CA FOUNDATION

MICRO ECONOMICS

महा MARATHON

CA TUSHAR TAPARIA

NATURE AND SCOPE OF BUSINESS ECONOMICS

BUSINESS ECONOMICS

Human beings have unlimited wants 'The means to satisfy these unlimited wants are relatively scarce' form the subject matter of Economics

Business Economics may be defined as the use of economic analysis to make business decisions involving the best use of an organization's scarce resources.

The book named 'An Inquiry into the Nature and Causes of the Wealth of Nations' (1776) usually abbreviated as 'The Wealth of Nations', by Adam Smith is considered as the first modern work of Economics.

Nature of Business Economics

- A Science
- Based on Micro Economics
- Incorporates elements of Macro Economics
- Use of theory of Markets and Private Enterprises
- Interdisciplinary in Nature
- An Art
- Pragmatic
- Normative

Economics has been broadly divided into two major parts

In Macro-Economics, we study the behaviour of the large economic aggregates, such as, the overall levels of output and employment, total consumption, total saving and total investment, exports, imports and foreign investment and also how these aggregates shift over time

In Macro Economics we study about-

- National Income & National Output
- Consumer Behaviour
- The General Price Level & Interest Rates
- The overall Level of Savings & Investment
- The Level of Employment & Rate of Economic Growth
- External value of Currency

Micro Economics is basically the study of the behaviour of different individuals and organizations within an economic system

In Micro Economics we study about-

- Product Pricing
- Consumer Behaviour
- Factor Pricing
- Behaviour of firms
- Location of Industry
- The Economic condition of a section of people

BASIS FOR COMPARISON	POSITIVE ECONOMICS (PURE SCIENCE)	NORMATIVE ECONOMICS
Meaning	A branch of economics based on data and facts.	A branch of economics based on values, opinions and judgement.
Nature	Descriptive	Prescriptive
What it does?	Analyses cause and effect relationship.	Passes value judgement.
Study of	What actually is	What ought to be
Testing	Statements can be tested using scientific methods.	Statements cannot be tested.
Economic issues	It clearly describes economic issue.	It provides solution for the economic issue, based on value.

There are two categories of business issues to which economic theories can be directly applied

Internal issues or operational issues (this can be solved using Micro Economics)

- Demand analysis and Forecasting
- Production and Cost analysis
- Inventory management
- Marginal analysis
- Market structure and Pricing Policies
- Resource Allocation
- Profit Analysis
- Risk and Uncertainty analysis

External issues or environmental issues (this can be solved using Macro Economics)

- The type of economic system.
- Stage of Business Cycle.
- The general trends in national income, employment, prices, saving and investment.
- Social and Political Environment
- Working of central banks & financial sector & capital market & their regulation.
- Socio-economic organisations like trade unions, producer & consumer unions & cooperatives.

CAPITALIST ECONOMY (FREE MARKET ECONOMY /LAISSEZ FAIRE ECONOMY)

It is an economic system in which all means of production are owned and controlled by private individuals. Government has limited role in the management of the economic affairs under this system .Eg. United States, United Kingdom, Hong Kong, South Korea etc.

Characteristics

- Right to Private Property
- Freedom of Enterprise
- Freedom of Economic choice
- Profit Motive
- Consumer Sovereignty
- Competition
- Absence of Government Interference

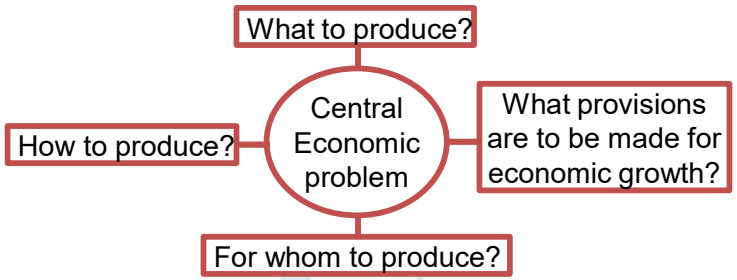
Merits

-Self - regulating and works automatically through price mechanism.
-Greater efficiency and incentive to work.
-Economic growth is faster
-Optimum allocation of the resources.
-High degree of operative efficiency.
-Cost of Production is minimized
-Benefits of competition to consumer
-Incentive for innovation and technological progress
-Right to freedom and right to private property

Demerits

-Economic inequality and social injustice.
-Precedence of property rights over human rights.
-Ignores human welfare.
-Wide differences in economic opportunities and perpetuates unfairness in society.
-Demand pattern is not the real needs of society.
-Exploitation of labour leading to frequent strikes and lock outs.
-Misallocation of resources .
-Less of merit goods (health care and education) and more of harmful goods will be produced .
-Leads to formation of monopolies.

BASIC PROBLEMS OF AN ECONOMY



MIXED ECONOMY

This system depends on both markets & government for allocation of resources. Its aim is to develop a system which tries to include the best features of both the controlled economy & market economy while excluding demerits of both. Under this system major economic development is due to private enterprise & private property & government runs important & selected industries to remove complete self interest & profit motive.

FEATURES

- Co-existence of Private & Public Sector- a) Private Sector b) Public Sector c) Combined

Merits

-Economic freedom & existence of private property.
-Private sector to promote decision making & better resource allocation.
-Consumer's sovereignty & freedom of choice.
-Incentive for innovation & technological progress.
-Encourages enterprise and risk taking.
-Comparative greater economic & social equality & freedom from exploitation .
-Disadvantages of cut throat competition avoided through government's laws like environment & labour regulations.

Demerits

-Excessive controls by the state reduces incentives & constrained growth of the private sector .
-Poor implementation of planning & Wastage of Resources & Corruption. High rates of taxation & Lack of efficiency.
-Undue delays in economic decisions & poor performance of the public sector.
-Difficult to maintain a balance between the public & private.

SOCIALIST ECONOMY (COMMAND ECONOMY /CENTRALLY PLANNED ECONOMY)

This concept was propounded by Karl Marx & Frederic Engels in their work 'The Communist Manifesto'. In this economy the material means of production i.e. factories, mines, capital, etc. are owned by the whole community represented by the State. Resources are allocated according to commands of Centrally Planning authority & thus market has no role in allocation of resources. Under this, production & distribution of goods maximizes the welfare of community as a whole. Eg.USSR ,North Korea. No pure socialist country today.

Characteristics

- Collective Ownership
- Economic Planning
- Absence of Consumer Choice
- Absence of Competition
- Relatively Equal Income Distribution
- Minimum Role of Price Mechanism or Market Forces

Merits

-Equitable distribution of wealth and income.
-Rapid and Balanced Economic Development.
-No wastage of resources
-Unemployment is minimized, business fluctuations are eliminated & stability is brought.
-Better welfare of the society (social security).
-Ensures right to work & minimum standard of living to all people & No exploitation.

Demerits

-Predominance of bureaucracy (corruption, favouritism , inefficiencies & delays).
-Restricts freedom of individuals
-No Right of Private Property.
-No incentive to hard work .
-Administered prices are not determined by market forces
-Limited choice to consumers.
-The extreme form of socialism is not at all practicable.

