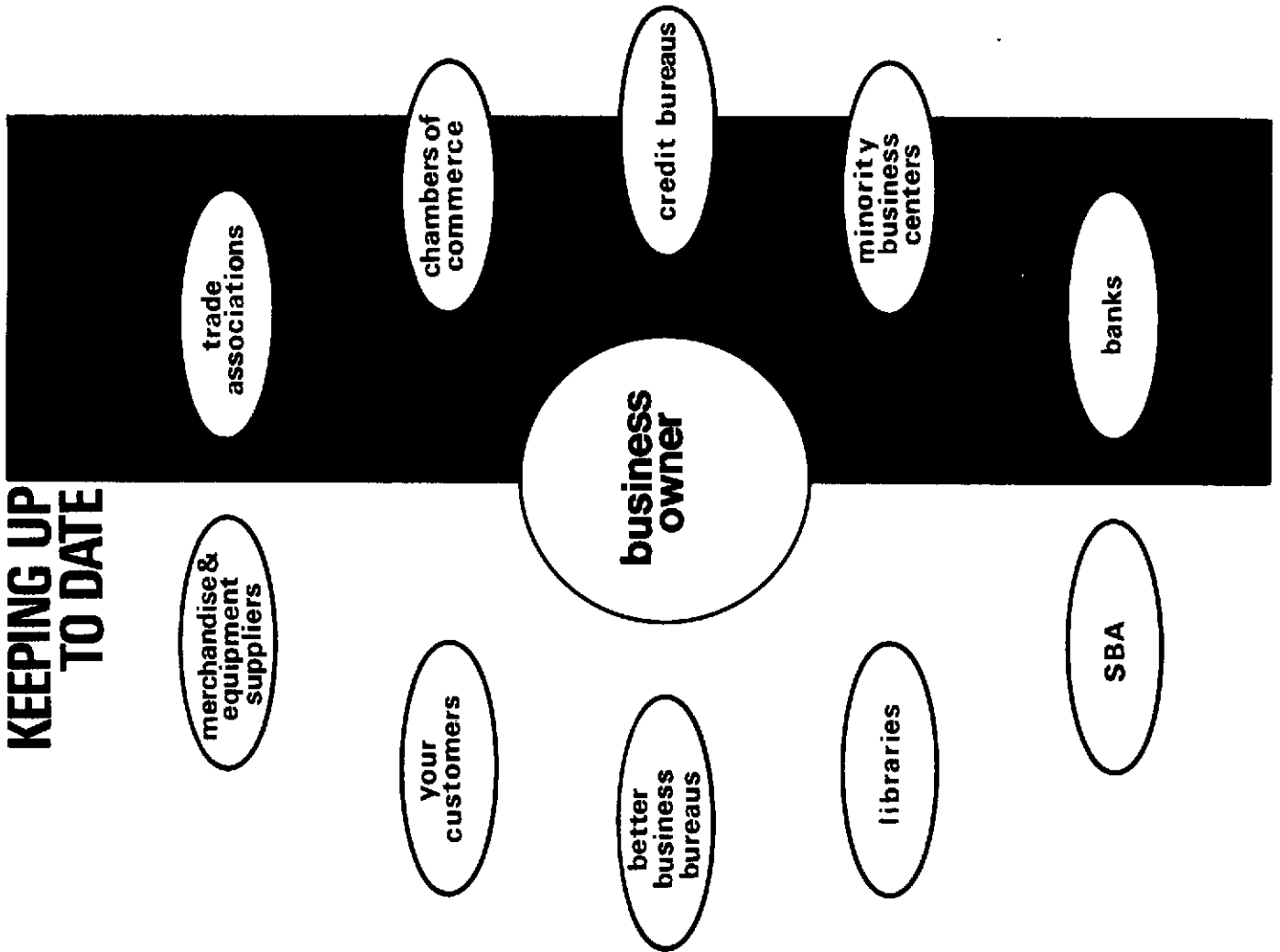
Minority economic and business development centers.

The United States Small Business Administration.

Visit your nearest United States Small Business Administration field office to consult with the business specialists. You will learn of other publications and sources of information which cannot be covered in this short book.

The cities in which offices are presently located are listed on page 95. Other locations are added or some of them are changed from time to time. Consult your telephone book for the address. Perhaps a small business booklet or leaflet has been prepared

KEEPING UP TO DATE



covering particular information about which you are interested. Lists of some of those already published appear on pages 96 and 97. Others are issued from time to time.

As a final step, before embarking upon your enterprise, review the checklist in the final chapter. You will find you have much work ahead of you in starting and managing your own business. But if you are the right person, you can succeed. Our American-free enterprise system has flourished because of the opportunities it offers to be boss, run the business, make the decisions, and keep the profits.

Checklist For Starting A Business

BEFORE ACTUALLY STARTING a business answer the following questions. The more of them you check as "yes," the better off you will be. All of them may not apply to your particular situation but, in all probability, most of them will. By the same token, the list does not cover everything. No list could for all types of situations in all kinds of businesses. You may wish to add some questions. Careful thought in advance will help to prevent mistakes and to avoid the loss of your savings. So many things must be considered that, unless some check list is followed, there is danger of significant matters being overlooked. And once you have started your business the urgency of day-to-day details reduces the opportunity for thoughtful consideration of all important questions.

