

MANAGERIAL ECONOMICS & FINANCIAL DIGITAL MATERIAL (R18A0061)

3rd Year B. Tech I- sem, Mechanical Engineering



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INTRODUCTION

- Managerial Economics as a subject gained popularity in USA after the publication of the book “Managerial Economics” by Joel Dean in 1951.
- Managerial Economics refers to the firm’s decision making process. It could be also interpreted as “Economics of Management” or “Economics of Management”. Managerial Economics is also called as “Industrial Economics” or “Business Economics”.
- As Joel Dean observes managerial economics shows how economic analysis can be used in formulating policies.

DEFINITION OF ME

- In the words of *E. F. Brigham and J. L. Pappas* Managerial Economics is “the applications of economics theory and methodology to business administration practice”.
- *M. H. Spencer and Louis Siegelman* explain the “Managerial Economics is the integration of economic theory with business practice for the purpose of facilitating decision making and forward planning by management”.

NATURE OF MANAGERIAL ECONOMICS

- Close to microeconomics
- Operates against the backdrop of macroeconomics
- Normative statements
- Prescriptive actions
- Applied in nature
- Offers scope to evaluate each alternative
- Interdisciplinary
- Assumptions and limitations

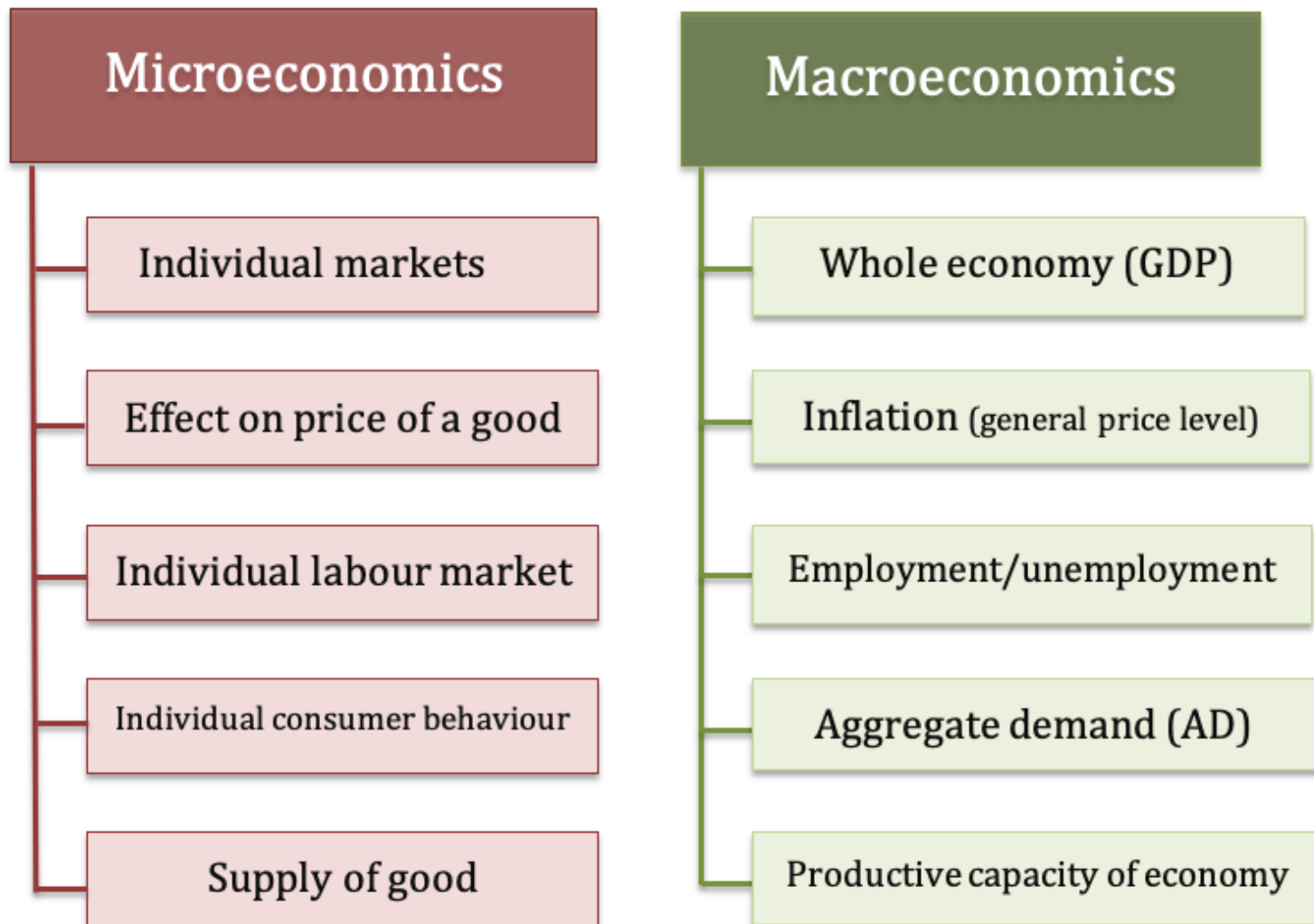
SCOPE OF MANAGERIAL ECONOMICS

- **Input and Output Decisions**
- **Cost Control and Reduction**
- **Demand Analysis and Forecasting**
- **Pricing and competitive strategy**
- **Resource Allocation**
- **Profit analysis**
- **Capital or investment analysis**
- **Make or Buy Decisions**
- **Break Even Analysis**

MANAGERIAL ECONOMICS RELATIONSHIP WITH OTHER DISCIPLINES

- Management
- Economics
- Mathematics
- Anthropology
- Sociology
- Statistics
