

Industrial Economics and Foreign Trade

Module 1 – Part 1

By

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What is Industrial Economics?

- Industrial economics is that branch of economics which deals with the economic problems of firms and industries, and their relationship with society.
- There are two broad elements of industrial economics. The first one, known as the descriptive element, is concerned with the information content of the subject.
- . It provides information to the industrialist or businessman regarding industrial organisations, natural resources, factors of production, industrial climate, trade and commercial policies of the government and the degree of competition in the business in which he operates.
- The second element of the subject is concerned with the business policy and decision making. This is the analytical part dealing with topics such as market analysis, pricing, choice of techniques, location of plant, investment planning, product diversification etc.

What is economics?

- *According to Adam Smith Economics is “An Enquiry into the nature and causes of wealth of nations”. Classical economists defined economics as the science of wealth.*
- *Neoclassical Definition - “--- study of mankind in the ordinary business of life. It examine that part of individual and social action which is most closely connected with the attainment and with the use of material requisites of wellbeing”.*
- *Scarcity definition - Lionel Robbins – “Economics is the study of human behaviour as a relationship between ends and scarce means which have alternative uses”.*
- *In short, it can be said that, economics study about the efficient utilisation of limited resources to produce goods and services to satisfy unlimited wants of the people.*

Microeconomics and macroeconomics

- These are the two broad branches of economics.
- *Microeconomics is the study of individual economic units.* Microeconomics mainly deals with pricing of goods and factors of production and hence it is also called price theory
- *Macroeconomics is the study of the economy as a whole.* Since it deals with the determination of income and employment in an economy, it is also called ‘Theory of income and employment’.

The problem of scarcity and choice

- Unlimited wants
- Limited resources
- Alternative uses of resources
- The problem of choice

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Basic Economic Problems or Central Problems of an Economy

- 1 What to produce and in what quantities?
- 2 How to produce?
- 3 For whom to produce?

Production Possibility Curve (PPC)

It is a curve which shows different combinations of the quantities of two goods that can be produced with a given amount of resources and with a given technology, when the resources are fully and efficiently utilised.

Assumptions

1. Only two commodities are produced in an economy
2. Technology is given or constant
3. There is full employment of resources

The PPC is concave to the origin. It shows that marginal rate of transformation, that is the rate of sacrifice of one commodity in order to produce an extra unit of the other commodity goes on increasing.

