JEPPIAAR ENGINEERING COLLEGE

DEPARTMENT OF MANAGEMENT STUDIES

I YEAR / I SEMESTER

BA4103 MANAGERIAL ECONOMICS

COURSE MATERIAL

Anna University Chennai

Regulation 2021

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JEPPIAAR
ENGINEERING COLLEGE

Jeppiaar Nagar, OMR Salai, Semmencherry ,Chennai -600119

VISION

To build Jeppiaar Engineering College as an institution of academic excellence in technology and management education, leading to become a world class university.

MISSION

- To excel in teaching and learning, research and innovation by promoting the principles of scientific analysis and creative thinking.
- To participate in the production, development and dissemination of knowledge and interact with national and international communities.
- To equip students with values, ethics and life skills needed to enrich their lives and enable them to contribute for the progress of society.
- To prepare students for higher studies and lifelong learning, enrich them with the practical skills necessary to excel as future professionals and entrepreneurs for the benefit of Nation's economy.

DEPARTMENT OF MANAGEMENT STUDIES

VISION

To be a prominent management institution developing industry ready managers, entrepreneurs and socially responsible leaders by imparting extensive expertise and competencies.

MISSION

- To provide management education to all groups in the community.
- To practice management through scholarly research and education.
- To advance in the best practices of management which enable the students to meet the global industry demand.
- To promote higher studies, lifelong learning, entrepreneurial skills and develop socially responsible professionals for empowering nation's economy.

PROGRAMME EDUCATIONAL OBJECTIVES (PEOs):

MBA programme curriculum is designed to prepare the post graduate students

- To have a thorough understanding of the core aspects of the business.
- To provide the learners with the management tools to identify, analyze and create business opportunities as well as solve business problems.
- To prepare them to have a holistic approach towards management functions.
- To inspire and make them practice ethical standards in business.

PROGRAMME OUTCOMES (POs)

On successful completion of the programme,

1. Ability to apply the business acumen gained in practice.
2. Ability to understand and solve managerial issues.
3. Ability to communicate and negotiate effectively, to achieve organizational and individual goals.
4. Ability to understand one's own ability to set achievable targets and complete them.
5. Ability to fulfill social outreach
6. Ability to take up challenging assignments

COURSE OBJECTIVE:

To introduce the concepts of scarcity and efficiency; to explain principles of micro economics relevant to managing an organization; to describe principles of macroeconomics to have the understanding of economic environment of business.

COURSE OUTCOMES:

1. To introduce the concepts of scarcity and efficiency

2. To explain principles of microeconomics relevant to managing an organization

3. To describe principles of macroeconomics

4. To have the understanding of economic environment of business.

5. To study about the policies that regulate economic variables

Course Outcomes	Program Outcomes					
	PO1	PO2	PO3	PO4	PO5	PO6
CO1	3	2			1	
CO2	3	2			1	
CO3	3	2			1	
CO4	3	2			1	
CO5	3	2			1	
Average	3	2	0	0	1	0

BA4103 MANAGERIAL ECONOMICS

UNIT I INTRODUCTION

The themes of economics – scarcity and efficiency – three fundamental economic problems – society's capability – Production possibility frontiers (PPF) – Productive efficiency Vs economic efficiency – economic growth & stability – Micro economies and Macro economies – the role of markets and government – Positive Vs negative externalities.

UNIT II CONSUMER AND PRODUCER BEHAVIOUR

Market – Demand and Supply – Determinants – Market equilibrium – elasticity of demand and supply – consumer behaviour – consumer equilibrium –Approaches to consumer behaviour –Production –Shortrun and long-run Production Function – Returns to scale – economies Vs diseconomies of scale – Analysis of cost – Short-run and long-run cost function – Relation between Production and cost function.

UNIT III PRODUCT AND FACTOR MARKET

Product market – perfect and imperfect market – different market structures – Firm's equilibrium and supply – Market efficiency – Economic costs of imperfect competition – factor market – Land, Labour and capital – Demand and supply – determination of factor price – Interaction of product and factor market – General equilibrium and efficiency of competitive markets

UNIT IV PERFORMANCE OF AN ECONOMY – MACRO ECONOMICS

Macro-economic aggregates – circular flow of macroeconomic activity – National income determination – Aggregate demand and supply – Macroeconomic equilibrium – Components of aggregate demand and national income – multiplier effect – Demand side management – Fiscal policy in theory

UNIT V AGGREGATE SUPPLY AND THE ROLE OF MONEY

Short-run and Long-run supply curve – Unemployment and its impact – Okun's law – Inflation and the impact – reasons for inflation – Demand Vs Supply factors –Inflation Vs Unemployement tradeoff – Phillips curve –short- run and long-run –Supply side Policy and management- Money market- Demand and supply of money – money-market equilibrium and national income – the role of monetary policy.

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1. Paul A. Samuelson, William D. Nordhaus, Sudip Chaudhuri and Anindya Sen, Economics, 19th edition, Tata McGraw Hill, New Delhi, 2011
2. William Boyes and Michael Melvin, Textbook of economics, Biztantra, 7 th edition 2008.
3. N. Gregory Mankiw, Principles of Economics, 8 th edition, Thomson learning, New Delhi,2017.
4. Richard Lipsey and Alec Chrystal, Economics, 13th edition, Oxford, University Press, New Delhi, 2015.
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UNIT 1

Meaning of economics.

- Economics deals with a wide range of human activities to satisfy human wants.
- It deals with the society problems such as unemployment, poverty, productivity and government policies.
- It studies man in the ordinary business of life and how he earns his income and how he satisfies his wants.
- It is concerned *(involves)* not with individuals actions but with social actions.
- It studies about problems arising out of multiplicity *(large number).*
- It studies how wealth *(money)* is produced with limited resources in order to satisfy human wants.

Importance of the study of economics.

- The knowledge of economics helps in solving many problems.
- The knowledge of economics is essential to conquer (overcome a problem) poverty of the millions of people and to raise their standard of living.
- It explains the relationship between the producer and consumer, the labour and the management.
- It gives the businessmen and industrialists the knowledge of modern methods.
- By studying economics we can discover new factors that may lead to increase the national wealth. Without the knowledge of economics, this is absolutely impossible.
- The knowledge of economics is very essential for **the finance minister**.

a*) It helps in framing the system of taxation.*

b) It helps in formulating the budget for development.

c) It helps in removing unemployment.

- Supply of money, effective credit system, effective working of the banking system can be analysed in the country only by having a thorough knowledge of economics by the people who admire these sectors.
- The knowledge of economics is very essential for the legislators and parliamentarians. They will be able to frame laws effectively only by having knowledge of the subject.
- The study is not undertaken merely for the sake of knowledge. It is to lay down principles and policies for removing poverty and increasing human welfare.

Economics as a science

- The question whether economics is a science or an art arose as early as the 18th century.
- A science is commonly defined as a systematic body of **knowledge**.
- A science teaches us to know. In other words science explains.
- Science is **theoretical** (*a set of ideas needed to explain something,or makes use of research findings to solve problems).*
- Economics satisfies the test of science, it is rightly considered as a science.

Economics as an art

- An art is completely different from science.
- An art is a system of rules.
- An art teaches us to do. In other words art directs.
- Art is **practical** *(involvement or even skills are also needed to understand).*
- From this we an conclude that economics is an art.

Economics has both theoritical and practical sides. Science requires art, art requires science.

Micro Economics

- The term **'mikros'** in Greek means **small**.
- Micro economics refers to the study of small units. In other words, micro economics studies the individual parts or components of the whole economy.
- Micro- economics is the study of particular firms, particular households, individual prices, wages, income, individual industries and so on.
- Micro economics as the name implies is concerned with parts of the economy rather than with the economy as a whole.

Importance of micro economics

- It explains how the market economy operates.
- It explains the method or manner in which scarce resources are allocated for different uses.
- It explains how goods and services are produced and distributed to the people.

Areas covered by micro economics are

a) Theory of product pricing

b) Theory of factor pricing *(rent, wages, interest and profits)*

c) Theory of economic welfare *(happiness and safety).*

Limitations of micro economics

- It may not give an idea about the functioning of the whole economy.
- The results of micro economics studies may not be applicable to aggregates (total or whole).
- It fails to give correct guidance to government to formulate economic policies.
- It fails to give practical explanation.
- Certain economic problems cannot be analysed.

Macro economics

- The term **'macros'** in Greek means **large**. Macro economics is the study of aggregates (total or whole).
- It studies about aggregate (total) demand, aggregate consumption, aggregate production, aggregate income and aggregate investment, etc.
- It studies all parts or components of the whole economy and it is not concerned with individual aspects of the economy.
- Macro economics examines the **forest** and not the **trees**.

Macro economics deals

a) not with individual quantities but with aggregate of these quantities,

b) not with individual income but with national income,

c) not with individual outputs but with total outputs.

Importance of macro economics

- It is very helpful in studying the vast *(huge)* and complex *(hard to understand)* nature of economic.
- It deals with many economic problems such as unemployment, inflation, depression *(make very unhappy, push down or make less active)* & recession *(a temporary decline or loss in economic activity).*
- It is used as a tool to analyse the level of employment, level of prices, etc.

- It is useful for the government in formulating suitable economic policies regarding general price level, wages, etc.
- It is only through macro economic approach the problems of economic growth could be solved.
- All nations, particularly developing nations are eager to increase their national income within the concern of macro economics.

Areas covered by macro economics are

a) Theory of income, output and employment.

b) Theory of prices

c) Theory of economic growth

d) Theory of distribution.

Importance of macro economics *in points*

1. Functioning of whole economy
2. Formulation of economic policies
3. Understanding & controlling economic fluctuations
4. Understanding macro economics
5. Inflation & deflation
6. Study of national income
7. Study of economic development
8. Performance of an economy
9. Nature of material welfare *(nature & size of the nations)*

Limitations of macro economics

- Macro analysis cannot be precise because it deals with aggregates (total) which are divergent *(avoiding common assumptions in making deductions)* in nature.
- In aggregative (total) thinking the elements have to be chosen carefully.

(For e.g.) adding all fruits together is a meaningful aggregate. Adding fruits with other machinery is an absurd *(unreasonable)* aggregate. *(i.e.)* apple+ bike

- Macro analysis may reveal *(make known)* that the national income of the country has increased by 50%, but the real fact will be that a good majority of people will be living in poverty.

- Composition of aggregates may be imperfect in macro analysis.

  (e.g.) Prices of many commodities would have fallen in the economy, but the prices of very essential *(necessary)* commodities might have risen many times.

- The limitations of macro analysis are in the nature of practical difficulties rather than inherent weakness.

Limitations of macro economics *in points*

1. Excessive thinking in terms of aggregates
2. Heterogeneous elements
3. Differences within aggregates
4. Aggregates must be functionally related
5. Limited applications

Macro economic policy

Macro economic policy can be defined as "a programme of action undertaken to control, regulate and manipulate **macro economic variables** to achieve the macro economic goals of the society"

- Macro economics is, thus, a policy oriented subject. It deals with a number of policies of macro nature to solve many issues & problems.

- A macroeconomic policy is, in fact an instrument of policing the economy to achieve certain economic goal.

- Macroeconomic policies have macroeconomic goals to fulfill.

The macro economic goals include

1. Price stability
2. Economic stability
3. Exchange rate stability
4. Maintenance of full employment

5. Economic growth
6. Economic justice *(law)*
7. Improvement of standard of living
8. Eradication of poverty
9. Equilibrium in the balance of payments
10. Equitable distribution of national income *(or)* economic equity

There are number of macro – economic policies

1. Monetary policy
2. Fiscal policy
3. Income policy
4. Trade police
5. Industrial policy
6. Import- Export policy
7. Banking policy
8. Planning policy.

Objective of macro economic policy in India

1. Achieving a growth rate of 5- 6 % per annum.
2. Creating job opportunities for unemployed & underemployed *(not having sufficient demanding paid work)*
3. Removing economic disparity *(differences)*
4. Eradication of poverty
5. Controlling inflation & price stabilization
6. Preventing balance of payments imbalances.

Macro economic theories

Macro – economic theories provide explanation to inter – relationship among different macro – economic variables & issues relating to the problems.

There are number of macro – economic theories

1. Theory of income & employment
2. Theory of general price level
3. Theory of distribution
4. Theory of consumption function
5. Theory of investment
6. Theories of trade cycles
7. Theories of economic growth
8. Theories of inflation
9. Theories of monetary policy
10. Theories of fiscal policy

Macro economic variables

Variables- *(often changing)*

These are macro-economic variables

1. National income *(total income of the country is called 'national income')*

a) **National product** *(it consists of all goods and services produced by the community (a group of people living together in a place) or firm and exchanged for money during a year).*

b) **National dividend / income** *(a sum of money paid to a shareholder out of its profit, it consists of all the incomes, in cash and kind)*

c) **National expenditure** *(the total spending or outlay of the firm or community (a group of people living together in a place) on good and services produced during a given year).*

2. Concept of employment

3. Consumption *(it refers to total consumption of the household sector and firms)*

4. Savings (it refers to savings of the community or firms as a whole)

Savings = Total income – total consumption

5. Investment *(total investment of the firms)*

6. Government expenditure *(government sector spends on consumption and investment)*

7. Households *(household sector includes all consuming)*

8. Firms *(firm sector includes all producing)*

Economics as a positive science

- A subject may be called as science only when laws or general principles are laid down explaining the relationship between cause & effect
- A positive economics may be defined as a body of systematized knowledge concerning ***"what is"***
- ***Positive economics describes the fact & behavior in the economy***
- ***Positive science explains the cause & effect***
- Positive science deals with things as they are, & it simply explains causes & effects without passing any judgment or comment

Economics as a normative science

- Normative science is a body of systematized knowledge relating to the criteria of what it ought ***(have)*** to be
- Normative science involves ethical precept ***(rule, law)*** & value judgment
- Normative science prescribes a norm & regulate things in order to achieve that norm
- It explains the rightness or wrongness of things or otherwise the end result

Positive & Normative analysis

1

- If you demonstrate that unemployment in the automobile industry in the united states rises when people purchase cars produced in other countries instead of cars produced in the united states, you are undertaking ***positive analysis***.
- If you claim that there to be a law to stop people from buying foreign made cars, you are imposing your judgments on the decisions & desire of others, it is not positive analysis. It is ***normative analysis.***

2

- If you demonstrate that the probability of death in an automobile accident is 20 percent higher if seat belts are not worn, you are using positive science
- If you argue that there should be a law requiring seat belts to be worn, you are using normative science

Economic growth

- A positive change in the level of production of goods and services by a country over a certain period of time. Economic growth is usually brought about by technological innovation and positive external forces.
- **Economic growth** is an increase in activity in an economy. It is often measured as the rate of change of gross domestic product (GDP).
- Economic growth refers only to the quantity of goods and services produced; it says nothing about the way in which they are produced
- Economic development, a related term, refers to change in the way goods and services are produced; positive economic development involves the introduction of more efficient or "productive" technologies or forms of social organisation.
- Economic growth can either be positive or negative. Negative growth can also be referred to by saying that the economy is ***shrinking*** *(reduction).*
- Negative growth is associated with economic recession and economic depression.
- An important aspect of **economic growth** is that it is never uniform or same across all sectors in an economy or all states of a country.
- For example in Australia, mining sector has done well along with services sector. In comparison to these two sectors, manufacturing sector has not been that good a performer as far as contribution to economic development of Australia is concerned.
- Often when costs of goods and services go up, it has an poor effect on prospects of economic growth of that particular country.
- Quite often governments play important roles in economic development of a nation by inventing and implementing plans and strategies that address imbalances within an economy. They also upgrade facilities, which are already in a good state.

Scarcity

- **Scarcity** means that people ***want more*** than is available.
- Scarcity limits both as individuals and as a society.
- As individuals, limited income keeps from doing and having all that we might like.
- As a society, limited resources *(such as manpower, machinery, and natural resources)* fix the amount of goods and services that can be produced.
- Scarcity requires **choice.**
- People must choose which of their desires they will satisfy and which they will leave unsatisfied.

- When we, either as individuals or as a society, choose more of something, ***scarcity forces*** us to take less of something else.
- Economics is sometimes called the study of scarcity because economic activity **would not exist** if scarcity did not force people to make choices.
- If one wants to do all things well, one must apply considerable time to each, and thus must sacrifice other things one could do.
- The basic economic problem which arises from people having **unlimited wants** while there are and always will be limited resources. Because of scarcity, various economic decisions must be made to allocate resources efficiently.
- **Suppose a person is having only one lakhs rupees as his resources,. He has to make a decision whether to construct a house or to conduct the marriage of his daughter or get admission for his son in an Engineering College paying heavy capitation fee. This is economic problem.**

Efficiency

- Efficiency is one of the most important concepts to use in Economics course.
- There are several meanings of the term - but they generally relate to how well an economy allocates scarce resources to meets the needs and wants of consumers.
- Economic efficiency is a term typically used in microeconomics when discussing product.
- Production of a unit of good is considered to be economically efficient when that unit of good is produced at the lowest possible cost.
- Economic efficiency is used to refer to a number of related concepts. It is the using of resources in such a way as to maximize the production of ...
- The extent to which a given set of resources is being allocated across uses or activities in a manner that maximizes whatever value they are
- Economically efficient production is organized to minimize the ratio of inputs to outputs.

Productive efficiency

- **Productive efficiency** (also known as "technical efficiency") occurs when the economy is utilizing all of its resources, and operating at its production possibility frontier (PPF).
- This takes place when production of one good is achieved at the lowest cost possible

- Productive efficiency requires that all firms operate using best-practice technological and managerial processes.
- By improving these processes, an economy or business can extend its production possibilit

Economic efficiency

- Economically efficient production is organized to minimize the ratio of inputs to outputs.
- A situation where each good is produced at the minimum cost
- The extent to which a given set of resources is being allocated

PPC CURVE

- This concept is founded by a great Professor called ***Paul A. Samuelson,*** who was the first American to receive a Nobel Prize in Economics in 1970.
- He was also an economics adviser to the American President, John F. Kennedy for many years.

Every country's aim would be to produce commodities that can be sold in the domestic and in the international markets with a favorable price. In other words, right goods should be produced with right factor inputs at right times.

Definition

Production Possibility Curve ***(PPC)*** is a curve that shows the possible combinations of any two economic goods an economy can produce by using the available scarce resources.
It is sometimes called Production Possibility Frontier, Production Possibility Boundary and Transformation Curve as the concept illustrates the potential productive capacity of the economy.

Assumptions of the concept – PPC

Economists criticize the concept of PPC on the different grounds since it is based on the certain assumptions like;

1. Human wants are unlimited.

2. The resources are limited but which has alternative uses

3. It takes into consideration the production of **only two** goods. However, in reality the economy will produce many goods. The life on the earth is not possible only with two goods.

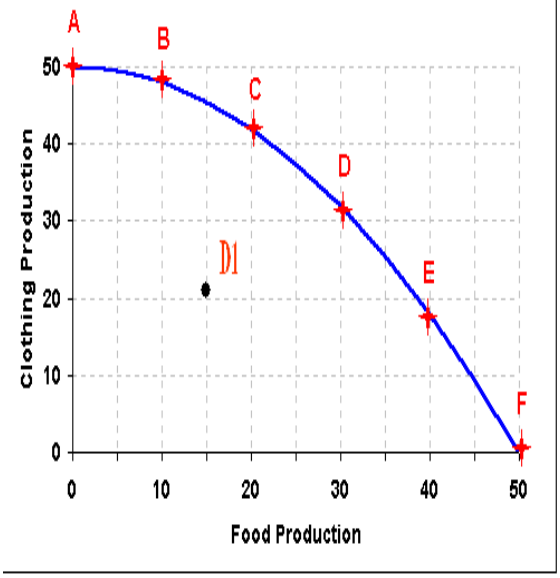
4. It also assumes that the economy has utilized scarce resources efficiently and fully. In other words, the economy is in full employment.