- Organisation Behaviour
- Psychology Etc,.

MICRO AND MACRO ECONOMIC CONCEPTS



DEMAND ANALYSIS

Demand in common parlance means the desire for an object. But in economics demand is something more than this.

According to Stonier and Hague, "Demand in economics means demand backed up by enough money to pay for the goods demanded". This means that the demand becomes effective only if it is backed by the purchasing power in addition to this there must be willingness to buy a commodity.

Nature and Types of Demand

- Consumer goods and producer goods
- Autonomous demand and derived demand
- Durable and perishable demand
- Firm demand and industry demand
- Short run demand and long run demand
- New demand and replacement demand
- Total market and segment market demand

FACTORS AFFECTING DEMAND

- Price of the Commodity
- Income of the Consumer
- Prices of related goods
- Tastes and Preferences of the Consumers
- Advertisement
- Population
- Government Policy
- Expectations regarding the future
- State of Business

Demand Function

- Function describes the relation between one dependent variable and other independent variable.

A **demand function** is a mathematical equation which expresses the **demand** of a product or service as a **function** of the its price and other factors such as the prices of the substitutes and complementary goods, income, etc

$$Q=f(P,I,PR,T,P,A,P)$$

LAW OF DEMAND

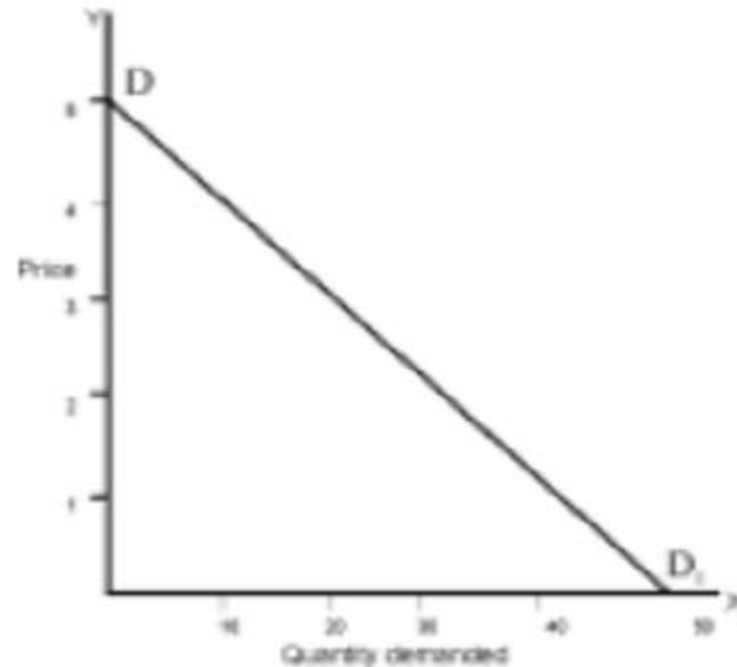
- . Law of demand shows the relation between price and quantity demanded of a commodity in the market. In the words of Marshall, “the amount demand increases with a fall in price and diminishes with a rise in price”. A rise in the price of a commodity is followed by a reduction in demand and a fall in price is followed by an increase in demand, if a condition of demand remains constant