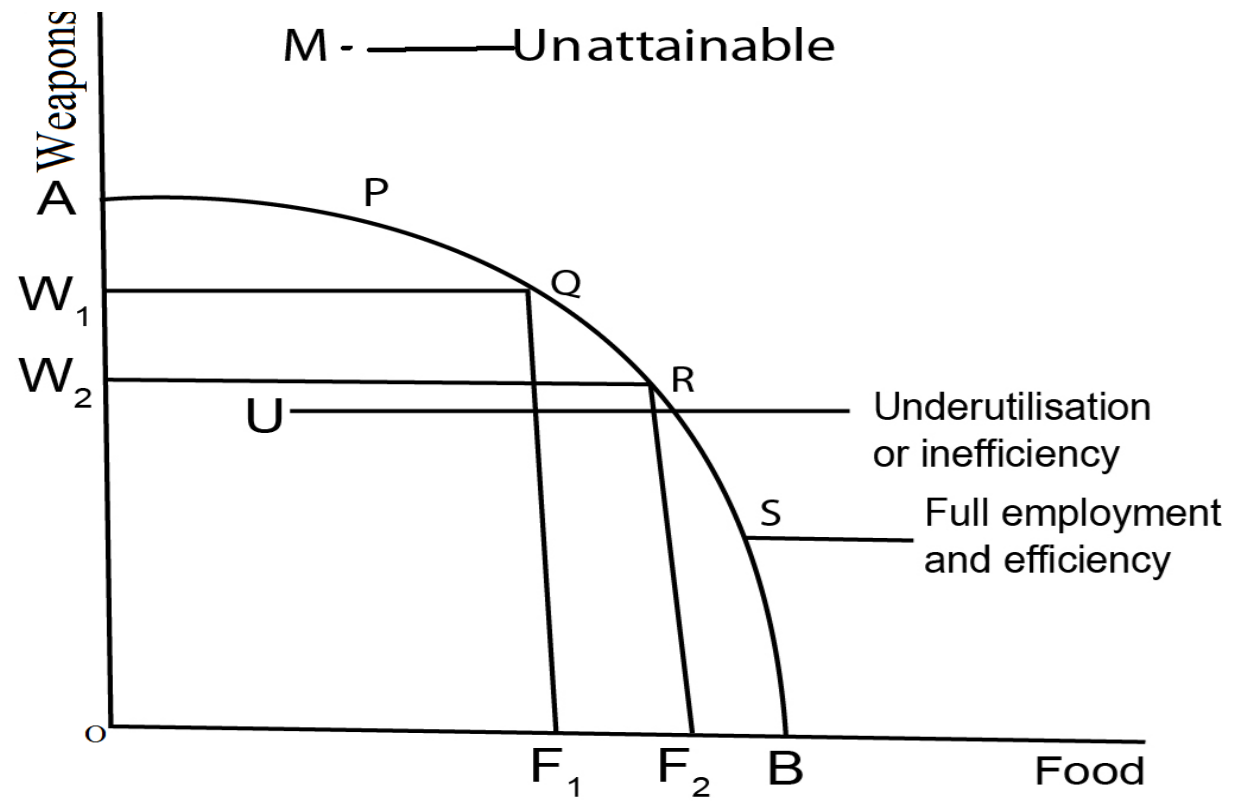


Fig 1.1 PPC

Opportunity Cost

Opportunity cost is the value of the next best alternative foregone when the best one is chosen.

Marginal opportunity cost is the amount of one commodity sacrificed to produce an extra unit of the other commodity.

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Module 1 – Part 3 – Types of Firms

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Firms

A firm is a commercial organisation operating for profit. It is an entity that make use of the services of factors of production and produce output through a process and with the help of a technology. The output of a firm can be a product or service or both.

Firms can be broadly classified as

A. Private sector firms B. Public sector firms and C. Joint sector firms

A. Private sector firms

When a firm is solely owned and operated by private individuals or institutions, it will come under private sector.

The following are the important type of business organisations coming under private sector:

i) Sole Proprietorship

It refers to a form of business organisation which is owned, managed and controlled by an individual who is entirely responsible for the results of the operations.

Advantages

- a) Easy to start or exit**
- b) Prompt and quick decision making**
- c) Confidentiality and to maintenance of secrecy.**

Limitations –

- a) Resources of a sole proprietor are limited**
- b) The owner has unlimited liability**
- c) The firm does not have an entity separate from the owner.**
- d) The life of a business is limited**

Partnership –

Partnership is a form of business in which two or more individuals decide to start a common business.

The following are the important **features** of partnership firms.

- i) **Liability:** The partners of a firm have unlimited liability.
- ii) **Sharing of profit and loss:**
- iii) **Continuity:** There is lack of continuity of business
- iv) **Number of Partners:** The minimum number is two. According to the Companies Act 2013, maximum number of partners in a partnership firm can be 100, subject to the number prescribed by the government.

Merits

- i) **Ease of formation and closure:** ii) **More funds:** iii) **Shared risk:** iv) **Secrecy:**

Limitations

- i) **unlimited liability:** ii) **Limited resources:** iii) **Lack of continuity**

Joint Stock Company

A joint stock company is a business organisation that is owned jointly by all its shareholders. Its scope and functions are governed by Memorandum of Association signed among members. The profit earned by the company is distributed among the shareholders in the form of dividends. A joint stock company is known as a limited company because the liability of a shareholder is limited to the proportion of shares held. A company can be a private limited company or public limited company. In the case of public limited company there is no limit on the maximum number of members but the minimum number is seven.