5. PPC is drawn provided that the state of technology is given and it remains constant over the period.

6. Resources available in the economy *(which are called factors of production such as land, labour, capital and organizer)* are fixed and constant. However, resources can be shifted from one commodity to another.

7. The economy is not able to change the quality of the factors of production. They are also given and constant.

8. It is also assumed that the production only related to short-period rather than long period.



S.NO	CLOTHING	FOOD
A	50	0
B	48	10
C	42	20
D	30	30
E	18	40
F	0	50

Production Possibility Curve

- ✓ The economy has to decide what to produce with their limited resources.
- ✓ The concept of production possibility curve helps to decide how to allocate resources & choose the possible combination of goods.
- ✓ The production possibility curve gives the possibilities of producing grains or wines with the available resources
- ✓ Point A in the diagram points out that it can produce OA amount of CLOTHS with the available scarce resources.
- ✓ If it wants to produce wine alone OB amount of FOOD can be produced

- ✓ If it wants to produce a combination of CLOTH & FOOD it has to choose a point between A & F for *e.g. D*
- ✓ The line *connecting points A & F is called production possibility curve*
- ✓ A production possibility curve implies that it can produce either OA of cloths or OF of food
- ✓ If it chooses a combination of the two, it has to prefer less than OA of cloths & less than OF of food
- ✓ As the resources are scarce if it wants to have food the nation has to sacrifice certain amount of cloths for the sake of food
- ✓ This sacrifice involved is known as opportunity cost.
- ✓ Any point on the PPC implies full employment, it means maximum use of the available scarce resources
- ✓ If the country choose to produce the combination of the two goods at point D1 the country faces unemployment *(i.e.)* the economy is not producing a full capacity
- ✓ To achieve full employment the economy has to move away from point D to a point on the curve ACF.
- ✓ Countries plan & formulate the policies to produce at any point on the PPC only.

Importance and Application of the Concept

The concept has got the following importance:

1. Since PPC shows the productive capacity of the economy, it gives reliable answers for the fundamental economic problems of what to produce?, How to produce?, and To whom to produce?.

2. Secondly, it illustrates the concept of opportunity cost. Here the country is trying to produce any two goods. So the production of the one commodity can be increased by reducing the production of other good. This is due to the fact that economic resources are scarce. Also opportunity cost ratios can be calculated.

3. Thirdly, it leads to the efficient allocation of scarce economic resources.

4. The growth of the economy can be judged from the shifts in the PPC. Economics growth in both quantitative and qualitative terms can be known from PPC.

5. It is very useful in order to achieve the social welfare of the community.

6. Last but not least, PPC can be used by the producers to make their decisions regarding the use of factors of production and it assist in the determination of the costs of the production.

PPC, therefore, shows unemployment of resources, Technological Progress, economic growth and economic efficiency.

According to Professor Dorfman, PPC explains three efficiencies. They are:

1. Efficient selection of goods to be produced,

2. Efficient allocation of resources in the production of these goods with efficient choice of method of production, and

3. Efficient allotment of the goods produced among consumers.

Usually this concept is applied for individual countries. Also this concept can be applied to the individual companies, farms etc to find out the production possibilities.

3 fundamental economic problems

1. What to produce?
2. How to produce?
3. To whom to produce?

BA 5101 - ECONOMIC ANALYSIS FOR BUSINESS

UNIT 2

Market

- The word market is not easy to define because it is used in many sense.
- The word is derived from the Latin word mercatus from the verb *mercari* which means to trade.
- It is the act or technique of *buying or selling.*
- A market need not be situated in a particular place or locality
- Buyers & sellers need not come into personal contact. The transactions can even be carried through telephones, agents etc.
- A market may refer to a commodity or services like fish market, vegetables market, money market, or share market.

In the language of economics the term market should imply certain things

1. There should be *buyers or sellers (producers)* of the commodity.
2. *Contact* between the buyers & sellers is essential for the market
3. The buyers & sellers deal with the same commodity or variety since the market in economics is identified on the basis of the commodity
4. There should be a price for the commodity bought or sold in the market

AREA

1. ***Local -*** A local market for a product exists when buyers & sellers of commodity carry on business in particular locality or village or area where the demand & supply conditions are influenced by local conditions only

(e.g.) Perishable goods like butter, milk, gee, eggs, vegetables etc,

2. National- Commodities that are demanded & supplied over the region or country are known as national markets.

(e.g.) Markets for wheat, rice or cotton exists throughout the country & they have national markets

3. International – *When demand & supply conditions are influenced at global level we have international markets*

(e.g.) gold, silver etc

TIME

1. **Very short period** – Refers to which commodities are perishable & the supply of commodities are fixed *(e.g.) Vegetables, fish, fruits,* where the supply cannot be changed within a short period of time, the rates differ in timings

2. **Short period** – In a short period market the commodity is not perishable & reproduce able. *(e.g.) cloth, crackers (season sales)*

3. **Long period**- The supply of commodity can be increased or decreased. The price of product may vary from time to time, day to day, *(e.g.) cloth, pulses, grains, cars etc.*

4. **Very long period (or) secular period**- Factors of production like land, labor, capital & organization technique. The prices are fixed in secular period.

Competition

a) **Perfect –** This type of market situation arises when there are large number of buyers & sellers in the market dealing in *homogeneous product.*

In perfectly competitive market there is no competition among the suppliers. In other words in this type of market there is absence of direct competition among agents. *(e.g.)* two wheelers market in India is highly competitive *but the competition is completely different from quality, strength, price & stuff.*

a) **Pure-** It is a part of perfect competition. Pure competition is pure in sense that there is *no element of monopoly*

b) ***IMPERFECT***

1. **Monopoly-** It is a market where the entire supply is controlled by *one supplier* in the particular market area.

   In such a situation the monopolist will *have power to fix the price as large.*

2. **Monopolistic competition-** There will be a large number of firms producing the commodity. Many will be competing the market. *Prices will differ slightly. (e.g.)soaps. Buyers are attached to their favorite brands.*

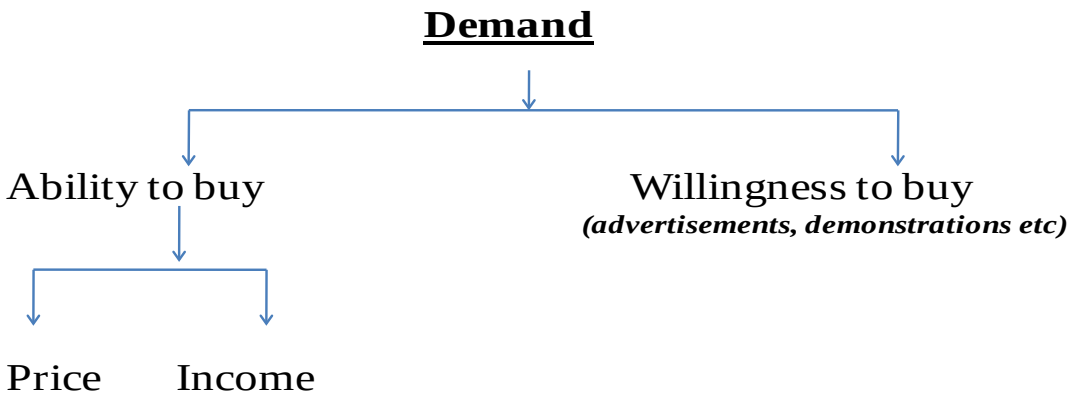
3. **Oligopoly –** There are few sellers the product may be homogeneous or heterogeneous in the *case of petrol, fertilizers or drugs. Prices may be through agreement*

4. **Duopoly-** There are only two sellers who control the entire supply. The output & price policy of one is dependent on the other.

Number of firms	Large	One	Many but not too many	Few
Nature of product	Homogeneous	Single without alternate	Product differentiation	Homogeneous or heterogeneous
Price policy	Price taking	Price making	Slight	Agreement
Entry	Free	No entry	Easy	Restricted
Profit	Normal	Irregular	Loss or profit in periods	Irregular

Demand

- Demand means a desire or wish to buy & consume a commodity or services.



Demand can be defined as

1. "The various quantities of a given commodity or services which consumers would buy in one market in a given period of time at various prices or at various incomes or at various prices of related goods"
2. "A desire for a commodity backed by willingness & ability to pay a price"
3. The amount of a particular economic good or service that a consumer or group of consumers will want to purchase at a given price. The demand curve is usually downward sloping, since consumers will want to buy more as price decreases.

Economists distinguish between the terms demand & quantity of demand

Quantity of demand

•The amount of product that people are willing & able to purchase at a specific price.

Demand

•The amount that people would be willing & able to purchase at every possible price.

Factors that determine demand

The quantity of demand for any commodity is determined by several factors

D = f(t,y,Ps,N,Fp,Dy,C,B)

D- Quantity of demand
T- Taste & preference of consumers
Y- Income of consumers
Ps- Price of substitute *(alternate or other related goods)*
N- Number of customers
Fp- Future price rise expectation
Dy-Distribution of income
C- Climate & weather
B- State of business

Law of demand

- The law of demand indicates the relationship between the price of a commodity & the quantity demanded in the market
- Consumers & merchants know that if you *lower the price of a goods or services without altering its quantity or quality* people will beat a path to your doorway. This is referred to as law of demand.

According to law of demand

- People purchase more of something when the price of that item fall
- The law of demand states that the quantity of some item that people are willing & able to purchase during a particular period of time decreases as the price rises.

Assumptions of law of demand

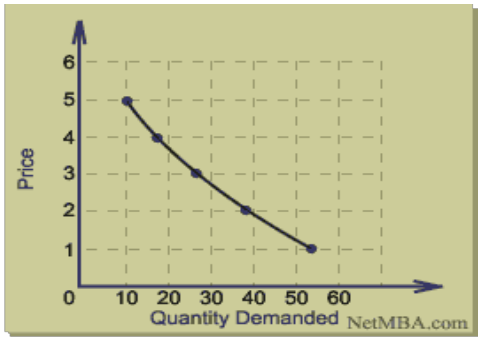
The law of demand is based on following assumptions

- The consumer tastes & preference do not change with changes in fashions & seasons
- The income of consumers remain same
- The prices of substitutes & other related goods remain same
- Perfect competition exists *(There are large number of sellers where the buyer should be aware of the various prices offered & their perfect conditions so that they have no reasons to prefer one seller to another)*
- Absence of close substitutes
- The existence of continuous demand for goods

Demand Schedule

The demand schedule is a statement which explains the relationship between the price of a commodity & the quantity demanded of it.

Price	Quantity Demanded d
5	10
4	17
3	26
2	38
1	53



- In this diagram Quantity demand is measured along the OX & the price is represented along the OY axis.
- By plotting the various combinations the demand curve DD is drawn

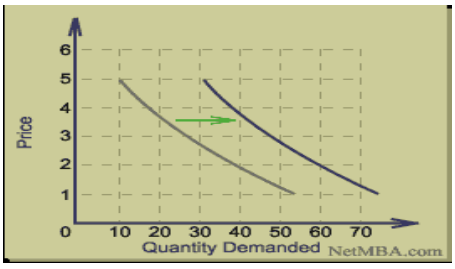
- The demand curve indicates that more quantities are demanded or brought at lower prices & lesser quantities are demanded or brought at higher prices.

Demand curve

- A demand curve is a graph of demand schedule
- The demand curve *slopes downwards because as prices fall quantity demand increases.*
- The demand curve may be of any type. It may be straight line or concave curve, or convex curve. Most of the curves are wavy line rather than straight line.

Shifts in the Demand Curve

- When there is a change in an influencing factor ***other than price,*** there may be a shift in the demand curve to the left or to the right, as the quantity demanded increases or decreases at a given price. ***For example,*** if there is a positive news report about the product, the quantity demanded at each price may increase, as demonstrated by the demand curve shifting to the right



Shifts in the Demand Curve

- A number of factors may influence the demand for a product, and changes in one or more of those factors may cause a shift in the demand curve.

Some of these demand-shifting factors are:

- ✓ *Customer preference*
- ✓ *Prices of related goods*
  - *Complements* - an increase in the price of a complement reduces demand, shifting the demand curve to the left.
  - *Substitutes* - an increase in the price of a substitute product increases demand, shifting the demand curve to the right.
- ✓ *Income* - an increase in income shifts the demand curve of normal goods to the right.
- ✓ *Number of potential buyers* - an increase in population or market size shifts the demand curve to the right.
- ✓ *Expectations of a price change* - a news report predicting higher prices in the future can increase the current demand as customers increase the quantity they purchase in anticipation of the price change.

Why does demand curve slopes downwards?

1.Income effect (When the price of a commodity falls, the consumer can buy more quantity of the commodity with his given income, as a result of a fall in the price of the commodity, consumer's real income or purchasing power increases. This increase induces the consumer to buy more of that commodity. This is called income effect.)

2.Taste

3. Price related to goods & services

4. Substitutes effect (When the price of a commodity falls, it becomes relatively cheaper than other substitute commodities. This induces the consumer to substitute the commodity whose price has fallen for other commodities, which have now become relatively expensive. As a result of this substitution effect, the quantity demanded of the commodity, whose price has fallen, rises.)

5. Expectations

6. Entry of new consumers or number of buyers

7. Law of diminishing marginal utility

- **When the consumer buys more & more quantities of commodity the *law of Diminishing Marginal Utility operates.***
- ***MU = P (Marginal utility is equal to price)***
- **A fall in price leads to a fall in marginal utility also.**
- **Every customer spends his limited income in such a way as to get the same marginal utility from all the commodities.**
- **Hence a consumer is encourage to buy additional or more units of a commodity in order to maximize his satisfaction or utility**

Elasticity of demand

***Elasticity means* the capacity of demand to shrink or stretch in response to change in price**

Meaning

- The law of demand generally states that *demand expands for a fall or raise in price*
- How much is the change in demand for a given fall or raise in price
- In other words elasticity of demand refers to the effect upon the quantity demand for a given change in price
- The relationship between small change in price & consequent changes in the amount demanded is known as elasticity of demand. *This tells the rate of change*.
- The elasticity of demand shows the extent of response in demand to the change in price.

Definition

1. The elasticity of demand in a market is great or small according to the amount demanded increase much or little for a given rise in price
2. The elasticity of demand is a measure of the relative change in the amount purchased in response to a relative change in price on a given demanded curve

Elasticity of demand can be classified into different kinds they are

1. ***Price elasticity of demand***
2. ***Cross elasticity of demand***
3. ***Income elasticity of demand***

1. Price elasticity of demand

- Price elasticity of demand is the percentage change in quantity demanded of a commodity divided by the percentage change in price of that commodity.
- *This can be expressed through formula*

$$\textbf{Price } E_D = \frac{\text{Percentage changes in quantity demanded of commodity X}}{\text{Percentage change in price of commodity X}}$$

$$\textbf{Percentage change in quantity demanded of commodity X} = \frac{\text{Change in quantity demanded of a commodity}}{\text{Original demand}}$$

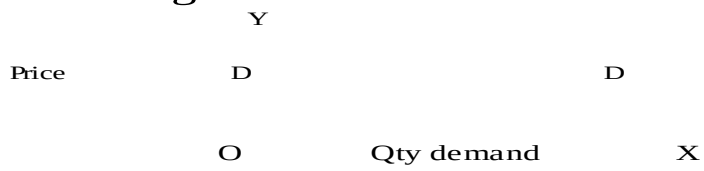
$$\textbf{Percentage change in price of a commodity} = \frac{\text{Change in the price of commodity}}{\text{Original price}}$$

Price elasticity of demand is of **five** types

1. ***Perfectly elastic demand***
2. ***Perfectly inelastic demand***
3. ***Unit elasticity of demand***
4. ***Elastic demand***
5. ***Inelastic demand***

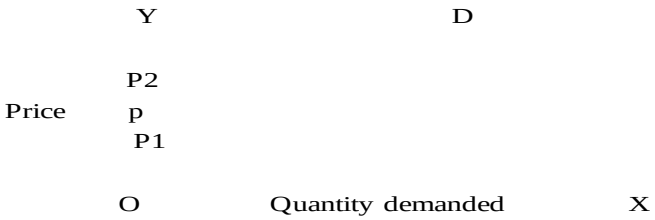
1. Perfectly elastic demand

It refers to change in demand for a small change in price



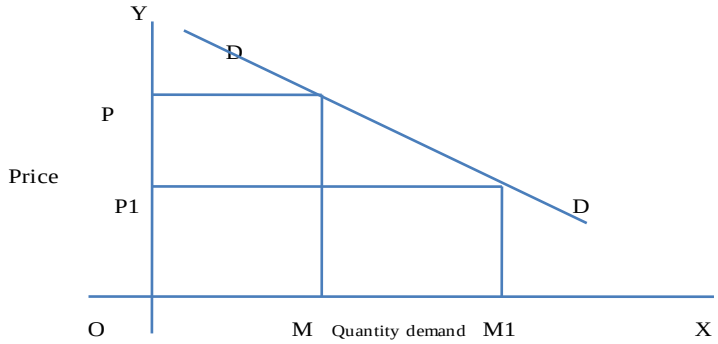
2. Perfectly inelastic demand

It refers to the situation where demand remains unchanged irrespective of any rise or fall in price



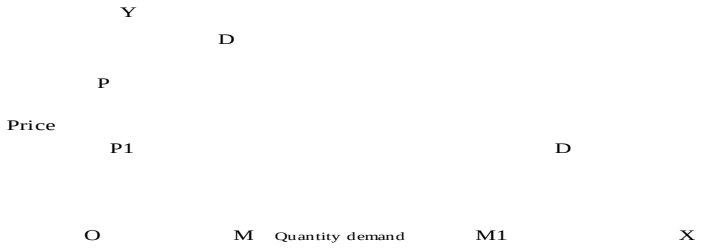
3. Unit elasticity of demand

It refers to an equal change in demand for a change in price



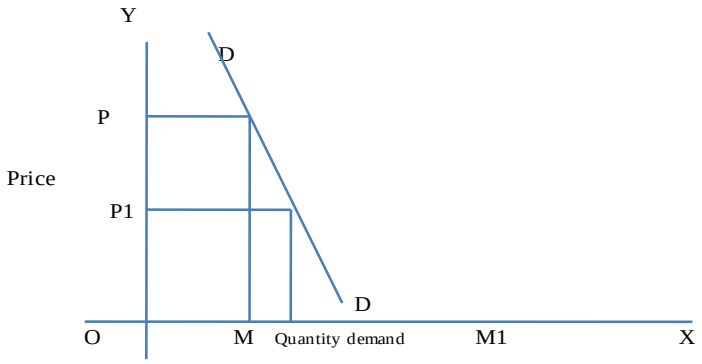
4. Elastic demand

It refers to a higher change in the quantity demanded for a small change ***(i.e.) rise or fall in price***



5. Inelastic demand or Elasticity less than demand

It refers to a small change in the quantity demanded for a big change ***(i.e.) rise or fall in price***



2. Cross elasticity of demand

- The cross elasticity of demand is the percentage change in the quantity demanded of commodity x divided by the percentage change in the price of some related commodity Y
- *The two commodity X & Y may be substitutes or compliments*
- *This can be expressed through formula*

Cross elasticity of demand =

$$\frac{\text{Percentage change in quantity demanded of commodity X}}{\text{Percentage change in quantity demanded of commodity Y}}$$

3. Income elasticity of demand

- The income elasticity of demand is the percentage change in quantity demanded of a commodity divided by the percentage change in income of the consumer
- *This can be expressed through the formula*

Income elasticity of demand =

$$\frac{\text{Percentage change in quantity demanded of commodity}}{\text{Percentage change in income of the consumer}}$$

Factors determining elasticity of demand

1. Availability of substitutes
2. Extent of uses of commodity

3. Nature of the commodity
4. Habits & customs
5. Level of prices
6. Percentage of income spent on the product
7. Time factor
8. Postponement of commodity *(if the umbrella is torn we get it repaired & postponed the purchase of a new umbrella)*

Supply

- Supply means the commodity offered for sale.
- Supply always relates to price
- ***The quantity supplied of a commodity increases when the price increases & the quantity supplied of a commodity decreases when the price decreases***

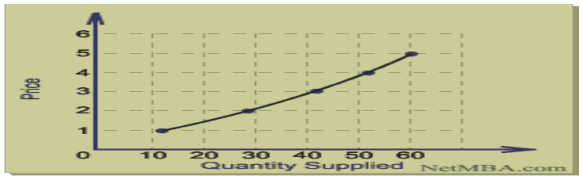
Law of supply

1. The law of supply states that there is a direct relationship between price & quantity supplied. *When the price rises the quantity supplied increases, & when the price falls the quantity supplied also falls.*
2. In other words *the law of supply states that the producers are willing to produce & offer for sale more of their product at a higher price than at a lower price.*

Supply schedule

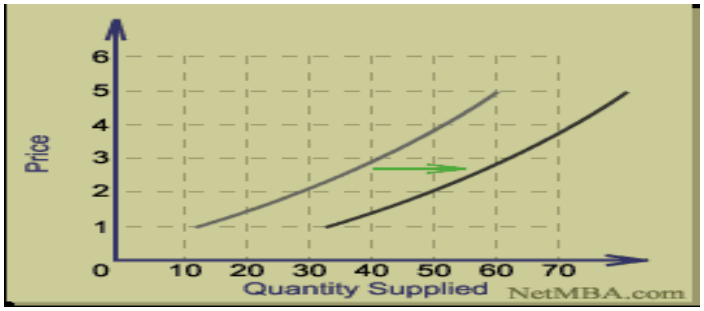
- Price usually is a major determinant in the quantity supplied.
- For a particular good with all other factors held constant, a table can be constructed of price and quantity supplied based on observed data. Such a table is called a supply schedule, as shown in the following example:

1	12
2	28
3	42
4	52
5	60



- As with the demand curve, the convention of the supply curve is to display quantity supplied on the x-axis, and price on the y-axis.

