Lesson 7
Sales Forecasting

Sales Forecasting: Meaning, Importance, objectives, Difficulty, Factors influencing the sales forecast, Methods of sales forecast, process of sales forecasting

Sales Forecasting

Meaning of Sales forecasting

Estimating potentials and Forecasting Sales

Importance of Sales Forecasting

Difficulties of Sales Forecasting

Factors influencing the Sales Forecast

Methods of Sales Forecasting

Process of Sales Forecasting

Objectives of Sales Forecasting

OBJECTIVES

After studying this lesson, you would be able to understand-

- Meaning, Objectives and Importance of Sales Forecasting
- Methods and Process of Sales Forecasting
- Difficulties of Sales Forecasting

SALES PLANNING & SALES FORECAST

The first stage in the sales management process is planning. This is followed by implementing the plans through sales operations. Sales planning involve establishing sales goals and then deciding which strategies and tactics to reach them.

However, a company manages it sales force within the context of its total marketing program. Therefore, the path taken in sales force planning depends on the company's strategic marketing planning. The strategic marketing planning in turn, depends on the overall company planning.

Sales planning include sales forecasting, sales territories, sales budgets & sales quotes etc.

Sales Forecast

A sales forecast is an estimate of sales (in dollars or units) that an individual firm expects to achieve during a specified time period, in a started market and under a proposed marketing plan. A sales forecast may be made for an entire product line or for individual items within the line. Sales may be forecast for a company's total market or for individual market segments.

At first glance, the company's sales potentials and sales forecast may appear to be the same, but usually that is but the case. The sales potential is what would be achieved under ideal conditions. The sales forecast typically is less than the sales potential for many different reasons.

Estimating Potentials and Forecasting sales

For certain strategic decisions, the estimation of the market and sales potential is more relevant than the sales forecast. For example – It a firm want to decide whether or not to market a particular innovation. It will first estimate the total market potential for that innovation. If the market potential is large enough, the firm will plan to introduce the innovation. Because there is no any sales history, the firm will forecast sales based on its experience with past product introductions, test market information and marketing plan's for the new product.

However, once a firm has achieved a certain level of sales in a particular market, the firm usually takes the previously determined potential on a given. It then focuses on developing the most accurate sales forecast possible.

Importance of Sales Forecasting

Many large companies, uses its sales forecasts to allocate resources across different functional areas. Production uses sales forecast to develop production schedules and quantity requirements and to regulate inventories finance uses the forecasts to set operating budgets and to project cash flows. Sales forecasts are used by human resources establish hiring levels and by marketing to allocate resources across different marketing activities and all other department plan their work and determine their requirements. For coming period based on the sales forecast. The sales forecast helps sales executions determine the budget for the department and it also influence sales quotas and compensation of sales people.

If the forecast is in error, the plan based on it will be too. For example – if it is overly optimistic, the organisation can suffer great losses, because of over expenditure of funds in anticipation of revenues that are not forthcoming. If the sales forecast is too low, the firm may not be prepared to provide what the market demands. This means that the company will be forgoing profits and giving its competitions a bigger market share. Therefore we can say that sales forecast can play a major role in the success of the company.

Difficulty of Sales Forecasting

The difficulty of developing an accurate sales forecast varies from situation to situation. When sales of a product are very stable from one period to the next, a sales forecast for an upcoming period is not difficult to position. But when sales of a product fluctuate dramatically from one period to period, accurate sales forecast are difficult to develop. Accurate sales forecasts are also difficult to attain for new products, since a historical sales record in lacking. Developing a sales forecast for an existing product is less difficult since the company has some historical data to guide them in forecasting its sales.

Factors influencing the sales forecast

The sales forecast must take into consideration changes that have occurred or are anticipated that may affect sales. These changes can be placed in four general categories:

1. Marketing Plans
2. Conditions with in the Industry

3. Conditions within the market
4. General business conditions

1. Marketing Plans

Any changes in the price structure, channels of distribution, promotional plans, products or other internal marketing policies may influence future sales. The forecast must estimate the quantitative extent of these influences. It may be known. For example, that the firm will soon have to raise prices. Although this action will reduce unit volume, total dollar volume might go up or down depending on the products price elasticity. There fore, formulating a realistic sales forecast is impossible with taking price changes into consideration.