Consider each question as it applies to your particular situation. Only after you have made an honest effort to answer a question favorably should you place a check mark in the right-hand column. Before deciding to ignore a question, completely satisfy yourself that it does not apply to your operation or that the action required is definitely not necessary.

Are You The Type?

Have you rated your personal qualifications using a scale similar to that presented in chapter 1 of this book? _____

Have you had some objective evaluators rate you on such scales? _____

Have you carefully considered your weak points and taken steps to improve them or to find an associate whose strong points will compensate for them? _____

What Business Should You Choose?

Have you written a summary of your background and experience to help you in making this decision? _____

Have you considered your hobbies and what you would like to do? _____

Does anyone want the services you can perform? _____

Have you studied surveys and/or sought advice and counsel to find out what fields of business may be expected to expand? _____

Have you considered working for someone else to gain more experience? _____

What Are Your Chances For Success?

Are general business conditions good? _____

Are business conditions good in the city and neighborhood where you plan to locate? _____

Are current conditions good in the line of business you plan to start? _____

What Will Be Your Return On Investment?

Do you know the typical return on investment in the line of business you plan to start? _____

Have you determined how much you will have to invest in your business? _____

check if
answer
is "yes"

Are you satisfied that the rate of return on the money you invest in the business will be greater than the rate you would probably receive if you invested the money elsewhere? _____

How Much Money Will You Need?

Have you filled out worksheets similar to those shown in chapter II of this book? _____

In filling out the worksheets have you taken care not to over estimate income? _____

Have you obtained quoted prices for equipment and supplies you will need? _____

Do you know the costs of goods which must be in your inventory? _____

Have you estimated expenses only after checking rents, wage scales, utility and other pertinent costs in the area where you plan to locate? _____

Have you found what percentage of your estimated sales your projected inventory and each expense item is and compared each percentage with the typical percentage for your line of business? _____

Have you added an additional amount of money to your estimates to allow for unexpected contingencies? _____

Where Can You Get The Money?

Have you counted up how much money of your own you can put into the business? _____

Do you know how much credit you can get from your suppliers -- the people you will buy from? _____

Do you know where you can borrow the rest of the money you need to start your business? _____

Have you selected a progressive bank with the credit services you may need? _____

Have you talked to a banker about your plans? _____

Does the banker have an interested, helpful attitude toward your problems? _____

check if
answer
is "yes"

Should You Share Ownership With Others?

If you need a partner with money or know-how that you don't have, do you know someone who will fit -- someone you can get along with? _____

Do you know the good and bad points about going it alone, having a partner, and incorporating your business? _____

Have you talked to a lawyer about it? _____

Where Should You Locate?

Have you studied the make-up of the population in the city or town where you plan to locate? _____

Do you know what kind of people will want to buy what you plan to sell? _____

Do people like that live in the area where you want to locate? _____

Have you checked the number, type and size of competitors in the area? _____

Does the area need another business like the one you plan to open? _____

Are employees available? _____

Have you checked and found adequate: utilities, parking facilities, police and fire protection, available housing, schools and other cultural and community activities? _____

Do you consider costs of the location reasonable in terms of taxes and average rents? _____

Is there sufficient opportunity for growth and expansion? _____

Have you checked the relative merits of the various shopping areas within the city, including shopping centers? _____

check if
answer
is "yes"

In selecting the actual site have you compared it with others by using a score sheet similar to the one shown in chapter 2? _____
Have you had a lawyer check the lease and zoning? _____

Should You Buy a Going Business?

Have you considered the advantages and disadvantages of buying a going business? (See chapter 3) _____
Have you compared what it would cost to equip and stock a new business with the price asked for the business you are considering buying? _____

How Much Should You Pay For It?

Have you estimated future sales and profits of the going business for the next few years? _____
Are your estimated future profits satisfactory? _____
Have you looked at past financial statements of the business to find the return on investment, sales and profit trends? _____
Have you verified the owner's claims about the business with reports from an independent accountant's analysis of the figures? _____
Is the inventory you will purchase a good buy? _____
Are equipment and fixtures fairly valued? _____
If you plan to buy the accounts receivable are they worth the asking price? _____
Have you been careful in your appraisal of the companies good will? _____
Are you prepared to assume the company's liabilities and are the creditors agreeable? _____
Have you learned why the present owner wants to sell? _____
Have you found out about the present owner's reputation with his employees and suppliers? _____

check if
answer
is "yes"

Have you consulted a lawyer to be sure that the title is good? _____
Has your lawyer checked to find out if there is any lien against the assets you are buying? _____
Has your lawyer drawn up an agreement covering all essential points including a seller's warranty for your protection against false statements? _____

Should You Invest in a Franchise?

Have you considered how the advantages and disadvantages of franchising apply to you? _____
Have you made a thorough search to find the right franchise opportunity? _____
Have you evaluated the franchise by answering the questions in chapter 4? _____

Have You Worked Out Plans for Buying?