- The supply curve SS slopes upwards from left to right, the supply curve maps the relationship between price & quantity supplied.
- The upward movement of supply curve show not only the sellers desire to make profit, but also the rise in the cost of production.



- ***There are several factors that may cause a shift in a good's supply curve. Some supply-shifting factors include:***
- ***Prices of other goods - the supply of one good may decrease if the price of another good increases, causing producers to reallocate resources to produce larger quantities of the more profitable good.***
- ***Number of sellers - more sellers result in more supply, shifting the supply curve to the right.***
- ***Prices of relevant inputs - if the cost of resources used to produce a good increases, sellers will be less inclined to supply the same quantity at a given price, and the supply curve will shift to the left.***
- ***Technology - technological advances that increase production efficiency shift the supply curve to the right.***
- ***Expectations - if sellers expect prices to increase, they may decrease the quantity currently supplied at a given price in order to be able to supply more when the price increases, resulting in a supply curve shift to the left.***

Factors that determine supply

- Production technology
- Prices of factors of production
- Prices of other products
- Number of producers
- Future price expectations
- Taxes
- Substitutes
- Factors outside the economic

- Change in government policy

Elasticity of supply

- The concept of elasticity of supply tells the responsiveness of supply to change in price
- Supply is elastic when the given percentage change in price brings about an *even greater percentage change in quantity supplied*

Definition

- Elasticity of supply is measured as the ratio of proportionate change in the quantity supplied to the proportionate change in price. High elasticity indicates the supply is sensitive to changes in prices, low elasticity indicates little sensitivity to price changes, and no elasticity means no relationship with price. Also called price elasticity of supply.

- Supply is said to be inelastic when the percentage change in quantity supplied is less than the percentage change in price

Elasticity of supply =

$$\frac{\text{Proportionate change in quantity supplied}}{\text{Proportionate change in price}}$$

Proportionate change in quantity supplied=

$$\frac{\text{Change in quantity supplied}}{\text{Original supply}}$$

Proportionate change in price=

$$\frac{\text{Change in Price}}{\text{Original price}}$$

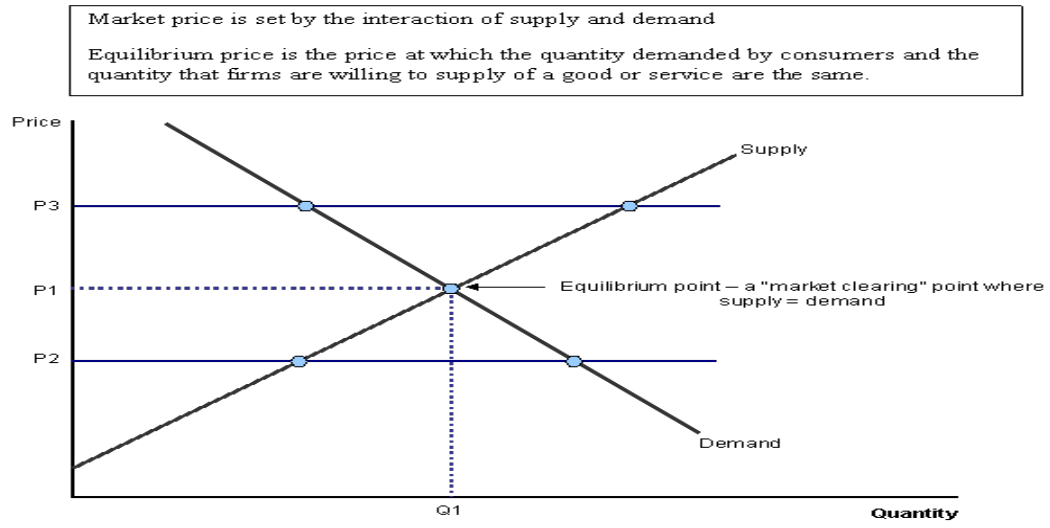
Factors that determine elasticity of supply *(or)* affecting

- Change in the cost of production
- Behavior pattern of the producers
- Availability of facilities expanding output or factors of production
- Supply in short & long periods *(time)*

Equilibrium price

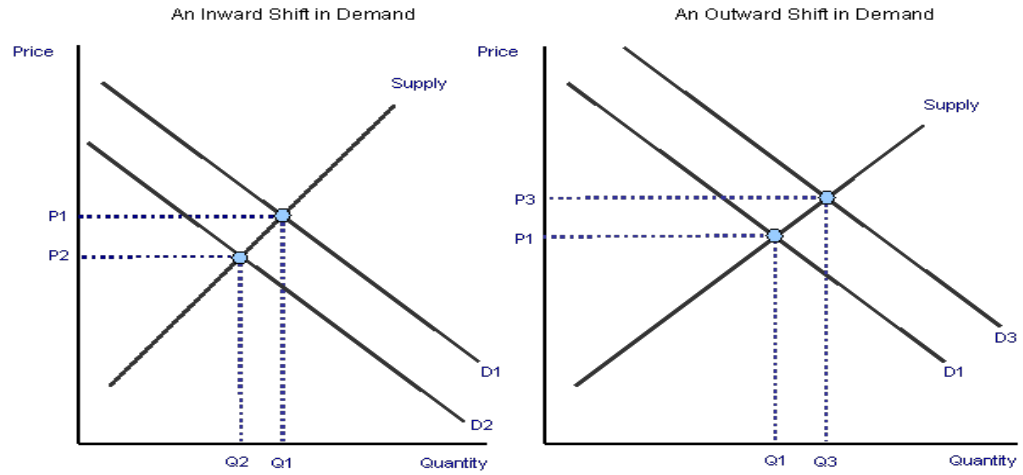
- **Definition**
  The market price at which the supply of an item equals the quantity demanded.
- Equilibrium means a state of equality or a state of balance between market demand and supply. Without a shift in demand and/or supply there will be no change in market price.

Price	Quantity demanded	Quantity supplied	Pressure on price
5	6	30	Downward
4	12	24	Downward
3	18	18	Equilibrium
2	24	12	Upward
1	30	6	Upward



- ***In the diagram above,*** **the quantity demanded and supplied at price P1 are equal. At any price above P1, supply exceeds demand and at a price below P1, demand exceeds supply. In other words, prices where demand and supply are out of balance are termed points of disequilibrium.**
- **Changes in the conditions of demand or supply will shift the demand or supply curves. This will cause changes in the equilibrium price and quantity in the market.**

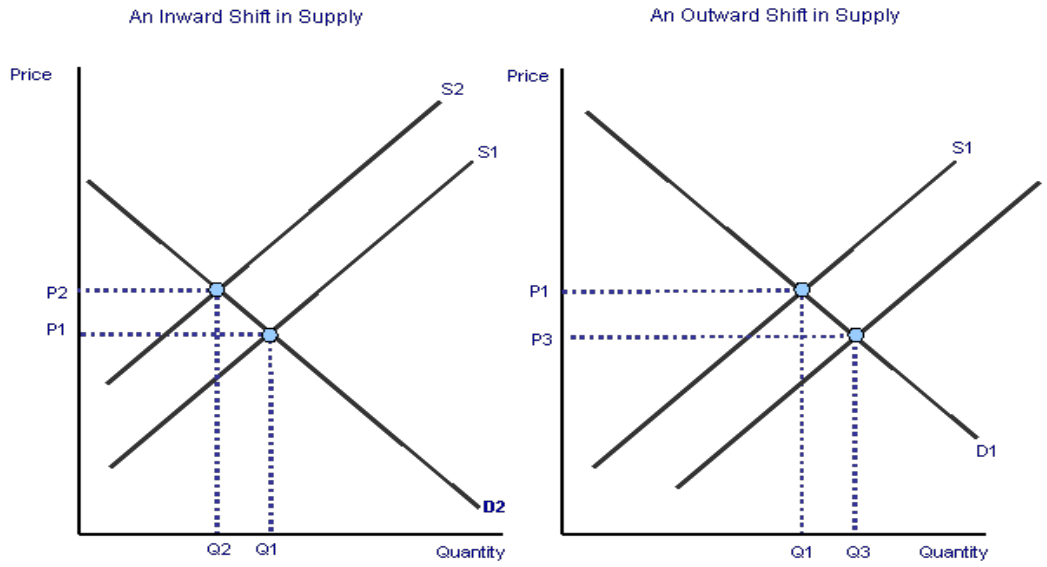
Changes in Market Demand and Equilibrium Price



The demand curve may shift to the right (increase) for several reasons:

- *A rise in the price of a substitute* or a fall in the price of a complement
- *An increase in consumers' income or their weal*th
- *Changing consumer t*astes and preferences in favour of the product
- *A fall in interest rates* (i.e. borrowing rates on bank loans or mortgage interest rates)
- *A general rise in consumer confidence* and optimism
- The outward shift in the demand curve causes a movement (expansion) along the supply curve and a rise in the equilibrium price and quantity. Firms in the market will sell more at a higher price and therefore receive more in total revenue.
- The reverse effects will occur when there is an inward shift of demand. A shift in the demand curve does not cause a shift in the supply curve! Demand and supply factors are assumed to be independent of each other although some economists claim this assumption is no longer valid!

Changes in Market Supply and Equilibrium Price



The supply curve may shift outwards if there is

- *A fall in the costs of production* (e.g. a fall in labour or raw material costs)
- *A government subsidy to producers that reduces their costs for each unit supplied*
- *Favourable climatic conditions* causing higher than expected yields for agricultural commodities
- *A fall in the price* of a substitute in production
- *An improvement in production technology* leading to higher productivity and efficiency in the production process and lower costs for businesses
- *The entry of new suppliers* (firms) into the market which leads to an increase in total market supply available to consumers
- The outward shift of the supply curve increases the supply available in the market at each price and with a given demand curve, there is a fall in the market equilibrium price from P1 to P3 and a rise in the quantity of output bought and sold from Q1 to Q3. The shift in supply causes an expansion along the demand curve.

Important note

- A shift in the supply curve does not cause a shift in the demand curve. Instead we move along (up or down) the demand curve to the new equilibrium position.
- A fall in supply might also be caused by the exit of firms from an industry perhaps because they are not making a sufficiently high rate of return by operating in a particular market.
- The equilibrium price and quantity in a market will change when there shifts in both market supply and demand.

Consumer behavior

- Generally consumption means usage

- When a want is satisfied the process is known as consumption

Characteristics of human behavior

- Wants are unlimited
- Wants are satiable *(wants are unlimited but they get satisfied)*
- Wants are competitive
- Wants are recurring in nature
- Wants are alternative *(coffee or tea)*
- Wants are complementary *(A want can be satisfied by two or more goods)*
- Wants vary with time, place & person
- Wants become habit

Concept of utility

- Utility is a want satisfying power. It is not absolute but is relative, it is relative to person needs.
- ***The utility of a commodity hence depends on the need of the individual***
- All don't have utility from all commodities *(Vegetarians do not have utility from fish & mutton)*
- Greater the need for the commodity, greater will be the utility
- Utility is a subjective concept, depending upon the mental aspect of customer *(South Indians prefer coffee where North Indians prefer tea)*
- Utility is a psychological feeling which cannot be expressed it can be realized .& felt by individuals.

Measurement of utility

- Utility is a subjective concept, the mental attitudes which decides utility differs from person to person
- Even for the same individual it differs from time to time
- So it is ***very difficult to measure directly the utility of a commodity***
- **Where Proff. Marshall says we can measure utility indirectly.**
- ***The indirect measure to utility is the price which a person is willing to pay for the satisfaction of his desire or want***
- Higher the price paid by the consumer higher will be the utility. So the price acts as a measure of utility

Total utility & marginal utility

- Total utility is the total satisfaction derived from consuming a commodity.
- Suppose a consumer purchases a packet of chocolate. Total utility refers to the total satisfaction he gets in consuming the packet of biscuits.

- **Marginal utility** is the satisfaction derived from the consumption of a **marginal unit or additional unit.**
- The term marginal utility can be defined as the rate of change of total utility caused by a change in the quantity of a commodity consumed.
- The marginal utility will not be constant.
- When we consume more & more the extra satisfaction ***(i.e) marginal utility will go on diminishing*** *(moving back)*

1. **Marginal utility –** the addition made to the total utility by the addition of consumption of one more unit of a commodity.

2. Total utility- The sum total of all marginal utilities

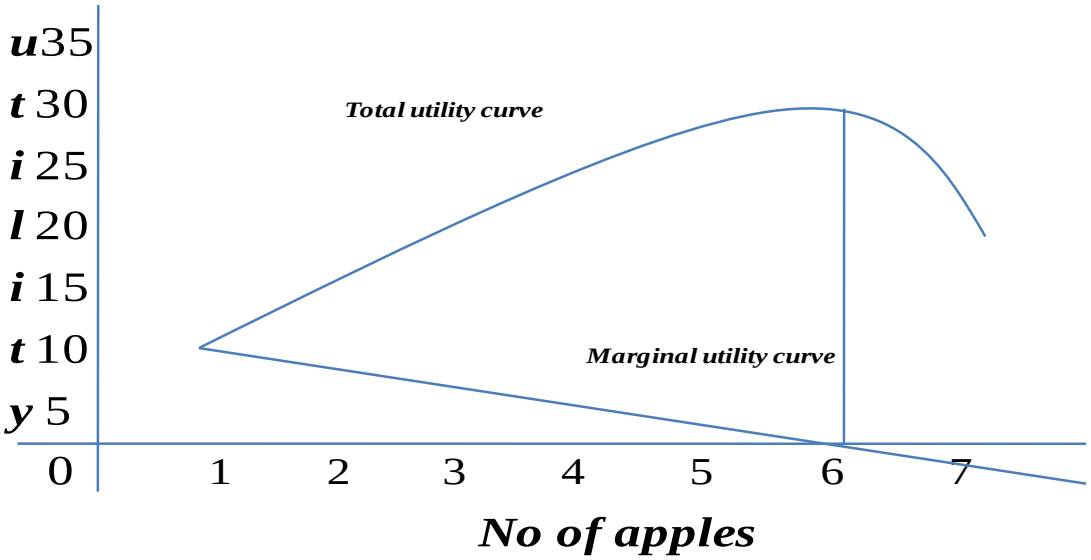
Marginal utilities can be expressed in three different ways

1. The marginal utility is the utility derived from marginal or last unit consumed
2. Marginal utility is the additional to the total derived from the additional unit

Law of diminishing marginal utility

- The law of diminishing marginal utility refers to a common experience of all of us in our practical life.
- It is based on the psychological feelings of satisfaction we can experience when we consume more & more of a commodity.
- When a consumer consumes more & more units of a commodity during a particular time, the desire tends to diminish.

1	**10**	**10**
2	**8**	**18**
3	**6**	**24**
4	**4**	**28**
5	**2**	**30**
6	**0**	**30**
7	**-2**	**28**



- We may illustrate the law of diminishing marginal utility by taking a starving man.
- Suppose a starving man finds a **apple**, it will have great utility for him
- If he finds a second apple it will welcome
- But he may not feel like it so badly as the first one
- If he consumes the third it would give him some satisfaction but not to the extent of the previous one
- So also with the fourth, fifth & sixth apple. The utility of consuming apple goes down or diminishing.
- The law is based on the fact that the utility depends on the need for the commodity & as one consumes more & more of a commodity the ***desire decreases & falls***
- A point will soon be reached when the consumer stops taking apples.
- This is the point the marginal utility of apple comes to zero for the time being.

- If the consumption of apple is continued still future, the consumer will get disutility will cause a feeling of vomiting.

Assumptions of the law

- The successive units of commodities ***should be identical & homogeneous,*** they should have similar standard (*All units of apples should be of same weight & quality).* If the first apple is sour & the second one is sweat the law will not apply
- The unit consumed should be following ***without interval time.*** The continuity in consumption is important.
- The ***unit consumed should be of standard unit.*** For instant a glass of milk, a cup of tea & not a spoon of milk or tea.
- The ***tastes, fashions, customs & habits of the consumer should remain unchanged.*** A change in any one will give different results.
- The ***income of the consumer remains*** constant

Importance of law of diminishing marginal utility

- The law of demand is the outcome of the law of diminishing utility. ***The law of demand states that larger quantities shall be purchased at a lower price.*** He gives lesser importance to additional units of the commodity.
- **The theory of taxation** is based on the law of diminishing marginal utility. *It is a self evident truth that the larger the stock of money, the lower shall be the utility of money* ***(rich persons have less marginal utility of money than poor people)*** If taxes are levied the sacrifice of poor will be more than that of the rich.

The change in design, pattern , packing of a commodity is very often brought about by producers this is based on the law. The use of same goods makes us feel to derive less utility

Criticisms of the law

- The utility is a ***mental phenomenon*** & it cannot be measured

- The law assumes that a person consumes ***only one good*** at a time. But this is not the case of real life.
- In practical life ***no body*** consumes the commodity following units ***without interval of time***, nor any one consumes till the point of satiety
- This approach assumes the marginal utility of money is constant, but in ***real world marginal utility of money changes***

Consumer Equilibrium

Definition:

Point of maximum consumer satisfaction: the point at which a consumer is deriving maximum satisfaction from his or her purchases

- When consumers make choices about the quantity of goods and services to consume, it is presumed that their objective is to **maximize total utility.** ***(Satisfying power of a commodity or a services which determines the demand for commodity is called 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 principle of consumer equilibrium is explained through the Law of Maximum satisfaction. *This is referred to in several ways, law of Equi-marginal utility, the law of substitution, the principle of marginal comparisons, law of consumers demand etc.*

The Law of Equi-Marginal Utility

- It is an extension to the law of diminishing marginal utility.
- The principle of Equi-marginal utility explains the behavior of a consumer in ***distributing his limited income among various goods and services.***
- This law states that how a consumer allocates his money income between various goods so as to obtain maximum satisfaction.
- When a consumer weights in mind whether to buy a little more or a little less of commodity, **he is trying to balance the marginal utility** of the commodity & that of money.