Theory of Demand and Supply

Demand = Desire + Willingness to purchase + Ability to pay

DETERMINANTS

Price
P ↑ QD ↓
Inverse Relation

Disposable Income
DI ↑ QD ↑
Positive Relation

Depends on Nature of Goods

1) Normal Goods
(Eg. Furniture)
2) Essential Consumer Goods
(Eg. Food Grain)
3) Durable Goods
(Eg. TV, Car)
4) Inferior Goods
(Eg. Cheap Substitutes)
5) Luxury/Prestigious Goods
(Eg. Rolls Royce)

Related Commodities

Complementary Goods

PP ↑ QDV ↓
Inverse Relation

Substitute / Competing Goods

PT ↑ QDC ↑
Direct Relation

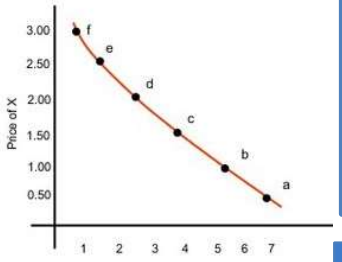
ceteris paribus- other things being equal / constant

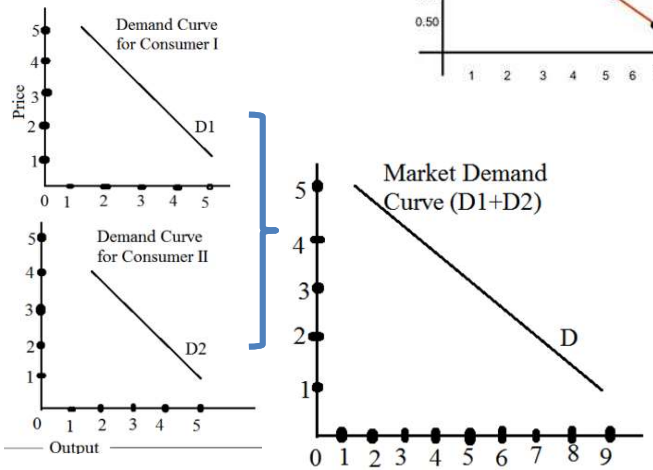
The Law of Demand states that other things being equal, when the price of a good rises , the quantity demanded of the good will fall.

Demand Schedule

Point	Price [Rs per unit]	Quantity demanded of X [kg. per month]
a	0.50	7.0
b	1.00	5.0
c	1.50	3.5
d	2.00	2.5
e	2.50	1.5
f	3.00	1.0

Demand Curve





Rationale of the Law of Demand (Reasons for the slope)-

Law of DMU
Income effect
Substitution effect
Multiple uses
New consumer

Exceptions to the Law of Demand

a) Conspicuous goods
b) Giffen goods
c) Conspicuous necessities
d) Future expectations about prices
e) Incomplete information and irrational behaviour
f) Demand for necessaries
g) Speculative goods

Taste & Preferences

Demonstration effect, people buy or have things because they see that other people are able to have them
Bandwagon effect refers to the desire of people to purchase a commodity in order to be fashionable or stylish or to conform to the people they wish to be associated with.
By '**snob effect**' we refer to the extent to which the demand for a consumers' good is decreased owing to the fact that others are also consuming the same commodity.
Highly priced goods are consumed by status seeking rich people to satisfy their need for conspicuous consumption. This is called '**Veblen effect**.

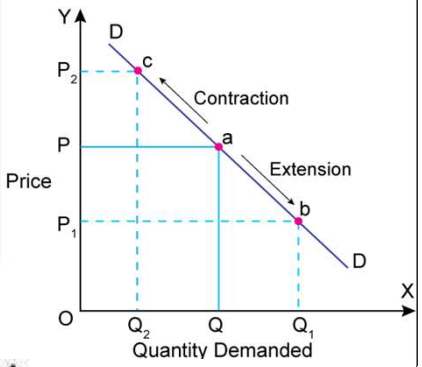
Consumers' Expectations

FP ↑ QD ↑
Direct Relation

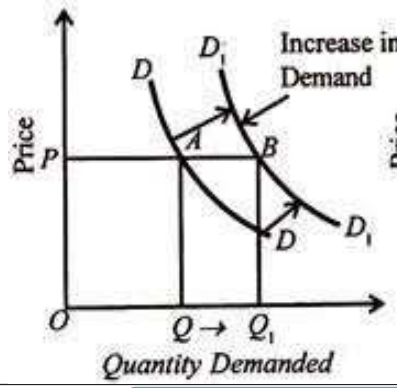
Other

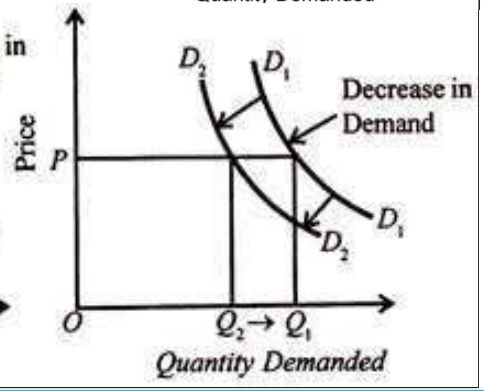
a) Size of population
b) Age Distribution of population
c) The level of National Income and its Distribution
d) Consumer-credit facility and interest rates
e) Government policies and regulations

Variation in Demand Curve & Movement along the Curve



Change In Demand & Shift of Demand Curve





Elasticity

Elasticity of demand is defined as degree of responsiveness of the quantity demanded of a good to changes in one of the variables on which demand depends.

Price elasticity of demand expresses the degree of responsiveness of quantity demanded of a good to a change in its price

$$\text{Price Elasticity} = \frac{\text{Percentage change in quantity demanded}}{\text{Percentage change in price}}$$

$$\text{or} = \frac{\text{Proportional change in quantity demanded}}{\text{Proportional change in price}}$$

$$= \frac{\Delta Q/Q}{\Delta P/P} = \frac{\Delta Q}{\Delta P} \times \frac{P}{Q} \quad \{\Delta = \text{change}\}$$

2. Arc Elasticity=Ep $= \frac{Q2 - Q1}{Q2 + Q1} \times \frac{P2 + P1}{P2 - P1}$

3.Total Outlay Method

Elasticity is measured by comparing total expenditure before and after a change in price

Ep=1: Unit elastic when there is *no change in the total revenue* as a result of a rise or fall in price- Revenue remains constant

Ep>1: Relatively elastic when *total revenue rises with a fall in price* and falls with a rise in price,

Ep<1 : Relatively inelastic when *total revenue rises with a rise in price* and falls with a fall in price,

4. Geometric Method $= \frac{\text{RT lower segment}}{\text{Rt upper segment}}$

Determinants of Price Elasticity of Demand

-Availability of substitutes.
-Position of a commodity in the consumer's budget.
-Nature of the need that a commodity satisfies.
-Number of uses to which a commodity can be put.
-Time period .
-Consumer habits.
-Tied demand.
-Price range .
-Minor complementary items.

Income elasticity of demand is the degree of responsiveness of the quantity demanded of a good to changes in the income of consumers

$$Ey = \frac{\%\text{ change in quantity demanded}}{\%\text{ change in income}}$$

$$= \frac{\Delta Q}{\Delta Y} \times \frac{Y1}{Q1}$$

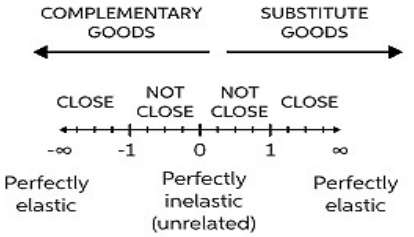
Income Elasticity of Demand – 3 Types

Negative	Positive	Zero
Associated with inferior goods. For example, cheap cars. When my income rises, I stop buying cheap cars.	Associated with luxury goods. For example, when my income rises I buy more vacations abroad.	These are sticky goods. For example, electricity, butane gas, water, salt, cooking oil, and kerosene.

