INTRODUCTION: THE ROLE OF FORECASTING

Every decision rests on a forecast – a view of the future. We know from everyday experience that many of the forecasts we are obliged to make will prove mistaken. Yet this does not invalidate the case for basing decisions upon forecasts. We are obliged to formulate forecasts of some kind or other as a means of determining a future course of action.

Man has evolved into a highly successful surviving animal. His chances of success have been enhanced by his ability to foresee the consequences of his decisions. In that sense we are all forecasters.

Forecasting is an essential discipline in planning and running a business. Success depends, to a large extent, on getting those forecasts right. We know, however, that the future is highly uncertain. Throughout our lives we are confronted with uncertainties. There is, therefore, a fair chance that we will not make the right decisions.

In business we are continually confronted by the need to take decisions. The important decisions compel us to construct a route map of the future and to forecast which way our decisions will take us. A wrong decision can end in disaster. For that reason we need to bring a wide range of skills to bear on the possible and probable outcomes of the decisions.

The business environment is constantly changing. It has become increasingly complex. Large organizations have the capacity to set up specialist units to provide forecasts for a wide range of subjects. All firms need to forecast the level of sales and revenues. This may require commissioned market research to establish the pattern of the market, its size and its growth potential.

The firm will also require an analysis of the competition, an appraisal of product design and development and an assessment of pricing policy. This also leads to an analysis of costs, covering labour and purchase of materials, components and services. The cost of capital may also be relevant, as will premises and location.

The network of related items needed for a thorough analysis and a set of forecasts relating to sales will include a number of crucial areas where we have no control. We cannot control interest rates, exchange rates, commodity prices, taxation and legislation. We cannot control the labour market or the
levels and changes in the customers’ spending power. Yet it is just as important to forecast those factors which are beyond our control as to forecast those which we can control.

All businesses will be affected by changes in taxation and interest rates. No business can escape the rises and falls of the business cycle. It is therefore essential to have an understanding of the causes of cyclical fluctuations and to make allowances for those potential fluctuations in building up a set of forecasts.

The object of forecasting

This may be summarized as: ‘to minimize uncertainty and to identify and evaluate risk’. Faced with doubts about the future the decision-taker requires as much information about the past and the future as is possible. He will need to know how much risk attaches to alternative decisions.

For these reasons, the problem of forecasting needs to be approached in as scientific a manner as possible. Yet it is as well at the outset to keep in mind the imprecise nature of many of the subjects to be forecast. Not only is our knowledge of the future extremely limited but our knowledge of the past is far from complete. There are few truly dependable sets of statistics describing the past and the margin of error in many of the series in common use is wide – in some cases so wide as to invalidate statistical analysis.

Thus forecasting must continue to be regarded very much as an art rather than a science, in spite of the continuous advances in computer technology. A golden rule of the computer industry is ‘rubbish in equals rubbish out’. Subjective judgement will be called into play at many points in the construction of a set of forecasts and the forecaster’s judgement will be more dependable if he has a strong grounding in history and a feel for the passage of time and the pace of change. He has to be armed with a storehouse of knowledge about the subject in question, to know the sources of the relevant statistics and – above all – to know how dependable (or unreliable) these sources may be.

It is in this respect that forecasting is an art rather than a science and the greater the forecaster’s experience the better. This does not mean that scientific methods should not be employed. The statistical techniques for calculating a trend or a relationship are obviously scientific.

The range of forecasts

A wide range of business management problems involve forecasting. Forecasts are required not only for the annual budget and the business plan
but for the appraisal of investment projects, the commissioning and exploitation of research as well as the appraisal of competition and the feasibility of making acquisitions. Thus a large part of management activity – the critical part of management – calls for research and forecasting work of one kind or another.

Throughout life each man is his own forecaster. So it tends to be in business. Yet the instances where it will be necessary to set down the forecasts in a systematic fashion have increased. This is not to say that detailed forecasts have to be supplied for every decision and every problem. Forecasting is an exacting task which will absorb a substantial amount of management time. Sophisticated forecasts must be constructed only where the forecasts make a direct contribution towards the problem in hand. There should be a return on the effort and cost of a piece of forecasting as with any other investment in managerial time. Sledgehammers must not be used to crack nuts.