- Every consumer aims at getting maximum satisfaction.
- Law of Equi-marginal utility is also known as the law of distribution or law of maximum satisfaction

The principle of Equi-marginal utility is based on the following assumptions:

(a) The wants of a consumer ***remain unchanged***.

(b) He has a ***fixed income***.

(c) The prices of all goods ***are given and known to a consumer.***

(d) He is one of the many buyers in the sense that he is ***powerless to alter the market price.***

(e) He can spend his income ***in small amounts.***

(f) He acts ***reasonably*** in the sense that he want maximum satisfaction

(g) Utility is measured cardinally. This means that utility, or use of a good, can be expressed in terms of "units" or "utils". This utility is not only comparable but also quantifiable.

- Suppose there are two goods 'x' and 'y' on which the consumer has to spend his given income.

The consumer's behavior is based on two factors:
(a) Marginal Utilities of goods 'x' and 'y'
(b) The prices of goods 'x' and 'y

- The consumer is in equilibrium position when marginal utility of money expenditure on each good is the same.
- The Law of Equi-Marginal Utility states that the consumer will distribute his money income in such a way that the utility derived from the **last rupee** spent on each good is equal.
- The consumer will spend his money income in such a way that marginal utility of each good is relative to its rupee.

- The consumer is in equilibrium in respect of the purchases of goods 'x' and 'y' ***when:***
  MUx = MUy Where MU is Marginal Utility and P equals Price Px Py

- If MUx / Px and MUy / Py are **not equal** and MUx / Px is greater than MUy / Py, then the consumer will alternate good 'x' for good 'y'. As a result the marginal utility of good 'x' will fall.

  The consumer will continue substituting good 'x' for good 'y' till **MUx/Px = MUy/Py** where the consumer will be in equilibrium. ***Thus this is also known as the law of substitution.***

- $$MU\ of\ income = \frac{Mu\ of\ good\ X}{Price\ of\ X} = \frac{Mu\ of\ good\ Y}{Price\ of\ Y} = \frac{Mu\ of\ good\ Z}{Price\ of\ Z}$$

- The 1st rupees spent gives him 50 units from the consumption of the commodity x
- The 2nd, 3rd rupees spent on X gives him ***diminishing rate of marginal utility.***
- ***He consumes commodity X up to Rs 3. After that he spend the 4th rupee on Y because it gives him more marginal utility than X.***
- If he spends it on the commodity Y, the 1st unit gives him 38 units of marginal utility & the Rs10 gives him 1 unit.
- 5th rupee also will be spent on Y
- Similarly of the total Rs 10, he will spend **Rs 6 on X & Rs 4 on Y** where the marginal utility at these levels X & y are equal.

MU of commodity x	MU of commodity Y
50 (1)	38 (4)
45 (2)	36 (5)
40 (3)	32 (7)
35 (6)	**25** (10)
30 (8)	
25 (9)	

MUx/Px = MUy/Py where the consumer will be in equilibrium.

Consumer surplus

- The concept of consumer surplus was introduced by ***Proff. Alferd Marshall***

- What a consumer is willing to pay for one unit of commodity & what he actually pays, measures the monetary cost the expected utility

- ***If a person is willing to pay Rs 50 . For a toy but he buys for Rs 30. It is said Rs 20 is consumer surplus.***
- He gets higher satisfaction than the price he actually pays for him
- ***Consumer surplus = Potential price – Actual price***
- The difference between the potential price & actual price is consumer surplus
- The sum total of surplus in enjoyed by the consumer.

Production

- Production in simple means creation of utility
- Production is the outcome of the combination of the four factors

1. ***Land***
2. ***Labour***
3. ***Capital***
4. ***Organization***

- Even if one factor is not used production is impossible
- The aim of the producer is to bet maximum profit at a minimum cost which is possible if he maximizes the productivity.

Production function

- ❑ The functional relationships between physical inputs & physical outputs of a firm is known as production function
- ❑ Production function is a technical relation between inputs & outputs.
- ❑ The production function shows for a given ***state of technology & managerial ability, the maximum rates of output*** that can be obtained from different combinations of the productive factors during a period time or unit of time
- ❑ It relates to the question of how much quantity of output can be obtained from a given quantity of various inputs
- ❑ The output of a firm depends upon the quantities of inputs used.
- ❑ If the firms increases or decreases its input, it can correspondingly increases or decreases its output.

Production function as an equation

- There are several ways of specifying the production function.
- In a general mathematical form, a production function can be expressed as:
- ***Q = f(X1,X2,X3,...,Xn*)**

where:

- *Q* = quantity of output
- *X*1,*X*2,*X*3,...,*Xn* = factor inputs ***(such as capital, labour, land or raw materials).***

Assumptions of production function

The production function is based on the following assumptions

1. Period of time
2. Technique or method of production adopted
3. Managerial ability
4. Factors of production

Law of returns (or) law of variable proportion

Law of returns are of three kinds they are

1. ***Law of diminishing returns***
2. ***Law of increasing returns***
3. ***Law of constant returns***

1. Law of diminishing returns

- Among several laws of production, the law of Diminishing returns is the oldest law.
- This law establishes a relationship between input & output
- The law of diminishing returns is the marginal product of each unit of input will decline as the amount of that input increases, holding all other inputs constant.

- ***(For e.g.)*** *Water are very vital for a plant's life, the next unit of water will keep the plant healthy & growing smartly. But as more & more water gets added, the soil becomes water-logged & most crops will perish. The law of diminishing returns can be understood with this example.*
- Let us suppose a farmer having a plot of land measuring 10 acres is interested in increasing the output from his land by investing more & more of capital & labour.
- ***Now we have to study how the inputs when increased as successive does not result in extra output.***
- The land is kept as a fixed factor & the input (labour & capital) has been the variable factor.
- Now we can distinguish three types of output from the table they are

a) ***Total output or total returns***

b) Average output or Average returns

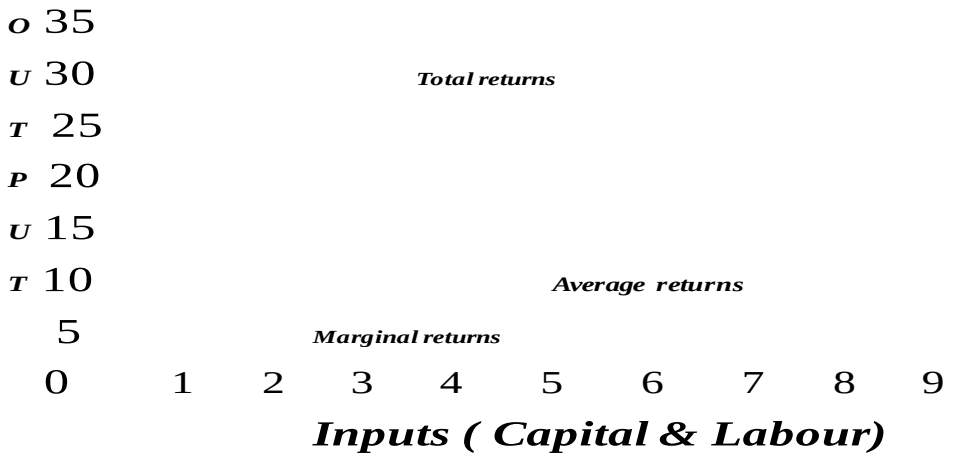
c) Marginal output or marginal returns

Total returns is the total output of corn for the total of capital & labour applied

- Column 2 of the table gives total returns for the total inputs.
- One unit of capital & labour combined the outcome is to 10 units of corn,
- By combining same plot with 2 units of capital & labour the total output comes to 18 units
- When 3 units of input are invested the output becomes 24 units
- The total returns is increasing from 10 to 18, 24, 28, 30 units etc
- However the rate of increasing is diminishing. The total output is maximum when the input is 5 or 6 units.
- Average returns refers to the output per unit of capital & labour invested.
- This is arrived by dividing the total outputs with the total units of input.
- Column 3 of the table gives average output which is decreasing.
- Marginal returns refers to the output of corn increases in one unit of the input
- Column 4 refers to the marginal output.

- When 1 unit is invested, the output is 10 units, when 2 units are invested the output is 18 units of corn. Where extra 8 units of corn have been realized because of increasing the input from 1 to 2 units
- The response for the second units of input is 8 units of corn. This is the marginal output for the second unit of input.
- When there are 3 units of input the total returns stands at 24 units of corn. the extra output is 6 units of corn due to the increase of one more unit
- By increasing the total input to 4 units the total output has gone up to 28 units, the extra output is 4 units of corn due to the increase of one more unit
- The table shows that the marginal output goes on declining for every increase in input.
- This shows that the increase in input does not give output equally .
- The first input gives 10 units of corn
- The second input gives 8 units of corn
- The third input gives 6 units of corn
- The marginal output goes on diminishing when the input is increased by units
- This is meant by law of diminishing marginal returns as the marginal return diminishes with marginal inputs
- At the 6^{th} input the marginal returns comes to zero

1	10	10	***10***
2	18	9	***8***
3	24	8	***6***
4	28	7	***4***
5	30	6	***2***
6	30	5	***0***
7	28	4	***-2***
8	24	3	***-4***



- In this figure, X axis represents inputs in units of capital & labour, Y axis represents the output of corn in units.
- ***TR curve represents total returns***
- ***AR curve represents average returns***
- ***MR curve represents marginal returns***
- *These three curves illustrates two basic facts namely*

a) Total output increases at a diminishing rate

b) Average & marginal output decreases

According to the modern economists, the law of diminishing marginal returns works not only in agriculture , but also in other fields of economic activity including manufacturing industries.

This law will operate in all fields where one or two factors of production are fixed while the others are variable.

Assumptions of law of diminishing returns

- The law is applicable only if one factor of production is kept constant or fixed.
- The factors of production utilized successively should be the same units
- The technique of production remains constant
- It should be understood that in earlier stages of cultivation, we may come across with increasing returns & not diminishing returns

Limitations

- The law is more applied in agriculture
- When land is taken for cultivation the productivity increases initially
- Increased application of agriculture inputs like fertilizers etc, will enable land to yield more return in the earlier stage.

2. Law of increasing returns

- The law of increasing returns is closely related to the law of diminishing returns
- This law operates because the efforts are made by the producer to increase outputs
- An increase of labour & capital leads to improve organisation.
-

Labour & capital	MR (Meters)	TP (Meters)
First	1000	1000
Second	1500	2500
Third	2000	4500
Fourth	2500	7000
Fifth	3000	10000

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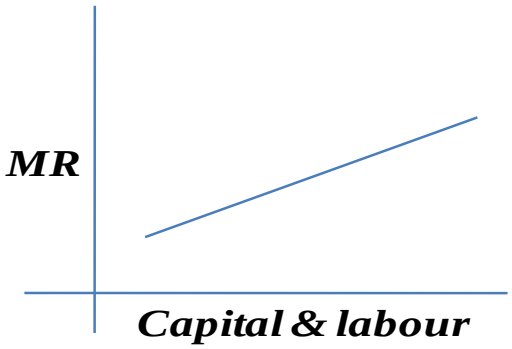


3. Law of constant returns

- The law of constant returns represents the shift from the increasing to decreasing returns
- The law of constant returns is said to operate when the total output increases exactly in proportion to increase in the factors of production
- If the actions of the law of increasing & diminishing returns are balanced, we have the law of constant returns
- The law of constant returns operate both in agriculture & industry, if the factor prices are constant

First	50	50	***MR***
Second	100	50	
Third	150	50	
Fourth	200	50	
Fifth	250	50	

Capital & labour

Law of returns to scale

- The law of returns to scale describes the *relationships between inputs & output* in the long run when all the inputs are increased
- Returns to scale studies the behavior of output when all factors are increased in the same percentage
- When the scale is increased the firm may experience either increasing returns, constant returns & decreasing returns.

Three phases to scale

- **Increasing returns**
- **Constant returns**
- **Decreasing returns.**
- **Increasing returns to scale**

When the increased in inputs leads to a more than proportionate increase in output, *returns to scale are said to be increasing.*

- **Constant returns to scale**

When the firm increases in all factors, inputs is equal to increase in output in same proportion, *returns to scale are said to be constant.*

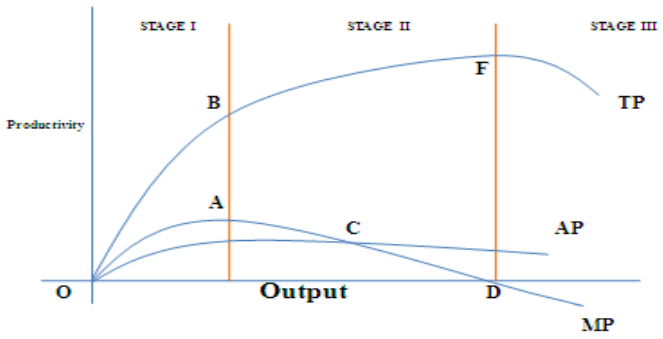
- **Decreasing returns to scale**

If increase in all factors leads to less than proportionate increase in output, *returns to scale are said to be decreasing*

Assumptions of returns to scale

- Existence of perfect competition
- Output is measured in terms of physical quantities
- Fixed state of technology
- All factor inputs except organization are variable
- Workers work with given tools & implements

1	20	20	20	
2	50	30	25	
3	90	40	30	
4	140	50	35	
5	185	45	37	**I**
6	220	35	37	**I**
7	245	25	35	**II**
8	245	0	30	**II**
9	235	-10	26	**III**



The following table explains the following stages

Stage I

- In this table labour is a variable factor & capital is applied to fixed factor
- When we apply more & more labour the total productivity increases in the early stages.
- Capital remain fixed the increase in total productivity can be traced to increase in the MP of labour
- TP is increasing at an increasing rate so long as the MP is increasing

STAGE II

- In the next stage MP falls down implying the total productivity increases but at a decreasing rate
- This stage continues till MP is ZERO
- In the second stage both average product & marginal product are declining but both are positive

STAGE III

- In the third stage MP is negative, the TP declines
- The decline in MP can be traced to limited availability of fixed factor

Thus the TP, MP & AP pass through three phases, increasing, diminishing & constant returns

Economies of scale (Large scale production)

- Large scale production enjoys both internal & external economies
- Internal economies are those economies which appear from within the firm

Internal economies may be classified into five kinds they are

1. **Technical**
2. **Financial**
3. **Managerial**
4. **Risk spreading**
5. **Commercial**

External economies

- External economies are those economies which arises from outside the firm due to some external factors

External economies may be classified into five kinds they are

1. **Economies of concentration**
2. **Economies of information**
3. **Economies of disintegration**
4. **Miscellaneous economies**

Diseconomies

- If a firm continuous to grow & expand beyond a certain limit, the economies of scale disappear & will give rise to diseconomies.
- The diseconomies are nothing but the disadvantages or loss of advantage which the firm had been hitherto *(up till now) enjoying.*

- *Diseconomies can be classified as internal diseconomies & external diseconomies*

Internal diseconomies

- Refers to the increased problems & complexities of large scale management
- When the size of the firm increases the administrative difficulties of coordinating all activities delay decision making arises

External diseconomies

- Too much of concentration & localization of industries beyond a certain limit may create diseconomies in production which will be common to all firms in locality
- Delay in transportation raw materials & finished goods there may be rise in the price of raw materials due to their increased demand
- There may be high cost of labour as their demand may increase there may be difficulties in banking & financing

Cost

- The supply of commodity in a market depends on various factors like the number of firms in the industry, state of technology, price, non pricing factors like floods, wars.
- The relationship between cost & output is called cost function
- It is assumed that the firm chooses a combination of factors which minimizes its cost of production for a given level of output

Cost of production

- The term cost of production means the expenses incurred in the production of commodity
- This refers to the total amount of money spent on the production of the commodity

Various concepts of costs

- Money cost
- Real cost
- Opportunity cost *or* alternative cost
- Implicit cost *or* book cost
- Explicit cost *or* cash cost *or* out of pocket cost

- Private cost
- Social cost
- Fixed cost
- Variable cost
- Incremental cost
- Sunk cost
- Shut down cost
- Abandonment cost
- Short run cost
- Long run cost

Money cost

- When an entrepreneur undertakes production he has to take money expenditure on various items
- Payment of wages & salaries, cost of raw materials, interest on capital, other expenses

Real cost

- The real cost is expressed in terms of efforts & pains
- The production of a commodity requires different kinds of labour & capital
- The real cost represents pain involved in producing a commodity besides the mioney incurred

Opportunity cost or Alternative cost

- It arises because of scarcity & alternative use of sources
- The opportunity cost is the income which the people have to make choices between the alternatives
- ***(For e.g.)*** Suppose a boy has got Rs 10 With this he can get 5 cups of ice creams. Each ice creams costs Rs 2 with that Rs 10 he can get 10 chocolates each cost Re 1 The boy realizes that he can either have 5 ice creams or 10 chocolates. If he wants both he has to give up the consumption of one for the other. By scarifying 1 ice creams he can have 2 chocolates.

Implicit cost

- Implicit cost differ from other cost
- This is also called imputed cost
- Implicit cost may be defines as the earnings of owners resources employed in their best alternative uses.
- ***(for e.g.)*** An entrepreneur does not utilizes services in his own business & works as a manager in some firm on salary basis. If he starts own business, he foregoes his salary as manger. The loss of salary is an implicit cost of own business
- It is implicit because the income foregone by entrepreneur is not charged

Explicit cost

- Cost involved cash payments which are made by employer to the owners of the resources as the services are purchased by him.
- This is also called paid out cost
- ***(for e.g.)*** The payments of wages, salaries, interest, rent, purchase of raw materials, insurance fee etc.

Private cost

- For a firm both explicit & implicit cost are private cost

Social cost

- Social cost implies the cost which a society bears on account of production of a commodity
- ***(for e.g.)*** Mills & factories located in a city causes ai pollution by emitting smoke, leather factories cause water pollution, cars & buses cause both air & noise pollution
- The money spent towards medical expenses connected with treatment or disease arising out of the pollution is social cost

Fixed cost

- Fixed cost are those which are fixed in production
- These cost do not vary with every change in output
- Fixed cost includes depreciation of machinery, building, maintenance of land

Variable cost

- Variable cost are those which vary in the output
- These cost increases with an increase & decreases with decreased output
- Variable cost includes running expenses, fuel, repairs etc

Incremental cost

- Incremental cost refers to the ***additional cost*** incurred due to change in the level or nature of activity
- Incremental cost are also known as differential costs Incremental cost measures the difference between old & new cost

Sunk cost

- Cost which remain ***unaltered*** even after a change in the level or nature of business activity
- These are known as specific cost
- The best example for sunk cost is depreciation

Shut down cost

- Shut down cost is one which would be incurred in the event of suspension ***(delay)***of the plant operation & which would be saved if the operations are continued
- ***(For e.g.)*** Cost of constructing sheds for sheltering plants & equipments & for storing exposed property. Further additional expenses may be incurred when business operations are started in re employment of workers & giving them training

Abandonment cost

- Cost involved in the ***discontinuance*** of tram services in Bombay & Delhi
- Abandonment cost are those cost of altogether abandoning ***(throw away***)the plant from services

Historical cost

- A cost paid in order to acquire an asset

Replacement cost

- Cost of the assets which are computed at the current prices *(Prices to be paid currently to acquire the same asset)*

(For e.g.)