The **cross-price elasticity** of demand between two goods measures the effect of the change in one good's price on the quantity demanded of the other good

$$\text{Cross elasticity of demand} = \frac{\text{Proportionate change in demand for X goods}}{\text{Proportionate change in price of Y goods}}$$

$$Exy = \frac{\Delta Qx}{\Delta Py} \times \frac{Py}{Qx}$$



The **Advertisement elasticity** of sales or promotional elasticity of demand is the responsiveness of a good's demand to changes in the firm's spending on advertising.

$$AED = \frac{\Delta Qd}{\Delta AE} \cdot \frac{AE}{Qd}$$

Elasticity	Interpretation
Ea = 0	Demand does not respond at all to increase in advertisement expenditure
Ea>0 but < 1	Increase in demand is less than proportionate to the increase in advertisement expenditure
Ea = 1	Demand increase in the same proportion in which advertisement expenditure increase
Ea> 1	Demand increase at a higher rate than increase in advertisement expenditure

Type	Value	Description
Perfectly Elastic	$(E_d = \infty)$	Infinite demand at same price
Perfectly Inelastic	$(E_d = 0)$	Same demand at all prices
Highly Elastic	$(E_d > 1)$	% Δ in Demand > % Δ in Price
Less Elastic	$(E_d < 1)$	% Δ in Demand < % Δ in Price
Unitary Elastic	$(E_d = 1)$	% Δ in Demand = % Δ in Price

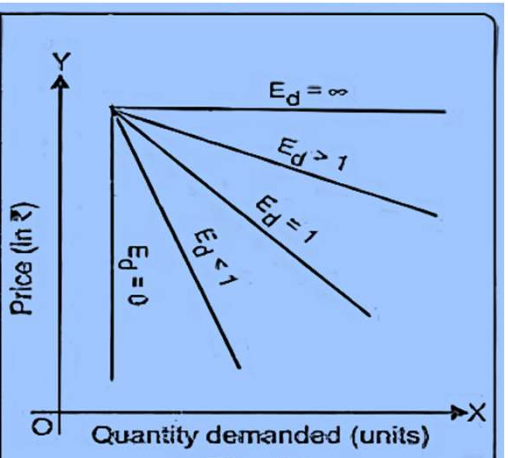


Fig. 4.9

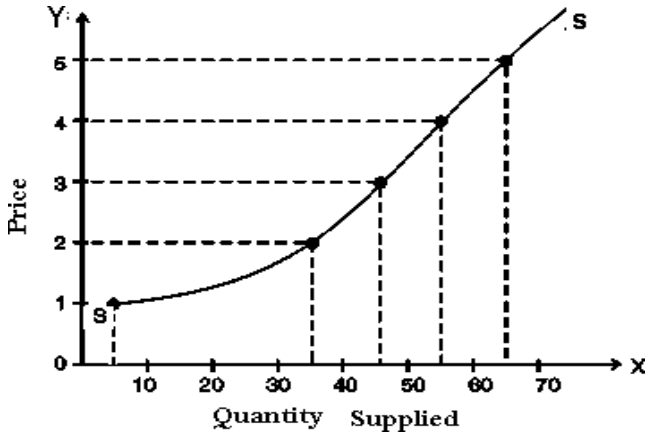
Supply = Willingness to Produce + Ability to Produce + At a Price

DETERMINANTS

- **Price** — P ↑ QS ↑ Direct Relation
- **Related Commodities** — PT ↑ QSC ↓ Inverse Relation
- **Factors of Production** — PFop ↑ QS ↓ Inverse Relation
- **State of Technology** — Tech ↑ QS ↑ Direct Relation
- **Government Policy** — Good ↑ QS ↑ Direct Relation
- **Nature of Competition & Size of Industry** — Comp ↑ QS ↑ Direct Relation
- **Expectations of Future Prices** — FP ↑ QS ↓ Inverse Relation
- **Number of Sellers** — S ↑ QS ↑ Direct Relation
- **Other**

ceteris paribus- other things being equal / constant

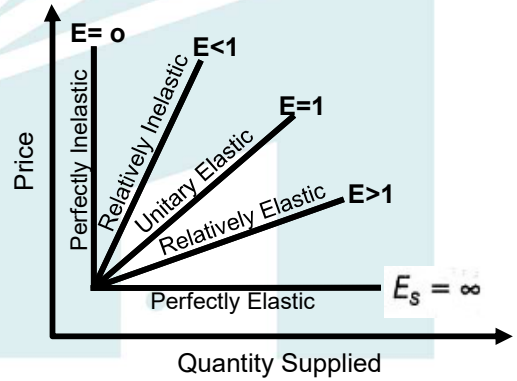
The Law of Supply states that other things remaining constant, the quantity of a good produced and offered for sale will increase as the price of the good rises and decrease as the price falls.



Elasticity

Elasticity of is defined as the responsiveness of the quantity supplied of a good to a change in its price.

$$Es = \frac{\text{\% Change in Quantity Supplied}}{\text{\% Change in Price}} \qquad Es = \frac{\Delta Q}{\Delta P} \times \frac{P}{Q}$$



Determinants of Elasticity of Supply

a) Constant costs or negligible rise in costs as output increases, supply will be elastic. Products that involve more complex production processes or require relatively longer time to produce exhibit lower elasticity of supply

b) The longer the period of time, greater the supply elasticity. A shorter time period Less elastic

c) The greater the spare capacity available, the greater will be the elasticity of supply.

d) If key raw materials and inputs are easily and cheaply available, then supply will be elastic

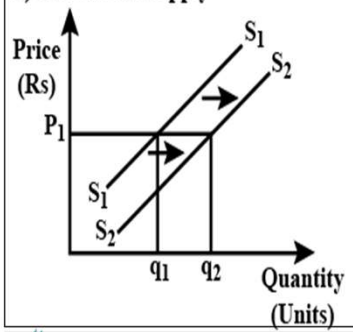
e) commodities which can be easily and inexpensively stored without losing value may have elastic supply.

f) Products which are more continuously produced have greater supply elasticity than those which are produced infrequently.

g) Expectation of substantial rise in prices in future will make the sellers respond less to a current rise in price..

IMAGE 1

1) Increase in Supply



1) Expansion of Supply

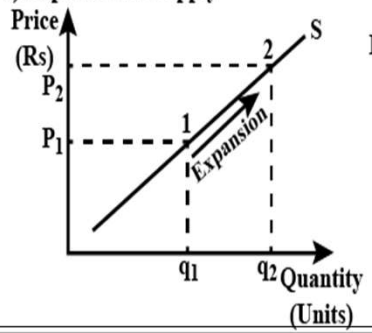
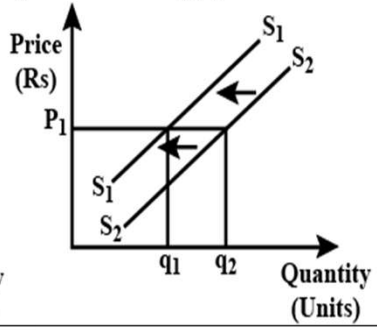
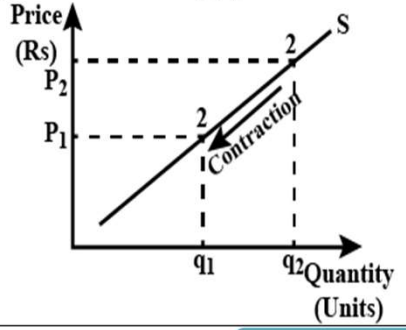


IMAGE 2

2) Decrease in Supply



2) Contraction of Supply



Theory of Consumer Behaviour

Utility is a want satisfying power of a commodity.

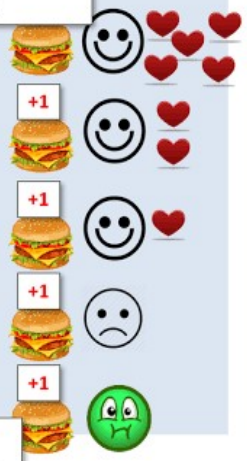
Law of diminishing marginal utility

The **law of diminishing marginal utility** states that marginal utility declines as more units of a good are consumed.

Successive equal quantities of a good consumed (possessed) will generate smaller amounts of extra utility (satisfaction).