Demand Schedule

**Table Demand
Schedule**

Price (Rs)	Quantity Demanded (Units)
5	10
4	20
3	30
2	40
1	50

**Figure Demand
Curve**

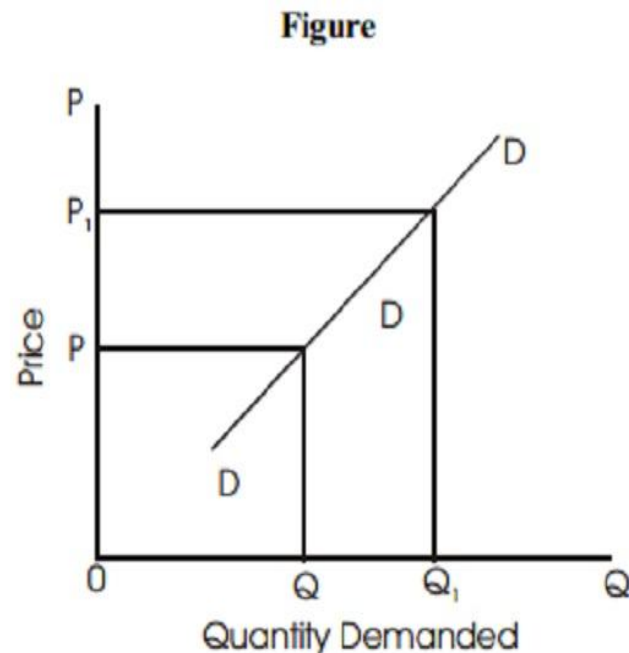


Assumptions

- This is no change in consumers taste and preferences.
- Income should remain constant.
- Prices of other goods should not change.
- There should be no substitute for the commodity
- The commodity should not confer at any distinction
- The demand for the commodity should be continuous
- People should not expect any change in the price of the commodity

EXCEPTIONS OF LAW OF DEMAND

- *Giffen paradox*
- *Veblen or Demonstration effect*
- *Ignorance*
- *Speculative effect*
- *Fear of shortage*
- *Necessaries*

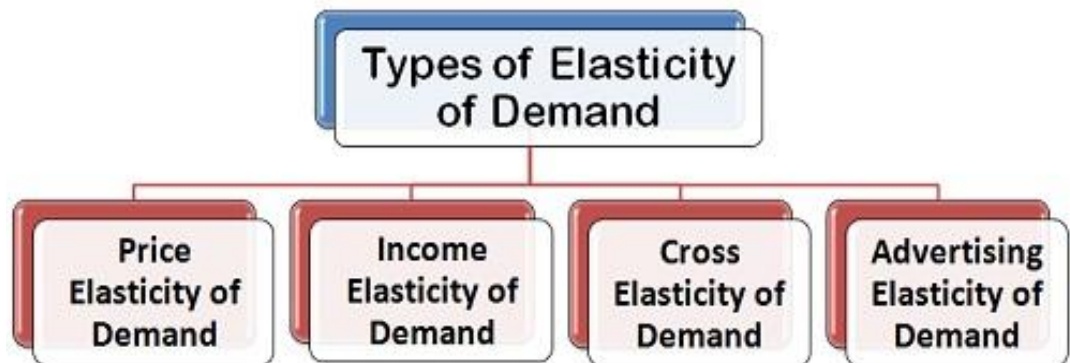


ELASTICITY OF DEMAND

- Elasticity of demand explains the relationship between a change in price and consequent change in amount demanded. “Marshall” introduced the concept of elasticity of demand. Elasticity of demand shows the extent of change in quantity demanded to a change in price.
- The proportionate change in quantity demand due to the proportionate change in any of the factors influencing the demand is known as Elasticity of Demand

Types of elasticity of demand

- **Price elasticity of demand**
- **Income elasticity of demand**
- **Cross elasticity of demand**
- **Advertising elasticity of demand**



ELASTICITY OF DEMAND

PRICE



PRICE ELASTICITY OF DEMAND

- Marshall was the first economist to define price elasticity of demand. Price elasticity of demand measures changes in quantity demanded to a change in Price. It is the ratio of percentage change in quantity demanded to a percentage change in price.

