

YESHWANTRAO CHAPHEKAR COLLEGE, PALGHAR

PRESENTATION

ON

CHAPTER- 5

DEMAND ESTIMATION & FORECASTING

CLASS- F.Y.BMS/F.Y.BAF

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Meaning of Demand Forecasting :

- ▶ A forecast is an estimation of a situation in future. Forecast is an attempt to foresee the future by examining the past.
- ▶ It is done to minimize risk and uncertainty. It cannot be hundred percent precise but can be relied upon.
- ▶ Demand forecasting is done by all types of organizations like business firms, schools, colleges, etc.
- ▶ Over production and under production can be avoided with forecasting.

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Types of Demand Forecasting :

1. Passive Demand Forecasting :-

- The demand of the previous years is extrapolated and future demand is predicted on this basis.
- The impact of new policies on demand can be analysed with this method.

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2. Active demand forecasting:-

- ▶ In this type the future demand is estimated by taking into account the impact of new policies & impact of its own plans & actions.
- ▶ This type is considered better than passive forecasting.

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3. Firm level demand forecasting:-

- When the demand for the product of an individual firm is forecasted it is called firm level or micro forecasting.

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4. Industries level demand forecasting:-

- When the demand for the product of an entire industry is estimated it is termed as industry level demand forecasting.

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5. National level demand forecasting:-

- It refers to the estimation of demand at the macro level i.e. estimation of future demand for all goods produced in the economy.

6. Short demand forecasting:-

- If demand is forecasted for less than a year it is known as short term demand forecasting.
- It is useful to the business firm for a variety of purposes like price determination, formulation of sales policy, determination of sales targets, etc.

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7. Long term forecasting:-

- When demand forecasting is related to 5 years or more, it is said to be long term forecasting.
- This type of forecasting helps in expansion, diversification, financial planning, etc

8. Medium term forecasting:-

- If demand is forecasted for a period of one to five years, it is included under medium term forecasting.
- This type is useful to plan promotional expenditure, modify designs and to bring about quality improvements.

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9. Ex-ante forecast:-

- When forecasting is done for a number of periods in future, it is called as ex-ante forecast.

10. Ex-post forecast:-

- When forecast for the past and the present are considered to find out the credibility of the forecasting model then it is termed as ex-post forecasting.

Steps/ Stages involved in Demand Forecasting.

- ▶ **Determination of objectives:-**
- ▶ The business firm clearly identify the objective of demand forecasting and utility of forecast for its future plans.
- ▶ Accordingly the right type of forecast like short term or long term has to be selected.

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Nature of the product and market:-

- ▶ The nature of demand forecasting depends upon the type of product & the nature of market in which it is sold.
- ▶ Different types of products require different types of demand forecasting. Goods may be consumer goods or producer goods or they may be durable or perishable. While forecasting demand for any of these good, a number of factors should be taken into account.
- ▶ E.g.- if the commodity is a finished goods, then demand for intermediary goods, scope for advertising & price policy (competitors).

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- Similarly, in the case of perishable goods like flowers, fruits, vegetables, etc facilities like storage, transport, etc should be considered.
- Another factor which deserves attention while forecasting demand is the stage to which the product can be identified with the like introductory stage, growth stage, etc.
- The nature of market structure is another significant factor which influences demand forecasting.

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▶ **Identification of demand determinants:-**

- ▶ The various determinants of demand should be clearly identified.
- ▶ The demand determinants are different for different types of products.
- ▶ While the demand for durable goods depends upon the level of income, availability of credit, the demand for non-durable goods depends upon the price level, taste, preferences of people, income level, etc.

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- ▶ **Selection of the method of demand forecasting:-**
- ▶ There are various methods of demand forecasting.
- ▶ Depending upon the nature of product a particular method has to be selected.
- ▶ Sometimes it may be necessary to select a combination of two or three methods.
- ▶ The selection of a particular method depends upon the time period available for forecasting demand, expenditure involved, etc.

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- ▶ **Interpretation of data and testing the accuracy of forecasting:-**
- ▶ Once the required statistical data is collected, it has to be processed and interpreted properly.
- ▶ Interpretation of statistical data is a complicated process. On the basis of the data collected, demand estimates have to be made.
- ▶ The testing is done to avoid or minimize error.

