LONG-RANGE PLANNING IS A USEFUL TOOL FOR A

SMALL GROWTH COMPANY

A Thesis

Presented to

the Faculty of the Division of Business and Economics

San Fernando Valley State College

In Partial Fulfillment

of the Requirements for the Degree

Master of Science

by

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June 1962
APPROVED by thesis committee

major adviser
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CHAPTER I

INTRODUCTION

Statement of the problem.—In today's business era marked by ruthless price competition, astronomical advertising budgets, nation-wide distribution systems, highly concentrated economic power, and staggering advances in technology, the small concern is laboring against formidable odds.

There is no panacea by which a small business can circumvent the inherent drawbacks of size. Instead there are numerous individual remedies which can be prescribed for the small enterprise. Dun and Bradstreet attributes most business failures to incompetent management. In a single work it would be an arduous task to educate and increase the competence of small business managers. The sagacious approach is to present a solution to the major area of management incompetence: the area of long range
It is difficult to conceive that a problem of this magnitude has not been thoroughly explored and the findings published in unequivocal form. The problem has been explored, but the publication in a simplified useful form is yet to be accomplished. The Small Business Administration lists numerous publications to advise the small business manager, but all of these publications together will not give the small business manager a guide to long-range planning. The American Management Association has made great strides in this area, but they also have failed to inscroll in one single work a long-range planning guide for the small business manager.

In other words, there is a great necessity to provide the small business manager with a set of simple guides, within the capabilities of the small firm, that will enable him to develop long-range plans. The successful operation of any business, large or small, requires management planning, not only for today but for the future.

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2 See Management Aids for Small Business published by the Small Business Administration.

3 Ibid.
there is evidence in the growing number of non-governmental publications in this field that this problem is being given increased attention by industry. Though it is doubtful if there is one single factor to which growth and success can be attributed, history proves that the successful operation of any business, large or small, is greatly dependent on management planning.4

Importance of the problem.—Appley, in his preface to Management for the Smaller Company, has definitively stated that the essential ingredient in company survival—at any size level—is effective, enlightened management. He further defines the enlightened manager as the able executive who does not wait for things to happen but makes them happen.5 Eugene Benge says planning is forcing things to happen that would not otherwise occur.6 Koontz and O'Donnell substantiate this premise.7 Planning precedes all

4Ibid.


other management principles. Koontz and O'Donnell say:

Without planning, a manager would not have the activities to organize, would not require a staff, would have no one to direct and would have no need to control.\(^8\)

From these and other authorities it is established that planning is a major factor in a company's success.

The Failure Index.—As competition becomes more aggressive, many of today's existing firms and more than half of the new enterprises will fail. According to Dun and Bradstreet the pattern will be similar to that shown in Table 1.

**TABLE 1**

**AGE OF BUSINESS FAILURES IN 1958**

<table>
<thead>
<tr>
<th>Number of Firms</th>
<th>Age in Years</th>
<th>Percent of Failures</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>96</td>
<td>1</td>
<td>3.5</td>
</tr>
<tr>
<td>79</td>
<td>2</td>
<td>17.4</td>
</tr>
<tr>
<td>63</td>
<td>3</td>
<td>16.2</td>
</tr>
<tr>
<td>51</td>
<td>4</td>
<td>11.4</td>
</tr>
<tr>
<td>43</td>
<td>5</td>
<td>8.7</td>
</tr>
</tbody>
</table>

Source: The Failure Record Through 1958, Dun and Bradstreet.

\(^8\)Ibid.
Of all new businesses, 3.5 per cent fail in the first year. The second and third years are the most hazardous with 17.4 per cent and 16.2 per cent failing respectively. By the end of five years less than half of the firms are still in business. The majority fail, according to Dun and Bradstreet, because of incompetence. The reason for this incompetence according to Ewing W. Reilley, President of the McKinsey foundation for Management Research, is:

In business, short term success can be achieved through shrewd intuitive decision making, successful opportunism, personal sales ability, leadership and drive, and the like, but increasingly, long-term success in adjusting to changing conditions and continuing growth and profitability are dependent on careful, strategic, long-range planning.

For a firm to attain success in the long term, it must: (1) establish objectives; (2) formulate plans to achieve its objectives; and (3) enforce and control its plans. The implications are clear; to stay competitive managers must plan.

Hypothesis

The purpose of this thesis is to elucidate the

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problem and present a useful tool for the small business manager.

**Hypothesis.**—An effective program of long-range planning can be developed for or by the small company.

**Test.**—Guides for long-range planning, with minimum complexity and without excessive detail, consist of the analyses and establishment of:

1. Sales forecasts
2. Manpower requirements
3. Facilities requirements
4. Financial requirements

The set of detailed guides and the related analysis, to be presented here, are within the capabilities of the small business and will serve to reduce the possibilities of failure and increase the probability of growth. The four guides presented above are by no means plenary. To compensate for this, each will be fully explored in numerous subguides arranged in a logical sequence. The test will encompass a review of the methodology, an analysis of hypothetical situations, and a presentation delineating the results of the analysis.

In this work formalized planning will be advocated: in following the stipulated guides, the manager must write out his plans. This approach will not only force him into a re-examination but will serve generally to stimulate his
thinking.

Philosophy of Approach

The approach by necessity must be uncomplicated and simplified enough to be within the realm of the small business manager's perception.

Awareness of the need.—Small companies, in spite of the numerous aids provided by governmental agencies, are haphazard in their long-range planning procedures compared to the capabilities, awareness, and planning specialization evidenced by the industrial giants.\textsuperscript{11}

Herman Loy, President of H. W. Loy and Company, in an article in \textit{Management for the Smaller Company}, refers to a survey of small business presidents:

Conspicuous of the replies was the fact that the most successful "growth" companies were paying relatively more attention to the essential function of long-range planning: those in trouble, very little.\textsuperscript{12}

Loy further states that lack of planning is generally attributed to lack of awareness.


The small enterprise by its very nature is vitally more interested in doers than planners, more concerned with experience than with new approaches to management planning.

Size as an advantage.—The small concern cannot attempt to plan in the same manner as its larger counterparts. Modified planning techniques must be employed to compensate for the lack of specialized skills and to cope with the varying degree of problems.

Because of the smaller scale of activities, sources of information will vary. Whereas the industrial giant may enlist the services of a market consultant (at a great expense) to develop an insight into geographic population trends, the small company, concerned with a decisively more limited area, may be able to obtain its relative information from the local chamber of commerce (at no cost).

The approach.—The small company needs a stimulating approach to long-range planning, an approach that must accomplish two things:

1. Develop the manager's awareness of long-range planning and its benefits.
2. Provide a set of uncomplicated guides the manager may follow.

The small businessman needs an approach that is simple and expedient, a technique that is flexible yet accurate, and a plan that will impress upon him the obvious benefits of
long-range planning.

The approach of this thesis is to present, for the small business manager, a plan in the form of simplified, sequential operations, the execution of which will lead to the development of a long-range plan.

The majority of the text will be patterned toward a manufacturing concern with conclusions that will relate to other types of enterprises.

Definitions of Terms

Planning.--Planning is defined as the forcing of things to happen that would not otherwise occur through the establishment of objectives, the selection and analysis of facts, and the relation of these facts to a course of action.\textsuperscript{13} Planning is, as George B. Galloway has so effectively said, "organized foresight plus corrective hindsight."\textsuperscript{14}

Long-range planning.--For the purpose of this thesis the long-range planning term will be five years. Three to five years appeared to be the most common term for long-range planning according to the National Industrial

\textsuperscript{13} Koontz and O'Donnell, p. 423.

Conference Board's Survey. At Minneapolis Honeywell, a report to management defined long-range planning as estimating, anticipating, and programming the future requirements for a five year period.

**Intermediate planning.**—Intermediate planning is a continuing interpretation of management aims for utilizing the tangible and intangible assets of a company. In an endeavor to assure continuity, growth and profits over a period of one to five years.

**Short-range planning.**—The short-range planning period is arbitrarily limited to six months or one year, usually broken into quarters.

**Small company.**—The Department of Commerce defines the small manufacturer as one with fewer than one hundred employees. The small wholesaler as one with sales volume of less than $200,000.00 and the small retailer and service organization as those with less than $50,000.00 sales volume. The Securities and Exchange Commission defines small business

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18 Koontz and O'Donnell, p. 442.
as having less than $250,000.00 in assets. The Small Business Administration defines a business as small if it is not dominant in its field and is independently owned and operated. The number of employees and dollar volume of the business are also considered in determining whether a firm is small business. The maximum number of employees and dollar volume may vary from industry to industry. The maximum number of employees may vary from two hundred and fifty to one thousand. The Small Business Administration's general definition is any business concern not otherwise defined in the SBA regulations is small if its number of employees does not exceed five hundred persons. The Committee for Economic Development states that small business will meet two or more of the following specifications:

1. Its management is independent, and frequently the managers are also owners.

2. Ownership is held and/or capital supplied by an individual or small group.

3. The company's area of operations is usually local, with one plant and home office, although its market need not be so.

4. The company's small size is relative to its industry as a whole.¹⁹

The "size" is a matter of opinion. In this thesis a distinction shall be made between the industrial giants and the small entrepreneur. The reader, from the material presented, can best select for himself the degree of smallness to which the information is applicable.

**Growth company.**—Graham and Dodd in their work describe a growth company as follows:

1. Those companies whose earnings move forward from cycle to cycle.

2. A separate concept is grounded on the expected growth of the industry as a whole. Such growth industries in 1950 would include T. V., Air Transport, Air Conditioning, and most branches of the Chemical industry.²⁰

Massachusetts investors' Growth Stock Fund define a growth company:

Those whose management efforts results in expanded markets and thus increases the prospects for future earnings.²¹

When a firm's management, under dynamic management, produces better-than-average earnings, investors regard the company


as a growth company. Thus, the foregoing, growth companies may be defined as those whose performance (sales) is better than the average for their industry.

Company objectives.---The company objectives are the basic plans or goals of the firm. Objectives are targets, the end results of planning. Objectives are destinations, the purpose of planning. Objectives may be updated and changed as the conditions of the business and the factors effecting the business also change.

Definition of Functions

Sales.---Sales is that omnipotent function charged with the responsibility of determining the location of markets, selecting channels of distribution, dividing the total market into branch or dealer areas, pricing the product, determining sales incentives, establishing advertising policies, setting sales policies and developing sales forecasts and budgets. The sales function plans, directs, and controls the activities of the sales personnel.


23Koontz and O'Donnell, p. 430.


and in addition coordinates and engages in market research, advertising policies, and customer relations. This thesis is primarily concerned with that portion of the sales function that deals with product planning, distribution, and forecasting.

**Finance.**—The finance or accounting function is responsible for the collection and allocation of cost and expenses involving the summarization of records, preparation of reports and studies, and monetary trends. The finance function interprets the data supplied by other departments, analyzes forecasts, and establishes budgets and capital requirements.

**Manufacturing.**—Manufacturing is responsible for producing the company’s end product in accordance with specifications established by engineering, and within the limits as specified by the quality control function. Manufacturing must procure the necessary materials, control them and store them. The allocation of labor and the efficiency of production are also functions of manufacturing. The determination of facilities and equipment

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requirements, manpower requirements, and efficient production methods for the current and long run basis are a function of manufacturing. In this thesis the quality control function will be considered as part of the manufacturing function.

The aforementioned definitions will adequately serve the purpose as a base of planning. It is not intended to imply that other functions are not required in the planning process but the prime concern lies with these three because all three are prime concern of the small business manager.

The long-range planning function in large companies usually reports to or is coordinated by the top executive level. In the small company since there rarely is a planning department the responsibility must be assumed directly by the managers of the business or it is not assumed at all. The planning function, in order to operate at optimum efficiency, must have top management authority to do the job.

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A program to follow.--From discussions in the first chapter, it can be concluded that a business attains its potential growth as the management determines the direction the business should take, the principles for which it stands, and the policies which are to guide it. While these are a firm foundation upon which to base plans they are of little value unless the organization making up the primary management of the business defines its goals and ultimately constructs a plan and program for attaining these goals. To do this a definite program must be followed. The firm must first establish the overall corporate objective and establish company policies, then augment them with a plan—a road map which the firm is to follow and which will result in the attainment of the objectives within the limits of the policies.