2. Conditions within the Industry

A firm obtains its sales volume from total industry sales. Therefore, any changes within the industry have an impact on the firm. New producer in an industry may mean that whatever volume may gain must come from existing companies.

Thus the sales forecast may have to be revised down ward. If a competitor is planning to redesign its line of product. The firm must consider the possibility that the competitor may obtain a larger share of the market during the coming period.

3. Market Condition

If basic demand factors are in a slump, the future sales of the firm will be affected. The firms Manager must be aware of any basic changes in the primary demand for the industry's output.

An analysis of future market condition is particularly important if the concern sells to relatively few industries.

Example- Mor Flo, a manufacturer of solar water heaters saw its sales potentials suddenly multiply several times when the nation suffered shortage of natural gas.

4. General Business Conditions

A major influencing factor in future sales development is the general state of the economy. Basically many of the methods of sales forecasting are simply reflections of overall opinion of what the general economy will be like during the coming period.

Sales Forecasting Methods

The following methods may be used to forecast the sales of a product or service. The methods can be placed in three general categories. **Survey methods** rely on the opinions of experts. Such as sales representative, sales executive and the customers who will be making purchase decisions **Mathematical methods** apply mathematical and statistical techniques to historical data to forecasts sales. **Operational method** takes information about the company's capacity and financial requirements to derive a sale forecast:

1. Survey Method

(i) Executive Opinion

(ii) Sales Force Composite

(iii) Buyers Intentions

2. Mathematical Methods

(i) Moving Average Models

(ii) Exponential Smoothing Models

(iii) Regression Models

3. Operational methods

(i) Test Markets

(ii) Must do Calculation

(iii) Capacity base Calculation

(i) Executive Opinion Method

The Executive Opinion method of forecasting is the oldest and simplest techniques. It consists of obtaining the views of top executives regarding future sales view that may or may not be supported by facts. In this method Executive may have formed main estimate lovingly by observation, experience and intuition.

The forecasts made by the executives are averaged to yield one forecast for all executives or the differences are reconciled through discussions among executives.

The major advantage cited fore this technique is that it is quick and easy to do. A survey of 150 firms found that 86% of the firms surveyed in the study used the executive opinion approach to forecast sales. This method is especially popular among small and medium size companies.

Despite its popularity the executive opinion approach has several disadvantages. many managers consider this method to be highly unscientific – many managers also argue that the executive opinion method require too much management time since differing forecasts must be reconciled before a final forecast is made.

Finally, the opinion of highly place executive and executive with strong feelings may influence the final forecast more then executive who are more knowledgeable about the company's product.

Example: Delphi Technique (Prediction on some matters)

(ii) Sales Force Composite Method

This method is based on collecting an estimate from each sales person of the products and /or services they expect to sell in the forecast period. The estimate may be made in consultation with sales executives and customer and/or based on the sales person's intuition and experience. The individual forecasts of each sales person are then aggregated to yield an overall forecast for the firm.

The sales force composite method places the responsibility for making the forecast in the hands of those who have to make it happen and who are closest to the market. Sales quotas and compensation which are based on these forecasts are likely to be regarded as fair by the representatives.

However sales people are often poor forecasts. They tend to be either overly optimistic or pessimistic. Unfortunately, the sales person may not only be motivated to understate the forecast if their goals are based on it, but also may are often unaware of broader economic and company forces at work.

Finally the process takes much time from both management and the sales persons.

(iii) Buyers Intensions Method

The survey of buyer intensions techniques for determining potentate consists of contacting potential customers and questioning them about whether or not they would purchase the product or service at the price asked.

Examples

One manufacturer contemplating the production of an aluminum playpen for basis used this technique. The playpen was to be made exactly like the ordinary wooden playpens on the market, except that aluminum tubing would be used instead of the wooden bars. Since the cost of the unit would be higher than that of the wooden units, the manufacturer wanted to know two things – First, how many people would buy such a product if it were placed on the market at the retail price of $ 59.95? Second, what did customer think the price of such a product should be?

