
# *Department of Economics*

**Minor/Elective Paper: Introductory Economics**

**Master of Arts (M. A.)**

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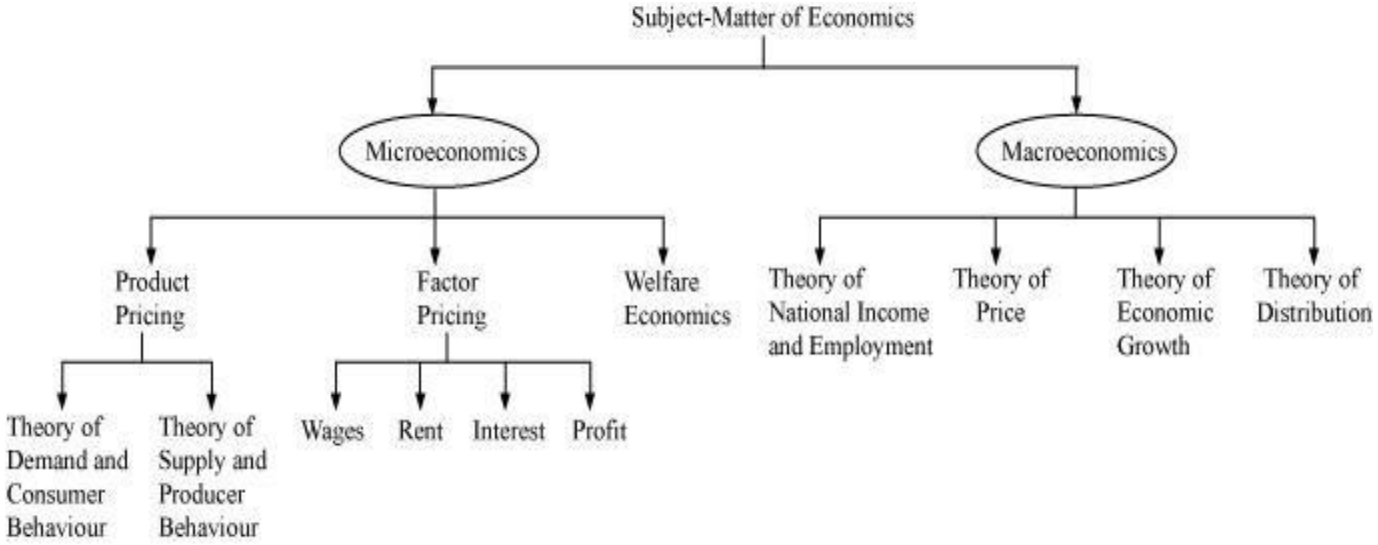
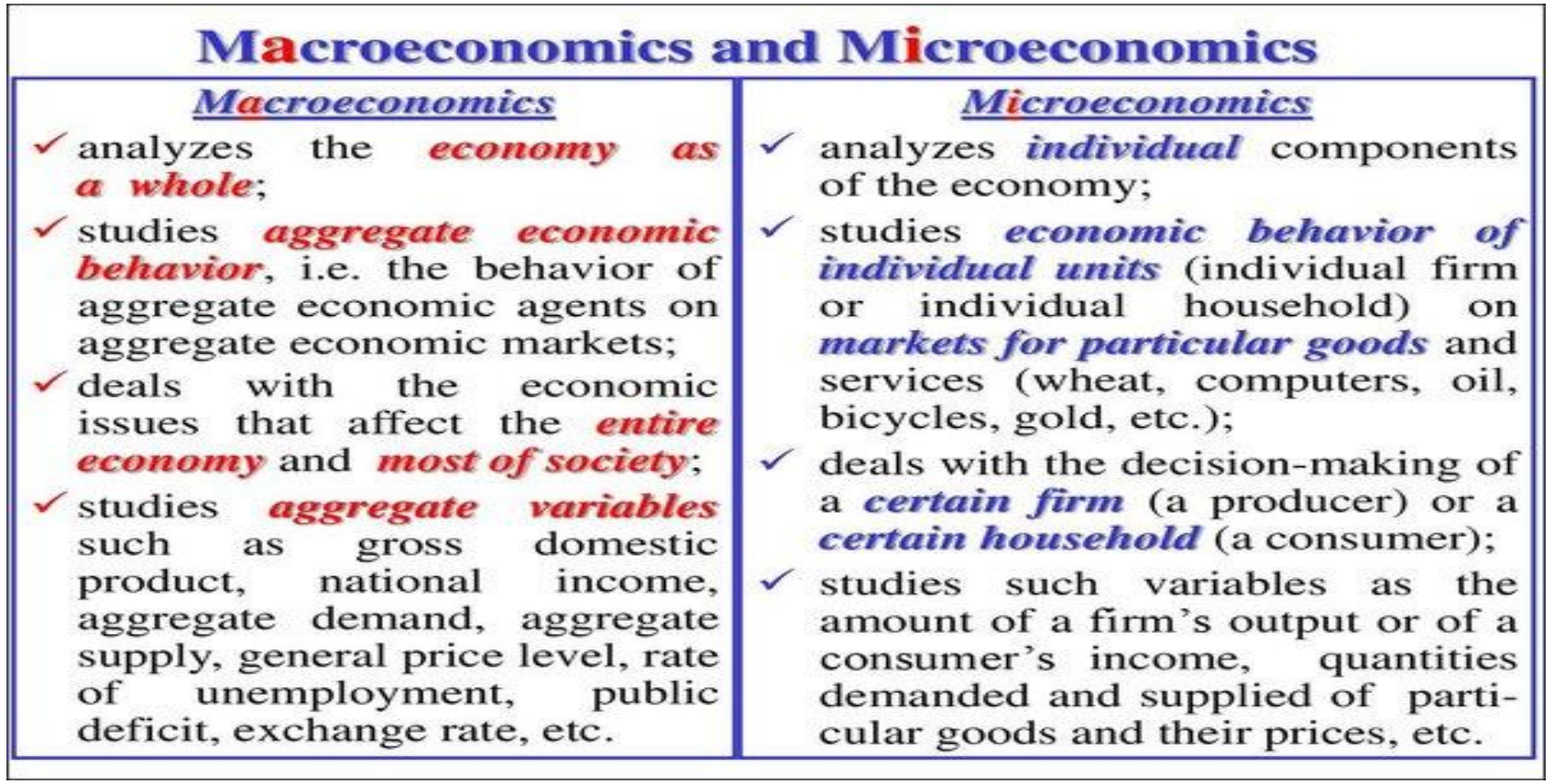
# Introduction