The degree of planning.—A vital step to effective
planning is the need to determine the degree to which one should plan and the detail that should be encompassed. Another important factor to consider, in addition to the purpose of the plan, is the people who are to implement the plan. Appley refers to managing as doing things through other people. If the people who are to use the plan are not in accord with the type, method, or purpose of the plan, it will have little chance of succeeding.

Advantages and Limitations of Planning

Although planning, like all other things is not perfect, authorities believe that the advantages do outweigh the disadvantages.

Advantages of planning. In general, planning sets up an orderly approach to a consideration and selection of alternatives, aids in forecasting problem areas, provides for corrective action on a planned basis, reduces unproductive work, defines goals and achievements, and plots a course of action. To quote an authority, Terry says:

The advantages of planning are numerous. First, planning makes for the utilization of purposeful and orderly activities. All efforts are pointed toward

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2Established in author's Bibliography.
desired results and an effective sequence of efforts is accomplished.\textsuperscript{3}

The greater extent to which the planning is carried, the more orderly the activity will be. But this can be overdone to an extent where freedom to operate may be hindered and the plan inflexible. Planning requires judgment, decision, and constant revision. There is a correctly tailored degree to every plan for each situation. A major factory rearrangement may require a very detailed plan, including time schedules in minutes, while another plan may be very general with time schedules in much longer periods of time.

\textbf{The purpose of the enterprise.--}The establishment of objectives should be synonymous with the purpose of the enterprise and presupposes planning. Good planning as a first principle forces the selection of objectives and prime purposes for each phase of the operation. Planning sets the stage and becomes the basis for all the other activities of organizing, staffing, directing and control. Consequently the development of a plan forces the consideration of alternatives. In fact testing of the various alternatives is a purpose of the plan. In this way the decision is narrowed through the application of analytical thought.

It must be remembered that the business organization is a flexible entity constantly changing and often repeating itself in cycles. This cyclical aspect of business may be predetermined through the application of good planning. Often a seasonal decline or rise in business cannot be avoided but adequate planning will anticipate it.

Unproductive work is minimized as a result of planning. The activities to be undertaken are re-examined and allocated so that only those activities that are necessary and in proper amounts to accomplish the desired end are undertaken. ⁴

A final advantage of proper planning forces management to write out its plans. Just writing them forces a re-examination and resultant improvements. ⁵ Thus an opportunity is provided for others to review the plans in a more thorough manner than if they are stated verbally.

Limitations of planning.—As for the limitations of planning, they are not so serious as to deter the planning function but they should certainly be realized by all those associated or effected by planning. First of all, because a good deal of planning is based on estimates of future conditions, the plan can only be as good as the

⁴Terry, p. 436.

estimate. Those involved in planning should be constantly evaluating their estimates and attempting to advance the forecasting techniques.

Another disadvantage of planning comes from the very nature of business in a dynamic economy characterized by constant change: a plan could very well be outdated before it is even implemented. New problems will constantly arise before the current ones are solved. 6 But after all the purpose of planning is to foresee problem areas before they occur. A good plan properly administered will in most cases combat this limitation.

Another limitation is the cost and time involved, two factors which many believe are better spent in doing rather than planning. These objectors further point out that the cost of planning is in excess of its actual contribution. 7 It must be admitted that a certain amount of planning is chance and speculation. 8 The cost of planning is admittedly hard to justify in quantitative terms and the actual cost is difficult to measure. Also, who can say that the results would not have been obtained

7Terry, p. 122.
without the expense of formalized planning?

Inflexibility of the organization is argued by some as another major limitation of planning. A good plan has built-in flexibility and provides for alternative courses of action. A formalized plan could dictate the pattern of operation thus forming a rigid base but this certainly is not the intention of a plan nor should management allow this to happen.

Finally one of the frequently encountered disadvantages of planning is the lack of understanding of the planning concept by those in operational positions. A major part of the planning personnel's job is one of "selling" this concept—of informing management of both advantages and disadvantages of planning, a promotion function without which the best plans will be received disinterestedly.

Problems of a Small Company

Business failures.—The very nature of the small company makes it prone to failure. According to Dun and Bradstreet, new businesses are started at the rate of two thousand daily with withdrawals of eighteen hundred daily. Dun and Bradstreet says:

9 Koontz and O'Donnell, p. 536.

The majority of small companies are one-way oriented, that way being the way of the owner-manager; thus the ills of poor management are ever present.\footnote{\textit{Ibid.}}

A contributing factor to managerial incompetence is the fact that many small businesses are started on the "idea" of the owners. Though the owners may be astute enough to start a business based on their ideas they may be thoroughly lacking in the basic fundamentals of business management.

A survey conducted by a management consulting firm in the San Francisco area concluded:

Most small business failures are the outcome of internal management difficulties. Only in a minority of the cases could failure be attributed to external courses beyond the control of the managers.\footnote{\textit{Ibid.}}

\textbf{Today's economy.}—During the present decade, a rapidly expanding economy has paradoxically resulted in a contraction of opportunity for smaller enterprises. Mergers and acquisitions have taken their toll while inflation has imposed a heavy burden on those unable to adsorb the soaring costs. Federal income taxes drain earnings that are necessary to finance normal growth, without which the small concern is doomed to lag behind its better financed, larger-sized

Executive manpower.—The shortage of executive manpower is another imminent problem. The small enterprise may lack a reserve of administrative talent coupled with the inability to provide a secure future to today's job candidates who have been brought up under wartime uncertainties and who are likely to forsake an opportunity to display imagination and initiative in favor of job security found in the larger concerns. In addition, the average small enterprise lacks both time and capital to support Research and Development functions that are so vital to business propagation. As a result the urgency of the day-to-day operation and the limited number of executives can effectively deter proper administration and planning. All this means that the small company executive must wear many hats, a necessity which may lead to hasty and poorly thought-out decisions.

Advantages of limited size.—On the other hand, the size of the smaller firm has definite advantages. The small enterprise, containing fewer products and services to offer, will find it much easier to plan its programs. There are fewer people with conflicting views to be integrated, a simpler organizational structure to contend

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with, and a smaller physical set-up to keep in mind as the analysis is made. 14

Realization of a need.—Many of today's small company managers realize the need of long-range planning. Obviously, too many of them realize this too late as evidenced by Dun and Bradstreet's failure record. But this record also shows that where many fail others succeed in almost the same circumstances. The activities that enable others to succeed certainly include investigation as a basis of decision making. The root of the problem is how to help the small businessman toward a realization of this need.

The Small Company's Approach to Planning

Though the problem of growth may exist in both the large and the small companies, the approach must by necessity be different.

A simplified approach.—The small business, because of its lack of qualified personnel, staff assistance, and the burden of the day-to-day operations, must often find a quick remedy to the problem of long-range planning. There usually is not enough personnel to complete the varied analyses that are undertaken by the large firms, nor are

there qualified personnel to attempt the various correlations. But these very limitations make it even more important that the small company should plan.

Long-range planning is essential to assure the businesses perpetuity.\(^{15}\) A simplified approach to long-range planning can be used as a very valuable aid to the small business. This long-range plan will enable the business to plot a course of future plans and actions.

Criteria of Planning

Planning for the small company follows a very logical approach. Basically the sequence is as follows:

1. Develop company objectives
2. Project Sales Forecasts
3. Develop Manpower and Facilities Requirements
4. Add the dollar signs and project the financial planning.

Each of these main steps is covered in later chapters. The purpose here is to introduce them and lay the groundwork for later detail.

Objectives.—The company's aims and goals dictate the path the plans should follow. Sequenced with objectives are policies and procedures. Company policies set the limitations within which the plans must operate; the planning

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Premise and procedures are guides to implementation.

Peter F. Drucker says that:

Objectives are needed in every area where performance and results directly and vitally affect the survival and prosperity of the business.\(^{16}\)

In other words, the objectives are necessary to spell out the aim of the business so that decisions to implement this aim can be made.

The entire management process concerns itself with the ways and means to accomplish predetermined results. These predetermined results are the objectives of the business firm.\(^{2}\)

Mr. George Brockway, Executive Vice-President of the Raymond Corporation states that:

All organizations have objectives even the small firms, written or unwritten, admitted or not.\(^{17}\)

These objectives should be clarified so that operating managers will understand them and use them as a guide to decision making. By formalizing the objectives, writing them out and discussing them any doubt is clarified and all managers will work for the same goal.


Objectives should be formalized and written out and discussed so that all of the managers' interpretations will be the same. Chapter III will deal with objectives more fully.

Sales forecasting.—The next major area of the small company's criteria of planning is sales forecasting. Chapter IV will deal with this subject in detail. Various authorities have stated their position regarding sales forecasting as related to planning.

Koontz and O'Donnell say that:

Sales Forecasts must set the stage for internal planning.18

Business expenses, capital outlays, and policies of all kinds are made for the purpose of maximizing profits obtainable from expected sales.

Robert T. Sheen observes that:

Sales Forecasts are the foundation upon which all other operation plans must be built.19

Joel Dean says:

The businessman recognized that for his decisions the past is irrelevant, except as a forecaster of the future. Businessmen look to the future for deciding today's plans.20

18 Koontz and O'Donnell, p. 465.


Before any other plans can be made the sales forecasts must be made. Manpower, facilities and dollars are all predicated on the sales forecast.

**Manpower and facilities**—Manpower requirements must follow the sales forecast in the sequence of planning. The facilities required will be based on manpower required and will serve to support manpower.

In this thesis sales per employee will be used as a guide in establishing manpower requirements. In the smaller company method studies, standard times and other up-to-date measuring tools may have to be sacrificed in favor of good estimates and previous history. The smaller company may not be equipped to accomplish the detailed measurements through the use of such tools. As has been pointed out the aim is not to compete with the industrial giants in the methods used but more to show that long-range planning can be used by the smaller company. What will be attempted is to show a simplified way for the small business manager to plan effectively.

**Financial planning**—The last of the planning criteria is financial planning. After sales have been determined and manpower requirements established, then facilities to support the manpower are established; the obvious question is, how much capital will be needed to support these functions? Here is where financial planning
proves the plan. A profit is usually expected, unless of course there are underlying reasons for lack of profit, which could very well be the case.

Financial planning will indicate how much working capital will be required to support the functions, what the profit will be, whether money will have to be borrowed and so forth. Chapter VII is devoted to financial planning.

Conclusion

Planning, whether it be for a large or small concern, requires a planned approach tailored to the individual company's need. In the small company the approach may vary widely from that of its large company counterpart because of this diversified need.

Planning is clearly an advantage to any concern large or small. The more definite the plans are, within reason, the easier the plan will be to follow. Small business managers are cautioned not to make plans so rigid that individual incentive and thought, the backbone of small business, will be retarded.

The small company has problems inherent and unique to its size. Also there are certain advantages in the small size often overlooked by the small business manager because of a lack of a standard of comparison. These advantages should be utilized.

The criteria for the small company's approach is
straightforward and logical. To generate any decisions regarding the business, the objectives must be established. The base of further planning is a sales forecast which forces planning of the manpower required to produce the goods and services that will be sold and a determination of the facilities that will be required to support the manpower. Lastly, the capital requirements must be established. Here is the essence of planning for the small company: an unequivocal approach without any room for the decoration and fringe that often colors planning.
CHAPTER III

OBJECTIVES

The starting point of management planning is the choice of predetermined objectives. Objectives may be general or specific. The main purpose of an objective is to define the goal of the enterprise and establish a base for planning. Alford says of objectives:

A necessary preliminary to all company activity is the formulation of a policy or set of instructions. The resulting action must subordinate all secondary considerations to that of the stated object. ¹ Objectives must spell out the aims and desires of the enterprise. From these, planning will establish the things that must be accomplished to meet these goals.

Examples of objectives.—Many years ago the Newport News Shipbuilding and Drydock Company set forth their objectives:

We shall build good ships here
At a profit, if we can
At a loss, if we must.
But always good ships.

Objectives need not be as poetic and inspiring but they must define the purpose of the enterprise.