Have you estimated what share of the market you think you can get? _____
Do you know how much or how many of each item of merchandise you will buy to open your business? _____
Have you found suppliers who will sell you what you need at a good price? _____
Do you have a plan for finding out what your customers want? _____
Have you set up a model stock assortment to follow in your buying? _____
Have you worked out stock control plans to avoid over-stocks, under-stocks, and out-of-stocks? _____
Do you plan to buy most of your stock from a few suppliers rather than a little from many, so that those you buy from will want to help you succeed? _____

check if
answer
is "yes"

How Will You Price Your Products and Services?

- Have you decided upon your price ranges? _____
- Do you know how to figure what you should charge to cover your costs? _____
- Do you know what your competitors charge? _____

What Selling Methods Will You Use?

- Have you studied the selling and sales promotion methods of competitors? _____
- Have you studied why customers buy your type of product or service? _____
- Have you thought about why you like to buy from some salesmen while others turn you off? _____
- Have you decided what your methods of selling will be? _____
- Have you outlined your sales promotion policy? _____

How Will You Select and Train Personnel?

- If you need to hire someone to help you, do you know where to look? _____
- Do you know what kind of person you need? _____
- Have you written a job description for each person you will need? _____
- Do you know the prevailing wage scales? _____
- Do you have a plan for training new employees? _____
- Will you continue training through good supervision? _____

What Other Management Problems Will You Face?

- Do you plan to sell for credit? _____
- If you do, do you have the extra capital necessary to carry accounts receivable? _____
- Have you made a policy for returned goods? _____
- Have you planned how you will make deliveries? _____

check if
answer
is "yes"

- Have you considered other policies which must be made in your particular business? _____
- Have you made a plan to guide yourself in making the best use of your time and effort? _____

What Records Will You Keep?

- Have you planned a system of records that will keep track of your income and expenses, what you owe other people, and what other people owe you? _____
- Have you worked out a way to keep track of your inventory so that you will always have enough on hand for your customers but not more than you can sell? _____
- Have you planned on how to keep your payroll records and take care of tax reports and payments? _____
- Do you know what financial statements you should prepare? _____
- Do you know how to use these financial statements? _____
- Have you obtained standard operating ratios for your type of business which you plan to use as guides? _____
- Do you know an accountant who will help you with your records and financial statements? _____

What Laws Will Affect You?

- Have you checked with the proper authorities to find out what, if any, licenses to do business are necessary? _____
- Do you know what police and health regulations apply to your business? _____
- Will your operations be subject to interstate commerce regulations? If so, do you know to which ones? _____
- Have you received advice from your lawyer regarding your responsibilities under Federal and state laws and local ordinances? _____

SMALL BUSINESS ADMINISTRATION FIELD OFFICES

- Agana, Guam
- Albuquerque, N. Mex.
- Anchorage, Alaska
- Atlanta, Ga.
- Augusta, Maine
- Baltimore, Md.
- Birmingham, Ala.
- Boise, Idaho
- Boston, Mass.
- Buffalo, N.Y.
- Casper, Wyo.
- Charleston, W. Va.
- Charlotte, N.C.
- Chicago, Ill.
- Cincinnati, Ohio
- Clarksburg, W. Va.
- Cleveland, Ohio
- Columbia, S.C.
- Columbus, Ohio
- Concord, N.H.
- Corpus Christi, Tex.
- Dallas, Tex.
- Denver, Colo.
- Des Moines, Iowa
- Detroit, Mich.
- Elmira, N.Y.
- El Paso, Tex.
- Fairbanks, Alaska
- Fargo, N. Dak.
- Gulfport, Miss.
- Harlingen, Tex.
- Harrisburg, Pa.
- Hartford, Conn.
- Hato Rey, P.R.
- Helena, Mont.
- Honolulu, Hawaii
- Houston, Tex.
- Indianapolis, Ind.
- Jackson, Miss.
- Jacksonville, Fla.
- Kansas City, Mo.
- Knoxville, Tenn.
- Las Vegas, Nev.
- Little Rock, Ark.
- Los Angeles, Calif.
- Louisville, Ky.
- Lubbock, Tex.
- Madison, Wis.
- Marquette, Mich.
- Marshall, Tex.
- Miami, Fla.
- Milwaukee, Wis.
- Minneapolis, Minn.
- Montpelier, Vt.
- Nashville, Tenn.
- Newark, N.J.
- New Orleans, La.
- New York, N.Y.
- Oklahoma City, Okla.
- Omaha, Nebr.
- Philadelphia, Pa.
- Phoenix, Ariz.
- Pittsburgh, Pa.
- Portland, Oreg.
- Providence, R.I.
- Rapid City, S. Dak.
- Richmond, Va.
- St. Louis, Mo.
- Salt Lake City, Utah
- San Antonio, Tex.
- San Diego, Calif.
- San Francisco, Calif.
- Seattle, Wash.
- Sioux Falls, S. Dak.
- Spokane, Wash.
- Springfield, Ill.
- Syracuse, N.Y.
- Washington, D.C.
- Wichita, Kans.
- Wilkes-Barre, Pa.
- Wilmington, Del.

check if
answer
is "yes"

How Will You Handle Taxes and Insurance?