- **Price elasticity** =
$$\frac{\text{Proportionate change in the quantity demand of commodity}}{\text{Proportionate change in the price of commodity}}$$

There are five cases of price elasticity of demand

Mathematical Expression

Mathematically, it can be expressed as:

Price elasticity of demand = $\frac{\% \text{change in quantity demanded}}{\% \text{change in price}}$

Symbolically, it can be expressed as:

$$E_p = \frac{\Delta q}{\Delta p} \times \frac{p}{q}$$

Where,

E_p = Price elasticity of demand

q = Original quantity demanded

Δq = Change in quantity demanded

p = Original price

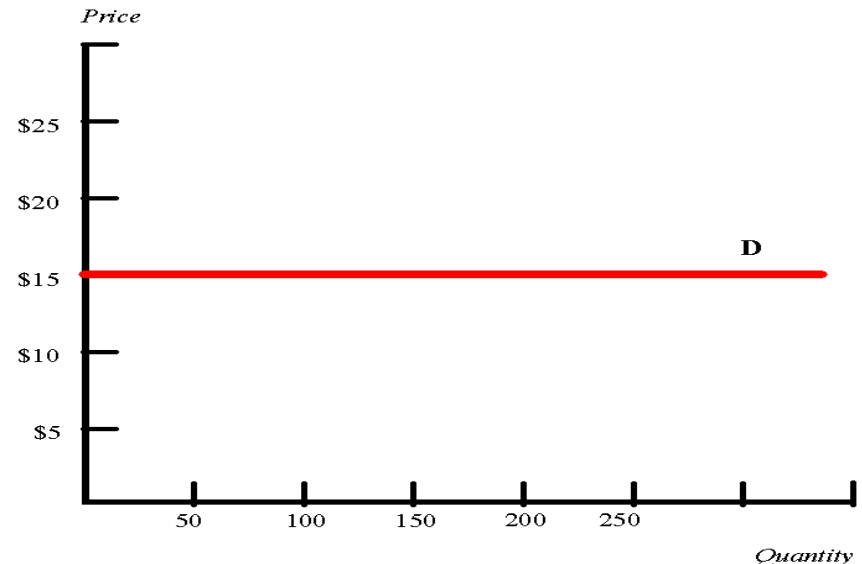
Δp = Change in price

Types or degrees of price elasticity of Demand

1. Perfectly Elastic Demand ($E_p = \infty$)
2. Perfectly Inelastic Demand ($E_p = 0$)
3. Relatively Elastic Demand ($E_p > 1$)
4. Relatively Inelastic Demand ($E_p < 1$)
5. Unitary Elastic Demand ($E_p = 1$)

Perfectly Elastic Demand

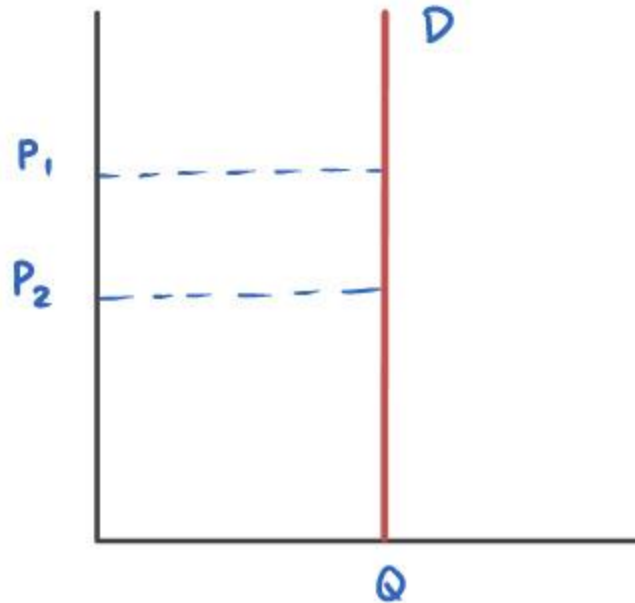
When small change in price leads to an infinitely large change in quantity demanded, it is called perfectly or infinitely elastic demand. In this case $E = \infty$