Harry T. Klein, in a Texas Oil Company publication described how the Texas Company's growth, from a tiny company in 1902 to an industrial giant in 1952, was, in part, the reward of farsighted objectives.

If we were to isolate the one factor, above all others, that transformed the tiny company of 1902 to the industrial giant of 1952, while hundreds of competitors failed and are forgotten, I should say that it has been Texaco's settled policy of thinking first of quality of product and service to the customer, and only second to the size of its profit. In a highly competitive industry such as ours, the highest rewards are reserved for those who render the greatest service.

Barnard is quite positive in his opinion of how vital it is for the small business manager to consider other than purely economic motives in establishing his objectives:

Economic motives are not the only basis for business decisions. Prestige, competitive reputation, social philosophy, social standing, philanthropic interests, combative ness, love of intrigue, dislike of friction, technical interests, Napoleonic dreams, love of accomplishing useful things, desire for regard of employees, love of publicity, fear of publicity, and a long catalogue of non-economic motives actually condition the management of business and nothing but

2Ibid.

the balance sheet keeps these non-economic motives from running wild. Yet, without all these incentives, I think most business would be a lifeless failure.\footnote{Chester R. Barnard, Organization and Management (Cambridge: Harvard University Press, 1948), p. 15.}

From these authorities it must be concluded that the economic motives do not govern, they merely limit and guide.

\textbf{Developing the objectives.--} Every business enterprise is following a course, some firms more definitely and intelligently than others. It is fairly obvious that a firm must know what it wants before it can attempt to accomplish it. A first step therefore, is to develop and clearly set forth the company's management philosophy and objectives.

The prime responsibility of establishing the firm's objectives lies with the chief executive. If he is not also the principal investor then the objectives may have to coalesce with the desires of the majority financial interest.

Objectives must be specific yet flexible enough to permit justifiable exceptions to meet special situations.\footnote{Alford and Beaty, p. 101.} Objectives are progressive in nature, capable of being modified, changed, or improved as conditions change. Caution must be exercised discreetly in developing...
objectives that will have a certain amount of permanence so that modification and improvement need only be necessary as a result of changes of pre-eminent magnitude in the conditions affecting the business.

William H. Newman in an article published in Readings in Management defines the basic guides to establishing objectives:

Top management should (a) seek something that really needs doing; (b) aim for things the company is qualified to do; and (c) strive for internal compatibility among its objectives.6

Mr. Newman also says that no phase of management calls for more wisdom and a finer sense of values than the establishing of objectives.7

Objectives have a profound influence on the long run success of the company, as evidenced by the preceding observations of those successful in this area.

Implementing objectives.—The establishment of objectives alone will not satisfy the requirements of implementing the future course of the enterprise. In addition to objectives there should be policies, rules, and procedures. These are necessary to define the basic aims of the business by informing the personnel of the full


7Ibid.
meaning of the objectives and establishing a premise by which the objectives may be satisfied.

Policies

Policies are a generalized statement of how objectives are to be achieved. Policies delineate the way in which the objectives are to be implemented. Although policies may be oral or implied, to be most effective they must be written.8

The implementation of good policies will reduce the amount of decisions employees will have to make. For example, if the manager of a small retail store establishes a policy requiring a twenty per cent deposit on all lay-away or will call sales, his employees need not question him each time a sale of this type is made.

An aid to better management.—Further, to aid the small businessman and particularly to eliminate any misunderstanding between the personnel of the organization, policies, like objectives, should be thoroughly defined in writing. Firms that establish concrete policies should also compile a policy manual wherein the policies are presented. Unfortunately, policy manuals as management tools are not widely used, except for personnel relations.9


9Alford and Beaty, pp. 106-107.
It may be argued that the establishment and formalization of policies is too sophisticated for small business but the answer is that the small business cannot afford to not take advantage of every tool it can conceive that will aid in efficient management. The formalization of policies will help eliminate any ambiguity as to the course the business wishes to follow and clearly establish the general rules that shall govern the business. The obvious result will be less time spent by the employees in decision-making activities that can and should be reduced to routine operations.

Good policies contribute to the survival of the business firm. Robert H. Johnson of the Department of Commerce says that:

The absence of policies causes unprofitable operation and subsequent failure.¹⁰

While this statement may be a little strong, it stands to reason for example that poor location, over-buying, insufficient capital and other management ills, in many instances, may result from the adoption of improper policies by the particular business situation, or from the lack of definite policies.¹¹


¹¹Ibid.
Rules

According to Terry, rules are:

Specific guides for action, established authoritatively, and utilized in order to inform employees of conditions under which designated activities are to be performed.\textsuperscript{12}

The purpose of rules.--Rules establish a basic framework so that persons may work together in a unified and harmonious manner. Like policies, rules define the specific actions to be taken in the course of the business but in more detail than policies. For example: a policy may simply state that "Every effort will be made to promote from within." This policy may be subordinate to a company objective of endeavoring to reward employees of merit as an incentive to lasting tenure. In contrast the rule might state that more directly "All job openings will be posted for review and may be bid on by all employees."

To be clearly understood, rules must be written out in simple expository language and if necessary verbally explained.\textsuperscript{13} Also, good rules must have a good purpose. Rules are necessary to provide protection both to employees and to the employer's property and equipment. Rules such as "no smoking in painting areas" are for the employees' safety.


\textsuperscript{13}Ibid., p. 436.
protection. Rules such as "the security vault is to be locked at all times" are for the employer's protection.

**Conclusion.**—Rules serve two basic purposes: (1) to actuate and (2) to regulate. Rules ultimately save time and effort by establishing guides for actions covering the events most likely to occur repetitively.

As with policies, it can again be argued that rules are fine for the larger company but are far too expensive and sophisticated for the smaller concern. But certainly there is nothing sophisticated about establishing a mutual understanding as to how the business is to be conducted and what is expected from employees and managers alike. As to expense, a simple handbook will more than suffice. It need not be professionally printed and bound in an expensive cover. In fact, a ditto run-off will do the job.

**Procedures**

Procedures are defined by R. F. Nueschel as:

The means by which all repetitive business action is initiated, carried forward, controlled, and stopped.14

Procedures are the methods to accomplishment. They define in detail the steps to be taken to carry out repetitive activities.

As previously pointed out, a policy may make a generalized statement such as "Every effort will be made to promote from within." A procedure would define how the individual employee would go about apprising management of his desire to advance.

Procedures should not only relate to personnel functions and problems but should cover as much of the repetitive and routine tasks as is practical, thus sparing the manager and employees both the task of deciding the course of action to be followed in relation to recurring tasks.

**Control of procedures.**—Procedures, as in the case of policies and rules, must be clarified, written out, and controlled and enforced in order to be effective. Enforcement and control are the responsibilities of the managers of the business. Koontz and O'Donnell, among other authorities, advocate the use of the Procedures Manual. They say:

Manuals are an excellent control device for they are an essential means of making official procedures known, provide easy reference, and provide for periodic review.15

**Disadvantages of procedures.**—Procedures may become too complex, inflexible and obsolete. Extreme care should

be exercised to keep procedures simple and to the point, including only the necessary steps. One way to develop flexible procedures is to use general job titles and departmental classifications rather than specific ones. Procedures will change as conditions affecting the business change, thus requiring constant updating and revision. To minimize this task the small business manager should: (1) keep procedures to a minimum covering only those activities that are of a repetitive nature; (2) make procedures as general as possible without distorting the purpose of the procedure; and (3) create flexibility by procedurizing only the required tasks leaving the specifics of the accomplishment up to the persons who will use the procedure. In this way, a procedure may define the format of a report and the distribution, leaving the way it is to be compiled and how the information is obtained up to the person who is to do it.

Conclusion

Armed with the tools of policies, rules, and procedures, the small business manager can make great forward strides toward astute management; furthermore he has provided himself with a firm base for long-range planning. The compliance with these tools will for the small business manager, clearly define four important concepts:
1. What the purpose for the firm's existence is and what its future aims and goals should be. This purpose will provide a basis for all future decisions and establish for all employees a goal toward which to strive.

2. How the objectives are to be achieved. The general statements of policy will serve as a guide for further executive action and will clearly state what the company will do and what it will not do. They will eliminate the ambiguity that would exist without them.

3. What the rules of conduct for all members of the firm should be. Rules will let each employee know what he can do and what he cannot do thus eliminating much embarrassment due to inconsistency in individual views.

4. What set methods should be adapted for accomplishing routine everyday tasks. Procedures will diminish the need for decisions to be made regarding recurring tasks. Procedures will help systemize activities, thus effecting savings in time and effort and also providing employees with a guide of what is expected in the performance of their individual jobs. In addition to establishing guide lines of operation the above concepts will force inventory taking in thinking and encourage organization. The small business manager need not go to great expense to effect these tools for, as has been stated,
"the simpler the better" certainly applies here. The important thing is to establish and use them.
CHAPTER IV

SALES FORECASTING

Sales forecasting has been described by one authority in the field of management as an attempt to estimate trends.\(^1\) Another management authority has said:

> It is not possible to make exact quantitative predictions of the volume of business at some future point in time. Some forecast must be made, nevertheless, to determine what should be done, how it should be done, and when it should be done.\(^2\)

Planning Purpose

Before long-range planning can be undertaken, a base or premise is needed. The establishment of this base in itself is planning. Forecast preparation is an all-inclusive thing, not merely a tabulation of potential sales

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figures. These potential sales must be substantiated and based on analysis. Crisp says:

Forecasting is a step-by-step approach based on:

1. Determining purpose of the forecast
2. Subdividing the task by products
3. Preparing preliminary forecast
4. Relating to promotional plans
5. Reviewing competitive trends
6. Reviewing and revising

What Crisp is saying is that sales forecasting is very much interrelated with product development and market research. Product development would concern the manufacturer while the retailer following this same guide would be concerned with product selection.

The small company should be vitally concerned with long-range sales forecasting. The managers of the small companies are often at a loss in determining how they should establish these forecasts. They certainly cannot equate their sales with the gross national product, and total disposable income may have no effect on them. Also, it may be very difficult for the small manager to pay for a thorough market analysis.

A different approach.—This thesis advocates a different approach to long-range sales forecasting. Instead of trying to equate potential sales to such factors as

3Crisp, pp. 24-31.
trends, a share of the market, or gross national product, why not take the definition of planning for its true meaning: forcing things to occur that would not otherwise happen? Thus, the small enterprise can set the stage and force new sales to occur.

Before pursuing this approach any further, a look at how other companies develop sales forecasts is in order.

A survey conducted by the American Management Association in 1956 gave the results shown in Table 2.

**TABLE 2**

**FACTORS USED IN SALES FORECASTING**

<table>
<thead>
<tr>
<th>Factor</th>
<th>Use</th>
<th>Importance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Past Sales</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Sales Departments Estimates</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Judgment Hunch</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>General Economic Indicator</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Economic Data on Industry</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Salesman's Field Reports</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>New Product Plans</td>
<td>7</td>
<td>10</td>
</tr>
<tr>
<td>Competition</td>
<td>8</td>
<td>11</td>
</tr>
<tr>
<td>Production Capacity</td>
<td>9</td>
<td>7</td>
</tr>
<tr>
<td>Market Surveys</td>
<td>10</td>
<td>9</td>
</tr>
<tr>
<td>Promotion Plans</td>
<td>11</td>
<td>8</td>
</tr>
<tr>
<td>Other</td>
<td>12</td>
<td>12</td>
</tr>
</tbody>
</table>

*Source: American Management Association, Special Report Number 16 (New York: 1956).*

The annual sales of the "297 participant company's" ranged from $600,000 to $4,000,000,000 with a medium of
$27,000,000. The table lists in descending order the factors considered most important and the factors most used. The reader can see that the two are not in complete accord and can conclude that there is no "one" way to forecast.