Equally, a common body of forecasting will serve a number of purposes within the firm. The large corporation comprising a number of subsidiaries and/or separate divisions may well find that each unit needs to forecast some similar, common subjects. In these cases forecasting may be regarded as a function conducted for the business as a whole. A set of forecasts in which the parts are consistent with the sum should be agreed centrally and made available for the various parts of the firm. Ideally, therefore, forecasting effort should be directed centrally and come under the control of the chief executive’s office.

Yet there are discordant views about forecasting. Warren Buffet, the hugely successful American long-term investor, said in his annual report of March 1995, ‘We will continue to ignore political and economic forecasts, which are an expensive distraction for many investors and businessmen.’ I have met a number of company chairmen over the years who have bluntly said they did not believe in forecasting. These were generally autocrats surrounded by yes men. In committee the boss pronounced his judgements and the discussion proceeded to rubber-stamp them.

Now this is plain stupid. We all know that there are many uncertainties lying in wait for us. But the art of living and surviving successfully is to attempt to foresee the pitfalls surrounding the opportunities that lie ahead and to work out the likely outcome of our decisions. The unforeseen events – not all adverse by the way – present the major risks which have to be assessed in weighing up the odds on our forecasts being fulfilled and the costs of things turning out badly. Mr Buffet is very hot on making sufficient risk allowances.

This is a vital aspect of forecasting which is seldom given proper attention. Through my career the demand has generally been for a single ‘best bet’ set of forecasts: perfectly understandable since most executives’ lives are taken up with day-to-day administration, leaving little time to keep informed about
the changes unfolding in the great big outside world and almost no time for educative reading and (even more importantly) constructive thinking.

Organizing the data and the forecasts

Most firms have a deeply entrenched calendar with timetables embracing all departments for submission of annual budgets and similar timetables for drawing up plans for two years ahead or longer. These are often regarded down the line as chores imposed on an already overloaded timetable. Plans, where they are made, are often extensions of the budget.

Forecasting has become more difficult because of the acceleration in technological change and the speeding up of communications. This has not been matched by any improvement in the collection of economic and social statistics. The margins for error are just as big and anyone who has been involved in the compilation of returns to government departments or business surveys will be aware of the sources of inaccuracies.

My object in writing this book is to draw on the experience of a long working lifetime to provide guidance in forecasting over the range of topics with which businesses are concerned and to help the busy executive to deal with the uncertainties and the problems raised by unreliable data. For that purpose I have divided the subject matter between those subjects over which the business has no control from those where it has virtually complete control.

Diagram I.1 shows the main factors of the environment in which the business has to operate and for which it may have to construct forecasts. Those outside the firm’s direct control are extremely powerful and affect all businesses to a greater or lesser degree.

Climate

Variations in climate may affect crops and harvests and may generate shortages or surpluses which will lead to major movements in food prices. Equally, abnormal changes in temperature will change demand, as with hot spells raising the demand for cold drinks and ice cream, or an unusual cold spell depressing sales of cold items and raising demand for hot food and drink.

In a wider scenario, natural disasters arising from volcanic activity and earthquakes can disrupt the economies of large areas and the climatic effects of El Niño, which occurs with varying intensity at intervals of around five years, are quite dramatic. The warming of the eastern Pacific which generates El Niño results in excessive rainfall in some regions and destructive droughts in others, spanning huge areas of the world.
Diagram I.1  The business environment
Climatic variations are minor factors for the great majority of businesses. An important minority, however, has to be prepared to face the consequences of fluctuations in weather and climate which may make a major impact on the price of supplies and demand for the firm’s products.

**Commodity prices**

Apart from food crops, rubber, wool and cotton are raw materials which are subject to major swings in prices. These may be affected by climate. They are also subject to substantial changes in demand resulting from the swings in the world business cycle. Above-average rises in spending and output in the world’s major economies will tend to force up the prices of raw materials in the commodity markets. Conversely, a downturn in the world business cycle will depress demand and prices in the industrial commodity markets. Metal prices, including precious metals, are equally subject to large swings, and firms depending on commodity supplies will need to forecast change in prices as part of their budgeting and marketing exercises.

**Energy prices**

Energy accounts for a large part of costs in the manufacturing industry. Metal manufacture uses vast amounts of energy, whilst electricity production is the dominant customer for raw energy. Transport, too, has large energy costs. Approximately 10 per cent of national costs arise from energy demand, the majority arising from industrial production. Energy costs are a minor item for the majority of service activities.