- **Economics: Definition and Scope**
- Adam Smith: Economics is a science of wealth.
- Marshall's Definition: Economics is a science of material welfare.
- Robbin's Definition: Economics is a science of Scarcity.
- Henry Smith: "the study of how in a civilised society one obtains the share of what other people have produced and of how the total product of society changes and is determined".
- Viner: "Economics is what economists do".
- **What economics is about?**
- The subject matter of economics is concerned with wants, efforts and satisfaction.



# Difference between Microeconomics and Macroeconomics

- Micro Economics talks about the actions of an individual unit, i.e. an individual, firm, household, market, industry, etc. On the other hand, the Macro Economics studies the economy as a whole, i.e. it assesses not a single unit but the combination of all i.e. firms, households, nation, industries, market, etc.

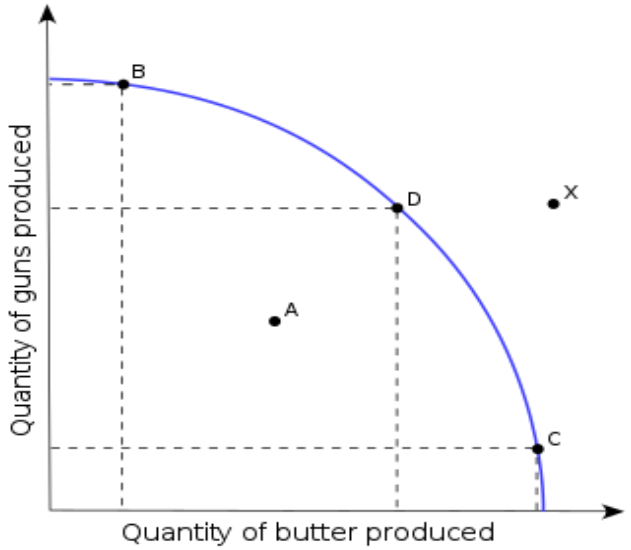


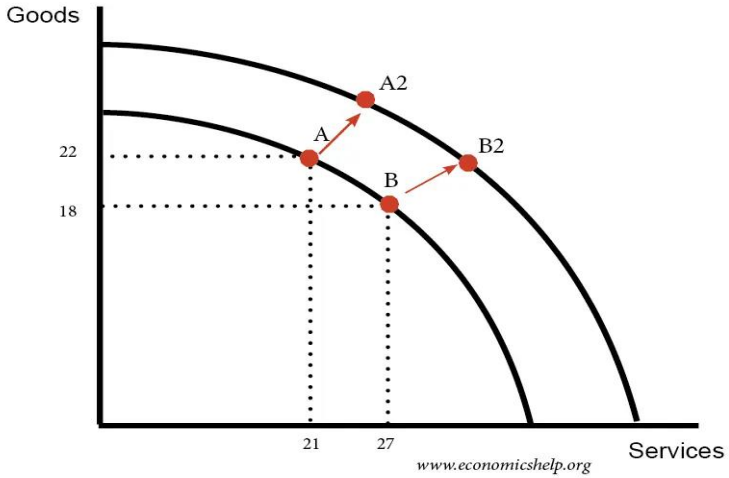
# Basic Economic Problems

- What to produce: which goods and in what quantities are to be produced?
- How to produce: what combination of resources (technique of production) be chosen to produce goods?
- For whom to produce: how the national product is to be distributed among the members of society?
- What Provision (if any) be made for economic growth: A society has to decide how much saving and investment (that is, how much sacrifice of current consumption.
- **How the central problems are solved?**
- Market or price mechanism: free play of the forces of demand and supply.
- Or
- Economic Planning: Government sets up a central planning authority
- Mixed economy in India.
- What, how and for whom: subject matter of microeconomics
- Macroeconomics: whether resources are fully utilised?

# Production Possibility Frontier

- Production Possibility Curve (frontier) represents graphically alternative production possibilities facing an economy.
- It shows how much an economy can produce given existing resources.

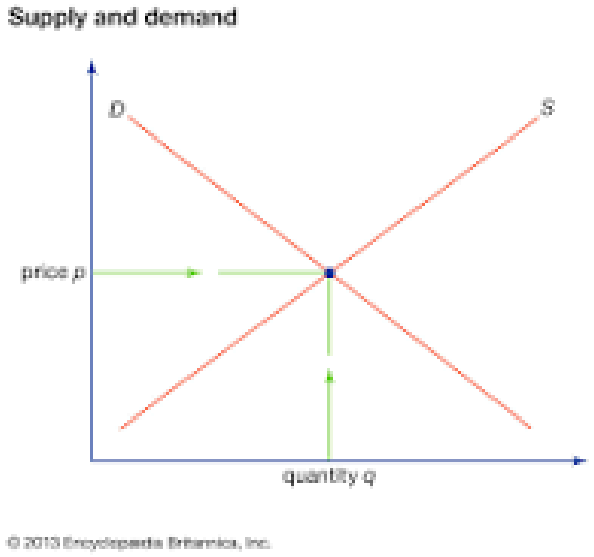


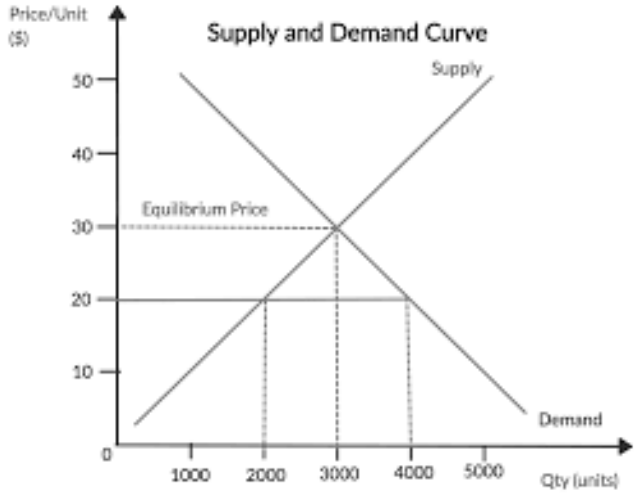




- it defines productive efficiency in the context of the production set: a point on the frontier indicates efficient use of the available inputs (such as points B, D and C in the graph), a point beneath the curve (such as A) indicates inefficiency, and a point beyond the curve (such as X) indicates impossibility.
- An outward shift of the PPC results from growth of the availability of inputs, such as physical capital or labour, or from technological progress. If there is an increase in land, labour or capital or an increase in the productivity of these factors, then the PPF curve can shift outwards enabling a better trade-off.