Many small businesses may reject through sheer ignorance, the idea of a five-year sales plan. A typical retort by the small business manager is "How do I know what is going to happen in the next five years?" This manager is correct, he may not know what is going to happen. That is basically why planning is advocated, planning of a type that will force things to happen instead of passively allowing them to happen. A course of action should be established to assure that certain things will happen. However, there is no claim here that a hard-and-fast rule for establishing forecasts has been discovered. Francis Lackner says:

Call it what you will, hunch, intuition or what have you, the essential ingredient in sales forecasting amounts to "common sense." 6

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Establishing the Forecast

The small enterprise should use this common-sense approach—along with experience, some research, and a little of the scientific method—to develop its long-range plans. The majority of this thesis is directed toward a small manufacturer, but other types of businesses are discussed to show the compatibility of sales forecasting to these operations. The intention is not to develop the sales forecast, but rather to show the logical sequencing of events that must take place and some of the alternatives that should be considered.

The first step.—The first step in establishing the sales forecast is to list previous sales by product. Then, just to get started, plot sales reflecting what the business realistically would like to do the next 5 years. If previous sales had been increased on an average of ten per cent per year, this figure could serve as a realistic expectation of future gains.

The product basis should be used, for as Holden says:

A company's line of products has a most important bearing on its success.7

By plotting at the product level, the small business

distinguishes sales by product and provides a basis for further analysis.

**Anticipated sales.**—At this point, by totaling the anticipated sales volume for each product, the manager has a sales forecast. Of course, it is not substantiated for it expresses only a desire of what he would like to do. The next step is to justify this desire by determining what must be done to attain the desired volume.

First a look at the exceptions that may affect this desire of ten per cent per year increase must be taken. Exceptions are new elements that will change the forecasted sales. Some of these exceptions are likely to be:

- New Products
- Increased value of existing products
- Reduction or increase in competition
- Greater or less market coverage
- Patents
- Changing population patterns by geographic area

At this point, the small business is only concerned with the realization of things that may affect the sales over which it may or may not have some control.

**Product Planning**

Donald Gates and numerous other authorities refer to product planning as a major consideration of sales
forecasting. In large companies this product planning may be a continuous process and long precedes sales forecasting. What is being done here is to force the small business to engage in product planning as a requirement of sales forecasting.

The equating of product sales to a common denominator must be established. Most products have a product life. This can be determined as related to the business's products by graphing previous sales from the inception of the product to the current period.

If the product was discontinued this must be shown. Product sales life can be displayed as shown in Graph 1 which is a basic characteristic pattern of sales volume and life of a product.9

From Table 3 it is noted that product X was introduced in 1955 and by 1960 was declining. The total sales of the product through 1960 are $180,000. It can be said that the product has had a life span to 1960 of five years. After establishing sales duration curves from previous records, the small business manager should plot the distribution for the remaining life of the product as in Table 4.

---


This may be an estimate based on the life cycle of similar products.

Annual Sales (000)

Graph 1.--Life Span of Product X

TABLE 3
ANNUAL SALES OF PRODUCT X (000)

<table>
<thead>
<tr>
<th>Year</th>
<th>1956</th>
<th>1957</th>
<th>1958</th>
<th>1959</th>
<th>1960</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales</td>
<td>20</td>
<td>50</td>
<td>70</td>
<td>30</td>
<td>10</td>
</tr>
</tbody>
</table>
TABLE 4
FORECASTED SALES OF PRODUCT X (000)

<table>
<thead>
<tr>
<th>Year</th>
<th>1961</th>
<th>1962</th>
<th>1963</th>
<th>1964</th>
<th>1965</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales</td>
<td>10</td>
<td>5</td>
<td>3</td>
<td>2</td>
<td>0</td>
</tr>
</tbody>
</table>

After this has been done for all existing products, the next step is to estimate the total sales of each product over its entire life span and plot them all on the same schedule as illustrated in Table 5. At this point the small business has a sales forecast by product and a desired total sales forecast for the business.

TABLE 5
ANNUAL SALES ALL PRODUCTS (000)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>200</td>
<td>10</td>
<td>10</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>800</td>
<td>300</td>
<td>360</td>
<td>90</td>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>1,200</td>
<td>20</td>
<td>160</td>
<td>300</td>
<td>450</td>
<td>175</td>
<td>40</td>
</tr>
<tr>
<td>C</td>
<td>300</td>
<td>80</td>
<td>25</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>180</td>
<td>100</td>
<td>10</td>
<td></td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>E</td>
<td>330</td>
<td>5</td>
<td>5</td>
<td>200</td>
<td>100</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>200</td>
<td>85</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>600</td>
<td>580</td>
<td>600</td>
<td>560</td>
<td>200</td>
<td>40</td>
<td></td>
</tr>
</tbody>
</table>
Analysis of product potential.--The next step is to analyze each product in relation to sales potential. To do this will require a certain amount of market research, which will be referred to in the analysis.

The sales forecast up to now is based primarily on history, anticipated trends and hunch. As Table 2 revealed, these are the three factors most used by other companies.

At this point the sales forecast should be refined and plans laid to force things to happen that would not otherwise occur. In product planning some of the things to consider are new products, complementary lines, and the improving of existing lines. A review of Table 5 will indicate the addition of new products. The intention here is not to definitize all of the alternatives, but to show how this is done. Naturally each type of company will have to consider factors inherent to its own industry.

Before proceeding to plan new products it is wise to look at the factors affecting the sales volume of the products. Of course a market survey would be very helpful, but as Table 2 shows, this is relatively unimportant to most companies. The small company because of expense may have to rely on good judgment, salesmans' reports, intuition, et cetera.

Each company will have to define its own factors but a sample guide might include such considerations as:
Life of product as used by consumer
Price
Quality
Design
Packaging

Factors affecting sales volume.—The factors affecting sales volume should be ranked in the order of the importance and relative values of each product in relation to the competition's products. From this a good idea of how the product ranks against the competition can be determined.

In addition, a determination of the major factors that have the most effect on sales will have to be made. This, without a market survey, again will have to be based on hunch, intuition and common sense. 10

Improvement of products.—The small business is now in a position to analyze its various products and attempt to improve them to achieve a greater sales volume. For example, if price is the major factor, study of the possibilities of price reduction would be elementary. Following are the major possibilities which should guide the managers' thinking:

Redesigning
Use of different materials

10Lackner, p. 154.
Repackaging

Improved production methods
(for manufacturer)

The manager must be careful not to infringe on other factors, i. e., he must not reduce price through a sacrifice in quality if quality is also a major factor in market acceptance. The next step is to analyze the other major factors with the same astuteness, then to repeat the same process for other products.

From this careful analysis, recommendations can be made to improve existing products and gain a greater market acceptance.

Another aid the small enterprise can use in determining how existing products can be improved is the analysis of current fads on which he may capitalize. For example, he can dress up an existing product by producing it in current fashionable colors, add gimmicks and flares, and consider seasonal applications.

New products.--The next step for the small businessman, using what market information is available and aided by internal ideas, is to determine the need for new items. As his major guide he should find out what the competition is doing, review trade journals and draw on the firm's source of patents, and he should not fail to use salesmen's suggestions and information. Then, he should be prepared to analyze each new product idea in relation to the firm's
capabilities, experience and skills.

If pointing up new product ideas does not prove out, the reverse can be tried. He can analyze what the firm can produce with existing skills and facilities and repeat the cycle in reverse. For example, he can determine why certain products cannot be made, what additional skills or facilities would be required, what type or return could be expected from the required investment. Another "reverse" test is to determine if any of the existing products could be complemented by new products. For example, assume that the business is a small manufacturer and two of the existing products are can and bottle openers. This small manufacturer could consider producing any number of other bar items or kitchen utensils that could be sold along with the existing items or marketed as sets.

If it is determined that the new product can be made it should be analyzed in the same manner as outlined for existing products.

Market Coverage

A prime concern to the small manufacturer is his outlets. As an additional tool in determining the methods for increasing sales, a list of the current methods of market coverage should be undertaken. Each should be analyzed to determine if the best possible coverage is being obtained. The manager should consider all possible
ways to market his product in order to obtain greater coverage.

Methods of coverage.—Some methods to consider are jobbers, distributors, door to door selling, catalog sales, and own stores. To analyze properly the best methods of market coverage the small manager must identify the largest group of users of its products and define the best method to sell this group. Advertising should be considered as a way of informing the consumer of the products. The small manager, depending on his market coverage, should consider direct mail, flyers, newspaper and magazine advertising.

Another thing to consider is where the greatest portion of the users of the product are located and determine how best to cover this area.

Buying motives should be of prime concern to the manager, for these are what sell his product. After defining buying motives, he should determine how these motives can best be satisfied.

Recommendation for Product Improvement

After a thorough analysis of the foregoing factors the small business manager will be in a position to accurately determine what must be done to increase sales volume. He is now ready to estimate the per cent increase that can be expected for an improved product and the expected sales volume curve. To estimate these the small
manager will rely on previous experience, current fads and trends, and all of the other factors that heretofore have been mentioned.

After establishing and carefully reviewing all estimates, the total sales estimate as illustrated by Table 5 should be revised to reflect the new figures.

To give an example of how this is done, the following assumptions are made. Products A and B have been improved for 1961 and a ten per cent increase in sales volume is estimated for product A and a twenty-five per cent increase in product B. Product G was introduced to replace product D starting in 1962. Table 5 will now appear as shown in Table 6. Table 6 does not give the ten per cent increase per year established as a goal. The first two years are adequate but the remaining three fail to yield the desired ten per cent per year increase. The pattern to be established should be something like that portrayed in Table 7.

Review and revision.—To illustrate why the manager needs to review the analysis, assume that the population in the distribution area is to increase three per cent per year for the next five years. What effect will it have on sales? Or the converse, assume the population will decrease three per cent per year for the next five years. What effect will this have? If the former is the case, new distribution areas should definitely be searched out.
TABLE 6

ANNUAL SALES ALL PRODUCTS
(000)
(Revision a of Table 5)

<table>
<thead>
<tr>
<th>Product</th>
<th>Est. Total Sales</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>200</td>
</tr>
<tr>
<td>A</td>
<td>900</td>
</tr>
<tr>
<td>B</td>
<td>1,450</td>
</tr>
<tr>
<td>C</td>
<td>300</td>
</tr>
<tr>
<td>D</td>
<td>180</td>
</tr>
<tr>
<td>E</td>
<td>330</td>
</tr>
<tr>
<td>F</td>
<td>200</td>
</tr>
<tr>
<td>G</td>
<td>500</td>
</tr>
<tr>
<td>TOTAL</td>
<td>600</td>
</tr>
</tbody>
</table>

TABLE 7

DESINED SALES ALL PRODUCTS
(000)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales</td>
<td>600</td>
<td>660</td>
<td>730</td>
<td>800</td>
<td>900</td>
<td>1000</td>
</tr>
</tbody>
</table>

After a thorough analysis of all factors as a basis for further thought, a list of the items analyzed and the estimated effect on the sales should be taken into consideration and listed as shown in Table 8.
<table>
<thead>
<tr>
<th>Recommendation</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Improve product A</strong></td>
<td>No change in cost, no effect on lifespan, 10% increase on sales volume</td>
</tr>
<tr>
<td><strong>2. Improve product B</strong></td>
<td>10% increase in cost, 25% increase in sales volume, no effect on lifespan</td>
</tr>
<tr>
<td><strong>3. Introduce product G in 1962</strong></td>
<td>Estimated total volume 500,000. Lifespan similar to product A</td>
</tr>
<tr>
<td><strong>4. Add product H in 1963</strong></td>
<td>Estimated total volume 600,000. Lifespan similar to product F</td>
</tr>
<tr>
<td><strong>5. Add New Jobber in 1963</strong></td>
<td>Add (35) new retail outlets. Estimated total sales increase will be</td>
</tr>
<tr>
<td></td>
<td>1963</td>
</tr>
<tr>
<td></td>
<td>1964</td>
</tr>
<tr>
<td></td>
<td>1965</td>
</tr>
<tr>
<td><strong>6. General population increase in market area - 3% per year 1963 on</strong></td>
<td>Increase total sales by</td>
</tr>
<tr>
<td></td>
<td>1963</td>
</tr>
<tr>
<td></td>
<td>1964</td>
</tr>
<tr>
<td></td>
<td>1965</td>
</tr>
</tbody>
</table>

Now again the sales should be revised for the next five years as in Table 9 to show the effects of the analyses presented in Table 8.