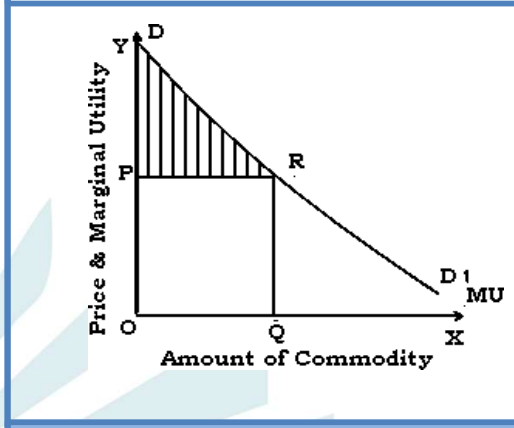
Quantity	Total Utility	Marginal Utility
0	0	–
1	300	300
2	550	250
3	750	200
4	900	150
5	1000	100
6	1050	50
7	1050	0

Total utility continues to rise (although at a decreasing rate) because we make an assumption that **more is better.**



The **marginal utility** of each additional good consumed declines.

Consumer surplus = what a consumer is ready to pay - what he actually pays.



Limitations

- Consumer surplus cannot be measured precisely.
- In the case of necessaries, the consumer surplus is always infinite.
- The consumer surplus is affected by the availability of substitutes.
- There is no simple rule for deriving the utility scale of articles which are used for their prestige value (e.g., diamonds).
- Consumer surplus cannot be measured in terms of money

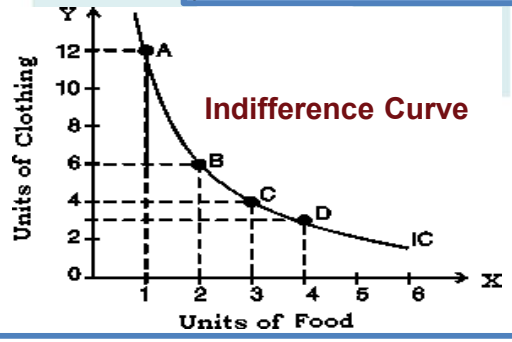
Applications

(1) Consumer surplus is a measure of the welfare that people gain from consuming goods & services. Consumers who perceive large surplus are more likely to repeat their purchases.
(2) Understanding the nature & extent of surplus can help business managers make better decisions about setting prices.
(3) Large scale investment decisions involve cost benefit analysis which takes into account the extent of consumer surplus which the projects may fetch.
(4) Knowledge of consumer surplus is also important to a firm raising its product prices
(5) Consumer surplus usually acts as a guide to finance ministers when they decide on the products on which taxes have to be imposed & the extent to which tax has to be raised.

Assumptions for Law of Diminishing Marginal Utility

- Rational Consumer
- Independant Utility
- Same Quality
- Standard Quantity
- Continuous Consumption
- Cardinal Measurability
- Constant MU of Money
- Fixed Income and Prices

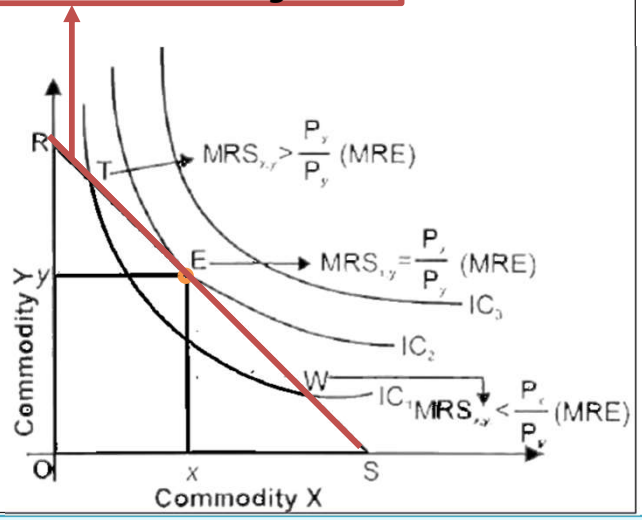
Indifference Curve



Characteristics

-Indifference curves slope downward to the right
-Indifference curves are always convex to the origin
-Indifference curves can never intersect each other
-A higher indifference curve represents a higher level of satisfaction than the lower indifference curve
-Indifference curve will not touch either axes

$P_xQ_x + P_yQ_y$ = Budget Line



Theory of Production and Cost

Production means 'creation of utility'. i.e. Utility of form, utility of place, utility of time and personal utility.
One of the principal concerns of business managers is the achievement of optimum efficiency in production by minimizing the cost of production

Land

In common parlance includes natural resources, fertility of soil, water, air, light, heat natural vegetation etc.

Characteristics

1) Land is a free gift of nature
2) Supply of land is fixed
3) Land is permanent and has indestructible powers
4) Land is a passive factor
5) Land is immobile
6) Land has multiple uses
7) Land is heterogeneous

Labour

Means any mental or physical exertion directed to produce G&S.

Characteristics

1) Human Effort
2) Labour is perishable
3) Labour is an active factor
4) Labour is inseparable from the labourer
5) Labour power differs from labourer to labourer
6) All labour may not be productive
7) Labour has poor bargaining power
8) Labour is mobile
9) No rapid adjustment of supply of labour to the demand for it
10) Choice between hours of labour and hours of leisure

Capital

It has been rightly defined as 'produced means of production' or 'man-made instruments of production'. In other words, capital refers to all man made goods that are used for further production of wealth.
Capital formation means a sustained increase in the stock of real capital in a country. In other words, capital formation involves production of more capital goods like, machines, tools, factories, transport equipments, electricity etc. which are used for further production of goods

Stages of capital formation:-

1) Savings 2) Mobilisation of savings 3) Investment

FACTORS OF PRODUCTION

Entrepreneur

There must be some factor which mobilises these factors, combines them in the right proportion, initiates the process of production and bears the risks involved in it. This factor is known as the entrepreneur

Functions

1) Initiating business enterprise and resource co-ordination 2) Risk bearing or uncertainty bearing 3) Innovations

Enterprise's objectives and constraints

(1) Organic objectives
(2) Economic objectives
(3) Social objectives
(4) Human objectives
(5) National objectives

1) Lack of knowledge and information.
2) Restrictions imposed in the public interest by the state on the production, price and movement of factors.
3) Infrastructural inadequacies and consequent supply chain bottlenecks.
4) Changes in business and economic conditions.
5) Events such as inflation, rising interest rates, unfavorable exchange rate fluctuations.

Enterprise's Problems

- ***Problems relating to objectives***
- ***Problems relating to location and size of the plant***
- ***Problems relating to selecting and organising physical facilities***
- ***Problems relating to organisation structure***
- ***Problems relating to Finance***
- ***Problems relating to marketing***
- ***Problems relating to legal formalities***
- ***Problems relating to industrial relations***

PRODUCTION FUNCTION

Q = f (a, b, c, d .....n)

Cobb-Douglas production function

$Q = KL^{a}\ C^{(1-a)}$

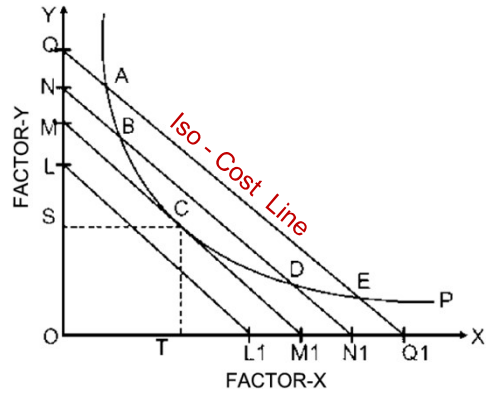
The Law of Variable Proportions or The Law of Diminishing Returns

The law states that in short run an increase in some inputs relative to other fixed inputs will, in a given state of technology, cause output to increase; but after a point, the extra output resulting from the same addition of extra input will become less and less.