**Labour markets**

Labour accounts for over half of total costs in most national economies. Very large numbers of people change jobs during the course of a year and the labour market determines the level of wages and salaries. Governments and trade unions have considerable influence on the labour market but the fact remains that supply and demand determine the levels of pay in regional markets and industries.

Most firms operate in urban areas where there are many other businesses and the going rates of pay in those areas are determined by the labour market. Where pay levels are low the firm will run the risk of losing labour to its competitors. In that sense the labour market is beyond the individual firm’s direct control and its policy with regard to pay and conditions of service will be strongly influenced by the wide labour market in which it operates.
Interest rates and exchange rates

Most firms borrow and pay interest. In many cases stocks and work-in-progress are financed by bank loans on which the bank charges a variable rate of interest. Firms may also borrow to help finance expansion and long-term investment in the business is financed in part by the issue of bonds.

Changes in interest rates may have a profound effect on a firm. Should rates be raised with the object of dampening down the demand for credit and the growth in spending, the check to spending will reduce sales for some sectors and damage profits. There is thus an indirect impact on a firm’s fortunes as well as a direct effect insofar as the firm has to pay a higher rate of interest on its borrowings.

The rate of interest is fixed by the central bank and is outside the firm’s control. Thus this powerful factor affecting business prospects can have a major impact on the firm in both directions, stimulating business via lower interest rates and retarding it via higher rates. Prudent management obliges the firm to anticipate the likelihood of changes in interest rates and to forecast the consequences.

Interest rates also have a bearing on exchange rates. Exchange rate movements are reflected in both export and import prices and this is another important area of business over which the firm has no control.

Taxation

Similarly, the levels of taxation are beyond the firm’s control. In some cases governments signal changes in taxation in advance, but this is not the general rule. The firm must therefore assess to what extent its sales may be affected by changes in sales tax or value added tax or excise duties and whether changes in corporation tax and allowances may distort its cash flow.

Legal restraints

Part of the business environment is dictated by laws and regulations. Health and safety legislation will determine certain standards that businesses must maintain. Equally, employment contracts may be regulated by legislation and in many countries free competition is maintained by legal restraints against monopolies. All these matters are beyond the control of the individual firm.
Customers’ spending power

Finally, the firm cannot control its own markets. It may endeavour to do so by differentiating its products from other competing brands but in broad terms it cannot determine how much money its potential customers have to spend. Government policy will influence spending power through changes in both taxation and interest rates and a country’s export markets will be heavily influenced by the changes in spending power in other countries. None of these features can be controlled by the individual firm.

Yet there is a clutch of activities over which the firm has complete control and which we now consider.

Product development

The firm will obviously decide the products and services which it will make. Its decisions will be influenced by its forecasts of markets and their potential. Unless restrained by patents it will be free to design what it plans to make and sell.

The use of capital

A business has complete control of its capital and is able to decide the extent to which it borrows and timing and scale of new stock market issues. It is obviously subject to the regulations with regard to share and bond issues and the scope of its borrowing will be limited by considerations of risk on the part of the lenders.

The use of labour

Although pay rates are dictated by the local labour market, the firm is not inhibited in the management of its workforce except insofar as regulations lay down the boundaries for working hours and holidays and such items as a minimum wage. The firm can plan recruitment and the training of its staff and make provision for pensions.

In forecasting its manpower requirements it will be necessary to take account of those features of the business environment which will influence the growth of the firm and timing of change.
Marketing

The business has complete control of its marketing and is able to promote its products so as to optimize its sales revenue, taking into account the changes in the level of the market in response to changes in the economic environment.

Long-term strategy and objectives

In planning long-term strategy it is necessary to take into account all aspects of the business environment likely to bear on the firm’s activities. Although strategic planning is an activity entirely within the firm’s control it is nevertheless concerned with those factors outside its control. Planning must not be carried out in a vacuum. It must make allowances for the timing and pattern of change and for the action of competitors.

Ideally, the firm should agree its objectives. These are likely to include product development, growth in sales, profit margins and return on capital. Having set the objectives the plan should outline the ways and means of reaching those targets. This will include the use of manpower, the generation of capital, investment to maintain and increase capacity and efficiency, the provision of premises and the profile of costs.

In all these aspects of management, forecasting has a role to play and the following chapters outline the approach and forecasting routines for the various subjects of concern to the business.