It is clearly evident that in the fifth year sales are generally falling off. How this can be revised can be determined by a reference to the analysis guide. Possibly other new products must be introduced to compensate for
those that are nearing the end of their lifespan. The fifth year is far enough off that an immediate decision need not be made. What is important is that the manager has forced things to happen that otherwise might not.

**TABLE 9**

ANNUAL SALES ALL PRODUCTS (000)
(Revision b of Table 5)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>200</td>
<td>10</td>
<td>10</td>
<td></td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>900</td>
<td>300</td>
<td>400</td>
<td>100</td>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>1,450</td>
<td>20</td>
<td>200</td>
<td>400</td>
<td>600</td>
<td>200</td>
<td>50</td>
</tr>
<tr>
<td>C</td>
<td>300</td>
<td>80</td>
<td>25</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>180</td>
<td>100</td>
<td>10</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E</td>
<td>330</td>
<td>5</td>
<td>5</td>
<td>200</td>
<td>100</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>200</td>
<td>85</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>G</td>
<td>500</td>
<td>20</td>
<td>50</td>
<td>300</td>
<td>100</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>600</strong></td>
<td><strong>660</strong></td>
<td><strong>730</strong></td>
<td><strong>760</strong></td>
<td><strong>525</strong></td>
<td><strong>150</strong></td>
<td></td>
</tr>
<tr>
<td>H</td>
<td>600</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>NEW TOTAL</strong></td>
<td><strong>600</strong></td>
<td><strong>660</strong></td>
<td><strong>730</strong></td>
<td><strong>800</strong></td>
<td><strong>825</strong></td>
<td><strong>250</strong></td>
<td></td>
</tr>
</tbody>
</table>

Add New Jobber 1963
Gen. Pop. Increase

<table>
<thead>
<tr>
<th></th>
<th>1963</th>
<th>1964</th>
<th>1965</th>
</tr>
</thead>
<tbody>
<tr>
<td>Add New Jobber 1963</td>
<td>40</td>
<td>99</td>
<td>63</td>
</tr>
<tr>
<td>Gen. Pop. Increase</td>
<td>16</td>
<td>41</td>
<td>18</td>
</tr>
<tr>
<td><strong>ADJUSTED TOTAL</strong></td>
<td><strong>600</strong></td>
<td><strong>660</strong></td>
<td><strong>730</strong></td>
</tr>
</tbody>
</table>

*Estimated total sales have been adjusted to show the increase which will result from the actions outlined in Table 8.
Indicators

For this thesis, no additional hypothetical figures will be assumed. The purpose is to establish a method of plotting sales and to attempt to outline in general terms the thought process that is relevant to a sales forecast.

Basic business indicators are such things as:
- Gross national product
- Personal income
- Employment
- Bank savings
- Price indexes

Correlation.—Large companies will attempt to correlate their sales with one or a combination of established indicators. It would be folly to attempt to correlate the small companies' sales with such things as Gross National Product. Therefore, the small company should establish its own indicators. The small retailer should be concerned with indicators that relate to his market area. He should attempt correlations with such indicators as local population, local employment level, and average local personal income. The small manufacturer will have to establish another set of indicators relative to his market's.

It is entirely possible that there will be no correlation, but nevertheless an attempt to discover
applicable indicators should be made.

A Master Plan

A master plan for forecasting sales cannot be assumed. Each business must consider the individual elements as they affect that business in order to establish the criteria that should be considered.

The foregoing applies strictly to a small manufacturing operation. This does not preclude other types of small business. The factors may be quite different but the analysis should follow the same general pattern.

A small retail store will be much more interested in location than the manufacturer. The manufacturer will wish to be proximately located to his distribution sources to reduce shipping costs, a location that may have little relationship to the retail outlet locations.

A small retail store's customers generally are derived from an area in close proximity to the store. This could easily be substantiated by a simple market survey that the astute manager could undertake. The most important factor for the manager of a retail operation is a study of the characteristics of his customers. He will want to know the social class of his customers as an aid in satisfying buying motives and determining the subsequent best sales and advertising approach.
Conclusion

In this chapter some basic ground rules for sales forecasting have been established. The prime consideration is to search and analyze all possible alternatives. As is indicated much of the sales forecast is based on estimates backed up by logical thought and analyses. The sales forecast, as all other planning functions, should take the following steps as set down by George B. Galloway:

Determination of objectives to be sought
Research to understand the problem
Discovery of alternative solutions
Choosing between alternatives
Detailed execution of the chosen alternative

CHAPTER V

MANPOWER AND FACILITIES REQUIREMENTS

The Problem

To date, very little progress has been made in the areas of manpower and facilities planning as evidenced by the general exiguity of published information. A review of the publications footnoted in the preceding chapters is evidence of the scarcity. This lack of publications certainly should not subordinate the effort for as Sheen says:

In addition to Sales Forecasts estimates of the facilities and personnel are essential.¹

To augment the deficiency in information, a review of the methods currently employed is presented below. For this presentation, three companies of dissimilar sizes were selected from the electronic manufacturing industry. The companies are designated as A, B, and C.

Current Status

Company A.--Company A is a large manufacturer of military electronics with annual sales of over one hundred million dollars ($100,000,000). Manpower and facilities planning is based on sales forecasts developed by a Master Planning department. The planning is performed by department heads in accordance with their own individual methods. Some utilize a sales per employee figure while others develop considerable detail applying forecast operations schedules, labor hour estimates, et cetera.

Facilities are forecasted on the basis of square footage per person and factored for aisles, washrooms, et cetera.

A Facilities Engineering group provides department heads with gross square footage figures per person by generalized job type. In most cases, department heads exceed the published figure in their planning.

Equipment is prognosticated by the department head based on his best estimate of future needs respective to his manpower and facilities forecast.

The company is devoid of a defined technique for forecasting nor do they insist on a uniform method. Each department head plans by his own procedure.²

²This company, considered very successful in its field, recently completed its first formal long-range
Company B.—Company B is a medium-sized manufacturer of military and commercial electronics with annual sales of twenty-five million dollars ($25,000,000). The sales are 90 per cent commercial and 10 per cent military.

In this company, manpower and facilities forecasts are based on a sales forecast prepared by a Market Research group.

The entire forecast of manpower and facilities is prepared by an Industrial Engineering group. Facilities are based on established standard square footage per employee by job classification and factored for aisles, washrooms, et cetera.

Direct manpower is forecasted on historical work factor standards for continuing products and estimated standards for new products.

Preliminary profit and loss statements are prepared and direct labor is adjusted to the result in an equitable fixed percentage of the sales dollar. The manpower forecast is revised to rectify any inconsistencies.

Indirect labor is forecasted as a ratio of direct labor. In this company, the accepted ratio is .5.

Equipment is forecasted based on anticipated and required technological advances and obsolescence.

Forecast after eight years in business. In addition, no definite plans have been made for the continuation of long range forecasts or of a standard method of forecasting manpower and facilities.
**Company C.**—Company C is a small manufacturer of military electronics with annual sales of three million dollars ($3,000,000.).

In this small company, manpower is forecasted supported by a long-range sales forecast developed by the Marketing Department. Future manpower requirements are established by management based on their best estimate. A historical trend line of sales per employee is used as a base.

Facilities are forecasted in conjunction with square footage per employee. The figure currently in use is (125) to (150) gross feet per employee.

Equipment is forecasted as a dollar figure and is based on management's best estimate of future requirements.

**Common methods.**—Common methods are employed by the three companies to the extent of (1) a sales forecast as a beginning point and, (2) square footage per employee as a basis of forecasting facilities requirements.

All of the foregoing methods arrive at the same goal but with varying degrees of refinement. It appears that the degree of sophistication is dependent upon management's realization of desired achievement, the methods available, and the emphasis that management places on the importance of long-range manpower and facilities planning.
From the presented cases, it can be concluded that:

1. Sales forecasts are necessary to develop manpower forecasts.

2. Square footage per employee is a standard measurement for forecasting facilities requirements.

3. Manpower forecasts are correlated to anticipated sales activity.

4. The degree of detail employed is arbitrary.

At this point, it would be beneficial to adjudge the success of the three companies and correlate the success with the degree of planning. Unfortunately, this is almost impossible to accomplish due to the vagueness of the factors influencing sales and success. Company A’s success might be due to certain technological advances which may have been part of its long-range planning or may be due purely to fortunate discoveries that were unplanned.

Reilley supports this conclusion in his statement,

... long-term facilities and manpower planning requires an analysis of future products and markets and a translation of these into plant and personnel requirements.\(^3\)

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\(^3\)Max D. Richards and William A. Nielander, Readings in Management (Cincinnati: South West Publishing Company, 1958), p. 302. Reilley’s references to future products and markets is the long-range sales forecast as developed in Chapter III.
A Proposed Model

As an aid to the small business manager, a proposed model for long-range manpower and facilities planning is presented. The model is intended as a guide and is not meant to be as a standard or a presentation of an exclusive way to achieve the desired result. The model includes an abundance of detail in particular areas. This is exemplified primarily to indicate a possible method. The small business manager is urged to indulge in as much detail as is practical in an effort to develop a realistic plan substantiated by logical thought and sufficient analyses.

The proposed example includes the following basic factors for consideration: sales dollars per employee, the direct ratio, (sales per direct employee) the indirect to direct ratio, manpower by job description, forecasting factors, and performance standards. Each factor will be discussed and analyzed.

**Sales dollars per employee.**—Sales dollars per employee can be used as a quick reference criterion of measurement. A simple division of the standard (sales per employee) into the forecasted sales will yield the number of employees. This figure should not be considered conclusive but should be substantiated by further analyses and correlation to historical trends. As the proposed
model is further explored, the basis of the standard of sales per employee will be presented. The standard is a goal that should be achieved in order to maintain wages as a standard per cent of sales.

The direct ratio.—The direct ratio is the sales per direct employee. A simple division of sales per direct employee into total sales is required to obtain this figure. Table 10 reflects the historical sales per employee of a small electronic equipment manufacturer.

<table>
<thead>
<tr>
<th>Years</th>
<th>1956</th>
<th>1957</th>
<th>1958</th>
<th>1959</th>
<th>1960</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales</td>
<td>400</td>
<td>440</td>
<td>490</td>
<td>520</td>
<td>600</td>
</tr>
<tr>
<td>No. of D/E</td>
<td>10</td>
<td>11</td>
<td>13</td>
<td>13</td>
<td>14</td>
</tr>
<tr>
<td>No. of Total Empl.</td>
<td>15</td>
<td>16</td>
<td>20</td>
<td>20</td>
<td>22</td>
</tr>
<tr>
<td>Direct Ratio</td>
<td>40.0</td>
<td>40.0</td>
<td>37.6</td>
<td>40.0</td>
<td>42.7</td>
</tr>
<tr>
<td>Sales/Total Empl.</td>
<td>26.7</td>
<td>27.5</td>
<td>24.5</td>
<td>26.0</td>
<td>27.0</td>
</tr>
</tbody>
</table>

The table shows that each direct employee produced goods and services at the rate of approximately $40,000 per year. The sales per direct employee will vary from firm to firm and industry to industry due to the numerous factors affecting it. The most substantial of which is the product
mix. The $40,000 per direct employee illustrated in Table 10 can be only a standard for that company and again reliable only if the product mix remains constant. Each company will have to develop its own standard based on its own goals and individual situations.\(^4\)

Work measurement standards, time studies, standard times, et cetera can be employed to develop the direct labor required to produce the goods and services as portrayed in the sales forecast, but because of the cost, time, and vagueness of the future, it is doubtful if many small businesses will employ such techniques.

In any event, the small business must arrive at a planning forecast of direct labor either by the method of sales per direct employee, wages as a per cent of sales divided by the average wage rate, analysis of the products to be produced, or other acceptable means that will allow the firm to forecast direct manpower backed by logical thought and substantiated by sufficient analysis.

\(^4\)A review of the five major automobile manufacturers as presented in the July, 1961 issue of *Fortune* magazine, reveals a variance between the highest and the lowest of 60% in the sales per employee. A review of the twelve leading electronic firms disclosed a variance of 211%. A further analysis of sales per employee by industry in the 5-year period, 1956 through 1961, showed that sales per employee increased over the 5-year period at various rates for various industries. The oil industry where automation particularly in the refinery area, is paramount showed a very small increase whereas the electronic industry where technology and advancement of the state of the art is paramount, which precludes a great deal of automation, the average percentage increase was much higher.
The amount of supervision is dependent upon the type of work being performed. According to Alford and Bangs, a foreman should supervise from five to twenty employees.  