TP = Total Output

$MP_n = TP_n - TP_{n-1}$

$$AP = \frac{\text{Total Product}}{\text{No. of units of Variable Factors}}$$

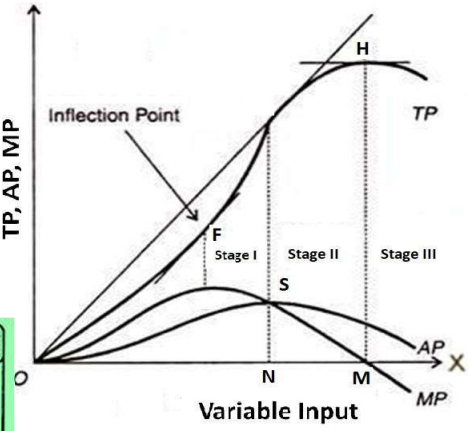


Isoquants are similar to indifference curves in the theory of consumer behaviour. An isoquant represents all those combinations of inputs which are capable of producing the same level of output & also called equal-product curves, production indifference curves or iso-product curves

Stages of Production

Units of variable factor (L)	Total Product (TP_L)	Marginal Product (MP_L)	Average Product (AP_L)	Stages
1	2	2	2	I
2	6	4	3	
3	12	6	4	
4	16	4	4	
5	18	2	3.6	II
6	18	0	3	
7	16	–2	2.28	III

Total Product	Marginal Product	Average Product
Stage I		
First increases at increasing rate then at diminishing rate.	Increases in the beginning then reaches a maximum and begins to decrease.	First increases, continues to increase and becomes maximum.
Stage II		
Continues to increase at diminishing rate and becomes maximum.	Continues to diminish and becomes equal to zero.	Becomes equal to MP and then begins to diminish.
Stage III		
Diminishes	Becomes negative.	Continues to diminish but will always be greater than zero.



The study of changes in output as a consequence of changes in scale forms the subject matter of **Returns to Scale.** Returns to scale may be constant, increasing or decreasing.

The Cobb-Douglas production function, explained earlier is used to explain "returns to scale" in production. Originally, Cobb and Douglas assumed that returns to scale are constant. The function was constructed in such a way that the exponents summed to a+1-a=1. However, later they relaxed the requirement and rewrote the equation as follows:

$$Q = K L^a C^b$$

Where 'Q' is output, 'L' the quantity of labour and 'C' the quantity of capital, 'K' and 'a' and 'b' are positive constants.

If a + b > 1 Increasing returns to scale result i.e. increase in output is more than the proportionate increase in the use of factors (labour and capital).

a + b = 1 Constant returns to scale result i.e. the output increases in the same proportion in which factors are increased.

a + b < 1 decreasing returns to scale result i.e. the output increases less than the proportionate increase in the labour and capital.

Cost analysis is concerned with the financial aspects of production relations as against physical aspects which were considered in production analysis.

Economic costs

Useful for businessmen while making decisions. The concept of economic cost is important because an entrepreneur must cover his EC if he wants to earn normal profits

=

Accounting Costs or Explicit Costs

Includes all the payments and charges made by the entrepreneur to the suppliers of various productive factors. These are expenses already incurred by the firm. Accountants record these in the financial statements of the firm.

+

Implicit costs

Amount of money the entrepreneur could have earned if he had invested his money and sold his own services and other factors in the next best alternative uses.

COST CONCEPTS

Outlay costs

Outlay costs involve actual expenditure of funds on, say, wages, materials, rent, interest, etc.

Opportunity cost

It is the amount or subjective value that is foregone in choosing one activity over the next best alternative. It relates to sacrificed alternatives; it is, in general not recorded in the books of account. (Refer Below)

Replacement costs

Replacement cost is the money expenditure that has to be incurred for replacing an old asset.

Historical costs

Historical cost refers to the cost incurred in the past on the acquisition of a productive asset such as machinery, building etc.

Indirect or Non-Traceable costs

Indirect costs are those which are not easily and definitely identifiable in relation to a plant, product, process or department.

Sunk costs

Sunk costs refer to those costs which are already incurred once and for all and cannot be recovered like expenses incurred on advertising

Variable costs

Variable costs are costs that are a function of output in the production period

Fixed costs

Fixed or constant costs are not a function of output; they do not vary with output upto a certain level of activity. These costs require a fixed expenditure of funds irrespective of the level of output

Direct or Traceable costs

Direct costs are those which have direct relationship with a component of operation . Such costs are directly related to a product, process or machine. Direct costs are costs that are readily identified and are traceable to a particular product, operation or plant.

Incremental costs

Incremental costs are related to the concept of marginal cost. Incremental cost refers to the additional cost incurred by a firm as result of a business decision

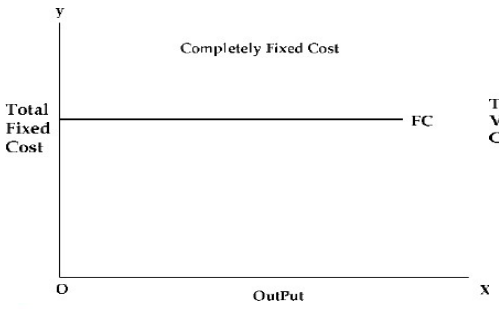
Private costs

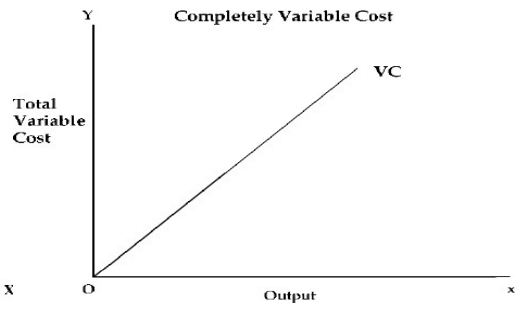
Private costs are costs actually incurred or provided for by firms and are either explicit or implicit. They normally figure in business decisions as they form part of total cost and are internalised by the firm.

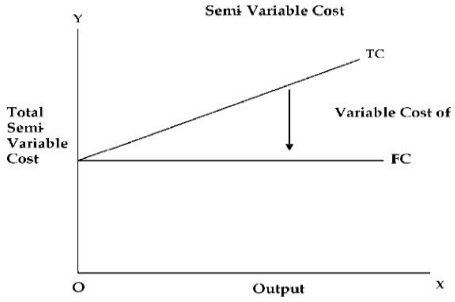
Social costs

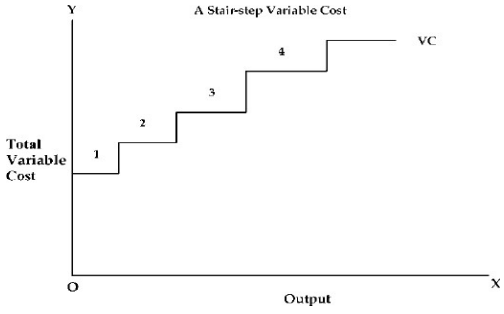
Social cost, on the other hand, refers to the total cost borne by the society on account of a business activity and includes private cost and external cost.

Opportunity cost is the value of the next best alternative forgone when making a decision, while implicit cost is a specific type of opportunity cost that arises from using resources already owned by a firm.