- Have you worked out a system for handling the withholding tax for your employees? _____
- Have you worked out a system for handling sales taxes? Excise taxes? _____
- Have you planned an adequate record system for the efficient preparation of income tax forms? _____
- Have you prepared a worksheet for meeting tax obligations? _____
- Have you talked with an insurance agent about what kinds of insurance you will need and how much it will cost? _____

Will You Set Measurable Goals for Yourself?

- Have you set goals and sub-goals for yourself? _____
- Have you specified dates when each goal is to be achieved? _____
- Are these realistic goals; that is, will they challenge you but at the same time not call for unreasonable accomplishment? _____
- Are the goals specific so that you can measure performance? _____
- Have you developed a business plan, using one of the SBA Aids to record your ideas, facts, and figures? _____
- Have you allowed for obstacles? _____

Will You Keep Up to Date?

- Have you made plans to keep up with improvements in your trade or industry? _____
- Have you prepared a business plan which will be amended as circumstances demand? _____

For address and telephone numbers of the field offices, look under "United States Government" in the appropriate telephone directories.

SMALL BUSINESS MANAGEMENT SERIES

1. An Employee Suggestion System for Small Companies. 30 cents.
3. Human Relations in Small Business. 45 cents.
4. Improving Material Handling in Small Business. 30 cents.
7. Better Communications in Small Business. 45 cents.
9. Cost Accounting for Small Manufacturers. 75 cents.
13. The Small Manufacturer and His Specialized Staff. 30 cents.
15. A Handbook of Small Business Finance. 45 cents.
16. Health Maintenance Program for Small Business. 55 cents.
17. New Product Introduction for Small Business Owners. 40 cents.
19. Technology and Your New Products. 30 cents.
20. Ratio Analysis for Small Business. 35 cents.
21. Profitable Small Plant Layout. 55 cents.
25. Guides for Profit Planning. 35 cents.
27. Profitable Community Relations for Small Business. 45 cents.
29. Management Audit for Small Manufacturers. 35 cents.
30. Insurance and Risk Management for Small Business. 40 cents.
31. Management Audit for Small Retailers. 35 cents.
32. Financial Recordkeeping for Small Stores. 60 cents.
33. Small Store Planning for Growth. 50 cents.
34. Selecting Advertising Media. 70 cents.

NONSERIES PUBLICATIONS

Managing for Profits. \$1.50.
Buying and Selling a Small Business. 80 cents.

ORDERS for these publications should be placed with the Superintendent of Documents, U. S. Government Printing Office, Washington, D. C. 20402. On orders for 100 or more copies mailed to a single address, a 25 percent discount is offered.

STARTING AND MANAGING SERIES

1. Starting and Managing a Small Business of Your Own. \$1.05.
3. Starting and Managing a Service Station. 70 cents.
4. Starting and Managing a Small Bookkeeping Service. 55 cents.
5. Starting and Managing a Small Building Business. 75 cents.
9. Starting and Managing a Small Restaurant. 80 cents.
10. Starting and Managing a Small Retail Hardware Store. 60 cents.
11. Starting and Managing a Small Retail Drugstore. \$1.00.
12. Starting and Managing a Small Drycleaning Business. 70 cents.
13. Starting and Managing a Small Automatic Vending Business. 40 cents.
14. Starting and Managing a Carwash. 45 cents.
15. Starting and Managing a Swap Shop or Consignment Sale Shop. 45 cents.
16. Starting and Managing a Small Shoe Service Shop. 70 cents.
17. Starting and Managing a Small Retail Camera Store. 65 cents.
18. Starting and Managing a Retail Flower Shop. 55 cents.
19. Starting and Managing a Pet Shop. 30 cents.
20. Starting and Managing a Small Retail Music Store. 55 cents.
21. Starting and Managing a Small Retail Jewelry Store. 40 cents.
22. Starting and Managing an Employment Agency. 70 cents.
23. Starting and Managing a Small Drive-In Restaurant. 35 cents.

ORDERS for these publications should be placed with the Superintendent of Documents, Government Printing Office, Washington, D. C. 20402. A discount of 25 percent is offered on lots of 100 or more copies mailed to the same address.

