THE ROLE OF PLANNING AND FORECASTING IN BUSINESS ORGANISATION

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Abstract
Individuals and organizations have operated for hundreds of years by planning and forecasting in an intuitive manner. It was not until the 1950s that formal approaches became popular. Since then, such approaches have been used by business, government, and nonprofit organizations. Advocates of formal approaches (for example, Steiner, 1979) claim that an organization can improve its effectiveness if it can forecast its environment, anticipate problems, and develop plans to respond to those problems. However, informal planning and forecasting are expensive activities; this raises questions about their superiority over informal planning and forecasting. Furthermore, critics of the formal approach claim that it introduces rigidity and hampers creativity. ftese critics include many observers with practical experience (for example, Wrapp, 1967). ftis chapter presents a framework for formal planning and forecasting which shows how they interact with one another. Suggestions are presented on how to use formal planning for strategic decision making. (For simplicity, references to planning and forecasting in this chapter will mean formal strategic planning and forecasting.) Planning is not expected to be useful in all situations, so recommendations are made on when planning is most useful. Descriptions of forecasting methods are then provided. Finally, suggestions are made on which forecasting methods to use when developing plans for a company.

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This chapter presents a framework for formal planning and forecasting which shows how they interact with one another. Suggestions are presented on how to use formal planning for strategic decision making. (For simplicity, references to planning and forecasting in this chapter will mean formal strategic planning and forecasting.) Planning is not expected to be useful in all situations, so recommendations are made on when planning is most useful. Descriptions of forecasting methods are then provided. Finally, suggestions are made on which forecasting methods to use when developing plans for a company.

Where possible, the advice on planning and forecasting is supported by relevant research. In some areas much research exists. (For a review of the psyc hological literature on forecasting and planning, see Hogarth and Makridakis, 1981.) In many areas, however, little research has been done.

Various aspects of formal planning and forecasting are illustrated here by using the strategic decision by Ford to introduce the Edsel automobile in 1957. In this situation, formal planning and forecasting would have been expected to be useful. Judging from published accounts by a participant at Ford (Baker, 1957) and an observer (Brooks, 1969), Ford did not use formal planning and forecasting for the strategic decisions involved in the introduction of the Edsel. (Of course, having decided intuitively to proceed, they did carry out operational planning for the production of the car.) The introduction of the Edsel is regarded as one of the largest business errors of all time. Ford itself lost $350 million. Their dealers also lost a substantial amount. Is it possible that formal planning and forecasting might have protected Ford from such a large strategic error?

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Figure 2-1 provides a framework to conceptualize strategic planning within a company.
A scanning of the environment yields relevant data for the "Data Bank." This data bank (or information system) would contain such data as government regulations, demographic indicators, industry sales, the resources of the company and of its competitors, and information on available technologies for production. Ideally, these data would be assembled in a central location, such as in a filing cabinet, chart room, or computer.

The left- hand side of Figure 2-1 examines planning. A variety of planning processes can be used. These will be described in more detail below. The planning processes draw upon information from the data bank (evidence on the current situation) and also upon the forecasts evidence on what will happen in the future). The two-way arrow from "Data Bank" to "Planning Processes" indicates that the planning process, to a large extent, dictates what information is required. It is recommended that formal planning start with the planning process rather than with the data.

The planning process produces a set of plans. These describe objectives and alternative strategies. One strategy is selected as a basis for action. In practice, the actions actually taken by the company can deviate substantially from the intended strategy. The actions lead to results, both intended and unintended. A record of these results is kept in the data bank.

The right-hand side of Figure 2-1 examines forecasting. To make forecasts for a company, it is necessary to have information about the company's proposed strategies (thus the arrow from "Plans" to "Forecasting Methods"). An examination of the forecasting methods, then, will help determine what data are required (thus the two-way arrow from "Data Bank" to "Forecasting Methods"). The forecasting methods, to be described in more detail below, yield a set of forecasts. What will happen if the company attempts strategy A and environment X occurs? How likely is environment X? How much confidence can we have in the forecast? These forecasts are then used as inputs to the planning process.

Note the distinctions between forecasting and planning. Planning provides the strategies, given certain forecasts, whereas forecasting estimates the results, given the plan. Planning relates to what the firm should do. Forecasting relates to what will happen if the firm tries to implement a given strategy in a possible environment. Forecasting also helps to determine the likelihood of the possible environments.

The remainder of this chapter discusses the items in the two circles on Figure 2-1, the Planning Process and Forecasting Methods.

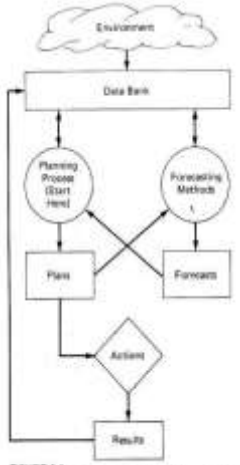

FIGURE 2-1
Framework for formal planning and forecasting.