This survey was conducted through personal interviews with 240 parents of infants. The results showed that 170 of 240 (approximately 71%) were interested in such a product. However they indicated that the price would have to be $ 39.95 to capture that size of market. The average (Mean) price quoted was $ 45. However, this price would eliminate half of the respondents who showed interest in the product. At the retail price of % 59.95 only 10 people said they would be interested in purchasing the product. Even it all 10 did buy at $ 59.95 that still represents only 4% of the market.

The survey indicated that only about one third of all child bearing families purchase playpens. This indicates that the total market potential for aluminum playpens would not be more than approximately 52800 units at best. This figure was divided by multiplying the total number of births per year, 4 million, by 0.33 and taking 4% of result. This simple calculation showed the manufacturer that market interest in the playpen was sufficient to warrant further investigation. The manufacture had established previously that the firm would be satisfied if it sold only 5000 units per year. This seemed possible on the basis of the survey.

The primary advantage of this method is that it is based on information directly from the people who will ultimately purchase or not purchase the product or service.

Major disadvantages of this method are its cost and time consuming exercise (Execution) for the sales manager who needs a quick idea of the market potential of a product, the survey method is not suitable.

For the manufacturer who intends to distribute nationally consumer survey can easily run into thousand of dollar (Rupees) and take three to six month to complete.

Furthermore surveys of buyer's intentions are hazardous undertakings. It is easy for the respondents to say that they would buy a certain product, but it is not sure that they are willing to spend money or not.

B. Mathematical Method

(i) Moving Average method

The simplest way to forecast sales is to forecast sales in the coming period to be equal to sales in the last period. Such a forecast assumes that the conditions in the last period will be the same as the condition in the coming period. It is likely, however, that the factor affecting sales changes from period to period. Hence, it makes sense to take an average of sales from several periods to construct the sales forecast for the coming period. This approach is called the moving average technique.

The most significant advantage of the moving average approach is that it is easy to compute. Moving average models provide accrete forecasts for product with stable sales histories but are less accurate for products that experience dramatic changes in sales, since the sales forecast is based on an average of sales from several different periods. Moving average models are also unable to reflect the impact of factors that arise in the forecasted period that were but present in previous periods.

(ii) Exponential Smoothing Models

The exponential smoothing approach to sales forecasting is closely related to the moving average approach/method. In moving average method, sales in each of the past periods has the same impact on the sales forecast in exponential smoothing method, the forecaster can allow sales in certain periods to influence the forecast more than sales in other periods. (Means actual sales of recent period are weighted more heavily than the average sales of earlier periods).

One significant advantage associated with exponential smoothing method is that the forecaster can determine the degree to which a particular period can affect forecasted sales.

A significant disadvantage associated with exponential smoothing method is that the selection of the smoothing constant is somewhat arbitrary. Despite this limitation exponential smoothing methods are used by a large number of companies to forecast sales.

(iii) Regression Analysis Method

Here an attempt is made to estimate a statistical series of dependable variables through fitted relationship by using another variable called the independent variable to which the first is related instead of using regularly spaced time intervals. In this sense, past data is also used by regression technique. Under this method, like trend method, a curve is fitted with the help of correlation between the dependent and independent variable.

Example:

The demand for paper will increase with the increase in the number of students. Number of students is an indicator for the demand of paper. It is based on the presumption that the one variable affects the other dependent variables.

This method describe in measurable objective terms, the factor and their relationship with the sales.

In this method forecaster takes into account all major factors (variables) which influence sales.

The mathematical complexity of those techniques limits their application in many companies.

Yet many firms employ highly trained personnel to use regression method to forecast sales. Also the availability of software programme designed for non-technical users has enhanced usage of the technique in many companies.

Operational Methods

(i) Market Test method

When product is quite new in the country, or good estimator are not available or buyers do not prepare their purchase plan. This method is very often adopted under this method; seller introduces his product in a part of the market segment for quite sometimes and makes the assessment of sales for the whole segment or the market on the basis of result of test sellers.