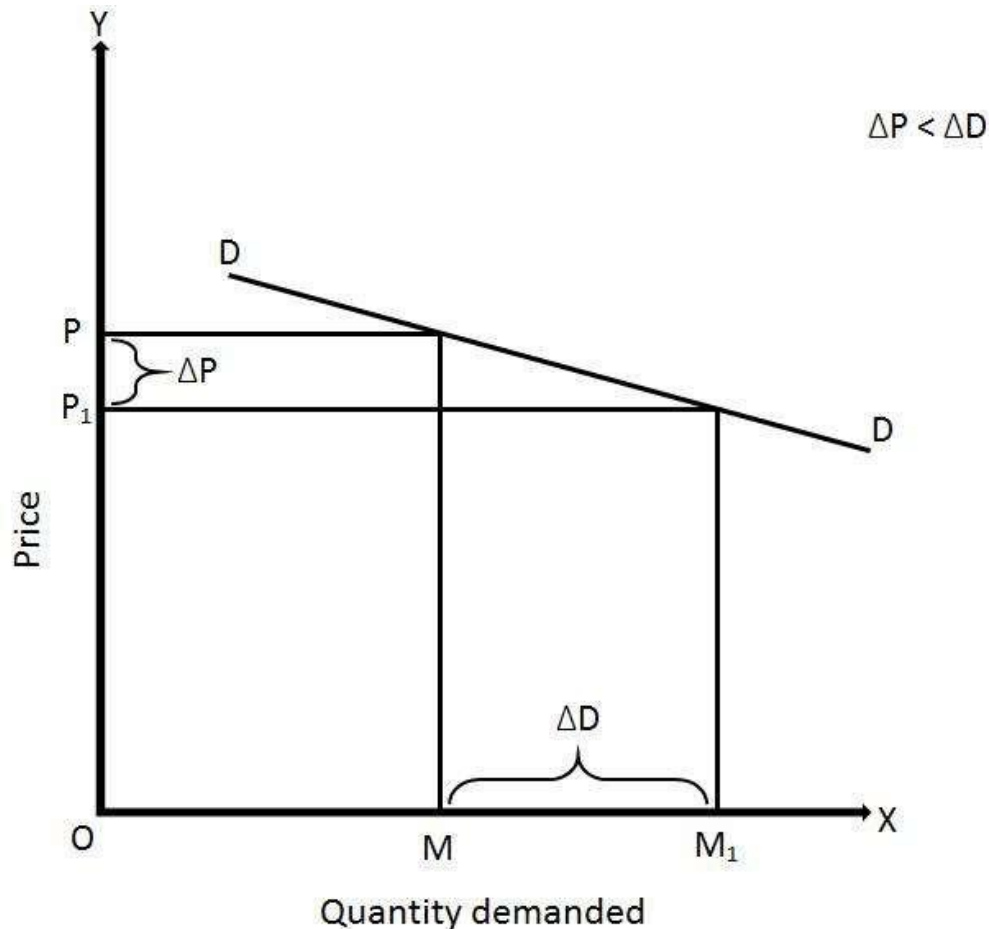
Perfectly Inelastic Demand

In this case, even a large change in price fails to bring about a change in quantity demanded.

