A) Qualitative Techniques/ Opinion Polling Method

- In this method, the opinion of the buyers, sales force and expert could be gathered to determine the emerging trend in the market.

- Suited for short term demand forecasting.

-Demand forecasting for new product can b made by qualitative techniques.

The opinion polling methods of demand forecasting are of following kinds:

1) Consumer Survey Method
2) Sales Force Opinion Method
3) Delphi Method

1) Consumer Survey Method

Survey method is one of the most common and direct methods of forecasting demand in the short term. This method encompasses the future purchase plans of consumers and their intentions. In this method, an organization conducts surveys with consumers to determine the demand for their existing products and services and anticipate the future demand accordingly.

Survey method include:

a) Complete Enumeration Survey
b) Sample Survey and Test Marketing
c) End Use

1) Consumer Survey Method

a) Complete Enumeration Survey:

In this method records the data & aggregates of consumers

If the data is wrongly recorded than Demand Forecasting going wrong, than this method will be totally useless.

b) Sample Survey & Test Marketing:

Only few customers selected and their views collected.

Based on the assumption that the sample truly represents the population.

This method is simple and does not cost much

The main disadvantage is that the sample may not be a true representation of the entire population.

1) Consumer Survey Method

c) End Use Method:

This method Focuses on Forecasting the demand for intermediary Goods.

Under this method, the sales of a Product are projected through a survey of its end users.

Example:

Milk is a commodity which can be used as an intermediary good for the production of ice cream, and other dairy products.

2) Sales Force Opinion Method

- **In this method , instead of consumers, the opinion of the opinion of salesman is sought.**

- It is also referred as the **"grass root approach"** as it is a bottom- up method that requires each sales person in the company to make an individual forecast for his or her particular sales territory.

- The composite of all forecasts then constitutes the sales forecast for the organisation.

- The main **advantage** is that the collecting data from its own employees is easier for a firm than to do it from external parties.

- The main **disadvantage** is that the sales force may give biased views as the projected demand affects their future job prospects.

3) Delphi Technique

This method is also known as **expert opinion method.**

In this method seeks the opinion of groups of Expert through mail about the expected level of Demand.

The identity of expert is kept secret.

These opinion exchanged among the various experts and their reactions are sought and analyzed.

The process goes on until some sort of unanimity is arrived at among all the experts.

The **advantage** is that the forecast is reliable as it is based on the opinion of people who know the product very well.

The **disadvantage** is that the method is subjective and not based on scientific analysis.

B) Quantitative Techniques/ Statistical or Analytical Methods

These are forecasting techniques that make use of historical quantitative data.

A statistical concept is applied to the existing data in order to generate the predicted demand in the forecast period.

The statistical methods, which are frequently used, for making demand projection are:

1) Trend Projection Method
2) Barometric Method
3) Regression Method
4) Econometric Method

1) Trend Projection Method

-An old firm can use its own data of past years regarding sales in past years.

-These data are known as time series of sales.

-**Assumes that past trend will continue in future.**

-Past trend is extrapolated (generalised).

The trend can be estimated by using any one of the following methods:

a) Graphical Method

b) Least Square Method

c) Time Series Data

d) Moving Average Method

e) Exponential Smoothing

1) Trend Projection Method

a) Graphical Method:

A trend line can be fitted through a series graphically.

The direction of curve shows the trend.

The main drawback of this method is that it may show the trend but not measure it.

b) Least Square Method:

Least Square Method

- Fitting trend equation or Least Square Method is based on the assumption that the past trend will continue in the future

1) Trend Projection Method

c) Time Series Data:

Data collected over a period of time recording historical changes in price, income, and other relevant variables influencing demand for a commodity.

Time series analysis relates to the determination of changes in a variable in relation to time.

d) Moving Average Method:

The moving average of the sales of the past years is computed.

The computed moving average is taken as forecast for the next year or period.

This is based on the assumption that future sales are the average of the past sales.

1) Trend Projection Method

e) Exponential Smoothing:

It uses a weighted average of past data as the basis for a forecast.

The procedure gives heaviest weight to more recent information and smaller weights to observations in the more distant past.

The reason for this is that the future is more dependent on the recent past than on the distant past.

2) Barometric Method

In barometric method, demand is predicted on the basis of past events or key variables occurring in the present.

This method is also used to predict various economic indicators, such as saving, investment, and income.

This method was introduced by Harvard Economic Service in 1920 and further revised by National Bureau of Economic Research (NBER) in 1930s.

This technique helps in determining the general trend of business activities.

For example, suppose government allots land to the XYZ society for constructing buildings. This indicates that there would be high demand for cement, bricks, and steel.

The main advantage of this method is that it is applicable even in the absence of past data.

3) Regression Method

This method is undertake to measure the relationship between two variables where correlation appears to exist.

E.g. The age of the air condition machine and the annual repair expenses.

This method is purely based on the statistical data.

4) Econometric Method

It is assumed that demand is determined by one or more variables. E.g. income, population, etc.

Demand is forecast on the basis of systematic analysis of economic relations by combining economic theory with mathematical and statistical tools.

Importance of Demand Forecastin

1) **Production Planning:**

Expansion of output of the firm should be abased on the estimates of likely demand, otherwise there may be overproduction and consequent losses may have to be faced.

2) **Sales Forecasting:**

Sales forecasting is based on the demand forecasting.

Promotional efforts of the firm should be based on the sales forcasting

Importance of Demand Forecasting

3) **Control of Business:**

For controlling the business, it is essential to have a well conceived budgeting of costs and profits that is based on the forecast of annual demand.

4) **Inventory Control:**

A satisfactory control of business inventories, raw materials, intermediate goods, finished product, etc. requires satisfactory estimates of the future requirements which can be traced through demand forecasting.

Importance of Demand Forecasting

5) **Economic Planning and Policy Making:**

The government can determine its import and export policies in view of the long-term demand forecasting for various goods in the country.

6) **Growth and Long- term Investment Programs:**

Demand forecasting is necessary for determining the growth rate of the firm and its long-term investment programs and planning.