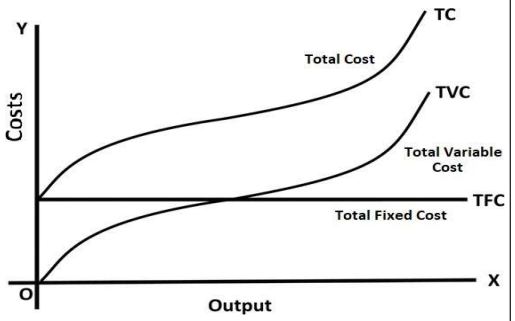


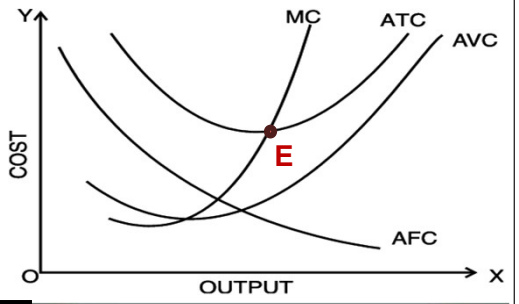




Short Run Cost Curves

Units of output (Q)	Total fixed cost	Total variable cost	Total cost (TFC+TVC)	Average fixed cost (TFC/Q)	Average variable cost (TVC/Q)	Average total cost (AFC+AVC) (TC/Q)	Marginal cost (MCn = TCn – TCn-1) (MC = ΔTC/ΔQ)
0	1000	0	1000	-	-	-	-
1	1000	50	1050	1000.00	50.00	1050.00	**50**
2	1000	90	1090	500.00	45.00	545.00	**40**
3	1000	140	1140	333.33	46.67	380.00	**50**
4	1000	196	1196	250.00	49.00	299.00	**56**
5	1000	255	1255	200.00	51.00	251.00	**59**
6	1000	325	1325	166.67	54.17	220.83	**70**
7	1000	400	1400	142.86	57.14	200.00	**75**
8	1000	480	1480	125.00	60.00	185.00	**80**
9	1000	570	1570	111.11	63.33	174.44	**90**
10	1000	670	1670	100.00	67.00	167.00	**100**
11	1000	780	1780	90.91	70.91	161.82	**110**
12	**1000**	**1080**	**2080**	**83.33**	**90.00**	**173.33**	**300**





ECONOMIES AND DISECONOMIES OF SCALE

Internal Economies and Diseconomies

- ***Technical economies and diseconomies***
- ***Managerial economies and diseconomies***
- ***Commercial economies and diseconomies***
- ***Financial economies and diseconomies***
- ***Risk bearing economies and diseconomies***

Internal Economies and Diseconomies

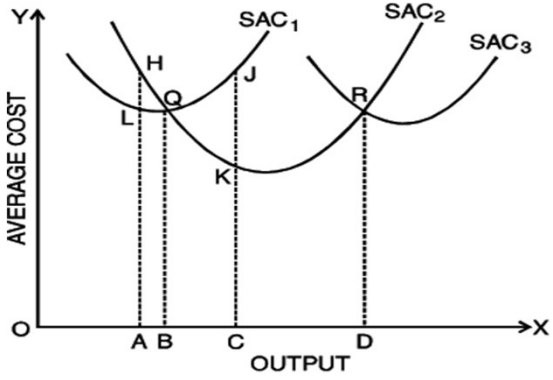
- ***Cheaper raw materials and capital equipment***
- ***Technological external economies***
- ***Development of skilled labour***
- ***Growth of ancillary industries***
- ***Better transportation and marketing facilities***
- ***Economies of Information***

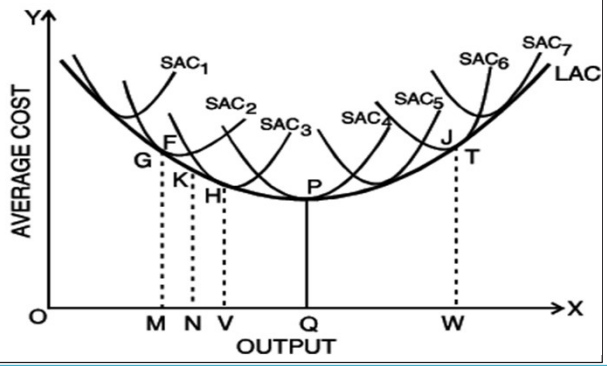
The long run average cost curve is often called as 'planning curve' because a firm plans to produce any output in the long run by choosing a plant on the long run average cost curve corresponding to the given output. The long run average cost curve helps the firm in the choice of the size of the plant for producing a specific output at the least possible cost. The long-run average cost (LAC) curve is also called the "Envelope curve"

Relationship between Average and Marginal Cost

1. When AC is falling, MC < AC.
2. When AC is rising, MC > AC.
3. At point E, MC = AC.
4. MC is always to the left of AC and cuts the AC from its lowest point.

Long Run Cost Curves





Price Determination in Different Markets

Notes by
CA Tushar Taparia

Classification of Markets
On the basis of -

- **AREA**
  - Local Markets
  - Regional Markets
  - National Markets
  - World Markets
- **TIME**
  - Very Short Period Market
  - Short Period Market
  - Long Period Market
  - Very Long Period Market (Secular Period)
- **NATURE OF TRANSACTION**
  - Spot Market
    - Future Market
- **REGULATION**
  - Regulated Market
    - Unregulated Market
- **VOLUME OF BUSINESS**
  - Wholesale Market
    - Retail Market
- **Competition**
  - Perfect Competition
  - Imperfect Competition
    - Monopoly
    - Oligopoly
    - Monopolistic Competition

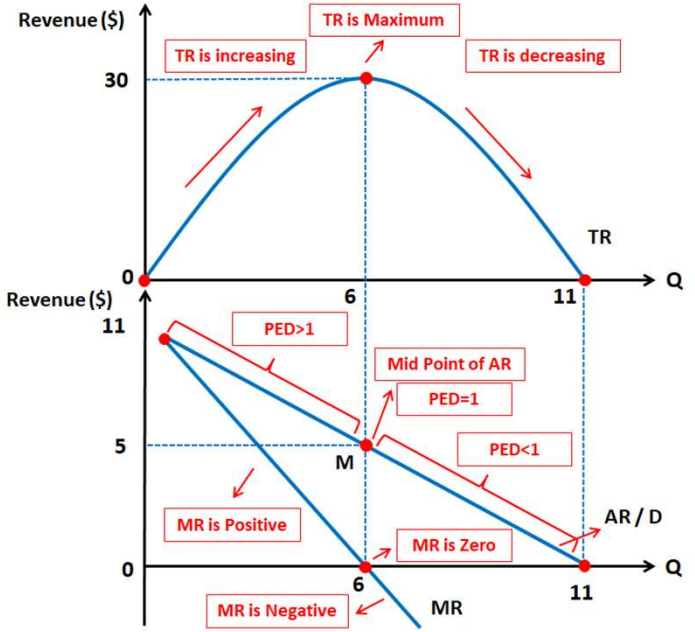
Waterproof Pen

Total Revenue (TR) = Price (P)× Quantity (Q)

Average Revenue (AR) = $\frac{TR}{Q}$
i.e AR=P

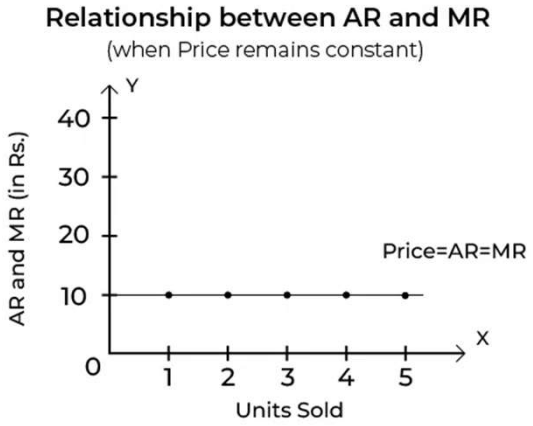
$MR = AR \frac{(e-1)}{e}$

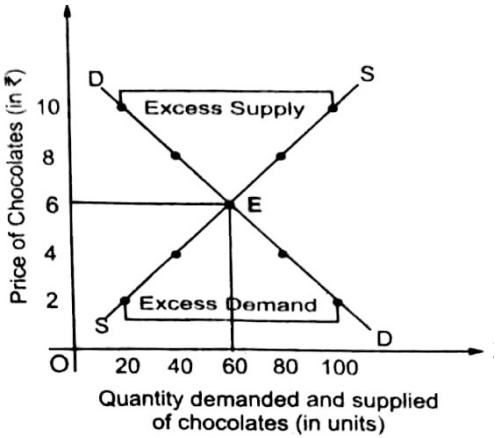
Marginal Revenue
MRn = TRn – TRn-1
$MR = \frac{\Delta TR}{\Delta Q}$