- *Price paid in the purchase of a machinery two years ago might be Rs. 10,000. this is historical cost*
- *Replacement cost is the cost prevailing now in the market. If the price of the machine is Rs 13,000*

Long run cost

- Long run cost are those which are flexible completely to the changes in the rate of output
- In long run cost there is sufficient scope for changing all input factors

Short run cost

- Short run cost are those which are flexible partially to changes in the rate of output
- In short run cost there is no scope to vary plant, machinery

Cost & output relations

- Cost output relationships are expressed through a cost function
- Cost function is a function derived from the production function & the market supply of inputs
- The basic concepts used in the analysis of cost behavior are total cost, average cost & marginal cost

Total cost

- Total cost is defined as the ***total actual cost incurred by an entrepreneur*** to produce a given quantity of output
- Total cost are composed of two major elements, total fixed cost, total variable costs

$$TC = TFC + TVC$$

- TFC is the sum of explicit fixed cost & the implicit cost incurred by an entrepreneur
- TFC remains fixed in the short run or at a certain level of output
- TVC varies with the variation in the output
- *The total fixed cost remains constant, this shows that the total fixed cost will be incurred even if the output is zero*

- TVC begin from the starting point, this shows when output is zero the variable cost are nil
- After that it starts rising upwards showing that as output increases the total variable cost also increases
- Y TVC
- COST

O Output X

Average cost

- Average cost per unit is the total cost divided by the number of units produced
- Average cost is also obtained by adding average fixed cost &average variable cost

$AC = \frac{TC}{q}$ *(or)* $AC = AFC + AVC$

where q is number of units produced

$AFC = \frac{TFC}{q}$

$AVC = \frac{TVC}{q}$

$AC = \frac{TFC}{q} + \frac{TVC}{q}$

Average fixed cost

- Average fixed cost diminishes with every increase in output
- AFC is the total fixed cost divided by the number of units produced

$$AFC = \frac{TFC}{q}$$

- AFC is the fixed cost per unit of output
- The greater the output of the firm, the smaller will be the AFC
- AFC diminishes as the output increases

Average variable cost

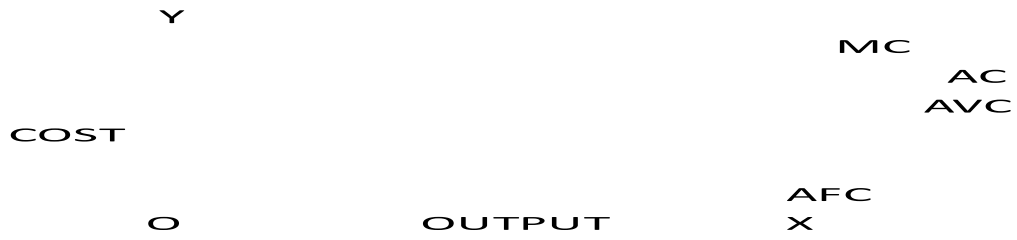
- Average variable cost is obtained by dividing the total variable cost by quantity

$$AVC = \frac{TVC}{q}$$

- AVC declines in the beginning up to a certain point & then rising sharply

Average cost

- AC is the combination of AVC & AFC
- When the output increases beyond the level, the employment of more workers & bad organization will lead to many difficulties
- This results the variable cost per unit goes on increasing with every increase in output



Marginal cost

- Marginal cost is the change in the total cost resulting from the change in the total output
- It means that addition made to the total cost caused by producing one more unit of output

$$MC = \frac{TC}{q}$$

change in total cost / change in the quantity

$$TC = TFC + TVC$$

$$MC = \frac{TVC}{q}$$

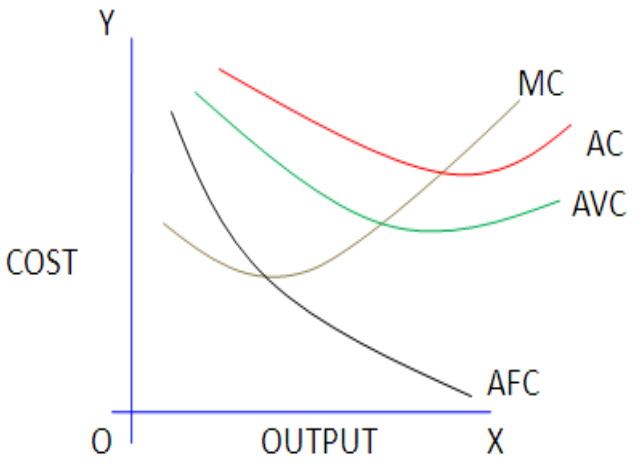
- Marginal costs changes due to the change in variable costs
- The marginal product first rise reaches a maximum & then decline
- This ensures that marginal cost curve of a firm decline first reaches a maximum & then rises
- That is why marginal cost curve of a firm has a U shape

Y MC

Marginal cost

O Output X

No of units (output)	TC	MC	AC
1	20	20	20
2	50	30	25
3	90	40	30
4	140	50	35
5	185	45	37
6	220	35	37
7	245	25	35
8	245	0	30
9	235	-10	26



UNIT 3

Meaning of land

- Land in economics is often used in a wider sense.
- It does not mean only the surface of the soil, but it also includes all those natural resources which are the free gifts of nature

Definition of land

"By land is meant materials & forces which nature gives freely for man's aid in land, water, air, light & heat"

Characteristic s of land

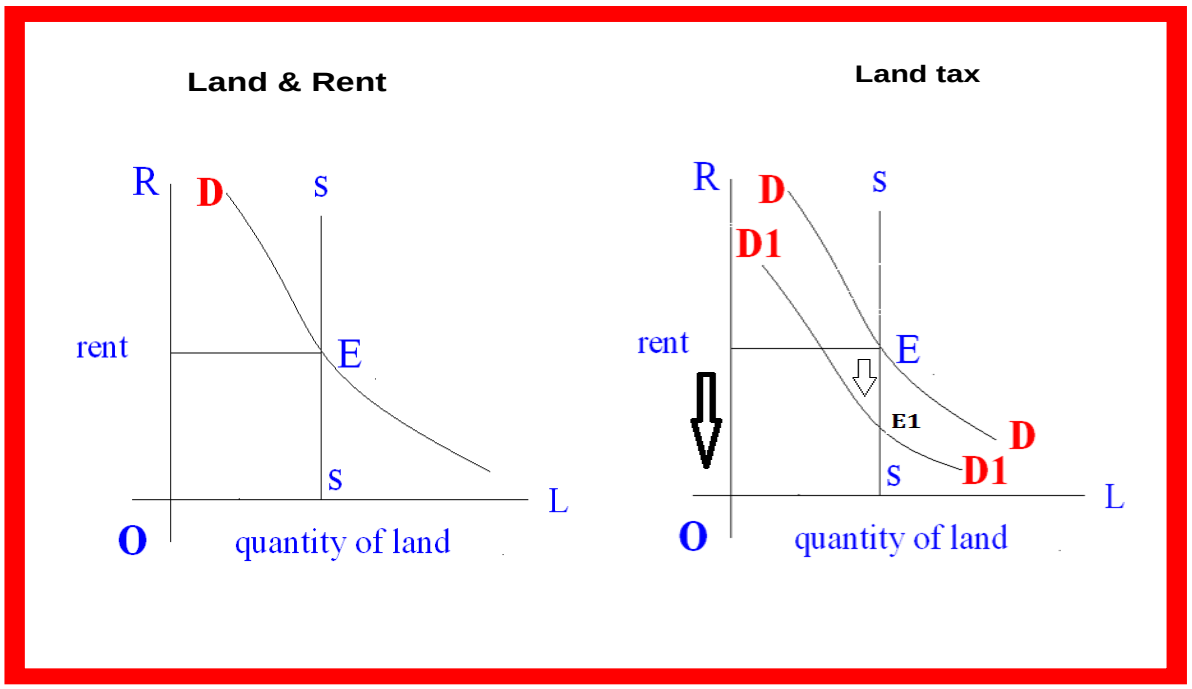
- Free gift of nature
- Fixed quantity
- Land is permanent
- Land is a primary factor of production
- And is immovable
- Land has many uses
- Land cannot be destroyed

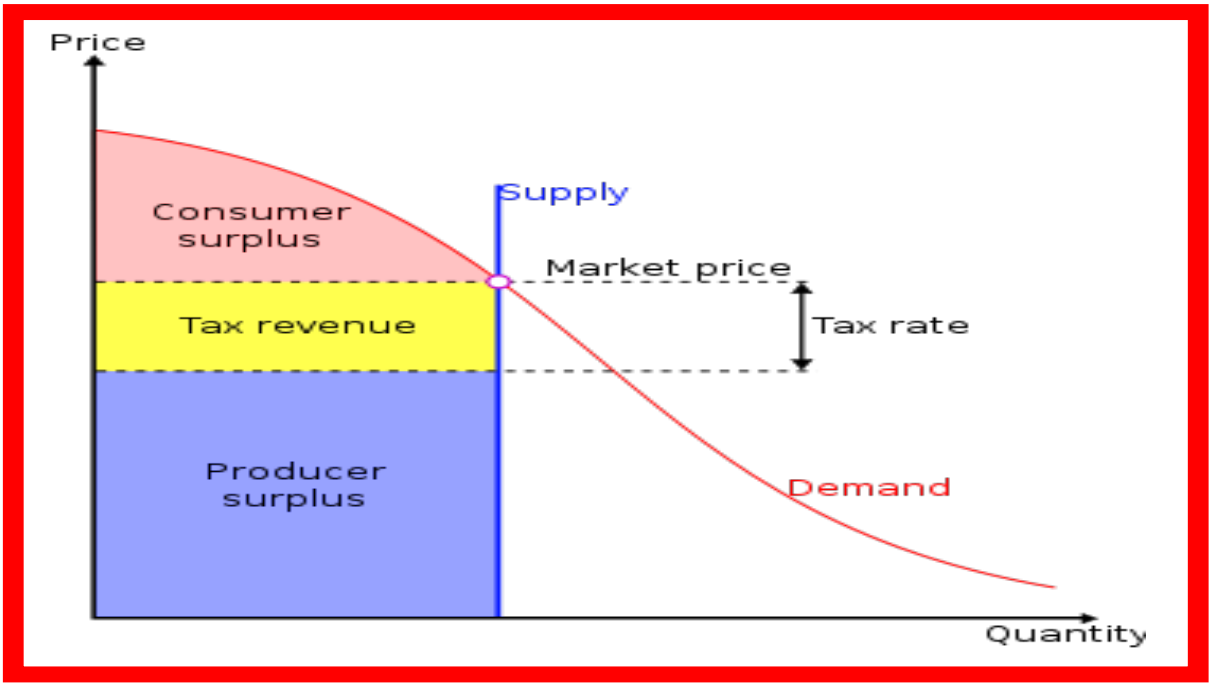
Factors affecting productivity of land

- Qualities of land
- Situation of land (remote areas)
- Means of irrigation (Canals, tube wells, tanks)
- Proper us of land
- Improved methods of cultivation
- Trained labor
- Ownership of land (in case of rent no care is taken)
- Government policy

Land & Rent

- Land is an essential factor of production for any business.
- **The price of using a piece of land for a period of time is called rent.**
- The supply of land is fixed
- The demand & supply curve intersect at the equilibrium point E.
- If rent were above the equilibrium, the amount of land demanded by all firms would be less than the fixed supply.





- Some landowners would be unable to rent their land & would have to offer their land for less rent.
- **Suppose the land can be used only to grow corn.** If the demand for corn rises, the demand curve for corn land will shift up & to the right and the rent will rise.
- *The price of the land is high because the price of corn is high.*
- *This is a fine example of derived demand.*
- Thus the value of the ***land gain entirely from the value of the product.***

Land tax

- Suppose the government introduce a **50% tax** on all land rents.
- **At a rent of 200** people will continue to demand the entire fixed supply of land.
- With the fixed supply, the market rent on land including tax will be **unchanged**
- Demand & quantity supplied are unchanged.
- The market price will be unaffected by the **tax**.
- The tax must have been completely paid out of the **land owner's income.**
- **The situation can be visualized what the farmers pays & what the landlord receives are now 2 quite different things.**
- As far as the landowners are concerned once the government steps in to take 50 % share the effect is just the same as it would be the net demand to the owners had shifted down from **DD to D1 D1.**
- Landowners equilibrium return after taxes is now only **E1 or half as much as E.**

- Striking result is that a tax on rent will lead to **no economic inefficiencies.**
- **Tax on pure economic rent does not change anyone's economic behaviour.**
- **Demanders are unaffected** because their price is unchanged.
- The **behaviour of suppliers is unaffected** because the supply of land is fixed & cannot react.
- Hence, the economy operates after a tax exactly as it did before with no inefficiencies.
- A tax on rent will lead to no ***economic inefficiencies***.

Labour

- Labor signifies the contribution of human elements in production.

- Labour refers to any exertion physical or mental undertaken in expectation of a reward, the reward usually begins the payment of money *(the payment of wages)*

Characteristics of labour

- Labour is inseparable from labourer *(skill is used but not himself)*
- Labour has poor bargaining power
- Labour is perishable
- Labour is less mobile *(sentimental attachments)*

Division of labour

Division of labour refers to dividing & sub dividing labour into a number of groups each performing only one complete process of production, if the making of an article is split up into several processes & each process is entrusted to a separate set of workers is called division of labour

Advantages of division of labour

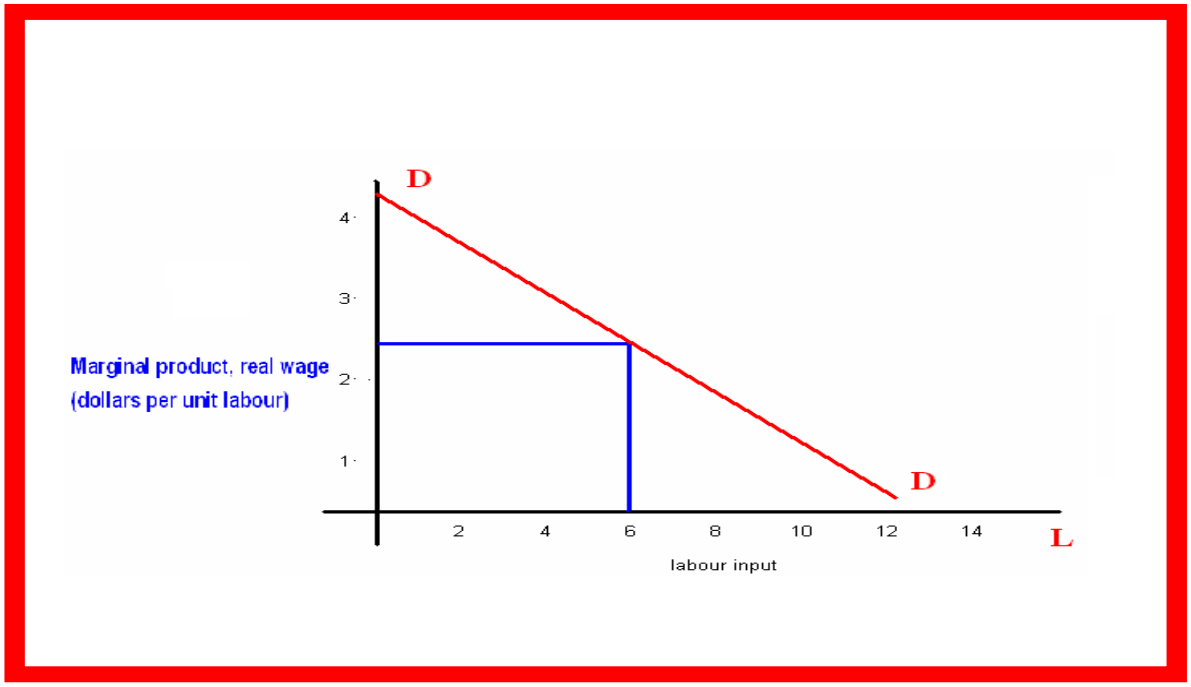
- Increase in productivity
- Increases in skill
- Inventions are possible
- Saving timings
- Improvements in quality of products
- Large scale production
- Reduction in cost of production
- Right man in right place
- Diversification of employment opportunities

Disadvantages of division of labour

- Monotony (same job over & over again)
- No sense of responsibility
- Loss of skill
- Worker is reduced in application of mind
- peacefulness of labour

Demand for labour

- The demand for labour is determined by its output.
- The labour demand curve shifts up & out over time with capital, technological & improvements in labour quality.
- At a given time with a given state of technology there exists relationship between the quantity of labour inputs & the amount of output.
- By law of diminishing returns each additional unit of labour input will add a smaller & smaller slab of output.



Factors determining wages

- Price level
- Regularity of work
- Nature of work
- Trade expenses
- Conditions of work
- Social prestige
- Future prospects

Capital

- Capital refers to produced means of production
- Capital includes all finished goods which are useful for the production of consumer goods
- The reward paid to capital as a factor of production is called interest

Characteristics of capital

- Capital is the result of savings
- Capital is the result of labour
- Capital is productive

BUSINESS CYCLE

- Business cycle or trade is a part of the capitalist system. ***It refers to boom & depression.***
- In business cycle there are wave like fluctuations in aggregate income, employment, output & price level.
- Fluctuations in economic activity have been occurring periodically in a more or less regular fashion. ***These fluctuations have been called business cycle.*** It may be noted that ***calling there fluctuations as cycle*** means they are periodic & occur regularly.
- The duration of a business cycle has not been of the same length, it has varied from a minimum of two years to a maximum of 10 to 12 years.
- Some business cycle have been very short lasting for only 2 to 3 years, while others have lasted for several years.

Definition

1. The business cycle in the general sense may be defined as "alternation of periods of prosperity & depression of good and bad trade".
2. "A trade cycle is composed of periods of good trade characterised by rising prices & low unemployment percentages altering with periods of bad trade characterised by falling prices & high unemployment percentages".

Phases of business cycle

- Capitalist countries such as USA & Great Britain have rapid economic growth during the last two years. But economic growth in there countries has not followed steady & smooth upward trend.
- Periodically there have been large fluctuation in economic activity ***(i.e.)*** change in output, income, employment & prices.

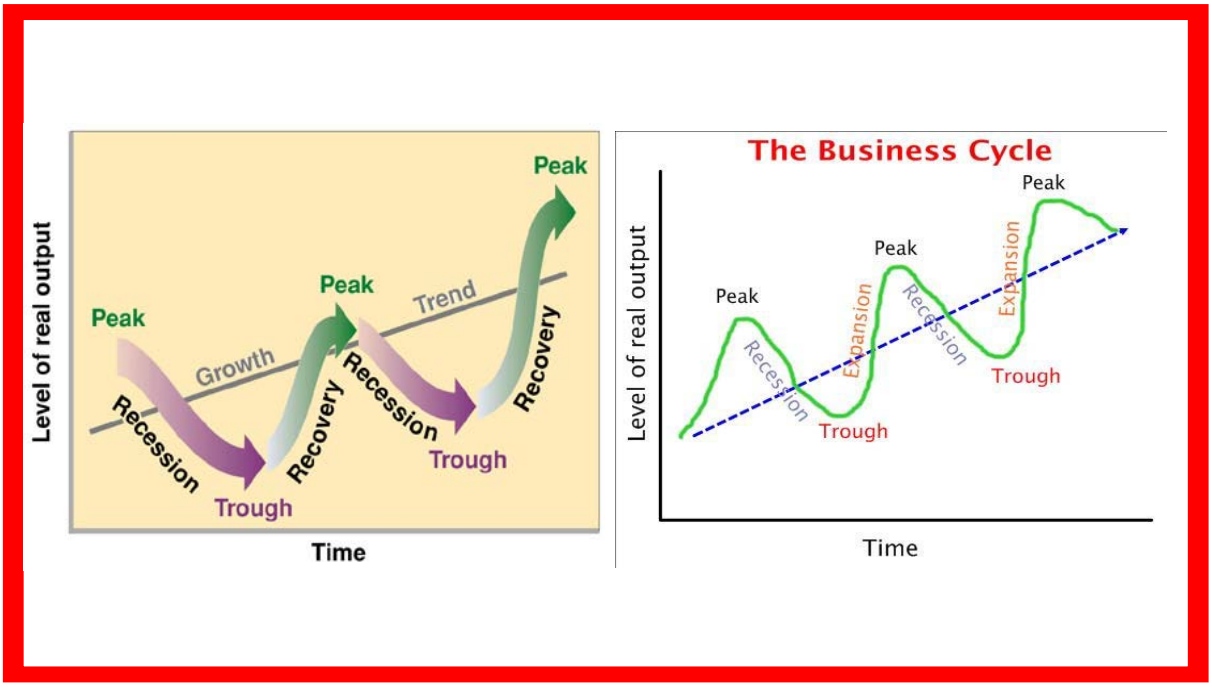
- The period of high income, output & employment has been called the period of expansion, upswing or prosperity & *the period of low income, output and employment has been described as contraction, recession, downswing or depression.*
- The period of expansion alternates ***(occur repeatedly)*** with the period of contraction.
- These alternating period of expansion & contraction in economic activity has been called business cycle. **They are also known as trade cycle.**

The four phases of business cycles have been shown

- We start from depression or through when the level of economic activity ***(i.e.)*** level of production and employment is at the lowest level.
- With the revial of economic activity the economic moves into the expansion phases.
- The expansion cannot continue, where contraction *(or)* downswing starts.
- When the contraction gathers we have depression.
- The downswing continues till the lowest turning point which is also called trough is reached.