Characteristics of a good forecasting method.

- ▶ Simplicity is an important characteristic of a good forecasting method. It should be easy to use.
- ▶ Accuracy is the next attribute. That method which can give accurate results is said to be the most reliable one. Past results of the method are ascertained and on that basis accuracy is determined.

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- ▶ Economy is another feature of a good forecasting method. Any method which involves least cost and at the same time gives good results is said to be the best.
- ▶ The ability to give quick results is another requirement for a good method. If the method involves too many complexities, then it will not be preferred by business firms.

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- ▶ A good demand forecasting method should be flexible and it should be possible to adapt itself according to the requirement. While remaining flexible, it should be able to give quick results according to the requirements and at all times.

Significance of Demand Forecasting.

1) For planning and Production analysis-

- The production planning of a business firm can be a meaningful exercise if it is based on demand forecasting.
- It is helpful to avoid over production or shortages in supply.
- Losses can be avoided by using demand forecasting.

2) Sales Forecasting-

- A proper sales policy can be formulated with the help of demand forecasting.
- It is necessary to set realistic targets to achieve the objectives.
- If the targets are too high, the sales force will find it difficult to achieve.

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3) Inventory planning–

- Inventories are goods and raw materials currently held by firms for future production or sale.
- Firm hold inventories to meet future demand.
- Accurate demand forecasting will help the firm to have an appropriate inventory policy.

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4) Price policy:-

- Demand forecast can help businesses to formulate appropriate price policy.
- This can help to avoid wide price fluctuations.

5) Resource planning:-

- Production requires the services of various factors of production like man-power, capital and raw materials.
- The firms has to make efforts to get skilled and trained man-power.
- Procurement of raw materials need to be done in advance.

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Methods of Demand Forecasting

▶ Survey Methods

We may undertake the following survey method-

1. Expert's opinion survey :

- ▶ This method is based on the opinion of experts who have a 'feel' about the product.
- ▶ They are able to predict the likely sales of a given product in future.
- ▶ These experts are salesmen, sales managers, marketing managers, market consultants, retailers, wholesalers etc.

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▶ **Advantages:-**

- ▶ This method is very simple and requires minimum statistical work.
- ▶ The time duration to arrive at the forecast may be very short.
- ▶ It involves very low cost.

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▶ **Limitations:-**

- ▶ It is often purely subjective because the opinion given by each expert may be personal, based on guess work.
- ▶ It is likely to be biased.
- ▶ The experts may not be aware of the broader economic changes that may have an impact on future demand.

DEMAND FORECASTING TECHNIQUES

2. Delphi Techniques:



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2. Delphi Method:-

- Here an attempt is done to bridge the gap between the opinions given by different experts.
- This may be done through bringing the experts together, and arranging one or two meetings of experts by a coordinator.
- The coordinator may help in narrowing down the differences.

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▶ **Advantages:-**

- ▶ It enables the respondents to be forthright in their views.
- ▶ It enables the forecaster to put the problem to the experts at one time and have their responses.

▶ **Limitations:-**

- ▶ It could be tedious and costly.
- ▶ The success of this method depends upon the expertise knowledge.

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3. Consumer Survey Method:-

- In this method demand forecasts are made through a survey of consumer's intention.
- In this method consumers themselves are asked about their future consumption plans.

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▶ 1. Complete Enumeration Method:

Advantages:-

- ▶ The forecaster does not introduce any bias of his own.
- ▶ He simply records the data and aggregates.
- ▶ The demand forecast is likely to be more accurate than many other methods.

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▶ Limitations:-

- ▶ It is tedious and cumbersome process. It may not be feasible if the number of consumers is very large.
- ▶ There can be large numbers of errors in the data collection.
- ▶ It is time consuming and costly.
- ▶ Consumers may not always reveal their true preferences

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▶ **2. Sample Survey Method:**

- ▶ The forecaster selects a sample of consuming units from the relevant population instead of all.
- ▶ A sample of consumers are asked questions about how they would respond to particular changes in the price of the commodities, advertising expenditure etc and other determinants of demand.

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- ▶ **Advantages:**

- ▶ Compared to complete enumeration method, this method is less tedious and less costly.
- ▶ Eg - If a firm is thinking of introducing a new product etc, the only way that the firm can know consumer's reaction.