# Demand and Supply

- Demand for a commodity is the amount of it that a consumer will purchase or will be ready to take off from the market at various given prices at a given moment of time.
- The law of demand holds that the demand level for a product or a resource will decline as its price rises, and rise as the price drops.
- Conversely, the law of supply says higher prices boost supply of an economic good while lower ones tend to diminish it.
- A market-clearing price balances supply and demand, and can be graphically represented as the intersection of the supply and demand curves.



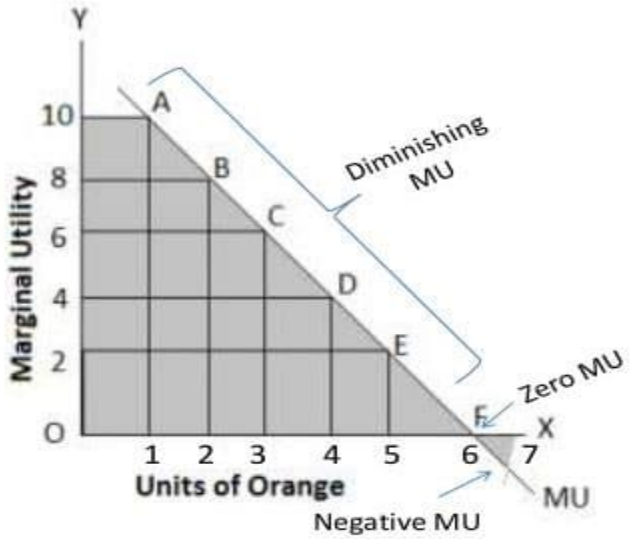
# Utility Analysis

- Marginal utility is the added satisfaction a consumer gets from having one more unit of a good or service.
- Diminishing marginal utility refers to the phenomenon that each additional unit of gain leads to an ever-smaller increase in subjective value. For example, three bites of candy are better than two bites, but the twentieth bite does not add much to the experience beyond the nineteenth (and could even make it worse).
- Law of diminishing marginal utility: “the additional benefit which a person derives from a given increase of his stock of a thing diminishes with every increase in the stock that he already has”

## Law of Diminishing Marginal Utility

| Units | Total Utility | Marginal Utility |
|---|---|---|
| 1 | 10 | 10 |
| 2 | 18 | 8 |
| 3 | 24 | 6 |
| 4 | 28 | 4 |
| 5 | 30 | 2 |
| 6 | 30 | 0 |
| 7 | 28 | -2 |

MU curve is downward sloping because of the fact that consumption of successive units gives less satisfaction.



# Indifference Curve Analysis

- An indifference curve is the locus of various points showing different combinations of two goods providing equal utility to the consumer. It shows a combination of two goods in various quantities that provides equal satisfaction (utility) to an individual.
- It is used in economics to describe the point where individuals have no particular preference for either one good or another based on their relative quantities.
- Along the curve, a consumer thus has an equal preference for the various combinations of goods shown.
- Typically, indifference curves are shown convex to the origin, and no two indifference curves ever intersect.