RETURN TO TOOLS FOR NEW BUSINESSES

RETURN TO MAIN MENU

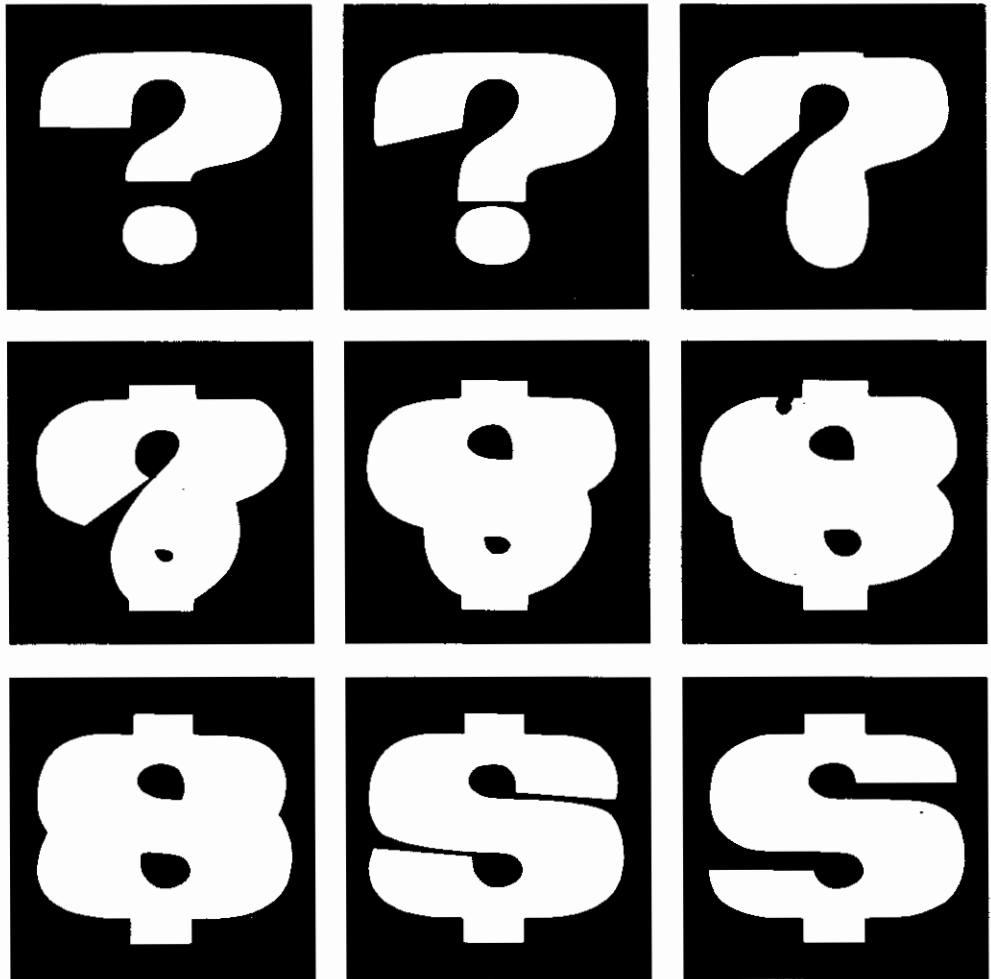
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Small Marketers Aid
U.S. Small Business Administration

Thinking About Going Into Business ?

By F.J. Roussel, Management Assistance Officer
and Rose Epplin, Public Information Officer for Management Assistance
U.S. Small Business Administration
St. Louis, Missouri



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Summary

To start and run a small business you must know and be many things. As one small business owner attending a conference put it: "When I came here, my business lost the services of its chief executive, sales manager, controller, advertising department, personnel director, head bookkeeper, and janitor."

This Aid, based on questions asked by people in small business or contemplating starting, suggests the many facets of running a small concern that each owner-manager must become familiar with. While the answers to the questions are hardly exhaustive of any of the subjects, they provide the background for questions you may need to ask before going into business, as well as suggesting sources of answers to those questions.

Introduction

Almost everyone considering it has dozens of questions about starting a small business. The only foolish questions, of course, are the questions that aren't asked. Yet, many times we don't have enough information to ask the right questions.

The questions in this Aid are drawn from participants in satellite telecasts to thirteen states in Appalachia from New York to Mississippi. Most of the questioners didn't own, operate, or manage small businesses. Their questions are typical of what's on the minds of potential business owners. You may have pondered similar questions, as you thought about becoming your own boss.

The questions fell generally into areas such as the steps in setting up a business, business regulations and taxes, marketing, and financing a new concern. In this Aid the questions have been grouped by subject.

Answers to the questions came from experts in the various areas. These experts included a lawyer, an accountant, a bank loan officer, several small business owners, and market researchers.

These answers, it is hoped, will help you as you approach deciding on becoming a small business owner. The questions may suggest areas that you need to explore further, aspects of starting and managing a small business that you hadn't considered before. They may suggest questions that you should find answers to before you invest your money, time, and effort in a small business.

Starting Out

1. If you have money but no particular business in mind, how can you get enough information on the best business to go into?

The best way of choosing your business venture is to look at your experience and educational background. A thorough review will provide leads on the business field you should enter—do what you know best. Even more important, you must like the business field you are going to

enter to bring the enthusiasm and self-confidence you need to make the business go. (SMA 71, S&M 1)*

2. What are the basic survival skills you need to run a business?

The basic survival skills include a working knowledge of basic recordkeeping; financial management; personnel management; market analysis; breakeven analysis; product or service knowledge; federal, state, and local tax knowledge; legal structures; and communication skills. (SBB 15, SBMS 32, SBMS 15, SBMS 20, SBMS 26, SMA 156, SMA 167, SMA 166, SBMS 25, SMA 142, SMA 144, MA 231)

3. What special obstacles do women entering business face, and how can these obstacles be overcome?

Women are at last making inroads into business, not only as executives but as owners. There are many obstacles, chief among them the doubts that lenders, suppliers, and in some fields, customers have about women's ability to run businesses. These can be overcome with self-confidence and a strong belief in your ideas. You should not be discouraged by being rebuffed by people who simply don't understand. As more and more women enter business and succeed, the process will become easier and easier.