Features

1. Independent Legal Entity:
2. Limited Liability:
3. Common seal:
4. Transferability of Shares:
5. Separation of Ownership and Management
6. Perpetual Existence:

Advantages

1. Limited Liability
2. Perpetual Existence
3. Large funds:
3. Independent Legal Entity:
5. Transferability of Shares

Disadvantages

1. Complexity in formation
2. Conflict of interest:
3. Excessive government controls
4. Lack of secrecy
5. Delay in decisions

Cooperative

A cooperative is a voluntary association of persons, who join together with the motive of welfare of the members. It is to be registered under the Cooperative Societies Act 1912. The capital of a cooperative society is raised from its members through issue of shares. Its dealings are confined to members only. Mainly there are two types of cooperative societies.

i) Consumer's cooperative societies

ii) Producer's cooperative societies

Advantages

i) Equality in voting status ii) Limited liability iii) Stable existence iv) Economy in operations v) Ease of formation:

Limitations

**i) Limited resources: ii) Inefficiency in management: iii) Lack of secrecy: iv) Government control:
(v) Differences of opinion**

PUBLIC SECTOR

Under public sector, government is the investor or owner of a business. In India Public Sector Undertaking (PSU) is a term used to denote a government company. In such companies, government either own the entire shares of the company or majority of the shares (51 percent).

Advantages

- 1. Balanced economic growth:**
- 2. Employment generation:**
- 3. Profits for public welfare:**

Disadvantages - 1. Evils of bureaucracy: 2. Extravagance and inefficiency

JOINT SECTOR –

The Joint Sector is a kind of simple partnership between the private sector and the Government. In such firms, ownership and control are effectively shared between public sector agencies on the one hand and a private group on the other. An important advantage of joint sector is that the resources of the two sectors can be combined.

Objectives of a Firm

- 1. Profit maximization**
- 2. Sales maximization - William Baumol**
- 3. Maximisation of growth rate - Marris**
- 4. Output Maximisation - Milton Kafolgis**
- 5. Satisfaction Maximisation - Scitovsky**
- 6. Utility Maximisation - Williamson**

[https://www.youtube.com/channel/UCJeL0lhyYyMjWRZnX5Eh
HWQ](https://www.youtube.com/channel/UCJeL0lhyYyMjWRZnX5EhHWQ)

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Module 1 – Part 4 – Utility Analysis

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Utility analysis

Utility is the want satisfying power of a commodity.

From consumers perspective utility can be defined as the satisfaction derived from the consumption of a commodity.

There are two approaches in the measurement of utility. These are cardinal approach and ordinal approach.

Total utility(TU)

It is the total satisfaction derived from the consumption of different units of a commodity.

$$TU_n = U_1 + U_2 + U_3 + \dots + U_n$$

Marginal Utility(MU)

It is the addition to total utility when a consumer consumes an additional unit of a commodity.

$$MU_n = TU_n - TU_{n-1}$$

Law of Diminishing Marginal Utility

The law states that as a consumer consumes more and more units of a commodity, the marginal utility goes on diminishing. As the law was first explained by a German Economist Hermann Heinrich Gossen, it is known as Gossen's first law.

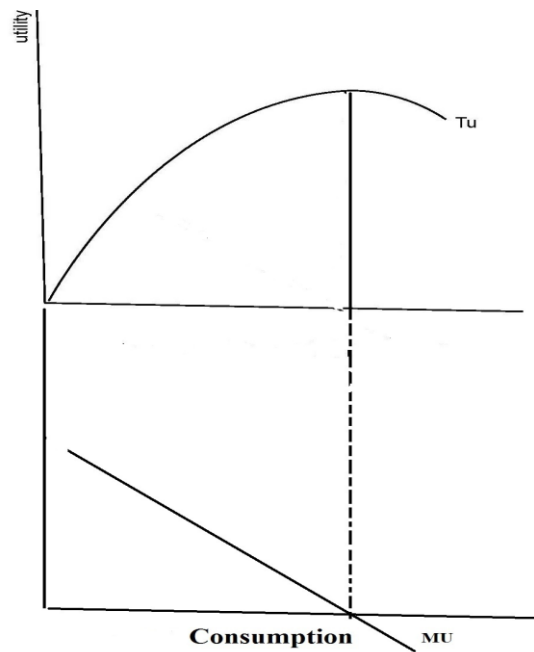


Fig 1.4 TU and MU

Relation between MU and TU

1. When MU is positive, TU increases(but at a diminishing rate)
2. When $MU = 0$, TU is maximum
3. When MU is negative, TU decreases