It is best method when a new product is introduced in the country for the first time.

During test period, any defect in the product may also come in the knowledge of the sales executives or production executive which may be removed immediately to make the product successful in the market.

Despite the advantages of above, it is very costly and time consuming method.

Sales forecast data are projected on the basis of results of a part of the segment or the market all segment are not homogeneous.

(ii) "Must – do" Forecasts

Often management forecasts the sales volume it needs to accomplish certain goals. For examples, sales forecasts for new products are difficult to develop because historical data on the products sales do not exist. Hence firms often decide that a reasonable forecast is the sales that must be achieved for the firm to reach its break-even points. In other wads, the forecasts are based on the sales volume needed to generate sufficient cash to cover fixed and variable costs.

(iii) Capacity Based Forecasts

Sometimes a firms market is such that it can sell everything it can make or buy. Thus its capacity becomes its sales forecasts. For **example**, the owner of a highly acclaimed restaurant developed a forecast of sales based on the restaurant's seating capacity.

Steps in Sales Forecasting

Determining major step in the process of sales forecasting is not an easy task. They may very from organization to organization depend upon the nature of business and of the product. Because nature of each business and of each product is not similar, a standardized procedure cannot suit every company in each circumstance. Market conditions which are not same for all products and in all products and in all areas, also influence the process of forecasting sales. Therefore we are discussing a procedure, which is generally followed by industries in ordinary circumstances.

(i) Determining the Objectives

As a first step, the objectives of sales forecasting (short term or long term) should be determined. In this regard certain points should be very clear before taking up the forecasting task such as period of forecasting (short term or long term or for one year, two year or a five years) territorial area for sales forecasting (Whole country or a specified area for a specified product) unit of sales forecasting (in quantity or value) and the time, labour and money to be employed on forecasting.

Short Term objectives

(1) Formulation of suitable production Policy (2) Provision of Raw Material (3) Pricing Policy (4) Regular availability of labour (5) Short term financial requirement (6) Setting of sales targets.

Long Term Objectives

(1) Estimating cash flow (2) Man-power Planning (3) Planning of Plant capacity (4) Budgetary Control over expenses. (5) Forecasting of long Term Financial Requirement.

(ii) Sub-dividing the task of forecasting

The second step in making the sales forecast is to sub-divide the forecasting programme into homogeneous groups according to product, area, activities or customers. The sum (Total) of sales forecast of all the groups will be total value of sales forecast for the company.

(iii) Determining the relative importance of factors

There are so many variables in the economy that influence the value of sales forecast. Those factors and their relative importance should be determined so that due weightage may be given to different factors affecting the sales.

(iv) Selection of method

The next step in sales forecasting is selecting an appropriate forecasting method. Combination of two or more methods may also be used. An appropriate authority should select the methods to be used in sales forecasting taking into account all the relevant situations, life cycles of the product, purpose of forecasting and the degree of accuracy required.

(v) Collection and Analysis of Data

Having selected the appropriate method of sales forecasting, necessary data required should be collected, tabulated, analyzed and crosschecked. This is all above done by applying statistical techniques and then to draw necessary deductions there from. It may be called the preliminary sales forecast and forms the basis of final sales forecasts.

(vi) Study of correlation between sales forecast and sales promotion plans

In order to ensure reliable ness, the sales promotion plans such as advertising policy, personal selling and other promotional plans should be reviewed with reference to the preliminary sales forecasts.

(vii) Study of competitors Activities

Volume of sales of a company is largely attested by the activities of competitors and therefore the efficient sales executives must study the competitor's activities, policies, programmes and strategies and also their effects on the overall market demand. The sales executive should also guess their mood and behavior and should adjust his own forecasting results accordingly.

(viii) Preparing Final Sales Forecast

Taking the sales promotion plans and competitors activities into stock, the preliminary sales forecast results are converted into final sales forecasts results relating to the product and territories involved. The sales Executives should also allow the grace for various limitations attached with the sales forecasting. The aggregate of sales forecasts of different products and/or territories or customers or activities may be the sales forecast of the company.

