



# MANAGERIAL ECONOMICS

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Lecture No - 15 : Demand Forecasting

## Session Outline

- Demand Forecasting

## Why Forecast Demand ?

- **Business environment is uncertain, volatile, dynamic and risky.**
- **Better business decisions can be taken if uncertainty can be eliminated or reduced**
- **Demand forecasting – predicting the future demand for firms product, is one of the ways to reduce uncertainty**

## Why Forecast Demand ?

- **Some of the business decision-making aided by a good demand forecast are:**
  - **Determining the optimal level of output**
  - **Planning and scheduling of production, distribution & transportation**
  - **Acquiring inputs (raw material, labour, capital)**
  - **Determining cost and pricing strategy**
  - **Decisions on expansion and exit strategies for the product**
  - **Meeting customer order dates and customer satisfaction**

## Why Forecast Demand ?

- Demand forecasting is the starting point of fulfilling a customer order. Its accuracy is paramount.
- Based on the forecasted demand, a firm commits its resources, capacities and capabilities for a period of time to create goods and services that its customers value and are willing to pay for

## Why Forecast Demand ?

- A low forecast will result in lost sales opportunity and customer dissatisfaction
- A high forecast will lead to accumulation of inventory, resulting in higher costs and less profits for the firm
- Thus forecast accuracy plays a crucial role in determining the effectiveness and efficiency of a firm

## Demand Forecasting - Categorization

- Categorization by Level of Forecasting
- Categorization by Time Period
- Categorization by Nature of Goods

## Categorization by Level of Forecasting

- **Firm level**
  - Refers to forecasting of demand by an individual firm for its products
  - Most important category for a manager for taking important decisions related to marketing and production
- **Industry level**
  - Refers to demand forecasting of a product in an industry as a whole
  - Provides insights into the growth pattern of an industry
  - Relative contribution of the industry in national income



## Categorization by level of forecasting

- **Economy (Macro) level**
  - Refers to forecasting of aggregate demand in the economy
  - Helps in various policy formulations at government level

## Categorization by Time Period

- Short term
  - Usually for a period of time less than a year
- Long term
- - time horizon of 5-7 years,10- 20 years

## Categorization by Time Period

- **Short term**
  - **Avoid underproduction and over production, inventory, cost on variable factor, sales target and appropriate pricing**
- **Long term**
- **- manpower planning, long term capital requirement, investment decisions, interdependence of industry.**

## Categorization by Nature of Goods

- **Consumer goods**
  - Durable – new demand/ replacement Demand
  - Non durable – income level, social status, age, education and occupation of consumers
- **Capital goods**
- **Derived demand**
- **Long term growth**

## Steps in Demand forecasting

- **Following are the typical steps for a systematic demand forecasting**
  - Understanding objective
  - Determining the time perspective
  - Understand and identify customer segments
  - Identify major factors that influence demand forecast
  - Determining the appropriate forecasting technique
  - Estimation and interpretation of results

## Subjective methods of Demand forecasting

- Deals with
  - What do people say
  - What do they do

Useful in forecasting for new product or new market for which no past data available.

## Subjective methods of Demand forecasting

- **Consumer's Opinion Survey**
- **Buyers are asked about their future buying intentions of products, their brand preferences and quantity of purchase.**
- **Possible response to increase in price, probable change in product's feature and competitive product.**

## Subjective methods of Demand forecasting

- Consumer's Opinion Survey
- Census Method
- Sample Method
- Stratified Sampling – for detail information



## Subjective methods of Demand forecasting

- **Consumer's Opinion Survey - merits**
- **Simple to administer**
- **Realistic results**
- **Suitable for short term decisions**

## Subjective methods of Demand forecasting

- **Sales force Composite**
- Salespersons are asked about their estimated sales target in their respective sales territories in a given period of time.
- Sum total of such estimates form the basis of forecasted demand.

## Subjective methods of Demand forecasting

- **Sales force Composite- Merits**
- Simple to administer
- Cost effective
- Reliable figures

## Subjective methods of Demand forecasting

- **Sales force Composite- Demerits**
- **Bias of salesperson**
- **Not suitable for long term**

## Subjective methods of Demand forecasting

- **Expert opinion methods**
- **Group Discussion – experts meet by brainstorming session or structured discussion**
- **Osborn 1953**

## Subjective methods of Demand forecasting

- **Expert opinion methods**
- Delphi Technique
- Rand corporation – To forecast the impact of technology on warfare
- Getting opinion of experts without face to face interaction

## Subjective methods of Demand forecasting

- **Expert opinion methods - merits**
- Experience of experts
- Time and resources – not required

## Subjective methods of Demand forecasting

- **Expert opinion methods - Demerits**
- **Bias**
- **Risk of loss of confidential information to rival firms**



## Subjective methods of Demand forecasting

- **Market Simulation**
- **Laboratory testing of consumer Behaviour**
- **Artificial market**
- **Gabor – Granger test- 1960- popular technique of market simulation**

## Subjective methods of Demand forecasting

- **Market Simulation – merits**
- **Consumer behaviour**
- **Helps in Absolutely new product**

## Subjective methods of Demand forecasting

- **Market Simulation – Demerits**
- Considerable amount of time and money
- Behave differently

## Subjective methods of Demand forecasting

- **Test Marketing**
- Steps ahead of market simulation
- Product is actually sold in the certain segment of market , test market
- Real market- where consumers buy without knowing that they are being observed.

## Subjective methods of Demand forecasting

- **Test Marketing - merits**
- **Most reliable among qualitative methods**
- **Suitable for new products**
- **Less risky**

## Subjective methods of Demand forecasting

- **Test Marketing - Demerits**
- **Costly – failure leads to sunk**
- **Time consuming**
- **Regional differences**

## **Session References**

**Managerial Economics: Geetika, Ghosh and Choudhury**

**Supply Chain Management: Chopra, Meindl, Kalra**