Assumption of the Law

1. Different units of the commodity consumed are identical and in standard size. If a thirsty person takes water in a small spoon MU may not decrease.
2. There is no time gap between the consumption of different units. If a person takes an ice cream today and the second one after one week there will not be any change in his MU.
3. Consumer's income remains constant.
4. Consumers taste and preferences remain constant. A change in taste may increase MU with additional consumption.
5. Marginal utility of money remains constant.
6. Consumer is rational or he is a normal person who wants to maximise utility.
7. Commodity consumed is a normal one. It is not an intoxicant like alcohol.
8. Utility can be measured

Importance of the law

1. Basis of economic laws
2. Basis of the theory of taxation

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Module 1 – Part 5 Demand

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Demand

Demand is ‘*the desire backed by ability and willingness to pay for a commodity*’.

Types of demand

1. Direct demand
2. Derived demand
3. Joint Demand
4. Individual demand and market demand

Demand for a commodity

Demand for a commodity is the quantity of that commodity a consumer is willing to buy at a given price in a given period of time.

Law of demand

Law of demand expresses the relation between price and quantity demanded. The law states that ‘*other things remaining the same, price and quantity demanded of a commodity are inversely proportional.*’

Demand schedule

It is a table which shows different quantities of a commodity demanded at different prices.

Demand Curve

It is the graphical representation of a demand schedule.

Exceptions to law of demand

1. Veblen goods
2. Giffen goods
3. Speculative goods.

Why does the demand curve slopes downwards?

1. Income effect –
2. Substitution effect –
3. Law of diminishing marginal utility

Market Demand curve

It is the total demand of a commodity in the market. In other words *it is the sum of quantity demanded by all the buyers in the market.*

Determinants of demand or Factors determining demand

1. Price of the product
2. Income of the consumer
3. Price of related goods
4. Taste and preferences of consumers
5. Advertisement
6. Climatic conditions
7. Expectations
8. Population
9. Distribution of Income

Changes in Demand

Changes in demand can be in the form of

a) Expansion and contraction of demand	b) Increase and decrease in demand.
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Expansion and Contraction of demand

It is also called change in quantity demanded and it occurs due to a change in the price of a commodity. *When price falls demand rises. This is expansion of demand.* On the other hand *when price rises demand falls and this is called contraction of demand. (Diagram)*

Increase and decrease in demand

These are the changes in demand due to changes in factors determining demand other than price. For example when income increases demand also increases and vice versa. *Increase in demand means at the same price a larger quantity is demanded and decrease in demand means at the same price lesser quantity is demanded.*

Elasticity of demand

Elasticity is the degree of responsiveness of demand of a product to a change in any one of the factors which determine demand. As there are different factors which determine demand, there are different types of elasticity.

Price elasticity of demand

Price elasticity of demand measures the extent to which demand changes when there is a change in price. *In other words it is the degree of responsiveness of demand of a commodity to a change in its price.*

Measurement of price elasticity

Percentage method

Price elasticity of demand is measured as the ratio of percentage change in quantity demanded to the percentage change in price.

Price elasticity of demand (e_p) = Percentage change in quantity demanded of X

Percentage change in price of X

(Derivation of formula)

In the demand function $D_x = a - bP_x$, $b = \frac{\Delta q}{\Delta p}$

Degrees of price elasticity

1. Perfectly elastic demand 2. Perfectly inelastic demand 3. Unit elastic demand 4. More elastic demand 5. Less elastic demand

(Numerical example)

Geometric method

$$E_p = \frac{\text{Lower segment of the demand curve at that point}}{\text{Upper segment of the demand curve at that point}}$$

(Diagram)

Expenditure method

This method compares the total expenditure on a commodity before and after a price change. Total expenditure is the product of price and quantity demanded.

1. If total expenditure increases with a fall in price and decreases with a rise in price elasticity of demand will be greater than one ($ep > 1$).
2. If total expenditure decreases with a fall in price and increases with a rise in price elasticity of demand will be less than one ($ep < 1$).
3. If total expenditure remains the same irrespective of the changes in price, elasticity of demand will be equal to one ($ep = 1$).