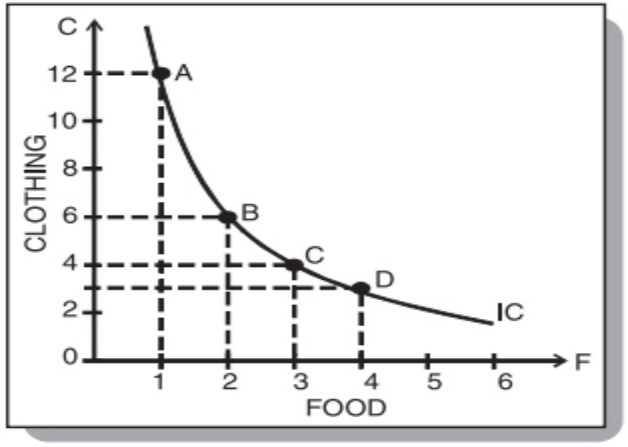


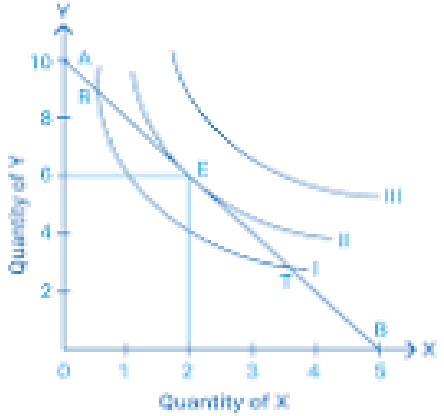

Fig. 1 : A Consumer's Indifference Curve

# Consumer Equilibrium

- When consumers make choices about the quantity of goods and services to consume, it is presumed that their objective is to maximize total utility. In maximizing total utility, the consumer faces a number of constraints, the most important of which are the consumer's income and the prices of the goods and services that the consumer wishes to consume. The consumer's effort to maximize total utility, subject to these constraints, is referred to as the consumer's problem. The solution to the consumer's problem, which entails decisions about how much the consumer will consume of a number of goods and services, is referred to as consumer equilibrium.
- The actual quantities purchased of each good are determined by the condition for consumer equilibrium, which is

$$\frac{\text{marginal utility of good 1}}{\text{price of good 1}} = \frac{\text{marginal utility of good 2}}{\text{price of good 2}} = \cdots = \frac{\text{marginal utility of good } N}{\text{price of good } N}$$

- The consumer's equilibrium can be represented graphically as a point of tangency where the indifference curve and the economic constraint meet. Therefore, this equilibrium is obtained when slope of the indifference curve and the slope of the consumer's budget line have the same level of equality.



# Elasticity

- Elastic is a term used in economics to describe a change in the behavior of buyers and sellers in response to a change in price for a good or service.
- An inelastic product is one that consumers continue to purchase even after a change in price.
- When a product is elastic, a change in price quickly results in a change in the quantity demanded. When a good is inelastic, there is little change in the quantity of demand even with the change of the good's price. The change that is observed for an elastic good is an increase in demand when the price decreases and a decrease in demand when the price increases.
- Elasticity can be quantified as the ratio of the percentage change in one variable to the percentage change in another variable when the latter variable has a causal influence on the former and all other conditions remain the same.
- Price elasticity= proportionate change in quantity demanded/proportionate change in price.

$$\varepsilon = \frac{\frac{Q_2 - Q_1}{Q_1}}{\frac{P_2 - P_1}{P_1}} = \frac{\%\text{ change in quantity Q}}{\%\text{ change in price P}}$$

- When the tangent of the straight line or curve is steeper, the price elasticity (demand or supply) is smaller; when the tangent of the straight line or curve is flatter, the price elasticity (demand or supply) is higher.

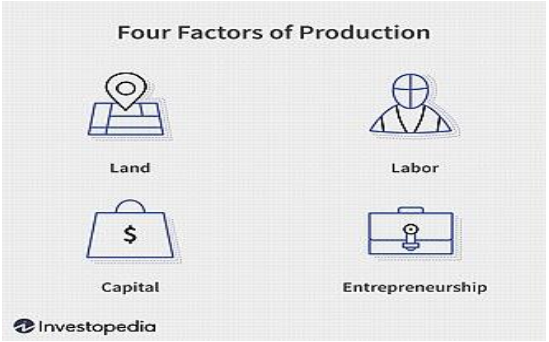

**What is meant by the price elasticity of supply?**
The price elasticity of supply refers to a measure that shows the sensitivity of the quantity, that is supplied, in accordance with price variation.

**What is meant by Income Elasticity**?
Income elasticity means the responsiveness of a particular quantity, that is demanded, according to income variation. This income here refers to the real income of customers who purchase the product. The other factors are assumed to be constant here.