P	Q	TR=P x Q	MR=ΔTR/ΔQ	AR = TR/Q
11	0	0	-	-
10	1	10	10	10
9	2	18	8	9
8	3	24	6	8
7	4	28	4	7
6	5	30	2	6
5	**6**	**30**	**0**	**5**
4	7	28	-2	4
3	8	24	-4	3
2	9	18	-6	2
1	10	10	-8	1
0	11	0	-10	0

Units (Q)	*Price or Average Revenue (P)*	*Total Revenue (Q × P)*	*Marginal Revenue*
1	10	10	10
2	10	20	10
3	10	30	10
4	10	40	10
5	10	50	10
6	10	60	10
7	10	70	10
8	10	80	10

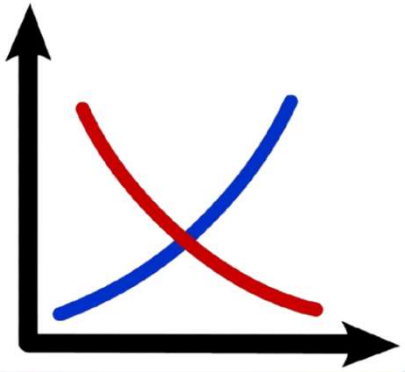




- **Market Equilibrium** is determined at Point E
- **Equilibrium Price** is determined at ₹ 6
- **Equilibrium Quantity** is determined at 60 chocolates

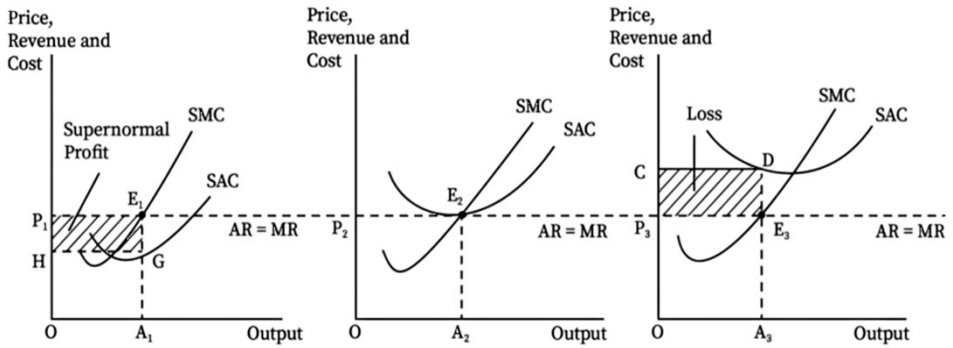
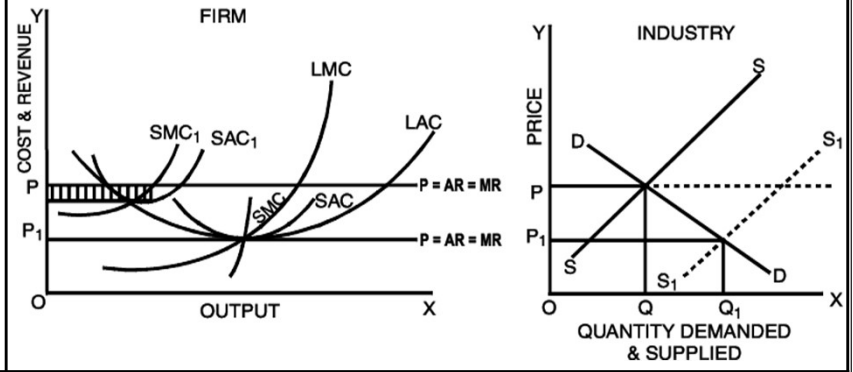
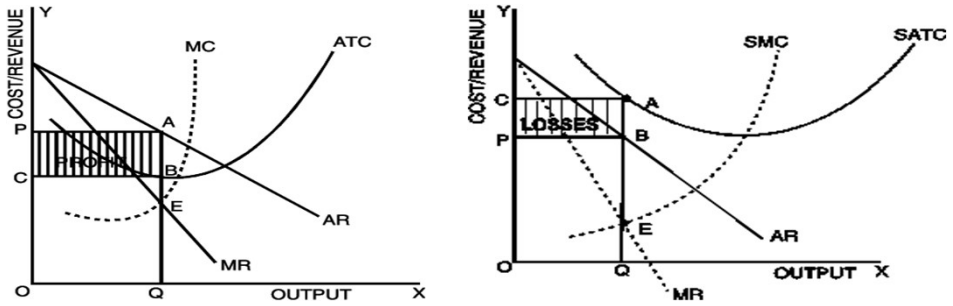
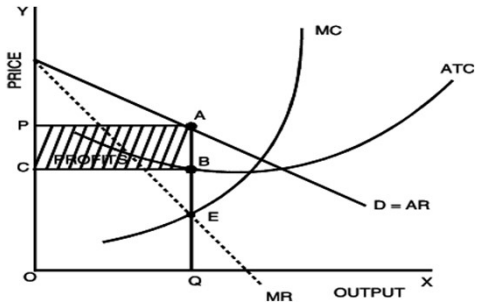
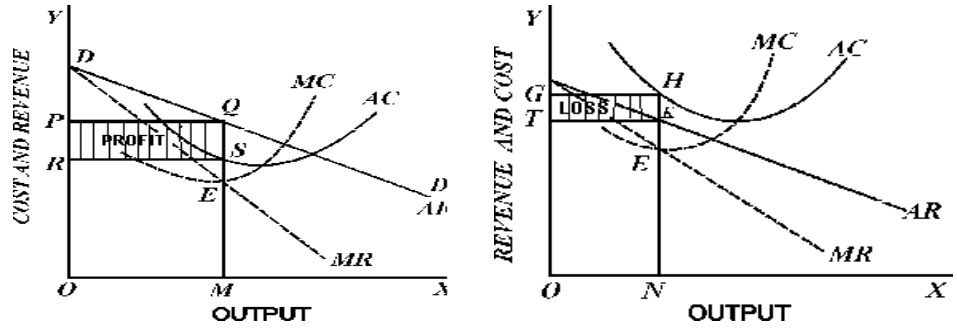
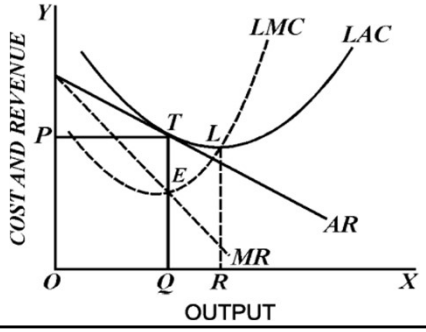
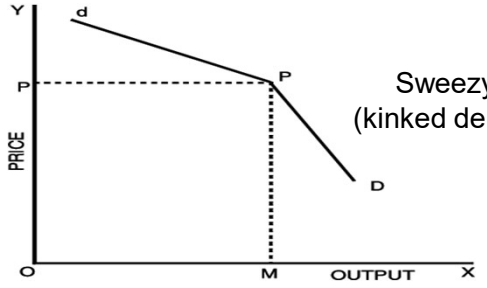
Conditions for equilibrium of a firm:

1) The marginal revenue should be equal to the marginal cost. i.e. MR = MC.
2) The MC curve should cut MR curve from below. In other words, MC should have a positive slope.