- $E_d = 0$

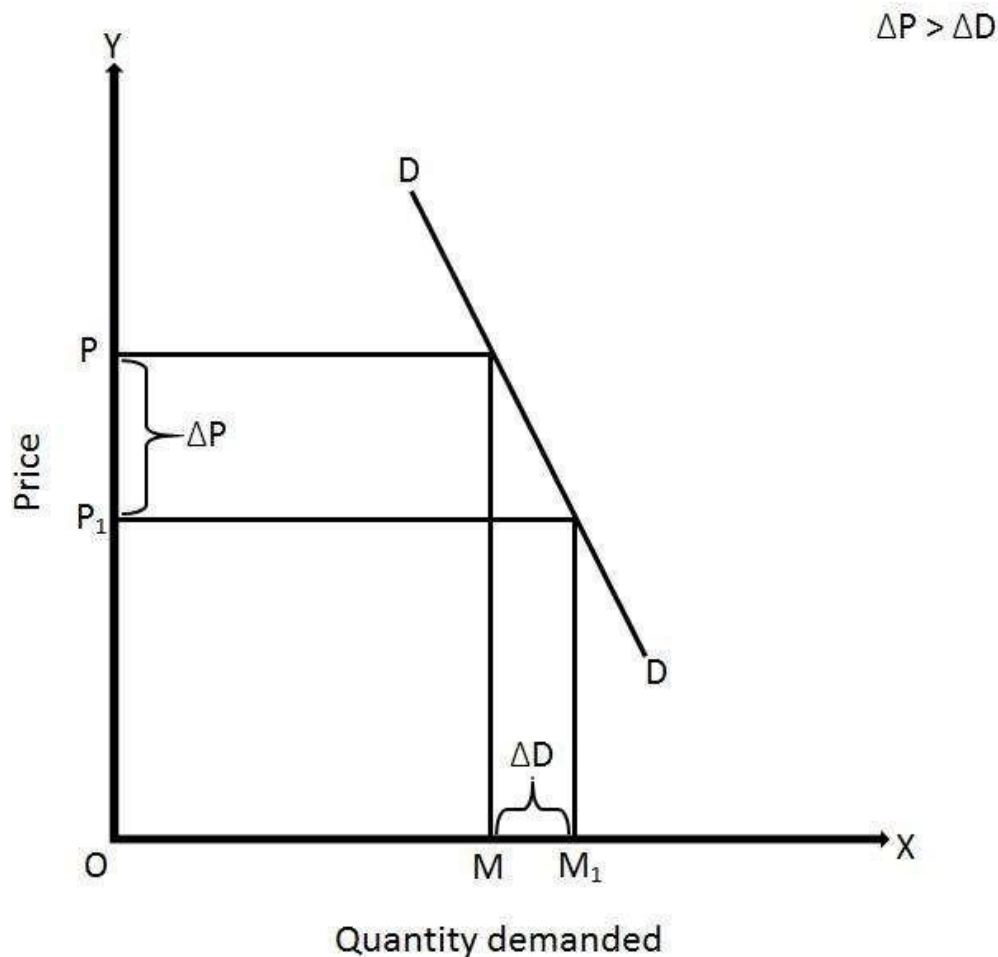


Relatively Elastic Demand ($E_p > 1$)



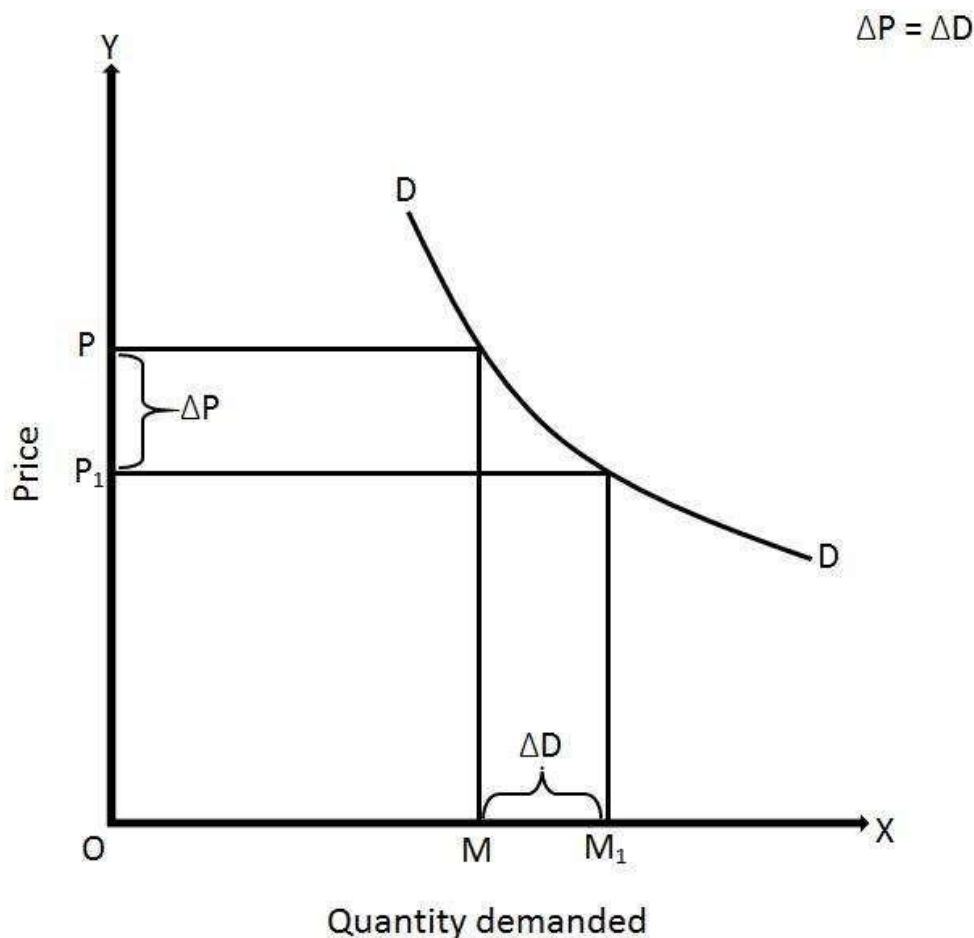
Percentage change in demand is greater than the percentage change in price