The building block for determining manpower requirements will be the direct employees—those who are required to produce the goods and services that are necessary to generate sales. This will preclude accounting and payroll personnel, purchasing personnel, indirect engineering personnel and all other employees who do not physically and directly contribute to production. To establish the indirect manpower requirements, similar tabulations based on historical data as in Table 10 will be undertaken.

Table 11 reflects the actual pattern of the same small electronic component manufacturer as shown in Table 10. The sales per employee are for this company and may have no relationship to other companies. Also, the ratio of indirect to direct employees is for this company.

Manpower forecasting by job description.—Manpower forecasting by job description is presented as a logical manner of forecasting indirect labor requirements. To sufficiently forecast by this method involves more than

---

### TABLE 11

**MANPOWER REQUIREMENTS**
(Historical)

<table>
<thead>
<tr>
<th>Years</th>
<th>1956</th>
<th>1957</th>
<th>1958</th>
<th>1959</th>
<th>1960</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales (000)</td>
<td>400</td>
<td>440</td>
<td>490</td>
<td>520</td>
<td>600</td>
</tr>
<tr>
<td>Direct Labor Personnel</td>
<td>10</td>
<td>11</td>
<td>13</td>
<td>13</td>
<td>14</td>
</tr>
<tr>
<td>Sales/D. L. Employee (000)</td>
<td>40</td>
<td>40</td>
<td>37.6</td>
<td>40</td>
<td>42.7</td>
</tr>
<tr>
<td>Overhead (Direct Support)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Foreman</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Purchasing Agent</td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Buyer</td>
<td>1</td>
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<td>1</td>
<td></td>
<td></td>
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<tr>
<td>Clerical</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>General and Administrative</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>President</td>
<td>1</td>
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</tr>
<tr>
<td>Accountant</td>
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<td></td>
</tr>
<tr>
<td>Engineer</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indirect Labor Personnel</td>
<td>5</td>
<td>5</td>
<td>7</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>Total Personnel</td>
<td>15</td>
<td>16</td>
<td>20</td>
<td>20</td>
<td>22</td>
</tr>
<tr>
<td>Sales/Employee (000)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>26.7</td>
<td>27.5</td>
<td>24.5</td>
<td>26.0</td>
<td>27.3</td>
</tr>
<tr>
<td>Ratio Indirect/Direct</td>
<td>.5</td>
<td>.45</td>
<td>.53</td>
<td>.53</td>
<td>.57</td>
</tr>
</tbody>
</table>
just placing figures on a chart. Table 12 is the actual forecast of the same small electronic component manufacturer mentioned previously. Table 13 indicates the performance standards that were developed and used as the basis for forecasting the figures shown in Table 12.

A review of Table 13 will disclose that foremen were forecasted at the rate of one per twenty direct labor employees. Table 12 shows that in 1964 and 1965 the direct labor force is greater than twenty but there is not an addition of a foreman. In this small company, the production superintendent served as foreman of the test and inspection personnel. Reference is made to Tables 12 and 13 as a method of forecasting manpower. The figures are for a specific firm and cannot apply to other firms without being revised to meet a specific situation. Each firm must develop its own standards based on its historical pattern, goals, and analytical abilities.

Once the small business manager has logically listed all of the applicable job descriptions and assigned performance standards to them, he has prepared a broad base for forecasting his manpower needs in addition to establishing a standard for performance measurement. D. P. Ragan of Hughes, Tuscon, in an article appearing in Purchasing magazine set forth his method as a standard measurement of work performance that need be altered only when basic ground rules change. Mr. Ragan's starting point was a breakdown by job
<table>
<thead>
<tr>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sales (000)</strong></td>
<td>400</td>
<td>440</td>
<td>490</td>
<td>520</td>
<td>600</td>
<td>660</td>
<td>730</td>
<td>856</td>
<td>965</td>
<td>1,050</td>
</tr>
<tr>
<td><strong>Direct Labor Personnel</strong></td>
<td>10</td>
<td>11</td>
<td>13</td>
<td>13</td>
<td>14</td>
<td>16</td>
<td>18</td>
<td>20</td>
<td>22</td>
<td>25</td>
</tr>
<tr>
<td><strong>Sales/D.L. Employee (000)</strong></td>
<td>40</td>
<td>40</td>
<td>37.6</td>
<td>40</td>
<td>42.7</td>
<td>41.2</td>
<td>40.5</td>
<td>42.8</td>
<td>43.8</td>
<td>42</td>
</tr>
<tr>
<td><strong>Overhead (Direct Support)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Production Superintendent</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Foreman</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Purchasing Agent</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Buyer</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Material &amp; Prod. Control Clerk</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stores Shipping &amp; Rec'v. Clerk</td>
<td>1</td>
<td>1</td>
<td>1</td>
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<tr>
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<td><strong>General &amp; Administrative</strong></td>
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<tr>
<td>President</td>
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<td>Salesman</td>
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<tr>
<td>Chief Accountant</td>
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<td>Accountant</td>
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<tr>
<td>Draftsman</td>
<td>1</td>
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<tr>
<td><strong>Indirect Labor Personnel</strong></td>
<td>5</td>
<td>5</td>
<td>7</td>
<td>7</td>
<td>8</td>
<td>9</td>
<td>9</td>
<td>10</td>
<td>11</td>
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<tr>
<td><strong>Total Personnel</strong></td>
<td>15</td>
<td>16</td>
<td>20</td>
<td>20</td>
<td>22</td>
<td>25</td>
<td>27</td>
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<tr>
<td><strong>Sales/Employee (000) Total</strong></td>
<td>26.7</td>
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<td>26.0</td>
<td>27.3</td>
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<td>27.0</td>
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<td>28.9</td>
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<tr>
<td><strong>Ratio Indirect/Direct</strong></td>
<td>.5</td>
<td>.45</td>
<td>.53</td>
<td>.53</td>
<td>.57</td>
<td>.55</td>
<td>.5</td>
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<td>Job Title</td>
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<tr>
<td>Foreman</td>
<td>1 per 20 D/L</td>
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<tr>
<td>Gen. Foreman</td>
<td>1 per 3 foremen or more</td>
<td></td>
<td></td>
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<tr>
<td>Production Supt.</td>
<td>Arbitrary, based on degree of control required, strength and weakness of D/L Supervision and amount of time president is able to devote to the mfg. functions.</td>
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<tr>
<td>Mfg. Manager</td>
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<tr>
<td>Buyer</td>
<td>1 per $750,000 of purchases</td>
<td></td>
<td></td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>Purchasing Clerk</td>
<td>1 per 1½ buyers</td>
<td></td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>Prod. Scheduler</td>
<td>1 per $3,000,000 sales</td>
<td></td>
<td></td>
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<tr>
<td>Expediter</td>
<td>1 per production scheduler above $2,000,000 sales</td>
<td></td>
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<tr>
<td>Storekeeper</td>
<td>1 per $1,000,000 purchases</td>
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<tr>
<td>Ship. &amp; Rec. Clerk</td>
<td>1 per $1,000,000 sales</td>
<td></td>
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<td></td>
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<tr>
<td>Inv't. Cnt'l. Clerk</td>
<td>1 per $500,000 purchases</td>
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<td></td>
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<tr>
<td>Order &amp; Ship. Clerk</td>
<td>1 per $2,000,000 purchases</td>
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<tr>
<td>Purchasing Agent</td>
<td>Arbitrary, see production supt. above.</td>
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<td>Material Supervisor</td>
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<tr>
<td>Maintenance Man</td>
<td>1 per 20,000 sq. ft.</td>
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<tr>
<td>Incoming Inspector</td>
<td>1 per $1,500,000 purchases</td>
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<tr>
<td>Personnel Record Clerk</td>
<td>1 per 300 employees</td>
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<tr>
<td>Salesmen</td>
<td>1 per $750,000 sales</td>
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</table>

* Actual manpower performance standards developed by the small electronic manufacturer referred to in Tables 10 through 12.
To forecast indirect manpower requirements, a qualitative approach must be used. The basic guides of sales per employee (total) and the ratio of indirect to direct employees will be a starting point. It should be remembered that indirect employees must be sufficient to support direct employees and supply both production and customer services as dictated by the nature of the business and company objectives. In addition, governmental—both state and federal—requirements such as tax reports, social security reports, et cetera will necessitate the efforts of indirect employees.

From Table 13 it can be perceived that the factors used for forecasting indirect manpower are: 7

1. Sales volume
2. Number of direct employees
3. Volume of purchases
4. Square footage requirements
5. Number of products

Sales Volume: Though sales volume is directly equated to only salesmen and shipping personnel, it serves as the basis for all of the other factors. Sales are the starting point for forecasting supporting labor and the facilities required by this labor.

As previously discussed, the first step is to forecast direct labor on the basis of sales per direct labor employee and substantiated by what other means is desirable and necessary to support the figure.

Each firm based on its distribution methods, Marketing areas, types of products, and industry practices will have to establish its own standard of sales per salesman.

The number of shipping personnel per sales dollar will vary from firm to firm depending on the method of distribution, the type of product, the packaging techniques,

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7In addition, the company growth pattern should be considered in relation to economies of scale and their effect on manpower requirements.
and the quantities of shipment. This factor, as all others, should be developed by each individual firm as it applies to its particular situation.

Number of Direct Employees: Direct production support personnel, though for this analysis are considered as indirect employees, are very closely related to direct labor personnel. The number required should be based on the number of direct labor production employees that are to be supervised and the type and complexity of the production work.

Indirect labor is generally related to direct labor as a ratio. The indirect labor, in part, being required to support direct labor in such areas as material services, personnel, planning, and scheduling, et cetera.

As shown in Table 13, direct labor is the starting point for the establishment of further manpower requirements.

Volume of Purchases: The volume of purchases can readily serve as a basis for establishing purchasing personnel forecasts. Each firm must establish its own standards based on the volume, the quantities and types of items purchased.

A direct standard can be applied to buyers, purchasing agents, and receiving personnel and indirectly to purchasing support personnel such as inventory control,
clerical, et cetera.

Square Footage Requirements: All personnel can and must be supplied with a work area. Standards can be developed for each type of job classification. Many companies, for long range purposes, simply use two groups—direct employees and indirect employees.  

Each company will have to develop its own average square footage requirements. A simple way to do this is to establish classifications in relation to equipment used, i.e., a production assembler with a work area and small hand tools will require much less space than a test technician with elaborate test equipment. This can be supplemented with layouts and actual test areas.

By adding up the square footage requirements for each employee and adding a factor for aisles, washrooms, et cetera, a total required figure can be obtained. This figure should be used by management to determine if and when larger facilities are required or if the current facility should be reduced.

Number of Products: In Table 13, the number of products was used as a basis for forecasting engineering personnel. This may not be applicable to other types of manufacture, but should nevertheless be considered and evaluated.

Litton Industries uses a standard figure for total employees. This figure for the past four years has varied only four per cent.
Other Factors: The basic guides presented herein are not meant to be conclusive. They are presented as an example of what has been successfully used and represent a guide to the small business concern to be used as a basis for developing its own factors.

Each one of the factors cannot stand on its own but is interrelated with the others. The application of systemized approach such as has been presented will do much to aid the small business manager in establishing a factual base for facility and manpower forecasting.

Equipment forecasts.--Each employee requires some type of equipment even if it is only a desk and chair. For each forecasted increment of manpower the equipment required to perform the function must be indicated. In addition, equipment to support the production volume, including production tools and machines, test equipment, et cetera, should be estimated. A review of new or improved product ideas should be undertaken to evaluate the need for additional equipment.

A successfully used technique to accomplish this and one that is easily achieved, is for each manager to develop his own requirements based on manpower forecasts. These then, should be reviewed and revised as necessary.
Conclusion

Before a business can forecast manpower and facility requirements, a sales forecast must be developed. There are many ways to forecast manpower ranging from detailed product processing analysis to intuitive estimates by management.