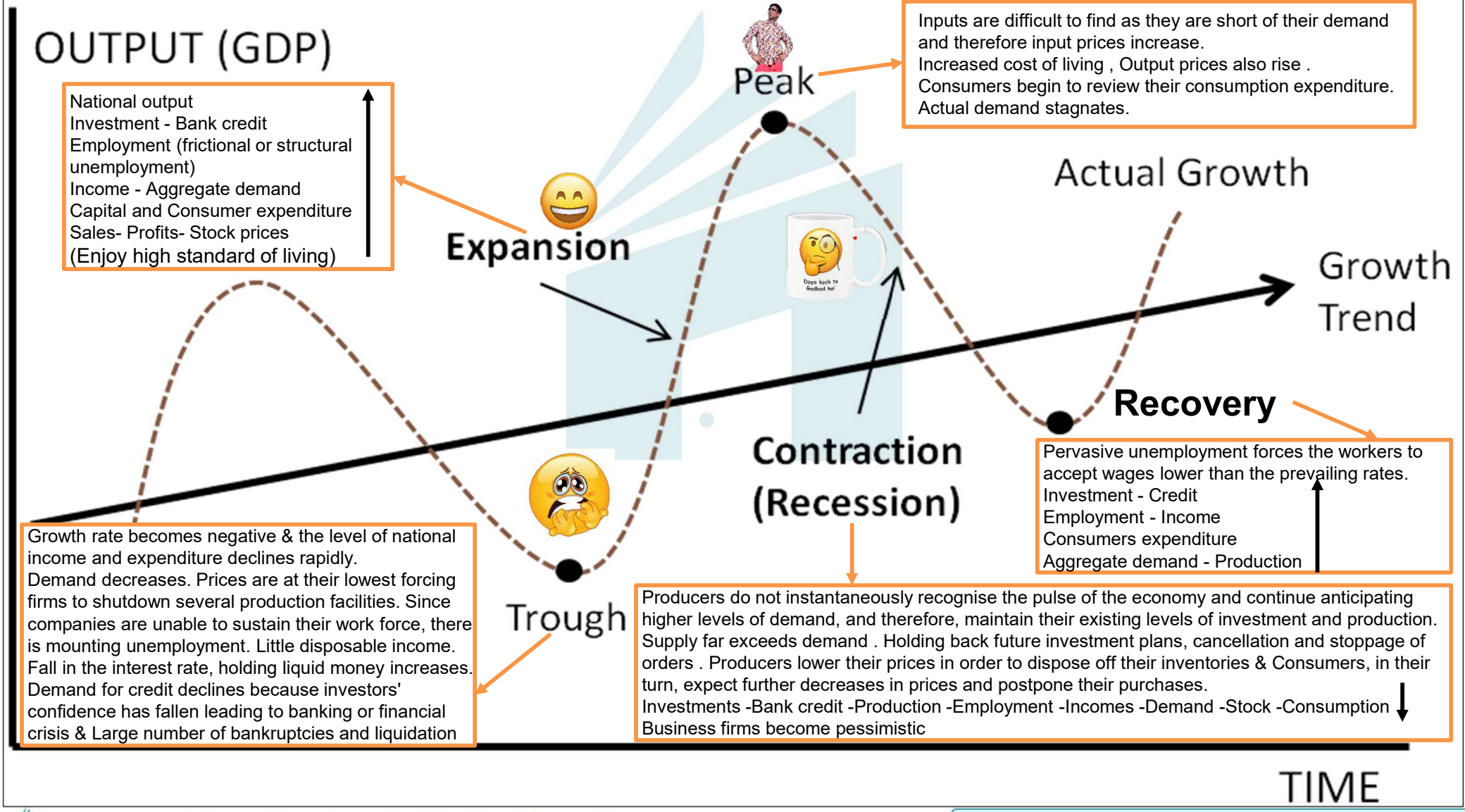
	No Change In Supply	An Increase In Supply	A Decrease In Supply
No Change In Demand	P same Q same	P down Q up	P up Q down
An Increase In Demand	P up Q up	P ambiguous Q up	P up Q ambiguous
A Decrease In Demand	P down Q down	P down Q ambiguous	P ambiguous Q down

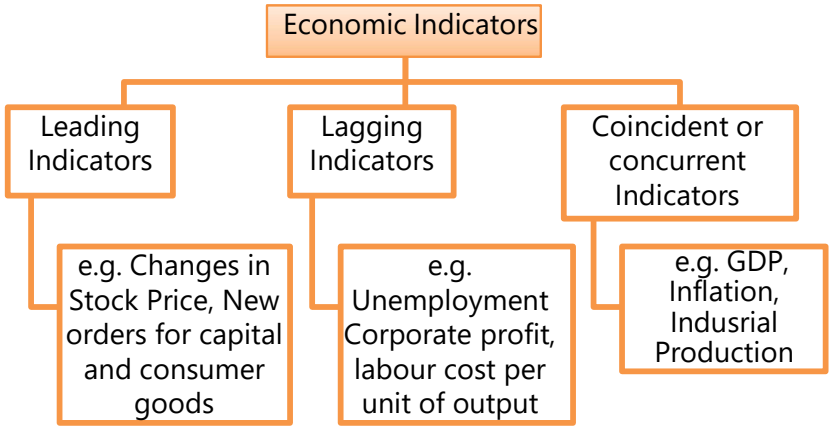
Basis of Comparison	Perfect Competition	Monopoly	Monopolistic Competition	Oligopoly
No. of Sellers	Large number of sellers	One Seller	Fairly large number of seller	Few sellers
No. of Buyers	Large number of buyers	Large number of buyers	Large number of buyers	Large number of buyers
Nature of the Product	Homogenous products	Somehow unique products	Differentiated products	Homogeneous or differentiated
Nature of Knowledge	Perfect knowledge	Some knowledge	Some knowledge	Some knowledge
Nature of Entry and Exit	Free entry and exit	Restricted entry	Free entry and exit	Restricted entry
Market Power	No power	Large power	Slight power	Significant power
Nature of Influence on Price	Price taker	Price maker	Price maker	Price maker
Selling Cost	Does not exist	Does not exist	Exists	Exists
Slope of the Demand Curve	Perfectly elastic	Negatively sloped but less elastic	Negatively sloped but more elastic	Kinky demand curve
AR and MR Relation	AR=MR	$AR > MR$	$AR > MR$	$AR > MR$
Nature of Profit (long-run)	Normal	Abnormal	Normal	Abnormal

Market	Short Run	Long Run
Perfect Competition		
Monopoly		
Monopolistic Competition		
Oligopoly	**Types** • Pure Oligopoly or Perfect Oligopoly • Open and Closed Oligopoly • Collusive and Competitive Oligopoly • Partial or Full Oligopoly • Syndicated and Organized Oligopoly **Characteristics** • Strategic Interdependence • Importance of advertising and selling costs • Group behaviour	 Sweezy's Model (kinked demand curve)

Business Cycle

Rhythmic fluctuations in aggregate economic activity that an economy experiences over a period of time are called business cycles or trade cycles characteristic of these economic fluctuations is that they are recurrent and occur periodically. That is, they occur again and again but not always at regular intervals, nor are they of the same length. It has been observed that some business cycles have been long, lasting for several years while others have been short ending in two to three years. A typical business cycle has four distinct phases. These are: 1) Expansion (also called Boom or Upswing)
2) Peak or boom or Prosperity 3)Contraction (also called Downswing or Recession) 3)Trough or Depression





Features

1. Business cycles occur periodically intensity & duration of these cycles vary.
2. Business cycles have distinct phases length of each phase is also not definite.
3. Business cycles generally originate in free market economies.
4. all sectors are adversely affected by business cycles
5. Business cycles are exceedingly complex phenomena difficult to make an accurate prediction of trade cycles before their occurrence
6. Business cycles are contagious and are international in character.
7. Business cycles have serious consequences on the well-being of the society.

Causes of Business Cycle