The following phases of business cycle have been distinguished

1. Expansion ***(Boom, upswing or prosperity)***
2. Peak ***(upper turning point)***
3. Contraction (***downswing, recession or depression)***
4. Trough ***(lower turning point)***



Explanation

1. Expansion or boom (1st 2 points are same)

- In its expansion phase *(the expansion of business activity takes place),* both output & employment increases till we have full employment & production at the highest level.
- The level of production is at maximum level.
- A good amount of net investment is occurring & demands for durable goods are also high.
- Prices also generally rise during the expansion phase but to high level of economic activity people enjoy a high standard of living.

The important features of upswing are

Money wage raise, rising prices, high level of employment, Job opportunities, expansion of credit and borrowing, rise in profits and income. **(e.g.) IT Industries**

3. Recession

- The ***turning point from boom condition is called recession.***
- The failure of a company or a bank bursts the boom & brings a phase of recession.
- Investment are reduced, production comedown, & income & profits decline, business activity shows sign of dullness.

- During recession, not only there is a fall in GNP but also level of employment reduces. The agricultural class and wage earners would be worst hit.
- At times of depression prices also generally fall due to fall in aggregate demand.
- **Depression occur** when banks start reducing credit ***(i.e.)*** contraction in bank credit may cause downswing. ***(e.g.)*** like low rate of interest for banks, other investment reduces injection of money.

4.Trough

- There is a limit to which level of economic activity can fall. ***(i.e.)*** it may last for sometime.
- After a period of depression, recovery sets in. This is the turning point from depression to revival towards upswing.
- Expansion of money and credit is injected in the economy and the income of the people goes up. ***(i.e.)*** if the banking system starts expanding credit and because of new technology coming into existence.

Theories of business cycle

- Trade cycle is a highly complex phenomenon and it can't be explained by a single factor.
- However several theories have been put forward to explain the causes of trade cycle.

a) ***Sun spot theory or Climate theory***

b) ***Psychological theory***

c) ***Hawtrey's theory or monetary theory***

d) Keyen's theory or trade cycle

e) Von Hayek's theory (or) over investment theory

f) Over savings (or) under- consumption theory

g) Schumpeter's innovation theory

a) Sun spot theory

- This is oldest theory of business cycle.
- Sun spot theory was developed in 1975 by Stanley Jevons.

- Sun spots are storms on the surface of the sun caused by violent nuclear explosion there.
- Since economies are the **older world were heavily dependent on agriculture,** changes in climate condition due to sun spots produced fluctuations in agricultural output.
- The climate variations are due to spots in the sun. Hence the theory is called sun spot theory.
- Whenever there is good harvest, the economies enjoy prosperous boom period. There goods periods are intercepted bad period due to bad harvest and we call them depression.

b) Psychological theory

- The psychological feeling of **optimism *(success)*** *(good must always happen)* and **pessimism *(no confident, thinking everything in wrong)*** in business are responsible for boom and depression.
- This theory is ***only partially true***. The psychological factors may help in gathering momentum in the upswing or bring the downswing suddenly.
- This theory does not explain how the booms or slump is initiated.
- The theory fails to explain as to how a depression starts and how a recovery begins.

c) **Monetary theory** *(Talks about money supply)*

- According to Hawtrey "Trade cycle is purely a monetary phenomenon" and he strongly advocated that **changes in the flow of money** are exclusively responsible for the changes in economic activity which in turn creates boom or depression.
- ***The basic cause of boom or depression to Hawtrey is***

a) Increasing in the quantity of money raises the availability of bank credit for investment.

b) Thus, by increasing the supply of credit expansion in money supply causes rate of interest to fail.

- Lower rate of interest induces businessmen to borrow more for investment in capital goods and also for investment in keeping more inventories of goods.
- If the rate of interest is increased, borrowing gets reduced and as such the business activities gets reduced.

In short, Hawtrey's theory is nothing but inflation and deflation created by the rate of interest.

d) **Keyen's theory:**

- According to Keyen, the primary cause of ***cyclical fluctuations is marginal efficiency of capital (i.e.)*** changes in rate of profits on current investment outlay and also due to changes in the rate of interest.
- According to him MEC forms the vital factor in guiding investment ***(more or less)*** decisions of businessmen.
- But this factor depends on ***business men psychology.***
- This theory approaches very near to psychological theory.
- The rate of interest is a function of quality of money while the MEC depends upon

a) **The supply price of capital assets**

b) **The expected profits *(i.e.)* from such capital assets.**

- Investment outlay will generate multiple amounts of income and employment.

Weakness of the theory

- The theory does not throw away any light on the aspects of trade cycle.
- A sizable fall in the rate of interest will do helpful in investment. But in actual practice, rate of interest does not have any influence on investment.
- According to Keynes, MEC from the essential factor in guiding the investment decision of entrepreneurs. But this factor depends o the final analysis of the entrepreneurs ***(i.e.)*** the psychology of the investors.

SEE PAGE NO 235 AUJHA for extra notes

e) Von Hayek's theory (or) over investment theory

- According to Hayek business cycle, it is the result of ***over issue of credit at an artificially low rate of interest***. The market rates begin lower than the natural rate.
- A fall in the market rate of interest below the natural rate will lead to more investment and therefore an upward swing takes place.
- A rise in the market rate of interest over the natural rate will lead to fall in investment and downswing takes place.
- Change in money supply which causes a change in market failure of the banking system to keep the supply of money is constant is responsible for the business cycle.

f) Over savings (or) under- consumption theory:

According to this theory the business cycle is the result of over saving by which the richer class and under consumption by the poor classes.

- In a free capitalist society, rich have larger incomes. They save the income and automatically invest them as the richer class is unable to spend all income. This leads to **over- production of goods**.
- In the free capitalistic economy, majority of people are poor with low income and low prosperity to consume. Hence, there is a glut *(excess supply)* in the market leading to depression. ***(i.e.)*** supply will be there but low consumption.
- It assumes that all savings are automatically invested. But practically it is not.
- Mere saving will not lead to investment.
- This theory is inadequate to explain business cycles.

g) **Schumpeter's innovation theory**

- The theory stresses the role of aggressive businessmen who come along with new ideas, investment and innovation.
- Innovation should not be confused with inventions.
- It is only the application of new techniques of production, new materials or new methods of doing business.
- Innovation may consist of:

a) **Introduction of new product**

b) **Introduction of some new method.**

c) **Opening of a new market for the product.**

Characteristics of business cycle

1. **It occurs periodically.**

2. It is all embracing *(hold closely in your arms or include).*

- The business cycle implies that the depression will affect all industries in the entire economy and also affecting the economies of other countries.

3. It is wave like *patterns* *(business cycle has set of patterns)*

- Rising prices, production, employment which will become the features of the upward movement.

- Falling prices, employment will become the features of the downward movement.

4. International in character

- Once if it is started in one country it spreads to other countries through TRADE RELATIONS between them.
- ***(e.g.)*** if there is a recession in USA which is a large importer of goods from other countries, will cause a fall in demand for the imports of other countries.

5. Profits fluctuate more than any other type of income.

- Business cycle causes a lot of uncertainty for business man and makes it difficult to forecast the economic condition.
- During the period of depression, profit may even become negative and many businesses go bankrupt.

6. Inventories of goods

- When depression sets in, the inventories start beyond ***(i.e.) increase*** the desired level. This leads to cuts in production of goods.
- *(When we stock more goods would be wasted, so they cut the production at certain level).*
- When recovery starts, the inventories go below the desired level
- *(i.e.)* where all the stock will be sold and no stock would be available.
- This encourages business man to place more orders for goods whose production picks up and stimulates investment in capital goods.

7. Consumption of durable goods *(cars, houses, refrigerators)*

- Consumption of durable good**s** is affected mostly by the cyclical fluctuations.
- Expectations of entrepreneurs change quite often in making investment.

8. Consumption of non durable goods

- Consumption of non durable goods does not vary much during different phases of business cycle *(even if loss people have to eat)*

9. The cycles will be similar, but not identical *(same)*

10. It affects the whole economy

- Generally depression will affect all industries in the entire economy

11. It is a cumulative process

- The movements are cumulative in process.
- Once the upward movement starts, it creates future movements in the same direction by feeding on itself.
- Similarly, when downward movement starts, it persists ***(continue)*** in the same direction, leading to the worst depression till it is to gain an upward movement.

Control of trade cycle

- The trade cycle creates havoc *(a great destruction or disorder)* in the economy by

making fluctuations & instability.

- It has become the duty of the government to control the fluctuations caused by trade cycle & to ensure smooth economic activity.

The trade cycle cannot be controlled by a single operation. It consists of many sided

activities which are as follows

a) ***Monetary policy***

b) ***Fiscal policy***

c) ***Anti – cyclical budgeting***

d) ***Economic activity***

e) ***Tax rates***

f) ***Government involvement***

General equilibrium of all markets

- Economists **highlight** that a **free market** will promote **high rate of savings & investments, rapid economic growth & healthy productivity growth.**
- At the same time, many people worry that this same free market will lead the rich to become richer while the poor fall behind.

a) Free market

b) Capital markets

c) Government

d) Individual markets

a) Free market

- People **incomes** are determined by **rent, interest & wages.**
- **Competitive pricing** helps to solve the question of how goods are to be produced in effective manner.
- **Right price** is based on effective selection of inputs in production process.

b) Capital markets

- Capital & its return are determined by **2 fundamental** forces.
- **Demand for capital** results from productive production process.
- **People must be lending funds** to firms that will make the productive investment in productive process.
- Technology are brought into the society that people are willing to hold from consumption in the form of savings.

c) Government

- Prices are affected by **government policies**.
- **Well designed taxes** on high incomes & **efficient wage subsidies** to low wage workers will help to improve the economy growth, savings & investment.

d) Individual markets

- Supply & demand determine prices & quantities
- Demand curves are derived from marginal utilities of different goods.
- Cost of products & revenue are based on inputs & outputs to make profits.
- Revenue of firms are derived from production factors.
- Land, labour, or capital determine factor prices such as rent, wages & rates.
- Cost of different commodities lie behind their competitive supply

PRODUCT MARKET

Characteristic	Pure	Monopolistic	Oligopoly	Monopoly
Number of companies	Infinite	Many	Few	One
Similarity of product	Identical	Different	Standardized or Differentiated	Not Applicable
Ease of new firm entry	Very Easy	Relatively Easy	Very Difficult	Not Possible
Control over price	None	Some	Interdependent	Substantial
Non-Price competition (Advertising)	Industrial	Substantial emphasizing product differentiation	More for Consumer than Industrial Goods	Good Will Advertising
Examples	Agriculture	Clothes	Autos and Steel	Utilities

Factor market

- Factors (economic resources) are used to make goods and services sold in product markets.
- Four factor markets will be examined.

Factor	Income Received
1. Land	Rent
2. Labor	Wages
3. Capital	Interest
4. Enterprise	Profit

UNIT 4

Meaning of National income

National income has been defined by various writers from different angles.

1. Generally it refers to the money value of the flow of goods and services available annually in an economy.

2. National income is the total money value of goods & services produced in a country (i.e.) 1 Year.

3. National income is, the money value of all final outcome of all economic activities of the people of a country.

4. National income estimate which measures the volume of commodities and services turned out during a given period, counted without duplication.

5. National income is the value of goods and services produced during a given period counted without duplication.

6. Total income of the country is called 'national income'.

Concepts of national income

1. Gross Domestic Product- GDP
2. Gross National Product- GNP
3. Net Domestic Product- NDP
4. Net National Product- NNP
5. National Income- NI
6. Personal Income-PI
7. Disposable Personal Income- DPI
8. Personal savings

1. Gross Domestic Product- GDP

It is the money value of final goods & services produced in the domestic country during a year.

In other words GDP is the income generated (created) by the factors of production during a year within the country by its own resources. ***It does not include the income earned from abroad.*** (money earned by citizens in foreign country)

GDP = *Market value of goods & services produced by the residents in the country*

Plus (+) income earned in the country by foreigners

Minus (-) income received by residents of a country from abroad.

2. Gross National Product- GNP

Only our country income is calculated

Note *-when calculating total GNP* ***income earned in the country by the foreigners is reduced.***

GNP = GDP + Net income from abroad *(money earned by residents in foreign country)*

GNP = Market value of domestically produced goods & services

Plus (+) income earned by the residents of a country in foreign countries

Minus (-) income earned in the country by the foreigners. ***(foreign people will take their money).***

3. Net Domestic Product- NDP

It is the sum total of money value of final goods & services produced in the country in a year ***excluding*** depreciation cost.

Depreciation

Refers to all those expenditure undertaken by the producers to replace the worn out *(damaged)* parts of the capital goods like machinery, tools, equipments & buildings used up in the production of goods & services.

NDP = GDP - depreciation

4. Net National Product- NNP

NNP = GNP – depreciation.

The sum total of money value of final goods & services produced in an economy in a year excluding deprecation cost. It includes income from abroad.

5. National Income- NI

NI = NNP – indirect taxes + subsidies

The firm have to pay indirect taxes on goods & services to the government. These taxes have to be deducted from the NNP to find out total national income.

Direct taxes- people pay

Indirect taxes - firms pay

Subsidies - a some of money given to keep the price of some thing low ***(government expenditure)***

The government levies indirect taxes on goods sold on market. These taxes are collected from firms. At the same time, the government also provides subsidies to the firms which sell the goods fixed by the government. ***Selling the goods at a price fixed by the government will cause loss to the firms*** *when the firms are not selling the goods at market prices.* ***Such a loss is compensated by subsidies given by the government.***

6. Personal Income-PI

PI = NI - (corporate profits + social security contributions + Corporate income tax) + transfer payments

PI = The actual income received by the individuals or households in the country during the year.

Transfer payments = (unemployment allowances, old age & widow pensions, relief payments, interest payment on public debts, etc)

7. Disposable Personal Income - DPI

DPI = PI – direct taxes

The whole of PI is not available to individuals for consumption as they have to pay direct taxes. The part of PI which is left after payment of personal direct taxes is called DPI

8. Personal savings

PS = DPI - personal consumption expenditure

What we save from personal income without adding consumption is known as personal savings.

GDP	**000**
(-) Depreciation	**000**
NDP	**0,000**
GNP	**000**
(-) Deprecation	**000**
NNP	**000**
(-) Tax	**000**
(+) Sub	**000**
NI	**000**
(-) Cop profits, contribution	**000**
(+) Dividend	**000**
(+) Transfer payment	**000**
PI	**000**
(-) Direct tax	**000**
DPI	**000**
(-) Consumption expenditure	**000**
PS	**0,000**

Methods of computation of national income

There are 3 methods of computation of national income

1. **Product method (or) Census method (or) Value added method (or) Production method (or) Output method**
2. **Income method**
3. **Expenditure method**

1. Product method (or) Census method (or) Value added method (or) Production method (or) Output method

- The total products produced in the economy are calculated for a year.
- Under this method, the economy is divided into different individual sectors such as agriculture, fishing, mining, construction, manufacturing, trade & commerce, transport, communication & other services.
- The net value by each ***productive*** enterprise as well as by each industry or sector is estimated.
- In order to arrive net cost by an enterprise we have to subtract the following from the value of output of an enterprise.

a) Deprecation *(Capital consumption)*

b) Indirect taxes

c) Intermediate consumption *(such as raw materials, fuels purchased from other firms)*

- Here care must be taken to avoid double counting
- While estimating national income through product method certain precautions should be taken *(i.e.)* should be added or deducted.

2. Income method

- Income is calculated by adding up the rent of land, wages, salaries of employees, interest on capital, profits of entrepreneurs & income of the self employed people.
- Income is obtained by summing up of the income of all individuals of a country.
- While estimating national income through income method certain precautions should be taken (i.e.) which should be included & not included.

3. Expenditure method

- Expenditure method arrives income by adding up all expenditure made on goods & services during the year.

a) Expenditure by consumers on goods & services

b) Expenditure by private manufacturer on capital or investment goods.

c) Expenditure by government on consumption as well as capital goods.

d) Money received from export of goods & services.

- While estimating national income through expenditure method certain precautions should be taken (i.e.) which should be included & not included.

National product, National income, National expenditure

1. National product
2. National income
3. National expenditure

NP = NI = NE

1. National product

It consists of all the goods & services produced by the community & exchanged for money during a year. It does not include goods & services which are not paid for such as hobbies, house wives services charitable work etc.***(e.g.)*** value of all goods & services produced by the firms in the economy.

2. National income

It consists of all the income in cash & kind accruing to the factors of production. It represents the total income flow by the economy during the year.***(e.g.)*** value of all incomes earned in making these goods & services

3. National expenditure

This represents the total spending or outlay of the community on the goods & services of all types (capital as well as consumption) produced during a given year.***(e.g.)*** one's man expenditure becomes other man's income in the economy.

Importance (or) uses to calculate national income (or) use of national income data

1. Gives an idea of the structure of the economy (*understanding performance how much % of rate of growth has been achieved by our country) to measure economic welfare.*
2. Compare the international levels *(comparing the current & last year income to know about development)*
3. Planning economic development of the country *(for future decisions)*
4. Regional / economic development *(rural area development)*
5. Allocation of resources *(make use of resources)*
6. Potential area for growth *(to know which area has more growth, or invest money to increase growth)*
7. Development activities *(structural changes)*
8. Guide the government to formulate plans *(policy)* and fix targets *(budgets)*
9. Helps to make international comparisons, *(standard of living of people)*
10. Helps to study the rate of growth of an economy
11. Provide a reasonable basis for forecasting future economic events

Difficulties (or) limitations (or) problems involved in estimation of calculating national income

1. Double counting *(while evaluating national income **no commodity or services** should be counted twice. **e.g.** sugarcane – sugar – ice creams)*
2. Non- monetizes economy *(still barter system is followed in some rural areas)*
3. Stage of economic activity *(Production, distribution, consumption)*
4. Self consumption *(self purchase which is not known **e.g.** son & father)*
5. Lack of data *(showing less data to reduce taxes by firms**) coverage of commodities & services***
6. Earning through illegal activities *(like smuggling, black marketing, gambling etc)*
7. Unwillingness *(not willing to give a particular information)*
8. Inefficiency *(not being much efficient)*
9. Inventory value *(not giving correct value)*
10. Depreciation calculation
11. Accuracy & imputed value *(fair method of calculation)*
12. Non-availability of reliable statistics *(accurate & correct information regarding consumption, investment & savings of rural as well as urban population is not available)*
13. Lack of accounting habit *(in India most of the producers do not follow the practice of keeping regular accounts because of illiteracy)*
14. Lack of uniform basis *(there is no uniformity in evaluating commodities & services in terms of money)*
15. Transfer problems or payments *(transfer of money when reducing taxes)*
16. Inter – country comparisons

Circular flow of income

The modern economy is a monetary economy. In the modern economy, money is used in the process of exchange. Money has removed the difficulties of barer system. Thus money acts as a medium of exchange.