For the long-range forecast, the detail of product processing is not advocated nor is the other extreme of estimates. This thesis has shown a method of forecasting manpower through the use of a building block method based on direct labor employees, total sales and other factors that are a function of sales. The basis for the entire building block is manpower performance standards.

Facilities, as shown by other companies, are forecasted as a function of manpower on the premise that each worker must be provided a work area in relation to the type of work he performs.

In forecasting the future, the manager will find historical trends an invaluable aid. As the business environments change so may the trends, therefore, the manager is cautioned to thoroughly examine trends and estimates of the future environment so as not to be trapped in a straight line extrapolation.
CHAPTER VI

FINANCIAL PLANNING

Introduction

In previous chapters the forecasting and planning of Sales, Manpower, Facilities and Equipment have been discussed with relatively little reference to financial requirements.

The necessity of financial planning.--The necessity of financial planning is exemplified by the statement that the success or failure of a business enterprise is measured to a large degree in terms of profits.¹ Welsch also says:

Modern management, in order to keep pace with the competition, must chart its course in advance, then utilize effective techniques to assure control and coordination of effort during the process of operating.²

The Small Business Administration in their pamphlet elucidates this by stating:

²Ibid.
Business can fail even though they own things worth more than they owe. Bills are paid with liquid funds not fixed assets.\(^3\)

The long-range financial plan is the quantitative application of monetary receipts and expenditures to support and justify your long-range operational plans.

**Standards of measurement.—** Standards of measurement can be applied to the financial plan in the form of ratios. Dun and Bradstreet says: "Ratios are tools with which we measure performance."\(^4\) Ratios are also used to establish performance requirements. To easily accomplish this, Dun and Bradstreet suggests that financial plans be set up on a percentage basis as well as a dollar amount basis.\(^5\)

Though a listing of the various acceptable ratios will not be shown here, they should be brought to the attention of the small business manager so that he may be aware of them and attempt correlations. These ratios are not meant to be absolutes for many extraneous things may exist that will reflect a greater or lesser ratio than those published by Dun and Bradstreet. The important thing is that the manager understand them and the effect they have.

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\(^5\)Ibid., p. 40.
Other basic guides should be considered by the small business manager in developing and applying his financial plan. According to the Small Business Administration, three basic guides are available for financial planning and control:

The break-even point, the level of gross profit, and the rate of return on investment.\(^6\)

The Small Business Administration also stresses that:

These guides are tools and should never be considered as substitutes for managerial judgment.\(^7\)

Other guidelines and financial forecasts in addition to the above are required to correctly portray the long-range financial plans of the enterprise.

Koontz and O'Donnell say:

Only major plans and the expected operation of the sum total of all plans of the enterprise are usually translated into financial forecasts.\(^8\)

Remington H. Warner indicates other benefits in addition to evaluating and charting the anticipated income and expenses in his statement:

The development of long-range forecasts and of anticipated expenses and profits gives us a prime

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\(^7\)Ibid.

sales tool for obtaining outside funds if the projections indicate the need for them.\(^9\)

J. J. Curran says:

Financial requirements are determined by calculating the total amount necessary for fixed capital, working capital, and costs of organizing and promoting a business.\(^{10}\)

Glenn A. Welsch, an eminent authority in the field, simply defines financial plans as an organization of the facts of production. He outlines these facts of production as cost and expenses, capital requirements and all other monetary requirements.\(^{11}\) Welsch also says:

The planning budget represents the overall plan of operations developed by the company covering a definite period of time.\(^{12}\)

In previous chapters the overall plan of operations has been discussed by reviewing the sales forecast and the techniques for developing it in addition to a discussion of resources forecasts, manpower, facilities and equipment and some techniques for developing them. The next logical step is to determine the capital requirement to support the operations forecasts.

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\(^{11}\)Welsch, p. 6.

\(^{12}\)Ibid., p. 35.
Edward F. Reiter defines the required financial forecasts as projected profit and loss statements, balance sheets and cash flow statements. He also stresses the use of detailed projections of sources and uses of funds rather than ratios as a starting point.\textsuperscript{13} In Chapter V, the use of funds for manpower was discussed and in Chapter IV the source of funds was discussed. In this chapter the application of these to the financial forecast and the addition of other capital requirements will be discussed and applied to the financial forecasts.

The breakeven analysis has been mentioned as a tool but because of the hypothetical format and the lack of definition of product mix it will not be pursued.

Considerations

Before attempting to develop a proposed model of a financial plan, a discussion of the various considerations leading to the plan are in order.

The nature of expenses.--The nature of expenses is superbly described by Welsch in his statement:

The principle underlying the variable budgets is referred to as the principle of flexibility. The principle holds that costs can be related to activity.\textsuperscript{14}


\textsuperscript{14}Welsch, p. 159.
The Small Business Administration pamphlet says:
"Fixed expenses have the unfortunate habit of not remaining fixed."\(^{15}\)

Expenses of operation in the model are shown as variable expenses. The application is somewhat theoretical for even though it might be accepted that rent does vary with square footage, you cannot add or decrease square footage of facilities a foot at a time. On the other hand the cost of the square footage used is derived by dividing the total footage used by the total cost. Thus if only half of the facility is productively used, the cost per square foot of utilized space will be twice as high as if the total facility was productively used.

**Wages and salaries.**—Wages and salaries are developed on a quantitative basis, i. e., absolutes applied to the manpower forecast as developed in Chapter V. The direct labor rates usually are an average rate for all direct labor employees while the indirect labor rates should be determined as an average for each job classification.

For the ensuing years the wage and salary rates must be adjusted in accordance with economic forecasts. Historically, over the long-run, wages and salaries have increased over the years. The historical increases are

\(^{15}\)Small Business Administration, "Guides for Profit Planning," p. 2.
available from a number of sources such as the Department of Commerce, the Merchants and Manufacturers Association and independent surveys for specific classifications and geographic areas. Many companies use a trend line based on historical records within their own company adjusted for industry and geographic trends. This is suggested as a simple method for the small business manager.

Future requirements.--Future requirements for additional capital must seriously be considered by the manager and included in his financial forecasts. These requirements may be additional facilities and equipment, patent and licensing rights, and major facility modifications.

Any capital outlays other than operating expenses must be analyzed and costed out at the projected price for the future years in which the expenditures will be made.

Ratios.--Ratios as previously discussed are a method of measuring performance. In the case of planning they are a method of determining the acceptability of the plan based on performance requirements.

Dun and Bradstreet suggests that financial statements be set up in percentage form so that ratios may be easily derived.\textsuperscript{16} In the proposed model, both percentages

\textsuperscript{16}Dun and Bradstreet, "Profitable Management for Main Street," p. 40.
and dollar amounts will be shown.

It is recommended that the small business manager establish his own ratios, ratios that are indicative of his performance requirements within his own business environment. In addition and as an aid in setting up these ratios he should check the "14 Important Ratios" published annually by Dun and Bradstreet. 17

Methods of financing.--Methods of financing, if required by the long-range plan, deserve serious consideration by the small business manager. The existence of a long-range plan will greatly aid the manager in obtaining financing.

The method to be selected will be dependent on the required term of indebtedness, whether the loan is to be secured or unsecured, the amount of the loan in relation to sales and net worth, the firm's reputation, the collateral available for securing a loan and many other considerations.

In any event the firm should not limit itself to investigating a sole source for financing but should investigate all possibilities so as to secure the best financing at the best price.

The American Management Association in one of their Management Series publications recommends two simple methods...
rules in relation to financing:

The first step is to review critically the planned expenditures. The next step is to decide how to obtain the funds.\textsuperscript{18}

Financial Statements

Before establishing a long-range financial plan, it is essential to determine the types of financial statements that will be prepared. Welsch, Koontz and O'Donnell and other authorities agree that long-range financial plans should be limited to the major financial statements. In fact, Welsch says: "Usually such plans are reduced to writing in a very informal manner."\textsuperscript{19}

The Small Business Administration pamphlet titled \textit{Planning Your Working Capital Requirements}, limits the financial plans to profit and loss statements and a cash flow schedule.\textsuperscript{20}

The proposed model will include projected profit and loss statements, balance sheets and cash flow schedules.

\textbf{Profit and loss.--}Profit and loss statements will be kept simple for clarity's sake, but will be backed up by

\begin{itemize}
\item \textsuperscript{18}Small Business Administration, \textit{Guides for Profit Planning}, p. 3.
\item \textsuperscript{19}Welsch, pp. 28-29.
\item \textsuperscript{20}Small Business Administration, \textit{Planning Your Working Capital Requirements}, p. 3.
\end{itemize}
variable expense schedules. The format appears in the proposed model.

**Balance sheets.**—Balance sheets format will be shown in the proposed model and like the profit and loss statement will be kept simple and the one statement will be organized so as to cover the entire forecast period.

**Cash flow.**—Cash flow will be shown by format only but for a truly realistic plan, a cash flow should be prepared for each year.

**Proposed Model**

The proposed model is an extension of the sales forecast developed in Chapter IV and the resources, manpower, facilities and equipment developed in Chapter V. In this proposed model, the capital considerations required to finance the operational plans will be stated. The purpose is to present a guide that the small business man can follow in developing his own financial plans.

**Historical records.**—Historical records will serve as the basis for future plans. The small business manager should tabulate his historical profit and loss statements and balance sheets much in the same manner as sales and manpower were done in Chapters IV and V. An analysis of historical records will do much to enlighten the manager in relation to his performance interjecting hindsight and
the knowledge of his correct or incorrect decisions.

**Forecasted profit and loss.**--Forecasted profit and loss is the projection into the future of the forecasted income (sales) and the operating expenses usually covering the same years as the sales forecast.

The format as in Table 14 is recommended as an efficient way of comparing the historical years. In addition to the quantitative figures knowledge of historical happenings are necessary to properly analyze the statements.

Once the historical records are tabulated as shown in Table 14, an analysis of them should be undertaken. Quantitative figures tend to lose their significance when related to other years of various levels of production. Therefore, the statements also should reflect percentages of sales which can be equated to various levels of production.

Using historical records as a base together with the managers evaluation of future conditions, percentages for each item of the profit and loss statement should be selected and used for the forecasted statements. Table 15 reflects hypothetically selected percentages and the equivalent quantitative amounts. It should be noted that because this is a proposed model an analysis of the selected percentages could not be undertaken. In an actual situation
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<td></td>
<td>%</td>
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<tr>
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<td>43.5</td>
<td>6.5</td>
<td>47.5</td>
<td>6.5</td>
</tr>
</tbody>
</table>

*The Projected Profit and Loss Statement reflects hypothetically selected figures based on the sales forecast, product mix and technological advances as developed and discussed in Chapter IV.*
the analysis and selection is of prime importance.

The formula for income taxes used in the model are fifty-two per cent of operating profit less $5,500 as defined by the Bureau of Internal Revenue for operating profits in excess of $25,000. The percentage of sales is derived after computing the amount of tax based on operating profit.

Before any further work can take place, the figures in Table 15, Projected Profit and Loss statement, must be justified and changed if warranted.

Historically, the businessman has been confronted with the problem of developing reliable cost information for future conditions. The proposed model advocates the approach that all costs are variable with factors of the business.

Manufacturing expenses can be computed as a percentage of sales as shown in Table 15 or as a percentage of direct labor wages which is a common practice. In either case, the result will be the same for direct labor wages are also a function of sales.

After the forecasted P & L has been developed, it must be verified—the verification being an analysis of all of the costs—and the result, in actuality, becoming a budget.

As previously noted, wages have generally increased each year in accordance with rising price levels. Based on this and substantiated by a survey of employees versus sales
for given industries, each employee must produce more goods and services each ensuing year in order to make up the difference between the increased wage rates over the increased price index. For example, Table 15 shows wages staying at a constant 35 per cent of sales which is correct. An analysis is in order to see if the wages will support the manpower forecasted in Table 12, Chapter V. If the wages are not sufficient, then a decision must be made whether to increase wages as a per cent of sales or reduce the number of employees while maintaining production at the forecasted level. It is interesting to note the following actual increases in sales per employee for various industries. The years tested were 1956 through 1961 and though the recession year of 1957 showed a decline, the overall effect was an increase as shown in Table 16.