**What is meant by the concept of cross elasticity?**
The concept of cross elasticity of demand refers to the measurement of a specific quantity's sensitivity in response to the other product's price change. The way to measure it is to take the percentage variation in demanded product quantity and divide it by the other product's price percentage change. Example of cross elasticity is to measure the change in demand for coffee to a change in tea price.

# Production

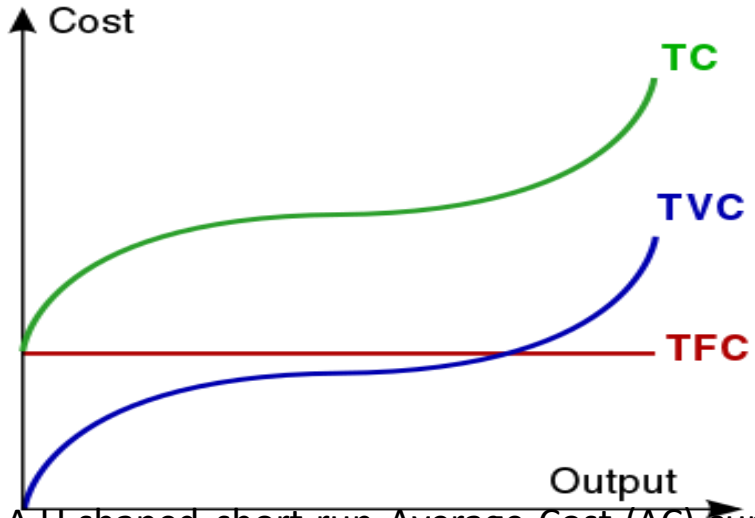
- Production is the process of combining various inputs, both material (such as metal, wood, glass, or plastics) and immaterial (such as plans, or knowledge) in order to create output. Land, labour, and capital are deemed the three fundamental production factors.

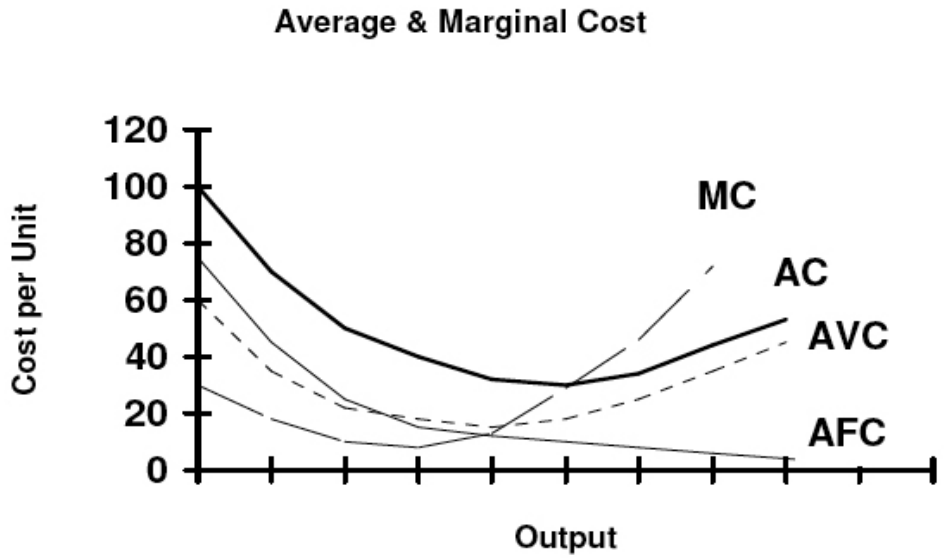



- The production function assesses the relationship between the inputs and the quantity of output. The production function assumes there is at least one fixed factor input. It is the economist's summary of technological knowledge.
- Q= f(a,b,c,d……)
- Cobb-Douglas Production function: Q=A$L^{\alpha}K^{\beta}$
- The law of variable proportions or law of diminishing marginal returns points out that as more units of a variable input are added to fixed amounts of land and capital, the change in total output would rise firstly and then fall.

# Cost Curves

- In economics, a cost curve is a graph of the costs of production as a function of total quantity produced. There are various types of cost curves, all related to each other, including total and average cost curves; marginal ("for each additional unit") cost curves, which are equal to the differential of the total cost curves; and variable cost curves.