1. Circular flow of income TWO- Sector economy (income & expenditure)
2. Circular flow of income THREE- Sector economy (income & expenditure with government)
3. Circular flow of income Four- Sector open economy (income & expenditure with government & foreign sector)

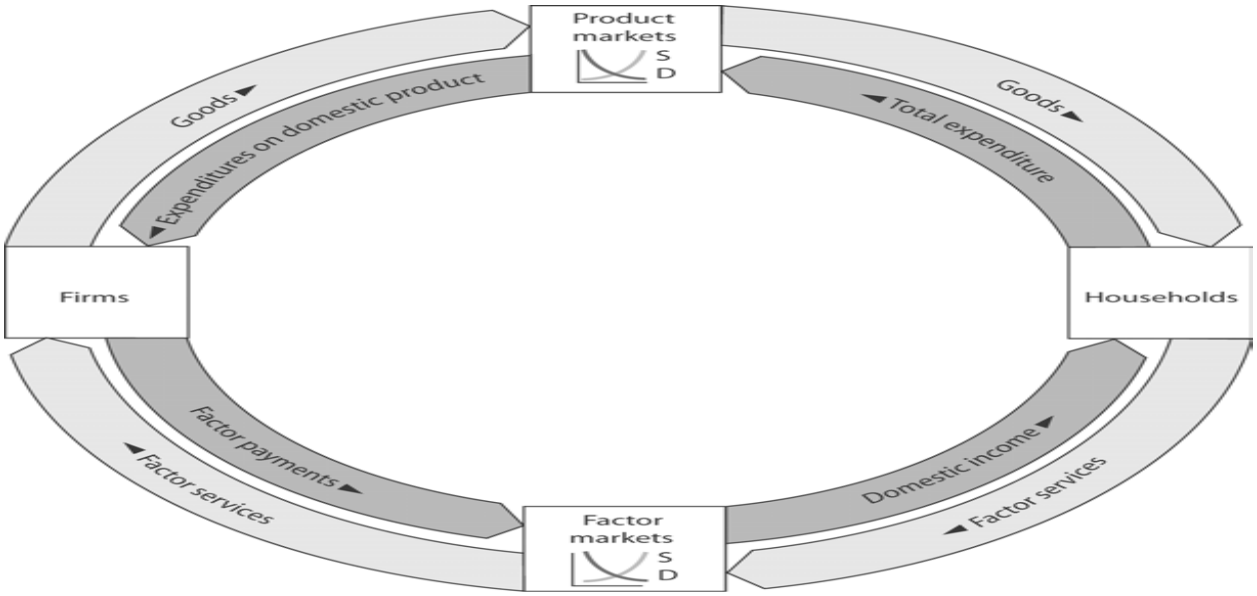
1. Circular flow of income TWO- Sector economy (income & expenditure)

Two basic principles on which circular flow of income are explained

1. In any exchange activity, the income received by the producer ***is equal*** to the amount spent by the consumer.
2. Goods & services produced, ***flow in clock wise direction*** & money payments to purchase these goods ***flow in antic clock wise direction***. These activities causes circular flow.

EXPLAINATION

- In any economy both production & consumption are considered to be the basic economic activity.
- We shall explain the flow of income in an economy by taking a model of a simplified economy in which only two sector operates *(i.e.) household* sector & producer's sector or firm.
- The upper loop shows flow of goods & services in the economy.
- Household supply services to the firm.
- Business firms by utilising the services produce goods & services.



- The firms supply goods to household as a reward to their services. (i.e.) goods flow from firms to households. *(when money was not introduced).*
- Such flow of goods & services is described as real flow in the economy.
- In the modern economics*(when money has been introduced),* factor payment are not made in kind but in terms of money.
- *Factor payment (i.e.) house holds receive their reward in the form of money as shown in the lower loop.*
- House holds utilise this money to purchase goods & services produced by the firms (thus money flows from firms to house hold & back to firms.
- Since the income flow in a circular way between firms & households, this flow is also known as circular flow of income.
- In this model only consumption expenditure of the house hold & investment expenditure of firms are included as shown in the following equation.

$$Y = C + I$$

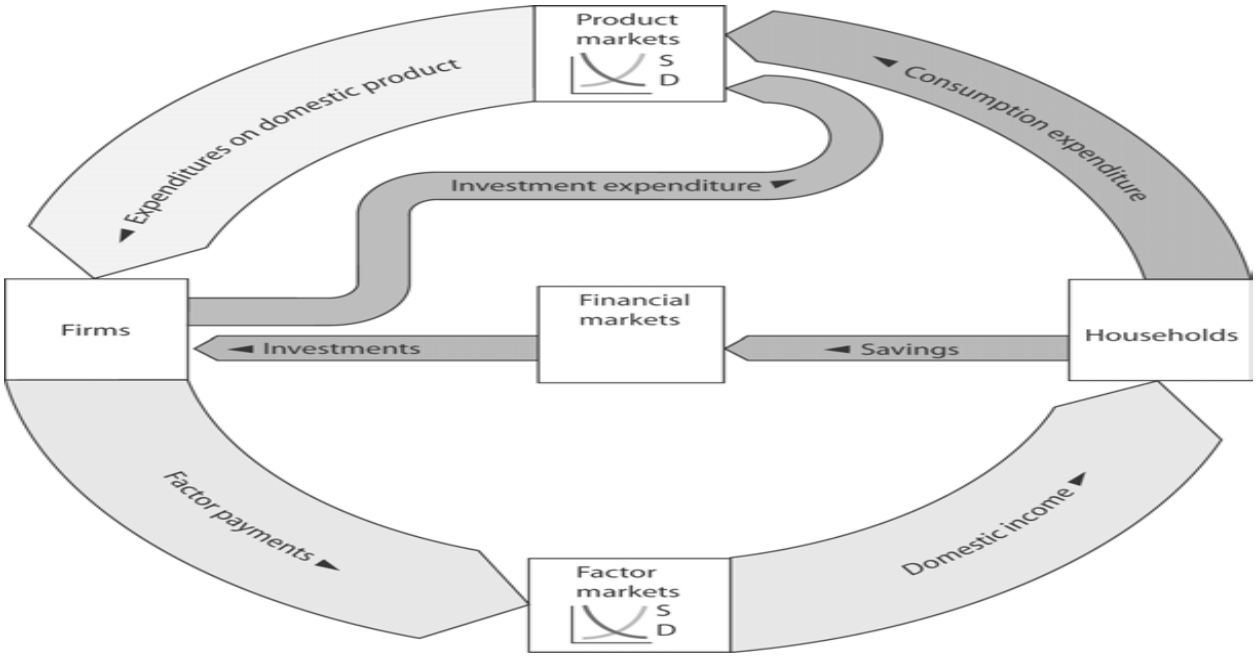
Y = National income

C = Consumption expenditure

I = Investment expenditure.

Circular flow of income TWO- Sector economy with saving & investment

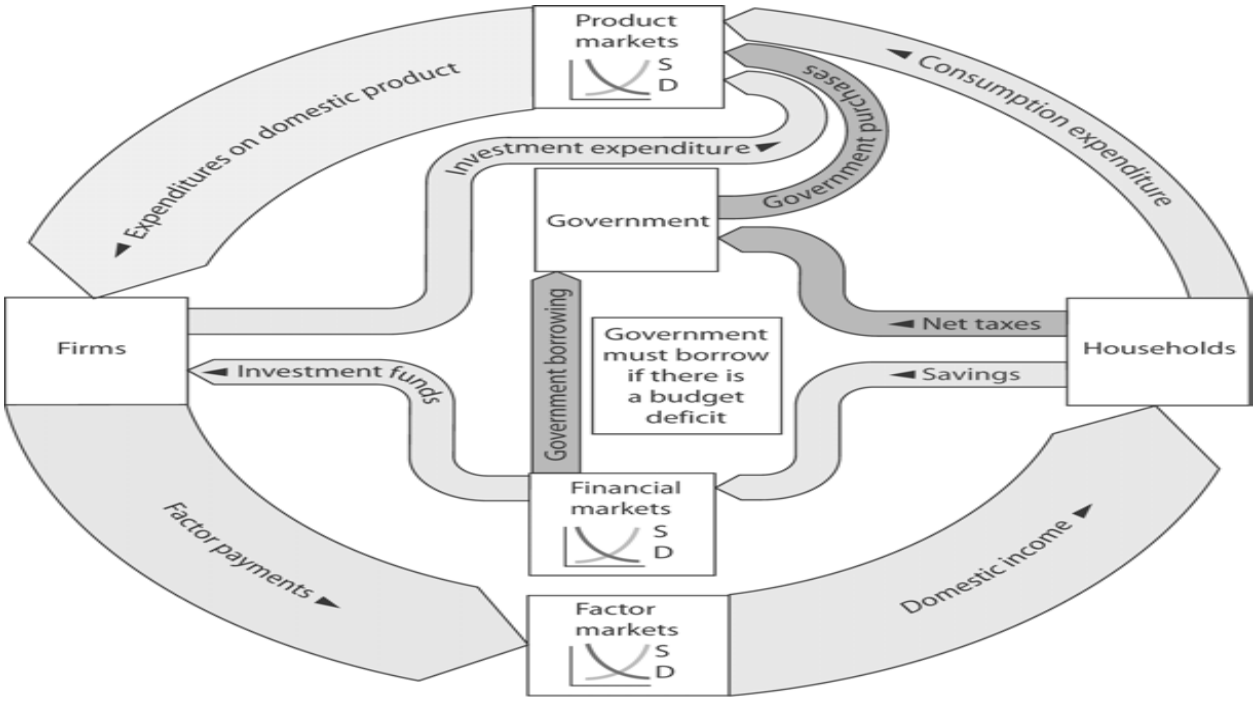
- In the above analysis of the circular flow of income we have assumed that all income which the house hold receive, they spend it on consumer goods & services.
- If house holds save a part of their income, their saving will affect money flow in the economy.
- When house holds save in ***financial markets*** their expenditure on goods & services will decline.
- Savings reduce the flow of money ***(profits)*** to the business firms & will cause a fall in income for them.
- It is business man who borrow from the financial markets for investment in goods such as machines, factories, tools etc. Firm spend on investment in order to expand their productive capacity in future.



2. **Circular flow of income THREE- Sector economy *(income & expenditure with government)***

The three sector model including government sector is explained

- Government plays a significant role in the economic life of any country. Government acts both as a consumer & producer in the modern economics.
- It has its own source of income & also it has to incur expenditure in a number of ways.
- Government collects taxes both from the firms & the house holds.
- Tax is the major source of income for the modern government. Withdrawing some amount from the households & the firms.
- A government spends the income on a number of activities which are so designed to benefit both the households & the firms. *(for e.g.)* ***like old age pensions, sickness benefit, housing, unemployment***. This type of activity will satisfy the needs of the society.
- Likewise it is also possible that the government may incur expenditure to render some services to the firm sector. *(e.g.)* the government may decide to subsidies *(pay part of the cost for producing something)* the production of few important commodities. Similarly government ***may purchase*** goods & services from the firms for the use of society.



- Another method of financing government expenditure is borrowing from the financial market.
- After including the government spending, the equation will be

$$Y = C + I + G$$

Y = National income

C = Consumption expenditure

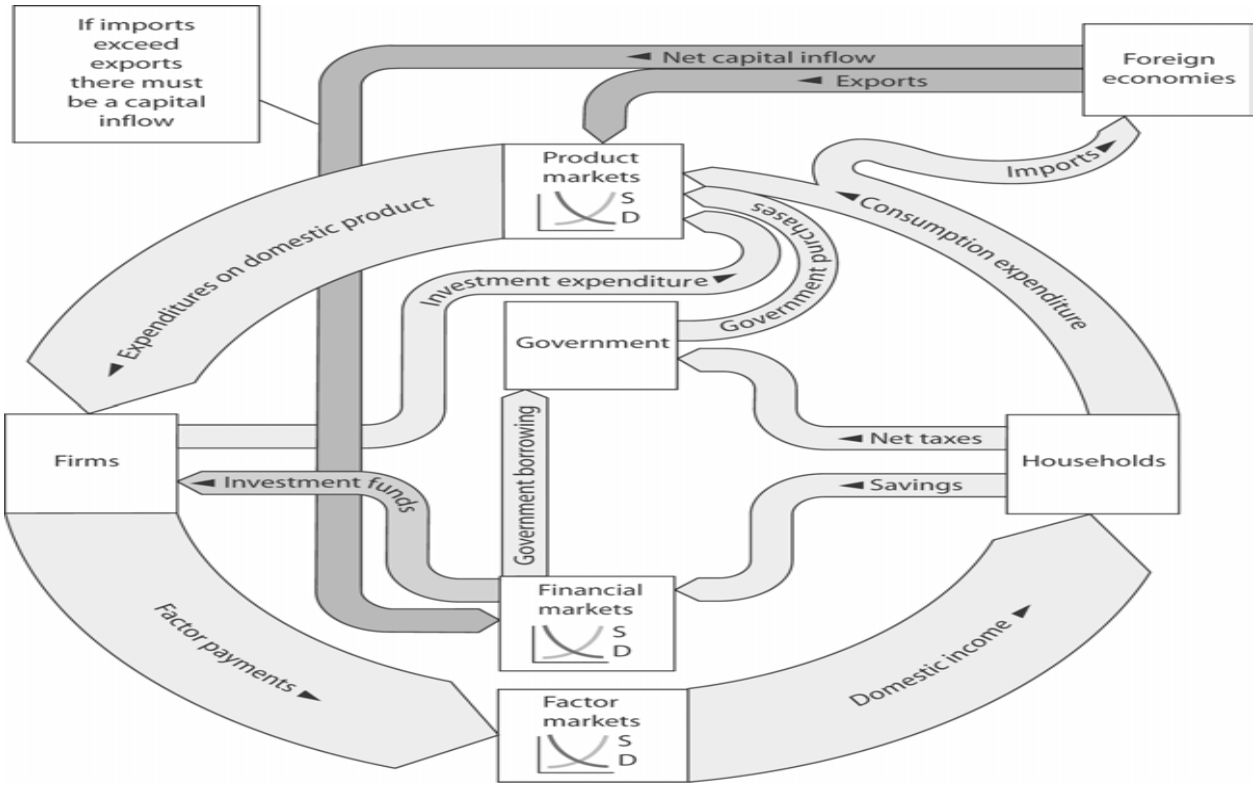
I = Investment expenditure.

G = Government expenditure

3. Circular flow of income Four- Sector open economy *(income & expenditure with government & foreign sector)*

- The four sector model includes foreign sector in addition to household, business enterprises & government sector in circular flow of income.
- Export causes an injection of money into the circular flow of money. When foreigners buy goods & services produced by domestic firms they are ***exports*** in circular flow of money.
- ***Imports*** are considered as leakages from the circular flow. They are expenditure incurred by the household sector to purchase goods from foreign countries.
- Take an *(e.g.)* household sector that buys goods imported from abroad & makes payment to the foreign firms thus is considered leakage from the circular flow of money.
- The household may receive transfer payments from the foreign sector for the ***service rendered*** by them in foreign.

The business firm export goods to foreign countries & get receipts from them. Such activities bring fresh injection of money in the circular flow. When firms purchase goods from the foreign firms & make payment to them, it causes leakage in the flow of money.



- Apart from this domestic firms also receive royalties, *(a sum of money)* interest, dividends, profits for investment made in foreign countries.
- Domestic firms also make payments for imports of machineries, capital goods, raw materials, consumer goods & services from abroad. Such import causes leakages for the circular flow.
- Like business firms, the government sector also makes payment for the goods imported & receive payment for the goods exports to foreign countries.
- Inclusion of foreign sector in the income equation will be shown as

$$Y = C + I + G + (X - M)$$

Y = National income

C = Consumption expenditure

I = Investment expenditure.

G = Government expenditure

X = Denotes income through exports

Y **=** Payments for imports

(X-M) **=** Difference between export & import gives net income earned from abroad.

- Net income earned from abroad may be minus or plus depending upon the size of export & import.
- If the export is greater than the import, net income would be *(positive),* on the other hand if the export is lower than the import then net income earned would be *(negative).*

Factors determining national income

There are number of factors which determines the size of the national income in a

country.

1. Quality & quantity of factors of production
2. The state of technical known how
3. Political stability.

1. Quality & quantity of factors of production

- Quality & quantity of ***factors of production*** is one of the most important determinants in national income.
- The quality & quantity of **land** determines the quality & quantity of agricultural production & the national income.
- The quality & quantity of **labour** determining upon intelligence, education, training, etc. determines the volume of industrial production.
- The quality & quantity of **capital** is one of the greatest determinants on total output.
- The quality & quantity of **organisation** ability is also an important element determining the size of national income of a country.

2. The state of technical known how

- This is another important determinants operating in our country.
- A country with a poor technical knowledge cannot have a large size national income, as it will be incapable of exploiting its resources efficiently.
- The extent of technical known how & technology of production determine the capital formation in the country.

- Advanced technology will go in a long way in increasing the size of national income or economic development.

3. Political stability

- The economic development of several countries, have been hindered *(delayed)* in the past by political stability.

The key to develop & increase in national income rest ***(stopped)*** on important factors like ***capital formation, technical, political stability etc***. In backward economies, all these factors will be deplorably *(shockingly bad)* lacking & the size

of the national income will be small.

Factor determining national income in different sectors

1. Determination of national income TWO- Sector model (income & expenditure)
2. Determination of national income THREE- Sector model (income & expenditure with government)
3. Determination of national income FOUR- Sector model (income & expenditure with government & foreign sector)

1. Determination of national income TWO- Sector model (income & expenditure)

The two sector model involves only the household sectors & the business sector.

- There are only two sectors in an economy

a) The household sectors

b) The business firms

c) ***Household*** own all the factors of production (L,L,C) & sells factor services to the business firms to make their living. They spend a major part of their income on (consumer goods & services) supplied by the business firms.

b) ***Business firms*** on the other hand, hire factor services from the house holds & sell their entire product to the households.

- There is no government & therefore there is no tax & no government expenses.
- The households consume a part of their income & they save a part which goes to the investment.

- The two sector economy is a closed economy there is no foreign trade.
- In the business sector, there is no corporate (foreign) savings.
- All prices, including factor prices remain constant.

The equilibrium of national income is determined at a level where ***aggregate demand = aggregate supply***

1.) Aggregate demand

- It is the total expenditure which all households & business firms want to make on goods & services.
- In a two sector model the aggregate demand consists of 2 components
  - There is consumption demand
  - There is a demand for capital goods which is called investment demand.
- Thus by aggregate demand we mean how much expenditure the households & the entrepreneurs are undertaking on consumption & investment.

Aggregate demand = Consumption demand + investment demand

- ***Consumption demand***

As income increases, consumption demand will also increase. *(in other words)* consumption demand is a function of income.

- **Investment demand**

Investment demand depends on two factors

1.) Marginal efficiency of capital *(investment)*

MEC means the expected rate of profits which the business community hopes to get from the investment in capital assets.

2.) Rate of interest

2.) Aggregate supply

The aggregate supply means the total money value of goods & services produced in an economy in a year. ***The supply or output of final goods & services in a year.***

- It is important to note that aggregate supply is the same thing as ***national product*** as both represents the value of output of final goods & services produced.