(ix) Evaluation and Adjustment

The figure of final sales forecast from the basis for the operations of the company in the near future. The actual sales performance in the coming period should be reviewed and evaluated from time to time. The evaluation work may be monthly, quarterly, half yearly or yearly. The figures of the forecast should be revised from time to time in the light of difficulties experienced during the course at actual operations on the expiring of forecast period. (A comparison should be made between the actual sales and forecasted sales for the period.) Any variation should be located and causes of variation should be analyzed. Effects should be made to improve the negative features. The evaluation, thus, would help improve the next period sales forecast figures.

Objectives of Sales Forecasting

The forecast of sales may be for a short period not extending beyond one year when it should be reasonably accurate or it may be for a long period extending over one year. Accordingly, the objects of sale forecasting may be short term objectives or long term objectives.

(A) Short Term Objectives

(i) Formation of Suitable Production Policy

Formulating of suitable production policy viz. what is to be produced and how much, when to produce etc. is very necessary, for a business so that problems of over production or under production may not arise and production may be made according to the needs of the customers.

(ii) Provision of Raw Materials

Regular supply of raw materials to the works is necessary to keep the production schedule which is based on the sales forecasts for a specified short period. Provision of raw materials can also be made in advance on the basis of sales forecast.

(iii) Appropriate Pricing Policy

Sales forecast from the basis of production policy which in turn influences the costs of production which can affect the organizations pricing policy. Pricing of the commodity depends upon the production costs, Scale of production and other variable factors determine the cost of production and scale of production depends upon sales forecasts.

(iv) Regular Availability of Labour

Sales forecast can ensure the availability of trained personnel and non-technical workers so that the organization might not experience any shortage of personnel during the period and also at the same time, they should not remain idle if the production is curtailed.

(v) Forecasting of Short Term Financial Requirement

Requirements at the organisation depend on the level of production and sales volume. Financial requirement can also be forecasted and the necessary finance can be arranged according to the sales and production plans.

(vi) Setting of Sales Targets

Sales forecast helps in setting the sales target for different products or line of products or market or segment of market on the basis of which control of sales personnel may be exercised and necessary incentives may be provided for implementing the programme and achieving the targets of sales.

(B) Long Term Objectives

(i) Estimating Cash Inflows

Cash inflows from sales can be estimated well in advance on the basis of sales forecasting by determining the cash and credit sales ratio. An effective credit policy can also be designed for the organisation on the basis of anticipated sales figure.

(ii) Determining Dividend Policy

Profits of the concern are the direct result of turnover the profits, therefore can also be forecasted on the basis of sales forecast using the gross profit sales ration techniques. Sound dividend and reserve policies can also be evolved in advance.

(iv) Man Power Planning

Adequate regular supply at trained and skilled man power is necessary to avoid any hardship in production function in the long run. So a sound man power planning i.e. recruitment, selection, promotion, transfer, wages, training etc. may be formulated to maintaining a work force.

(v) Planning of Plant Capacity

One of the long term objectives of sales forecasting is to plan plant capacity in accordance with the demand. If sales forecast reveals that the plant capacity will full short of the demand in future, it can very well plan its plant capacity according the needs of the customer and increase it either by using a superior technology or by setting up of new plant.

(v) Budgetary control Over Expenses

All business and financial activities are estimated in light of sales forecast figures. A budget for the income and expenditure of the business is prepared incorporating the estimated figures of the incomes and expenditures. Then these budgeted figures are compared with the actual performance and variation removed. Thus budgetary control over expenditures is possible with the help of sales forecast.

(vi) Forecasting of Long Term Financial Requirements

Sales forecasting also helps to determine the long term financial requirements of the organisation for working capital needs as well as for capital expenditure.

SELF CHECK QUESTIONS

1. What do you mean by Sales Forecasting? Discuss the objectives of Sales Forecasting.
2. Discuss the importance and difficulties of Sales Forecasting
3. Discuss the important methods of sales forecasting.
4. Explain the different steps in sales forecasting.
5. Explain the different factors influencing the Sales Forecasting