- A U-shaped short-run Average Cost (AC) curve. Short- t per unit of output) is lower when output is higher, giving rise to the downward sloped curve
- AVC is the Average Variable Cost and shape of the average variable cost curve is directly determined by increasing and then diminishing marginal returns to the variable input.
- MC the marginal cost curve is usually U-shaped. Marginal cost is relatively high at small quantities of output; then as production increases, marginal cost declines, reaches a minimum value, then rises. The marginal cost curve intersects both the average variable cost curve and (short-run) average total cost curve at their minimum points.

# Iso-Quant Curve

- The term Iso-quant or Iso-product is composed of two words, Iso = equal, quant = quantity or product = output. Thus it means equal quantity or equal product.
- An Iso-product or Iso-quant curve is that curve which shows the different combinations of two factors yielding the same total product. Like, indifference curves, Iso- quant curves also slope downward from left to right.

Table 1. Iso-Product Schedule.

| Combination | Units of labour | Units of capital | Output of cloth (metres) |
|---|---|---|---|
| A | 1 | 15 | 200 |
| B | 2 | 11 | 200 |
| C | 3 | 8 | 200 |
| D | 4 | 6 | 200 |
| E | 5 | 5 | 200 |

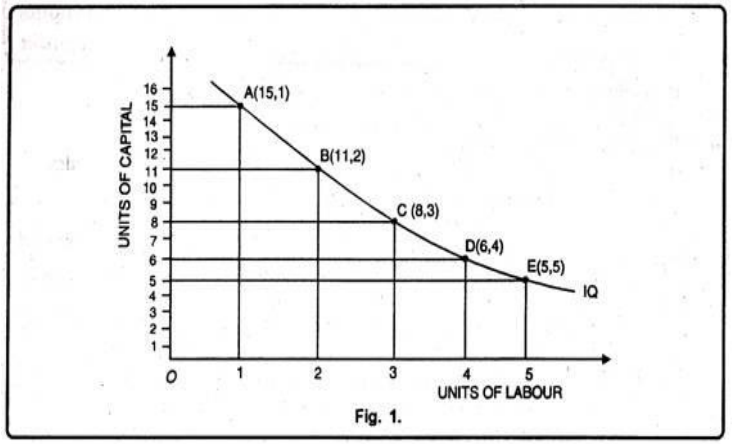


Fig. 1.

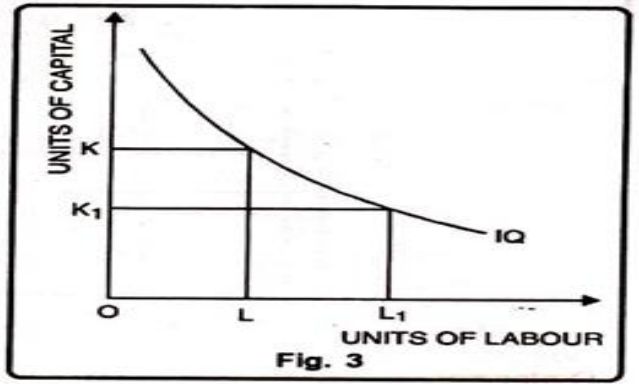
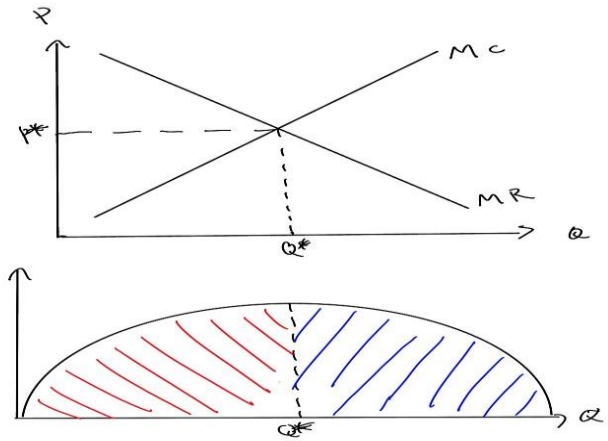


Fig. 3

- Iso-Product Curves Slope Downward from Left to Right. Isoquants are Convex to the Origin. Two Iso-Product Curves Never Cut Each Other. Higher Iso-Product Curves Represent Higher Level of Output. No Isoquant can Touch Either Axis.
- The slope of an Iso-quant curve expresses the marginal rate of technical substitution (MRTS).The marginal rate of technical substitution between two factors C (capital) and L (labour), MRTSLC is the rate at which L can be substituted for C in the production of good X without changing the quantity of output.