Relatively Inelastic Demand ($E_p < 1$)



Percentage change in quantity demanded is less than the percentage change in price

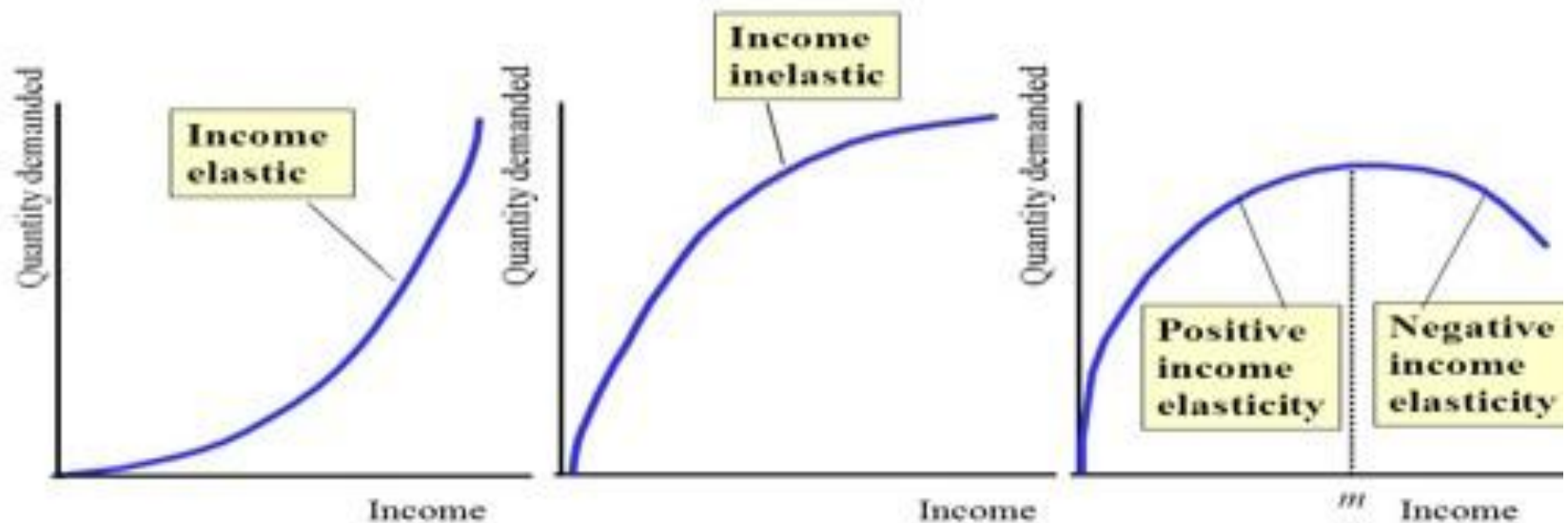
Unitary Elastic Demand ($E_p = 1$)



Percentage change in quantity demanded is equal to the percentage change in price

INCOME ELASTICITY OF DEMAND

Income Elasticity of Demand



CROSS ELASTICITY OF DEMAND

CROSS PRICE ELASTICITY OF DEMAND



FORMULAE



**Cross Price
Elasticity of
Demand
Formula**

=



$$\frac{\% \text{ Change in Quantity Demanded of Product A}}{\% \text{ Change in Price of Product B}}$$



A close-up photograph of a computer keyboard. The central focus is a bright blue key with the words "demand forecasting" printed in white, lowercase, sans-serif font. The key is slightly raised and has a glossy finish. Surrounding it are several white keys with standard symbols: a curly brace and bracket, a hyphen/underscore, a double quote/apostrophe, and a large "shift" key. The lighting is soft, creating subtle shadows and highlights on the keys' surfaces.