4. What are the most important factors that cause small business failure?

There are, of course, many reasons for the failure of new small businesses. One way of looking at the causes is to remember that a new business is starting at zero momentum: newly entering a market, having to establish supplier relations, finding proper financing, and training employees. To coordinate all these facets and start them simultaneously is a tremendous job. If you don't have experience and management capability, success won't be very likely. You'll also find that undercapitalized businesses, those without enough cash to carry them through the first six months or so before the business starts making money, don't have good survival prospects. In such cases, even businesses with good management can founder.

5. If you're trying to buy a going service business, how can you figure a reasonable price for the business that takes into account good will and business contacts in addition to the value of equipment and inventory?

There are many methods, but basically what you're trying to do is set a value on the assets and earnings record of the firm. The simplest way is to determine the "payback period," usually two or three years. That is, the net profit for two years would equal the good will value. A more complicated and accurate method called the "net present value" method, is based on the cost of capital and a risk factor. For that method an accountant's help would be valuable. **Buying and Selling a Small Business** (stock #045-000-00003-6, available from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402) may be helpful here.

6. What kind of a market study should you do before deciding to buy a radio station?

Determining the price of any business is difficult. A Bank of America publication, "How to Buy and Sell a Business," could be of help. (You can get their order form by writing Bank of America, Dept. 3120, P.O. Box 37000, San Francisco, CA 94137.) Now, for a radio station specifically, you can get figures on the total revenue of all stations in the area (that is, advertising revenue) from the Federal Trade Commission. You should also get the percentage of the total market that the station you're considering has. You must also determine the potential market for the area in advertising dollars. Finding out the total number of businesses by line and size in the

*The references in parentheses refer to other Small Business Administration publications that deal with the topics discussed. You will find them listed in the "For Further Information" section at the end of this Aid. You will also find instructions on how to get these publications in that section.

area covered by the station and their advertising expenditures would give you some insight. Really, you'd study the market like this for buying any business.

Regulations and Licenses

7. How do you find out what the federal, state, and local regulations are for the type of business you're going into?

The regulations for businesses may vary for different lines of business and certainly will from state to state. You can find out by contacting the various levels of government like the Internal Revenue Services for federal tax regulations, but your best bet is to go to your local SBA office. They can give you specific information for all levels of government. Local chambers of commerce can also often help you in this area.

8. What kind of registrations and licenses are generally required?

Obviously, as we just discussed, there are specific requirements in each state and locality, but it is possible to list the kinds of basic licenses and registrations a new business will need:

Local—A business license from city, town, or county, depending on your location, will be necessary. In addition, you'll have to meet zoning laws, building codes, and similar regulations.

State—In most states, if your business isn't a corporation and your full name isn't in the name of the business, you'll have to register under what's called the fictitious name law. You should also file for a sale and use tax number. In some lines of business (like liquor stores, barber shops, real estate offices) specific licenses are needed.

Federal—You'll need to contact the IRS for an employer's identification number and a "Going Into Business Tax Kit."

9. What's this OSHA you hear about?

OSHA is the U.S. Labor Department's Occupational Safety and Health Administration. It is responsible for helping make work premises safe and healthy for employees. Since change in this area is frequent, it's best to contact OSHA itself. They have a number of publications aimed at small business.

10. What are some specific legal requirements for mail order businesses which might not apply to other businesses? The business under consideration would not use direct mail advertising, rather it would advertise in magazines and newspapers.

You should contact the Federal Trade Commission and get the FTC's list of publications; you can then order those that pertain to your particular business. If you're selling food, you must get in touch with the Food and Drug Administration. (SBB 3, SBB 9)

11. How do you go about finding suppliers and manufacturers?

Most suppliers are interested in adding new accounts. A prime source for finding suppliers is the **Thomas Register**. It lists manufacturers by categories and geographical area. Most libraries have copies. For local suppliers don't overlook the yellow pages and your state's directory of manufacturers. If you know the product line and manufacturers, a letter or phone call to the companies will get you the local distributor/wholesaler. In some lines, trade shows are good sources of getting suppliers and looking over competing products.

12. Should a sole proprietor with no employees have disability benefits?

If you can afford it, it's a good idea. It makes sense to protect the income of a small sole proprietorship with income maintenance insurance. Ask your insurance agent about various plans. (MA 222, SMA 148, SBMS 30)

13. How often should a small grocery store take an inventory?

A physical (can by can) inventory should be taken at least once a quarter. If your fiscal year ended December 31, you'd take one then and subsequently on March 31, June 30, September 30, and so on. If you have an automated ordering system, you can take a physical inventory less frequently.

Since local conditions may vary, get recommendations from your suppliers. Aggressive wholesalers should be able to give you timely information and help. (SBMS 32)

14. How long does it take a new business to establish a good public image?

A good public image takes a long time to establish (and only minutes to lose). There is no set formula, but a good image depends on:

- The service, products, and customer treatment you provide;
- The market you're in;
- How you stack up against your competitors;
- The quality of your public relations and advertising programs.