# Profit Maximisation or Cost Minimisation

- Profit maximization is the process of finding the production output at which the difference between revenues and cost is the largest. Profit is total revenue minus total cost. Stated another way, profit is the difference between the quantity of a good or service sold (Qs) multiplied by the price it's sold at (P), minus the quantity of a good or service that is produced (Qp) multiplied by the costs incurred in providing that good or service (C).
- Profit = Qs *P – Qp * C
- The economic cost is the sum of the explicit and implicit costs of an activity.
- Explicit costs are costs that require you to physically pay money. Implicit costs are the costs in monetary terms of the benefits a business could have realized by doing the next best alternative.
- There's no straightforward equation for the profit maximization formula, but it is calculated by equating the marginal revenue (MR) to the marginal cost (MC), MR= MC which represents the additional revenue and cost incurred from producing one additional unit.



# Forms of Market

| | Perfect competition | Monopolistic competition | Oligopoly | Monopoly |
|---|---|---|---|---|
| Number of firms | Many small | Many small | A few large | One |
| Product characteristic | Homogenous | Differentiated | Differentiated | Single |
| Barriers to entry | None | Slight | High | Very high |
| Control over price of their products | None | Slight – local competition limits how much they can charge | Varies: oligopolists may either engage in trade wars to reduce market share of rivals and newcomers or aim for more monopolistic situation by cartel, by takeovers and mergers or aggressive marketing. | Considerable |
| Ability to control the price of inputs | None | Slight | May be high e.g. supermarket chains can set the price for some agricultural produce. | May be very high depending on whether other producers have other outlets for their produce |
| Other features | | | Constantly trying to keep themselves and products in consumers eye in order to maintain or even increase market share by branding, heavy advertising, promotions, gimmicks etc. | |
| Examples | Wool growers, market gardeners | Restaurants, clothing shops. | Car manufacturers, supermarkets, soft drink- (e.g. Coke & Pepsi), cigarettes, fast foods, Kodak (dominant firm) | Water, local electricity, Velcro |

# Distribution

- 'Distribution' refers to the sharing of the wealth that is produced among the different factors of production.
- Marginal Productivity Theory of Distribution: Marginal productivity theory of distribution is the most celebrated theory of distribution. It is the neo-classical theory of distribution and is derived from Ricardo's "Marginal principle". J.B. Clark, Marshall and Hicks are the main pro-pounders of this theory.
- According to this theory, an entrepreneur or a firm will employ a factor at a given price till its marginal productivity tends to be equal to its price. It thus follows that the reward (price) of a factor tends to be equal to its marginal productivity.
- Marginal Physical Product: The marginal physical product of a factor is the increase in total product resulting from the employment of an additional unit of that factor, other factors remaining constant. The physical product or the marginal product of a particular factor is thus measured as MP = TPn – TPn-1.
- Value of Marginal Physical Product (VMPP) is usually referred to as the marginal productivity of a factor, and is obtained by multiplying the marginal physical product of the factor by the price of output. VMPP = MPP x P.
- Marginal Revenue Productivity: The marginal revenue at any level of firm's output is the net revenue earned by selling another (additional) unit of the product. Algebraically, it is the addition to total revenue earned by selling n units of product. In other-words, Marginal Revenue Product (MRP) of a factor is the net addition to total revenue made by the employment of an additional unit of that factor, assuming other factors to be fixed under a given state of technology. Thus, marginal revenue product is obtained by multiplying the marginal revenue. MRP = MPP x MR where, MRP indicates marginal revenue product and MPP stands for the marginal physical product.
- Marginal Productivity Theory of Distribution is the reward of a factor equals its marginal product. The payment made to the factor concerned is just equal to the value of the addition made to the total output on account of the employment of the additional unit of a factor.