demand
forecasting

Meaning & Definition of Demand Forecasting

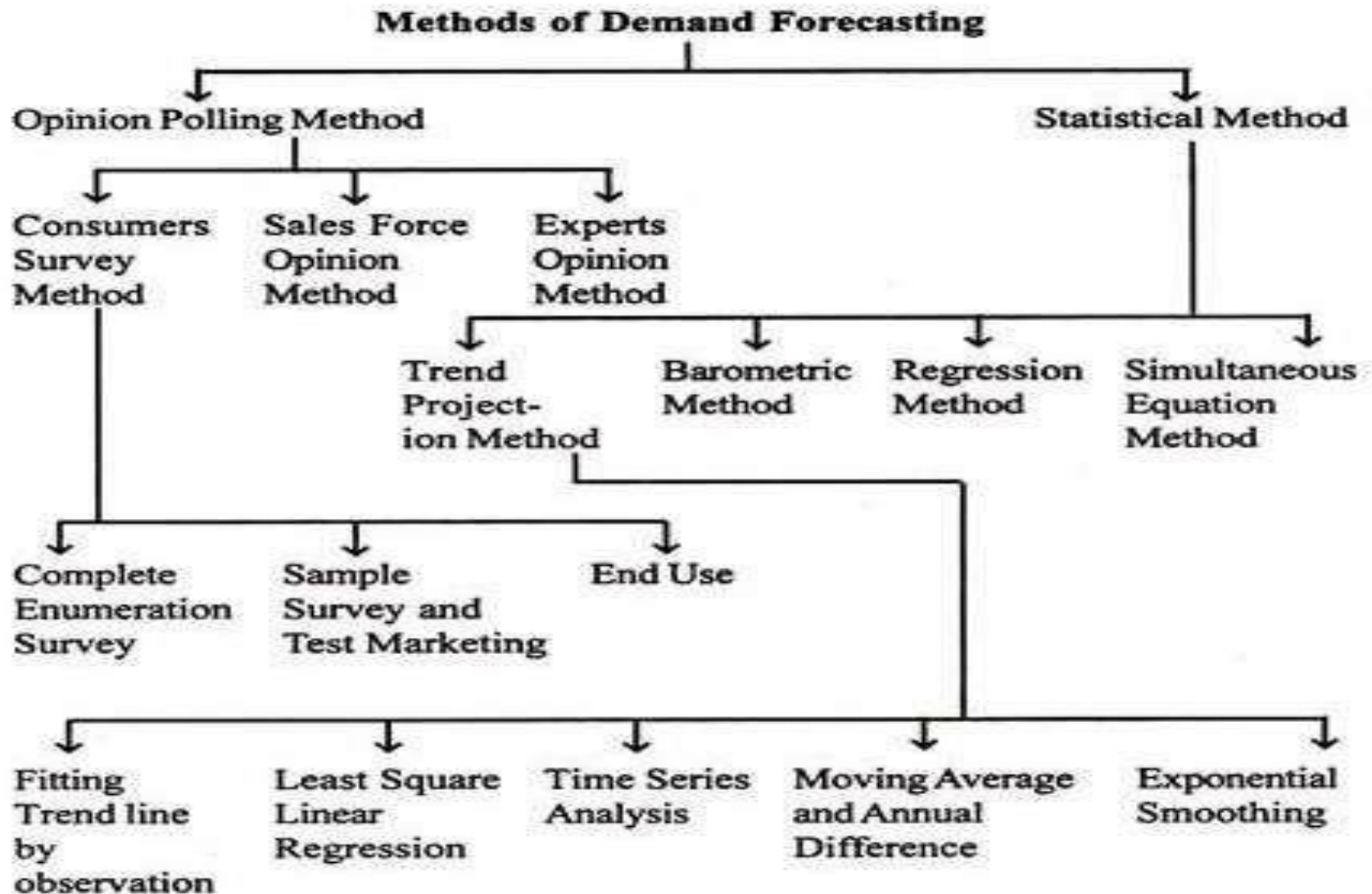
Demand forecasting is a systematic process that involves anticipating the demand for the product and services of an organization in future under a set of uncontrollable and competitive forces.

Accurate demand forecasting is essential for a firm to enable it to produce the required quantities at the right time and arrange well in advance for various inputs.

Meaning & Definition of Demand Forecasting

In the words of Cundiff and Still, “Demand forecasting is an estimate of sales during a specified future period based on proposed marketing plan and a set of particular uncontrollable and competitive forces.”

METHODS OF DEMAND FORECASTING



Factors Governing Demand Forecasting





Thank you!