If you're new to a market—and if you do what you say you're going to—you may establish an excellent reputation in 18 to 24 months. (SMA 124, SMA 128, SMA 163, SBMS 34)

15. How do you find a good lawyer?

As with most personal services, you must have rapport with your attorney. The best way to determine this is to talk to lawyers by phone or visit them before you make a selection. Get recommendations from friends, your banker, or lastly a "lawyers reference service." You're looking for someone you can trust and who will take an interest in you and your business. (SMA 118)

16. Do you need a lawyer to start a business?

No, but it's wise to get the best advice possible when you're starting out. An attorney is one source of the expertise you'll need to draw on. In some states you need an attorney to form a corporation. Check your state law.

Form of Business

17. What form of business do you recommend for a new business?

Each legal form, sole proprietorship, partnership, or corporation, has its advantages and disadvantages. The one you should pick depends on your circumstances, including:

- Your financial condition,
- The line of business you're entering,
- The number of employees,
- The risk involved,
- Your tax situation.

Don't assume, if you plan a one-person business, that sole proprietorship is the way to go. See your lawyer. (MA 223, MA 231)

18. I've heard that the Subchapter S corporation and "1244" stock offerings are designed for small business. Could you explain them?

Essentially, a Subchapter S corporation treats profits or losses by the corporation as ordinary income or loss to the individual stockholder. A full discussion of the Subchapter S corporation can be found in Internal

Revenue Service Publication Number 589.

Internal Revenue Code Section 1244 allows an individual to treat losses on the stock of a "small business corporation" as deductions against ordinary income. IRS Publications Number 542, 544, and 550 have sections discussing this regulation.

The rules for taking advantage of these devices are quite specific and a little involved. You should get the IRS publications. You can get copies by getting in touch with your local IRS office. It's listed in your local directory under "U.S. Government." It would be a good idea to discuss these topics with your accountant, lawyer, or other business advisor.

19. Is it a good idea to incorporate your business in a state other than the one in which you plan to do business?

No. For small businesses it's normally best to incorporate where you are going to do business. If you incorporate out of state, you'd have to register as a "foreign" corporation.

Taxes

20. Is a sales person, paid on a commission basis, treated like an hourly wage sales clerk with respect to tax withholding?

Yes, unless the sales person is a manufacturer's rep or is in business as an independent contractor.

21. Concerning a sales representative on straight commission, is it mandatory to take out FICA taxes (social security) and withholding taxes?

Yes, if the rep is an employee of the company. The deciding factor is whether or not the rep is an independent contractor in business for herself or himself.

22. What about casual labor and taxes?

If an individual is your employee, you must withhold taxes. The only exception is if the labor is on an independent contract basis. Then the independent contractor withholds taxes and files all appropriate forms.

23. Say you have a partnership between two people and the spouse of one of the partners keeps the books, is the spouse an employee, even if he or she isn't paid?

If he or she weren't paid, such a bookkeeper could be classified as a nonemployee. Thus, since there are no wages, there are no withholdings for income tax, FICA, and the like. If you paid him or her, it would be like any other employee for tax purposes.

24. If I live in one state but go to other states to sell goods, how do I handle taxes?

As a business in another state, you'd have to collect and remit taxes to the state where the goods are sold. Most states have forms to remit these collected taxes. These sales should be kept separate from sales in your home state, since you would not pay home state sales tax on them. (SMA 142)

25. How is a corporation taxed if all stockholders work as salaried employees and all profits are applied to the liquidation of the original purchase debt?

Stockholding employees are taxed on salaries like any other employee. The purchase price of a corporation is not a debt to the corporation, but an investment by the stockholders who bought the business. Thus, profits can't be used to liquidate this price. Profits may be used to retire corporate debts and, thus increase net worth, but all principal payments are taxable profits and taxed according to the corporate tax structure. If your net earnings before taxes approach \$100,000, check with

the IRS. It may be necessary to pay dividends, since nonpayment could be considered a technique for avoiding dividend taxation.

The Market

26. How can you get the census data you need to estimate the market for your store or service in a given locality?

You can get census information from the **Bureau of the Census in the U.S. Department of Commerce**, as well as through chambers of commerce and various state and local agencies that deal with business. You can find this information in your local public library and get it from nearby colleges and universities, too. (SMA 154, SMA 167, SBB 9, SBMS 22)

27. How can you find out what the prevailing costs are for a service business in your market area?

One way is simply to call competitors and ask their prices. Their prices will give you a lead. You could ask competitors' customers for the same information if you didn't want to go directly to the competition.

28. How do you go about determining the market for a mail order business?

The principles of determining market share and market potential are the same no matter how large the geographical area. You must first determine a customer profile, the size of the market, and the number of competitors. You could also use a readership survey given to you by a magazine in which you intend to advertise. (SBB 3, SBB 9, SBB 12, SBB 13, SBB 29)

Pricing

29. How do you figure markup and markdown?

Markup (markon) is the original amount that the merchandise is marked up. Markup as a percentage (also called gross margin rate) is figured as a percentage of sales. For example, say the cost of merchandise is \$10 and you want a 20% markup; what is the selling price (SP)? By definition we know that markup as a percentage is given as a percentage of sales. Thus, our cost must be 80% of the selling price (100% selling price - 20% desired markup).

The formula is:

$$SP = \frac{\text{Cost}}{\text{Cost as \% of SP}}$$

$$SP = \frac{\$10.00}{.80}$$

$$SP = \$12.50$$

So, our selling price is \$12.50, cost \$10.00, and markup \$2.50 or 20% of the selling price.

