## Introduction

The growing competition, rapidity of change in circumstances and the trend towards automation demand that decisions in business are not based purely on guesses and hunches rather on a careful analysis of data concerning the future course of events. More time and attention are given to the future than to the past and the question "what is likely to happen" takes precedence over "what has happened" though no attempt to answer the first can be taken without the facts and figures being available to answer the second.

# **Meaning of Business Forecasting:**

When estimates of future conditions are made on a systematic basis, the process is referred to as "forecasting" and the figure or statement obtained is known as a "forecast". In a world where the future is not known with certainty, virtually every business and economic decision rests upon a forecast of future conditions.

Forecasting aims at reducing the areas of uncertainty that surround management decision-making with respect to costs, profit, sales, production, pricing, capital investment and so forth. If the future were known with certainty, forecasting would be unnecessary.

# **Definitions of Business Forecasting:**

# **Role of Forecasting in Business**

It should be realised at the outset that the object of business forecasting is not to determine a curve or series of figures that will tell exactly what will happen, say, a year in advance, but it is to make analysis based on definite statistical data, which will enable and execute to take advantage of future conditions to a greater extent than he could do without them. In many respects, the future tends to move like the past. This is a good thing, since without some element of continuity between past, present and future, there would be little possibility of successful prediction. But history may not repeat itself and we would hardly expect economic conditions next year or over the next ten years to follow a clear-cut precedent. Yet, frequently past patterns prevail sufficiently to justify using the past as a basis for predicting the future.

While forecasting, one should note that it is impossible to forecast the future precisely—there always must be some range of error allowed for in the forecast. Statistical forecasts are those in which we can use the mathematical theory of probability to measure the risks of errors in predictions.

#### STEPS IN FORECASTING

Forecasting business change involves more than analysis of statistical data-it also embodies the prediction of economic change such as secular trend, seasonal variations, cyclical variations and a consideration of cause and effect.

Broadly speaking, the forecasting of business fluctuations consists of the following steps:

- 1. Understanding why changes in the past have occurred: One of the basic principles is statistical forecasting—indeed of all forecasting when historical data are available—is that the forecaster should use the data on past performance to get a "speedometer reading" of the current rate (say, of sales) and of how fast this rate is increasing or decreasing. The current rate and changes in the rate—"acceleration" and "deceleration" constitute the basis of forecasting. Once they are known, various mathematical techniques can develop projections from them of the future. It is often said that the past, imperfect indicator of the future though it is, is the best guide we have in attempting to make predictions.
- 2. **Determining which phases of business activity must be measured:** After it is known why business fluctuations have occurred, or if there is a reasonable supposition, it is necessary to measure certain phases of business activity in order to predict what changes will probably follow the present level of activity.
- 3. Selecting and compiling data to be used as measuring devices: There is an interdependent relationship between the selection of statistical data and determination of why business fluctuations occur. Statistical data cannot be collected and analysed in an intelligent manner unless there is a sufficient understanding of business fluctuations.

Likewise, it is important that reasons for business fluctuations are stated in such a manner that it is possible to secure data are related to the reasons.

4. **Analysing the data:** In this last step, the data are analysed in the light of one's understanding of the reason why change occurs. For example, if it is reasoned that a certain combination of forces will result in a given change, the statistical part of the problem is to measure these forces and form the data available, to draw conclusions on the future course of action. The methods of drawing conclusions may be called forecasting techniques and they represent any one of a large number of analytical devices for summarising data and drawing inferences therefrom.

#### METHODS OF FORECASTING

There is nothing new about business forecasting as, for centuries, the businessmen have tried to adjust themselves in such a manner as to make the best out of the future conditions. The rule-of-thumb method has been widely practised in business. It consists of deciding about the future in terms of past experience and familiarity with the problem at hand. Even today, this method is very widely used in business. However, it can lead to absurd conclusions in the hands of the inexperienced.

In recent years, the techniques of forecasting have improved to a marked degree and are applicable to almost every sphere of business activity. Attempts are being made to make forecasting as scientific as possible. The base of scientific forecasting is statistics, i.e., numerical data on business trends which many businessmen fail to acquaint themselves with. However, forecasting business change involves more than an analysis of statistical data—it also embodies the prediction of economic change such as secular trend, seasonal variation and a consideration of cause and effect. To handle the increasing variety of managerial forecasting problems, several forecasting techniques have been developed in recent years. Forecasting techniques vary from simple expert guesses to complex analyses of mass data. Each technique has its special use and care must be taken to select the correct technique for a particular situation. Also, before applying a method of forecasting, the following questions should be answered:

- 1. What is the purpose of the forecast–how is it to be used?
- 2. What are the dynamics and components of the system for which the forecast will be made?
- 3. How important is the past in estimation the future?

The following are some of the important methods of forecasting:

- 1. Business Barometers
- 2. Extrapolation
- 3. Regression Analysis
- 4. Econometric Models
- 5. Forecasting by the use of Time Series Analysis
- 6. Opinion Polling
- 7. Causal Models
- 8. Exponential Smoothing
- 9. Survey Method

A forecast is usually a combination of various techniques.

### 1. BUSINESS BAROMETERS

Of great assistance in practical forecasting is a series that can be used "index" or "indicator" is also widely, though loosely, used in business statistics; sometimes the term is used to mean simply an indicator of the present economic situations and sometimes, it is used to designate an indicator of future conditions.

The following are some of the important series which aid businessmen in forecasting:

- 1. Gross National Product
- 2. Employment
- 3. Wholesale prices
- 4. Consumer prices
- 5. Industrial production
- 6. Volume of bank deposits and currency outstanding
- 7. Consumer credit
- 8. Disposable personal income
- 9. Departmental store sales

### 10. Stock prices

### 11. Bond yields

This list is by no means exhaustive, nor is the arrangement necessarily in order of importance. Several of the above series are composite average or total—or indices of these averages or totals. Analysis also should be made of the major components of these series.

Index numbers relating to different activities in the field of production, trade, finance, etc., may also be combined into a general index of Business Activity. This general index refers to the general conditions of trade and industry. But, the behaviour of individual industries of trades might show a different trend from that of the Composite Business Activity Index. Also, general boom or depression may be reflected in a majority of separate industries and trades, yet some industries and trades might show quite contrary tendencies. Hence, the study of general business conditions, as revealed by the Composite Business Index, should be supplemented by special studies of individual business based on separate indices. The trends indicated by barometers will guide the businessmen as to whether the stocks of goods should be increased or released or whether to increase investment or not, etc.