DESCRIPTION OF THE STRATEGIC PLANNING PROCESS

Formal strategic planning calls for an explicit written process for determining the firm's long-range objectives, the generation of alternative strategies for achieving these objectives, the evaluation of these strategies, and a systematic procedure for monitoring results. Each of these steps of the planning process should be accompanied by an explicit procedure for gaining commitment. This process is summarized in Figure 2-2. The arrows suggest the best order in which to proceed. The need for commitment is relevant for all phases. The specification of objectives should be done befo re the generation of strategies which, in turn, should be completed before the evaluation. The monitoring step is last. The dotted line indicates that, to some extent, the process is iterative. For example, the evaluation may call for going back to the generation of new strategies, or monitoring may require a new evaluation of strategies.

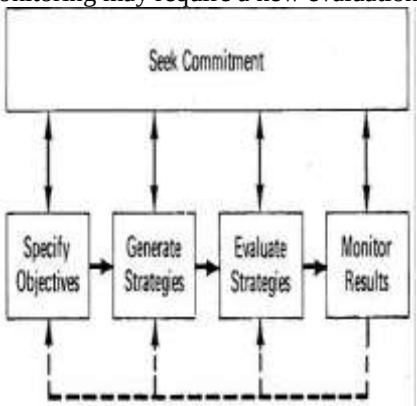

FIGURE 2-2
The planning process.

The various steps of the planning process are described below along with some formal techniques that can

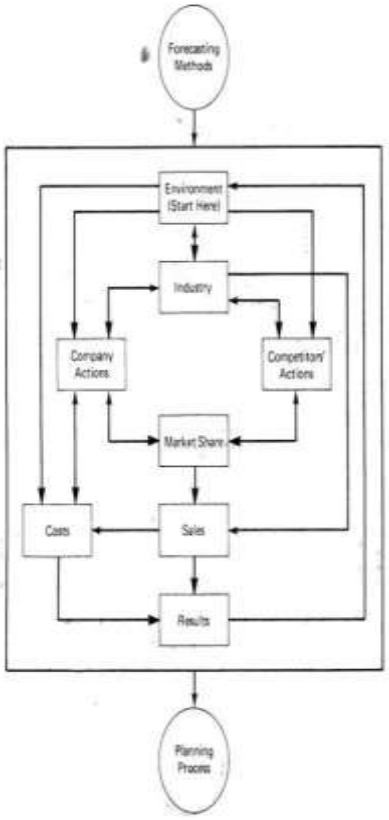

FIGURE 2-4
Need for forecasts in company planning.

be used to make each step explicit. (Although commitment is the first step, it is easiest to discuss this last.) This discussion is prescriptive; it suggests how planning should be done. Numerous accounts are available of how formal strategic planning is done (for example, see Wood, 1980, and the extensive review of the descriptive research by Hofer, 1976).An environmental change can directly affect company actions (e.g., a change in export laws), or it can indirectly affect the company by its impact on the industry (e.g., increased energy costs).

Surprisingly, the accuracy of industry forecasts is not highly sensitive to the accuracy of the environmental forecast (evidence on this. point is summarized in Armstrong, 1978a, pp. 219, 241, 378). It is expected that this generalization will not hold for extremely large environmental changes such as wars, depressions, shortages, government controls, or major technological innovations. But, generally, highly accurate environmental forecasts are not required for industry forecasts.

It is important to determine which are the important factors in the environment that might affect the industry. It is also important to predict the direction of change in the important factors, and to then get “approximately correct” predictions of the magnitude of the changes in these factors. For the direction of change in environmental factors, only general trends, not cycles, should be considered. Other than recurrent events owing to the seasons of the year (seasonality), cycles have been of little value for improving the accuracy of forecasts. The reason? One must also predict the phases (timing) of the cycles. If the timing is off, large errors can occur.

Ample data exist on trends in the environment. The more important factors are published in magazines, newspapers, and financial newsletters. The problem is not a lack of data; rather, it is how to use the data. Companies often spend much time and money seeking information from the environment that will confirm their beliefs. Frequently they ignore negative or "disconfirming" information that is easily available. It seems useful, therefore, to severely limit the budget for the collection of environmental data. Seldom is the

additional information expected to have a strong positive impact on decision making. (Most of the evidence in this area is from studies in psychology; Goldberg, 1968, provides a summary of this research.)

This advice on environmental forecasts is counterintuitive. People typically expect that better environmental forecasts are of great value to the company. Thus, much time and money are spent by firms to obtain "better forecasts." For example, many companies purchase econometric forecasts to obtain short-range forecasts of GNP, inflation rates, and unemployment. This practice is widespread despite the fact that little evidence exists to suggest that these forecasts are superior to other, cheaper alternatives such as extrapolations or forecasts by a panel of experts (Armstrong, 1978b).

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