Markdown (discount) is a reduction of selling price below the original sales price. Assume the item is marked down to \$11.25. The markdown is \$1.25 or a 10% markdown (\$1.25 markdown divided by \$12.50 original selling price). (SMA 158)

30. How would you go about establishing price guidelines for a business renting items to customers?

Pricing is based normally on a combination of cost and market competition. Trade associations are a prime source of such information. Check your library for the **Encyclopedia of Associations** with which you'll be

able to find the association dealing with your business.

Finances

31. What is the average expected net profit for small business?

Average net profits vary with the type of business—retail, wholesale, service, manufacturing, construction. They also vary for the type of business structure—proprietorship or corporation. Dun & Bradstreet and Robert Morris Associates publish ratios which give you these figures, as well as lots of very useful cost information. (SMA 165, SBMS 15, SBMS 20)

32. Would you explain the meaning of "rate of return on investment"? How is it different from net profit? Is it different from return on assets employed?

Net profit (before taxes) is basically total sales for a specific period less cost of goods and operating expenses during that period. (For a retail business, cost of goods would be your cost of merchandise sold.) Net profit is a function of both rate of return on investment (ROI) and return on total assets. ROI is net profit divided by the capital invested by the owners of the company. ROI is used to measure the effectiveness of management in attaining the owners' desired return on their investment. Generally, the larger the ROI, the more attractive a company is to potential investors.

Return on total assets is the net profit divided by total assets. This measures the net profitability of the use of all resources of the business. It is another tool for measuring management effectiveness in the use of all resources borrowed and equity. (SBMS 20, SBMS 25)

33. Does a bank require absolute top credit references from loan applicants?

The better the credit references the greater the possibility of loan approval.

34. If I estimate my start-up cost at \$50,000 and can't put up anywhere near the \$25,000 that I've been told is what I should have for my share, am I wasting my time even filling out a loan application? (MA 170)

In all probability you would be, although there are some exceptions. For example, it might be possible to get a loan under your circumstances if you were buying a business that's already operating well enough to provide sufficient profits to cover its obligations and the loan. Furthermore, if the applicant is the present manager who has made this business go, the chances of getting such a loan are much better.

Help!

35. Getting money is difficult; keeping it may be even more difficult. Where can I get assistance in managing my business?

Your accountant and bank can provide financial counseling which can be very helpful in starting and managing your business. They can also give you invaluable information on the local area and your market that can be critical in making decisions in your business.

The U.S. Small Business Administration has many management assistance programs. It provides counseling in the areas just mentioned. Most importantly, SBA can provide the kind of long term management assistance you need to make your business a success. (MA 4)

For Further Information

The following Small Business Administration publications are available free from your nearest SBA field office or from SBA, Washington, DC 20416:

- MA 4**—Management Assistance
- MA 5**—Women's Handbook

The following Small Business Administration publications are available free from SBA, P.O. Box 15434, Fort Worth, TX 76119:

- MA 170** —The ABC's of Borrowing
- MA 222** —Business Life Insurance
- MA 223** —Incorporating a Small Business
- MA 231** —Selecting the Legal Structure for Your Business
- SMA 71** —Checklist for Going Into Business
- SMA 118**—Legal Services for Small Retail and Service Firms
- SMA 124**—Knowing Your Image
- SMA 128**—Building Customer Confidence in Your Service Shop
- SMA 142**—Steps in Meeting Your Tax Obligations
- SMA 144**—Getting the Facts for Income Tax Reporting
- SMA 148**—Insurance Checklist for Small Business
- SMA 154**—Using Census Data to Select a Store Site
- SMA 156**—Marketing Checklist for Small Retailers
- SMA 158**—A Pricing Checklist for Small Retailers
- SMA 163**—Public Relations for Small Business
- SMA 165**—Checklist for Profit Watching
- SMA 166**—Simple Breakeven Analysis for Small Stores
- SMA 167**—Learning About Your Market
- SBB 3** —Selling by Mail Order
- SBB 9** —Marketing Research Procedures
- SBB 12** —Statistics and Maps for National Market Analysis
- SBB 13** —National Directories for Use in Marketing
- SBB 15** —Recordkeeping Systems—Small Store and Service Trade
- SBB 29** —National Mailing-List Houses

The following SBA publications are sold by the Superintendent of Documents, Government Printing Office, Washington, DC 20402. (For current prices and a mail order form, write SBA, P.O. Box 15434, Fort Worth, TX 76119 and ask for SBA 115B—For-Sale Booklets.)

- SBMS 15** —Handbook of Small Business Finance
- SBMS 20** —Ratio Analysis for Small Business
- SBMS 22** —Practical Use of Government Statistics
- SBMS 25** —Guides for Profit Planning
- SBMS 26** —Personnel Management Guides for Small Business
- SBMS 30** —Insurance and Risk Management for Small Business
- SBMS 32** —Financial Recordkeeping for Small Stores
- SBMS 34** —Selecting Advertising Media
- S&M 1** —Starting and Managing a Small Business of Your Own
- Nonseries**—Buying and Selling a Small Business

RETURN TO TOOLS FOR NEW BUSINESSES

RETURN TO MAIN MENU