### TABLE 16

**AVERAGE PER CENT INCREASE IN SALES PER EMPLOYEE PER YEAR 1956 THROUGH 1961**

<table>
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<tr>
<th>Industry</th>
<th>Per Cent Increase</th>
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<tbody>
<tr>
<td>Aircraft</td>
<td>8.5</td>
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<td>Steel</td>
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<tr>
<td>Automobile</td>
<td>3.8</td>
</tr>
<tr>
<td>Electronics</td>
<td>3.7</td>
</tr>
</tbody>
</table>
The profit and loss statement has been kept simple and does not include detailed expenses, non-operating income and expenses, et cetera, in accordance with Koontz and O'Donnell, Welsch and other authorities, previously cited, philosophy of simplicity of forecasts.

**Forecasted balance sheet.**—Forecasted balance sheet is analogous to a photograph of the financial condition of the business at an instantaneous point in time. Because of the hypothetical nature of the forecast only the balance sheet format is shown.

The balance sheet is more than figures arbitrarily selected and placed in their proper categories. The same thought, analysis of historical trends, selection of ratios and selection of future performance requirements must be undertaken so as to provide a goal.

Table 17 reflects the latest balance sheet for the proposed model. The figures are hypothetical but are compatible with the profit and loss for that same year. A forecasted balance sheet is not shown for the forecast period because of the decisions required as noted above. A model forecast would of necessity in a hypothetical situation reflect arbitrary projections which have a bearing on a real situation. A sample format for balance sheet forecast is shown in Table 18.

The percentages in the first column should reflect management's desired result based on its analysis of the
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<tr>
<th>ASSETS</th>
<th>%</th>
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<th>ASSETS</th>
<th>%</th>
<th>$</th>
<th>ASSETS</th>
<th>%</th>
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<td>Inventories</td>
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<td>50.0</td>
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<tr>
<td>Machinery &amp; Equipment (less depreciation)</td>
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</table>
historical and future condition.

Forecasted cash flow.—Whereas profit and loss statements and balance sheets are fairly standard to all businesses, experience indicates that the cash flow is relatively new and often unknown to the small business manager.

Welsch says:

Too often the need for additional cash is not realized until the situation becomes quite critical but determination of probable cash receipts and probable cash payments makes possible an evaluation of the probable cash position for the forecast period.21

To plan working capital requirements it is important to know the cash flow which will be generated from the forecasted profit and loss statement. This involves a consideration of all elements of cash receipts and disbursements at the time they occur.

A sample format for cash flow is shown in Table 19. The headings of possible items of inclusion are shown on the left side of the page. Across the top of the page columns for the 12 months of the first year should be set up. A reduction in detail can then be shown by tabulating on a yearly basis for the ensuing four years. The subject cash flow and the various methods that can be used for developing it would be sufficient in itself

21Welsch, p. 203.
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<td><strong>Cash Shortage</strong></td>
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<td>Bank Loans to be Obtained</td>
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<td><strong>Ending Cash Balance</strong></td>
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for a thesis topic. Therefore, a comprehensive discussion will not be undertaken here. The small business manager is supplied the following reference for a detailed discussion on cash flow.\textsuperscript{22}

The forecast of cash should be scrutinized by management to obtain the most favorable use of cash. To visually conceive this, reference is made to Graph 2 titled, Income and Expenditure Curves. To develop these graphs, the manager need only to plot expenses and income as portrayed on the Cash Flow.

\begin{center}
\begin{tikzpicture}
\begin{axis}[
width=\textwidth,
height=0.5\textwidth,
axis lines=left,
ylabel=\text{	extit{Expenses}}
]
\addplot[mark=none, dashed] coordinates { (1,0) (2,1) (3,2) (4,3) (5,2) (6,1) (7,0) } node[pos=0.5, above] {Income};
\addplot[mark=none, solid] coordinates { (1,0) (2,1) (3,2) (4,3) (5,2) (6,1) (7,0) };
\end{axis}
\end{tikzpicture}
\end{center}

Graph 2.---Income and Expenditure Curves

Graph 2 reflects hypothetical figures of a cyclical business showing expenditure and income curves. For the

\textsuperscript{22}Small Business Administration, Planning Your Working Capital Requirements. Previously cited as an excellent short and to the point discussion on cash flow.
first four months, cash is required to offset the deficit between expenses and income while the latter part of the year income is in excess of expenditures resulting in a surplus of cash. The first condition can be offset by obtaining short term loans and the second condition can be used to an advantage by obtaining additional income through interest payments by buying Treasury Bonds or as a pledged bank balance.23

Conclusion

Planning forces things to happen that would otherwise not occur. A detailed projection of sources and uses of funds for the forecast period is a mandatory requirement to assure that capital will be available as needed or to set the stage so that capital may be obtained. The financial forecasts are based on recent operating experience plus management's best judgment and required performance during the forecast period. The profit and loss, balance sheet and cash flow are all that is needed to support the long-range forecast program.24


CHAPTER VII

CONCLUSIONS

A Survey of the Problem

The problem as defined is to show a method of long-range planning that will meet the following criteria of:

Simplicity
Inexpensiveness
Understandability
Flexibility
Relative accuracy

The problems of the small company. — The small company is laboring against formidable odds in competing with the industrial giants. Many small businesses operate on a day to day existence without a plan for the future that, if implemented properly, would force things to happen that otherwise might not occur.

In the small company there are few executives. Each usually performs numerous management functions. The
small company rarely enjoys such things as specialized planning groups and executive staffs. Therefore, long-range planning must be done by the existing staff within the realm of the existing personnel capabilities.

**A need for long-range planning.**—A need for long-range planning for the small company is evidenced by the failure rate of small business as referenced in Chapter II.

It is essential that all business whether large or small develop plans for the future to aid in insuring long-term success. Though it is possible that many companies have succeeded in the long-term without the aid of long-range planning, the small company especially, should take advantage of every opportunity available to it to help assure success.

**The philosophy of small company long-range planning.**—The philosophy of small company long-range planning is to plan by a method that is understandable in comparison with the small businessman's abilities, simple and inexpensive to administer, flexible, and accurate to the degree for which it is intended.

The approach as presented in this thesis follows a step by step pattern of activities that must be undertaken to accomplish the objective. The degree of sophistication has been exemplified but the application is left up to the individual manager. Where warranted, because
of the nature and complexity of the subject matter, reference has been made to source documents which the reader has been encouraged to review.

A planning approach involving complicated statistics and equations and extensive detail, though germane to the subject, has been purposely avoided. Such an approach would do more to deter small company long-range planning efforts than to encourage them.

A Way to Plan

As most executives have learned, the definition of the problem is the essential step in affecting resolution. This holds true for long-range planning as well. The problem has been defined as: How can company success be assured in the long-term.

Define what is to be accomplished.—The definition of success is of paramount importance. This, in management terms, is referred to as Objectives as discussed in Chapters II and III.

Objectives are guide lines that spell out management’s aims and desires of the enterprise. Once objectives are established, they should be supported by detail definitions referred to as Policies, Rules, and Procedures.

Develop a method.—Because of the diversification of business activity, the factors affecting individual
businesses, and the variety of aims involved, each company must tailor-make their own method of planning. Most of all the method must be consistent with the available personnel abilities and must achieve the goal of developing a workable long-range plan.

A Method of Planning

A method of planning has been presented in this thesis which, with minor modifications, should satisfy the requirements of the small company. The method basically involves three major considerations: Sales, Manpower and Facilities, and Capital Requirements. The considerations were presented in this order purposely for each is a function of the preceding one.

Objectives, though they are not in the true sense considered part of the long-range plan, are essential to the plan. Sales are a function of objectives, company abilities and management insight. Manpower and facilities are a function of sales, and capital requirements are a function of sales, manpower and facilities, and objectives.

The sales forecast. —The sales forecast is an attempt by management to estimate the future potential of the business. Sales forecasts should be based on historical trends, market conditions, company abilities and management initiative. Sales forecasting must involve more than hopeful selection of the desired sales volume.
The prime purpose of the sales forecast is to force management to analyze what they must do in order to achieve the forecasted sales. Questions such as the following must be answered: What additional skills or equipment are required? Does management have abilities to produce? What is competition doing? What can be done to increase sales?

The correct completion of the sales forecast alone will do much for the small business but to be complete other items in addition to sales must be considered.

**Manpower and facilities forecast.**—Manpower and facilities forecast is a complement to the sales forecast to the degree that it defines the skills, equipment, and facilities that are required to support the forecasted sales. The method presented for forecasting manpower is in essence a standard for performance measurement thus serving a dual purpose. It forces management to develop a standard for current performance which will enable it to measure the current performance and also requires an estimate of what future performance should be.

If it is possible, management should analyze the performance of its competition. Because of the lack of standards in small companies and the lack of knowledge of this type between competitors, it is doubtful if the small business would be in the fortunate position to equate their manpower standards to those of their competition.
Facilities, being a function of manpower, are derived through a simple multiplication of the required space per person times the number of people. The required space per person, as the manpower itself, must be developed for each company in relation to its individual requirements.

Financial forecasts.--Financial forecasts of the business should depict the monetary requirements and returns of the venture. In accordance with cited authorities the financial forecasts have been kept to a minimal detail.

Historical records are of prime importance in developing forecasts. From these records trends and ratios can be computed and when analyzed and adjusted, they will serve as forecast factors. At this point, it is wise to interject the importance of analysis of historical trends and an estimate of future conditions. Conditions constantly change requiring that factors also change. For example, Litton Industries has adjusted their overhead rate by 15 per cent over the past three years. To use this ratio as a forecast factor required analysis of future conditions and an estimate of projected overhead percentages. This estimate may not be the same as the trend line would indicate.

The financial forecasts referenced in this thesis are the Profit and Loss Statement, the Balance Sheet and the Cash Flow forecast. These forecasts follow the Sales
and Manpower and Facilities forecasts in this order for two important reasons: (1) the logical sequence of the job to be done and (2) a justification of the forecasts. For example, in completing the profit and loss statement it may be discovered that wages and salaries as a percentage of sales may be out of line with previous or proposed figures. This will force the manager to re-evaluate his original forecasts and attempt to adjust these figures. The adjustment needless to say cannot be an arbitrary increase or decrease in manpower but must be carefully thought out and any decreases justified by technological improvements, improved methods, sub-contracts, et cetera.

The balance sheet, which reflects a picture of the firm's financial condition at an instantaneous point in time, is a logical resultant of the cash flow forecast, the sales budget and the manpower and facilities forecast. Though some cash flow formats include the necessary elements of the balance sheet, a separate schedule is advocated as a less confusing presentation and also to allow easy equation to historical and forecasted ratios.

The cash flow is an essential document to define the source and time periods of receipts and expenditures and further justify the sales and manpower forecasts. The cash flow provides the manager with a moving picture of the finances of the business. If facilities are planned
for expansion the cash flow will indicate when capital will be available to pay for them thus aiding in decisions of expansion dates, methods of financing—i.e., borrowing or from working capital, timing of indebtedness and periods and amounts of repayment if applicable. On the other hand, cash may not be available or the financial condition such that borrowing would be very difficult. In this situation the manager should re-evaluate his need for expansion and/or attempt alternate courses of action.

Of all the forecasts presented herein, the financial forecasts are the key to proving the long-range plan.

A Test of the Hypothesis

The hypothesis as stated in Chapter I is "an effective program of long-range planning can be developed for or by the small company."

Outlined in Chapters III, IV, V, and VI are the guidelines to develop a long-range plan. The guidelines are within the realm of the small business manager and are essential to long-range growth.

The guidelines are simple and understandable. Formats have been presented that minimize the effort required for the completion of the forecasts.

References are often made to analyses of current, historical, and future happenings for which there is no substitute. The plan presented here like all other
long-range plans is dependent on good sound analyses.

An effective program as outlined can and should be developed for or by the small company to insure long-range perpetuation by forcing things to happen that might not otherwise occur.
BIBLIOGRAPHY


Dun and Bradstreet. *14 Important Ratios.* New York: Dun and Bradstreet, Inc.