Uses or applications of price elasticity of demand

- 1. It is useful to the government in fixing the tax on a product.**
- 2. It is useful to the producers in fixing the price of a product.**
- 3. It is useful to the Trade Unions in wage bargaining**
- 4. It is useful to the policy makers.**

Factors determining elasticity of demand

1. Nature of the commodity
2. Number of substitutes available for a commodity
3. Number of uses of a commodity
4. Proportion of income spend on a commodity –
5. Time period

Cross elasticity of demand

It is the degree of responsiveness of demand of a commodity to a change in the price of its related good. In other words it is the degree of responsiveness of demand of commodity Y due to a change in the price of Y.

$$\text{Cross elasticity of demand}(e_c) = \frac{\% \text{change in quantity demanded of X}}{\% \text{change in price of Y}} = \frac{Py}{Qx} * \frac{\Delta Qx}{\Delta Py}$$

Interpretation of cross elasticity of demand

If cross elasticity of demand between commodity X and Y is zero it means that commodities are not related.

If cross elasticity of demand is positive it means that the two commodities are substitute goods

If cross elasticity of demand is negative, then the commodities will be complementary goods.

(Numerical Problems)

Income elasticity of demand

It is the degree of responsiveness of demand of a commodity to a change in the income of the consumer.

$$\text{Income elasticity (e}_y\text{)} = \frac{\% \text{change in quantity demanded}}{\% \text{change in income}} = \frac{Y}{Q} * \frac{\Delta Q}{\Delta Y} \quad \text{where Y is income}$$

(Numerical example)

. Promotional elasticity of demand

It is the degree of responsiveness of demand of a commodity to a change in the expenditure on sales promotional activities like advertisement.

$$\text{Promotional elasticity of demand} = \frac{\% \text{change in quantity demanded}}{\% \text{change in sales promotion expenditure}}$$

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Module 1 – Part 7 Supply

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Supply Analysis

Supply refers to the quantity offered for sale at a given price in a specified period of time. In other words it is the quantity of a commodity that a seller is willing to sell at a given price in a given period of time.

Factors determining supply

1. Price of factor inputs
2. Price of the commodity
3. Price of related goods
4. Technology
5. Government policies

Law of Supply

The law expresses the relation between price and quantity supplied of a commodity. *The law states that other things remaining the same price and quantity supplied of a commodity are directly proportional*

Supply Schedule

Supply curve

Since price and supply are directly proportional a linear supply function can be written as $S_x = a + bP_x$

Expansion and contraction of supply

These are the changes in quantity supplied of a commodity due to a change in its price

Increase and decrease in supply

These are the changes in supply due to changes in factors affecting supply other than price

Market Supply

It is the total supply of a commodity in the market.

Elasticity of supply

Price elasticity of supply is the degree of responsiveness of supply of a commodity to a change in its price

$$\text{Price elasticity of supply (Es)} = \frac{\% \text{change in quantity supplied}}{\% \text{change in price}}$$

$$E_s = \frac{p}{s} * \frac{\Delta s}{\Delta p}$$

Geometric method

According to the geometric method, elasticity of supply at a point on a straight line supply curve is the ratio of supply curve intercept on x-axis to the quantity supplied at that point.

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Module 1 – Part 8 Equilibrium and Deadweight loss

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Equilibrium

It is determined at that point where market demand equals market supply. Equilibrium point is the point at which the market demand curve intersect the market supply curve. *The price at which market demand equals market supply is the equilibrium price* and the quantity demanded and supplied at this price is the equilibrium quantity.

Excess demand and excess supply

Changes in demand and supply and its effects on equilibrium

Consumer surplus

The difference between the price that consumers are willing to pay for a good and the price that they actually pay for a good is called **consumer surplus**

Producer surplus

Producer surplus is the difference between price at which producers are willing to sell a good and the price they actually receive from consumers

The sum of consumer surplus and producer surplus is the social surplus.

Taxation and Deadweight loss

Deadweight loss

Deadweight loss due to tax is the loss in social welfare due to the imposition of the tax.