- The ***aggregate supply of goods of an economy depends upon the stock of capital, the amount of labour used & the state of technology.***

Determination of national income TWO- Sector model *(saving & investment approach)*

- We have seen how equilibrium level of national income is determined by aggregate demand & aggregate supply.
- The equilibrium level of national income is established at the point where ***aggregate demand = aggregate supply***
- But there is an alternative method for the explanation of the determination of national income. This alternative method explains the determination of national income directly by saving & investment.
- At a certain level of national income, ***investment by the entrepreneurs is more than savings by the people***, this would mean that aggregate demand is greater than aggregate supply. This would induce *(bring)* the firm to increase production, raising the level of income & employment
- The result will be that national output will be increased on account of which national income will go up.

Further when at any level of income ***investment is less than savings***, it means that aggregate demand is less than aggregate supply.

- This will induce *(bring)* the entrepreneurs ***to produce more goods***. As a result the entrepreneurs will not be able to sell their entire output at given prices. The result will be that output will be reduced which will result in the reduction of national income.

2. Determination of national income THREE sector model *(income*

& expenditure with government)

- In our analysis of two sector model we have explained how the level of national income is determined by the consumption function & investment.
- In two sector analysis we did not take into account the role of government in the determination of national income.
- Inclusion of government into this model **introduces three new variables** to the model ***(i.e.)*** government expenditure, taxes & transfer payments.
- In this system, the government imposes only direct taxes on the households; & it spends on buying services from the households sector & makes transfer payments, pension to the household sector, & subsidies to business sector.

a) Government expenditure

b) Taxes

c) Transfer payments

a) Government expenditure

- However in all economies today including the capital economies such as those of U.S.A, Britain, Japan the government expenses on goods & services plays an important role in determination of national income.
- It is important to note here that the government expenditure on such things as ***highways, public parks, education, health services*** is governed by the consideration of promoting social welfare, employment & growth in the economy & does not depend on the level of income of the economy.
- Therefore in this model of income determination, government expenditure is treated as expenditure.

b) Taxes

- Now in a three sector model, we analyse the impact of government expenditure when finances expenditure, **the government levies a lump sum of tax**. In this case the government expenditure **equals** revenue from lump sum tax its budget will be in balance.
- On the other hand if government expenditure exceeds tax revenue there will be a ***deficit budget.***
- Further if tax revenue is more than its expenditure, government will have a ***surplus budget***. We are here concerned with the impact of government expenditure & taxation in determination of national income

c) Transfer payments

- We have explained about the determination of national income in the three sector economy when government expenditure is financed by imposition of lump sum tax.
- We now extend our model to include transfer payments & see how they affect determination of national income.
- ***Transfer payments*** are payments to the people by the government for which it receives no services or goods in return from them.
- Transfer payments are made by the government to promote social welfare. Unemployment allowances, poverty relief grants, social security contributions, old age pensions are some important examples of transfer payments.

- ***(Transfer payments are opposite of tax)*** Where as tax reduces disposable income of people, transfer payments increases their disposable income.
- Transfer payments are financed through tax, then transfer payments become a part of government expenditure which reduces disposable income.
- Since transfer payments increases the disposable income of the people, they will increase their consumption expenditure depending on their propensity *(tendency)* to consume.

4. Determination of national Income FOUR - sector model *(income & expenditure with government & foreign sector)*

- In the four sector model of determination of national income, we ***add*** the foreign trade sector to the three sectors namely households, firms & government.
- Foreign trade ***(i.e.) volume of exports & imports*** of a country also affects the level of national income of a country.
- ***(For e.g.)*** the ***export*** of India represent the foreign demand & generates income for Indian people.
- On the other hand, ***imports*** represent the demand for foreign goods by the Indians & generate income for the people of other countries.
- It therefore follows that national income will depend on the net exports ***(i.e.)***

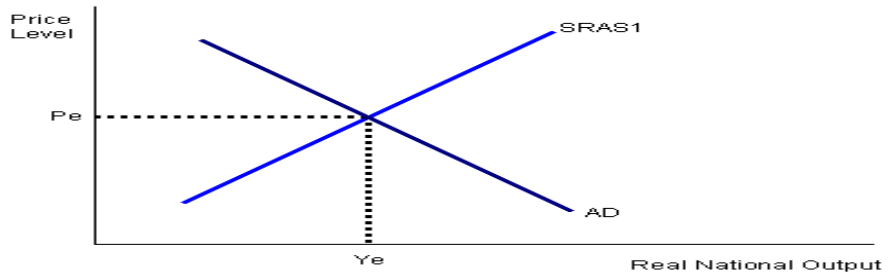
(X- M). The export & import of a country depend to a greater extent on the level of economic activity **(i.e.)** level of output & income of the country.

- When the growth of industrial output in India is rapid *(quick),* it will generate greater demand for imported materials.
- On the other hand, the higher industrial growth would also cause our exports to rise *(there is demand for own goods in abroad)*
- Increase or decrease in aggregate expenditure depends on the net export ***(i.e.) (X – M).***
- If the net exports are positive there will be increase in aggregate expenditure of the country *(i.e.)* improves our country.
- On the other words, if the net exports are negative, there will be decrease in aggregate expenditure.
- This model of income determination on exports & imports are considered as independent income.

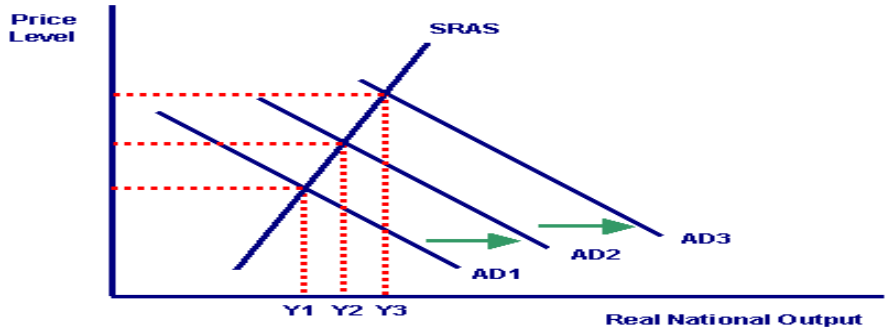
Macroeconomic Equilibrium

- *We now put aggregate demand and supply to together to consider the idea of equilibrium for the economy.*
- **Macroeconomic equilibrium** for an economy in the short run is established when **aggregate demand** intersects with short-run **aggregate supply**. This is shown in the diagram below

short-run aggregate supply (SRAS)

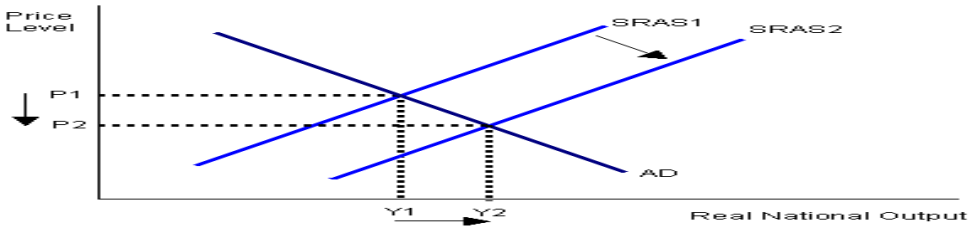


- At the price level Pe, the aggregate demand for goods and services is equal to the aggregate supply of output. The output and the general price level in the economy will tend to adjust towards this equilibrium position.
- ***If the price level is too high, there will be an excess supply of output. If the price level is below equilibrium, there will be excess demand in the short run.*** In both situations there should be a process taking the economy towards the equilibrium level of output.
- Consider for example a situation where aggregate supply is greater than current demand. This will lead to a build up in stocks (inventories) and this sends a signal to producers either to cut prices (to stimulate an increase in demand) or to reduce output so as to reduce the build up of excess stocks. Either way - there is a tendency for output to move closer to the current level of demand.
- There may be occasions when in the short run, the economy cannot meet an increase in demand. **This is more likely to occur when an economy reaches full-employment of factor resources.** In this situation, the aggregate supply curve in the short run becomes increasingly inelastic.
- The diagram below tracks the effect of this. We see aggregate demand rising but the economy **finds it difficult to raise** (expand) production. There is a small increase in real national output, but the main effect is to put upward pressure on the general price level. ***Shortages of resources will lead to a general rise in costs and prices***



Impact of a change in aggregate supply

- Suppose that increased **efficiency** and **productivity** together with lower input costs (e.g. of essential raw materials) causes the short run aggregate supply curve to shift outwards. (i.e. an increase in supply - assume no shift in aggregate demand).
- The diagram below shows what is likely to happen. ***AS shifts outwards and a new macroeconomic equilibrium will be established. The price level has fallen and real national output (in equilibrium) has increased to Y2.***

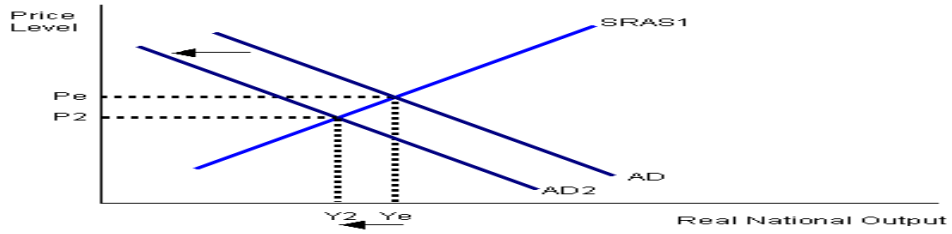


- Aggregate supply would shift inwards if there is a rise in the **unit costs of production** in the economy. For example there might be a rise in **unit wage costs** perhaps caused by higher wages not compensated for by higher labour productivity.

- **External economic shocks** might also cause the aggregate supply curve to shift inwards. For example a sharp rise in global commodity prices. If AS shifts to the left, assuming no change in the aggregate demand curve, we expect to see a higher price level (this is known as cost-push inflation) and a lower level of real national output.

Impact of a shift in aggregate demand

- In the diagram below we see the effects on an **inward shift in aggregate demand** in the economy. This might be caused for example by a decline in business confidence (reducing planned investment demand) or a fall in United Kingdom exports following a global downturn. It might also be caused by a cut in government spending or a rise in interest rates which leads to cutbacks in consumer spending.



- The result of the inward shift of AD is a contraction along the short run aggregate supply curve and a fall in the real level of national output. This causes downward pressure on the general price level.
- If aggregate demand shifts outwards (perhaps due to increased business confidence, an economic upturn in another country, or higher levels of government spending), we expect to see both a rise in the price level and higher national output.

Multiplier

Meaning

Multiplier is a kind of ratio, which expresses the relationship between ***the increase in national income & the increase in investment*** *which induces the raise in Income*

- *A large change in income for a small change in investment is called as multiplier.*
- The total effect of an increase in investment, on income is called the ***multiplier.***

➢ A multiplier can be defined as " the change in investment is multiplied in order to present us with the resulting change in income"

Generally, an increase in investment in the economy, will increase the income of the people & this will be an additional investment.

Types of multiplier

1. Simple multiplier
2. Super multiplier
3. Static multiplier

4. Dynamic multiplier
5. Employment multiplier
6. Consumption multiplier
7. Price multiplier
8. Budget multiplier

1. Simple multiplier

A ***small change*** in income is called simple multiplier. Where the investment is simplified*(very less investment is made).*

2. Super multiplier

If ***investment curve is upward sloping*** then it will be super multiplier. *(when there is large income)*

3. Static multiplier

*Static multiplier is known by different names like comparative static multiplier, simultaneous multiplier, logical multiplier, timeless multiplier & lag less multiplier.*The concept of static multiplier implies that ***change in investment causes as change in income***. It implies that the moment a rupee is spent on investment project, income increases

(e.g.) *government investment*

4. Dynamic multiplier

It is known as period & sequence multiplier.

The concept of dynamic multiplier recognises that ***" change in income results to change in investment"*** **(e.g.)** business investment.

5. Employment multiplier

It tells about effects of public investment on aggregate employment.*When people demand more consumer goods, it leads to demand for consumer goods*

industries which expands employment.

6. Consumption multiplier

*People increase their **purchasing power on consumer goods** then consumption increases.*

7. Price multiplier

*Price multiplier can be defined as **" the ratio of the ultimate increase in the general price level to, the initial increase in prices on account of the increased money supply".***

8. Budget multiplier

*When **government spends money on nation building activities** it will have a multiplier effect on the aggregate income.*

Investment multiplier

Investment multiplier is the coefficient relating to an increment of investment to an increment of income"

(i.e.) K = Δ Y / Δ I

Where

Y = income

I = investment

Δ = change (increment or decrement)

K = multiplier

Assumptions of multiplier

- The MPC is constant where there is no change *(i.e.)* do not decrease.
- Consumption is a function of current income *(when no consumption then no income)*
- There should be net increase in investment *(make note that investment increases)*
- An increase in investment instantaneously leads to a multiple increase in income.
- Consumer goods are available in response to effective demand for them *(if no goods are available then there will be no demand, if no demand then no investment)*
- Other resources of production are also easily available within the economy *(make note that even other resources are readily available)*
- There are no change in prices *(where investment should not be effected)*

- Fiscal & monetary policy remains stable, so that they do not affect the propensity to consume.
- There is a closed economy *(a closed economy implies absence of international trade).*

Importance of multiplier

1. Investment

The multiplier theory highlights the important of investment. A fall in investment leads to a decrease in income & employment.

2. Business (or) Trade cycle

When there are fluctuations in the level of income due to variations in the rate of investment, the multiplier process throws a spot light *(a lamp projecting a strong beam of light on a small area)* on the different phases of the trade cycle.

3. Savings

It helps to bring the equality between savings & investment. *(When there is savings then there will be investment).*

4. Formulate economic policy & planning

a) To achieve full employment

The amount of investment to be injected into the economy to remove unemployment & achieve full employment

b) To control trade cycle (fluctuations)

Can control boom & depression in a trade cycle on the basis of multiplier through investment.

c) Deficit finance

(Deficit) Government spend funds raised by borrowing rather than spending from

taxation for investment.***(i.e.)*** *when tax amount are very less government raise funds from outside.*

d) Public investment

Public investment refers to the expenditure on public work & other work meant to increase public welfare.

Limitations of multiplier

1. Availability of consumer goods

(The process of income generation is subjected to the availability of consumer goods).

If, with a rise in income, ***consumer goods are available in sufficient quantity***, the process of income generation would be strengthened and multiplier will have high value. If there is a shortage on consumption goods, income recipients will not be able to spend more on consumption resulting in a ***decline in the MPC*** & hence the multiplier.

2. Maintenance of investment

In order to achieve a high value of multiplier, it is necessary that the increments in investment are ***repeated in regular time intervals***, then the national income can be raised. The multiplier effect would be impaired because a decline in investment in some other sector may result in greater decline in national income.

3. Closed economy

Working of the multiplier depends upon the fact whether economy is closed or open. A closed economy implies absence of international trade. ***More imports over exports act as a leakage*** on the income.

4. Availability of resources

Smooth & better working of multiplier also depends upon the availability of other factors & resources of production, ***(for e.g.)*** *raw materials, equipment etc.*

5. Constant prices

It assumes that there is ***no change in prices*** of commodities & raw materials, etc. If the prices go up consumption will go down & value of multiplier will be effected.

6. Full employment

The output, income & employment will expand as a result when there are resources in the economy & full employment level is not reached. But once the full employment level has been attained ***output & employment will stop expanding.***

7. Effect of consumption & investment

The value of the multiplier would be greater & achieved earlier if both the effects are taken into account ***(i.e.) consumption & investment.***

8. Multiplier periods

Lapse of time between expenditures on consumption may be called the multiplier period. In other words, ***it is the period during which the receipt of new income includes secondary expenditure on consumption***. Consumers receive additional income but ***do not re-spend it immediately.***

Leakages of multiplier

1. **Savings** *(Increase in savings)*

Saving is the most important leakages of multiplier process

2. **Debt cancelation**

If a part of increase income *(profits)* is used to repay to bank, instead of spending it for future consumption.

3. **Price inflation** *(Increase in price)*

Inflation leads to increase in investment. A rise in price of consumption goodimplies increased expenditure on them *(for business people)*

4. **Net imports**

If increased income is spent on the purchase of imported goods it acts as a leakage out of the domestic income stream. Such an expenditure fails to affect the consumption of domestic goods

5. **Undistributed profits** *(holding of idle cash balance)*

If profits accruing to companies are not distributed to the share holders in the form of dividend, it is the leakage from the income stream (all incomes are not spent by the business)

6. **Taxation**

Taxation policy is also an important factor in weakening the multiplier process.

7. **Purchasing of existing wealth**

Another kind of leakages in the multiplier process arises when people spend the whole or part of their income on purchasing second- hand consumer durables like hares, bonds & so on then the value of multiplier reduces.

8. **Public investment**

If the increase in income as a result increases in investment by public may fail to induce *(bring)* private enterprise to spend for future investment.

Accelerator theory of investment

Meaning

The concept of multiplier is not sufficient to explain the aggregate income. Therefore, Keyens had explained in this principle.

Accelerator (or) the principle of acceleration is another important tool in economic analysis.

Multiplier & Accelerator are parallel concepts. The multiplier shows the effect of change in invesment on consumption & income, whereas the accelerator shows the effect of change in income & consumption of investment.

Multiplier explains how the consumption depends on investment.

Accelerator explains how the investment depends on consumption.

- The acceleration is an *important tool to explain* how an increased demand for consumption goods in the economy results in demand for capital goods which brings a stimulus to the economy.

The post- Keyensian in investment theory, however recognises the fact that the relationship between *income and investment* is a two way relationship.

(i.e.)

1. investment and income are interdependent *(dependent on each other)* and
2. the level of investment depends also on the level of income or output.

- The relationship between income and investment is called acceleration principle *(or)* accelerator theory of investment

(when income or consumption increase, investment will increase by a multiple amount. When income and consumption of the people increase, then greater the amount of the commodities will have to be produced).

- Acceleration principle is concerned *with the size of the capital* rather than the investment.
- Accelerator theory of investment describes the relationship between the change in capital and the change in the level of output.

The relationship between capital and output is defined as capital-output ratio *(i.e.) del K/del Y*

To produce a given amount of output, it requires a certain amount of capital. The required amount of capital to produce output will be given by the following equation:

$Kt = vYt$

Where

Kt - stands for the stock of capital

Yt - for the level of output or income

V - for capital output ratio

A glance at certain columns will show that *with a change in output, investment will increase by a multiple of* it. This shows that acceleration principle is working powerful in the economy.

If the accelerator is the only force, then we shall have too much of Instability in the economy. In real life we find that there are limits to instability both in the upward as well as in the downward direction. So that fluctuations in economic activity or what are called business cycles have a peak as well as a bottom.

Assumptions of accelerator theory of investment

The successful operation of the accelerator depends upon the followingassumptions & conditions

- **All firms have production function**
- Factors of production are homogeneous *(same)*
- Factor market is competitive and prices are given
- Firms produce with least- cost combination of inputs

- There is no excess production capacity
- Firms calculation about the future demand is fairly accurate
- There is no financial constraints and funds are easily available
- The nature of demand for consumption goods should be permanent
- Accelerator depends on smooth supply of money & credit

It requires various resources & factors of production to meet demand

- The working of accelerator is possible only when, the ratio between the output of consumer goods & the capital equipment remains constant.
- *When there is no excess capacity of capital goods industries the accelerator will not operate.*
- *When there is unused or excess capacity in the consumer goods industries, the acceleration principle will not operate.*
- Accelerator will operate smoothly in the period of rising demand
- During the period of declining demand the working of accelerator is limited.

Advantages of accelerator

1. It helps us to understand the process of *income generation & its utilisation*
2. It explains how *small increase in one sector* can be magnified & spread throughout the economy
3. It helps us to understand *how capital goods industries* are subject to more violent fluctuations than the consumer goods industries.

Limitations of accelerator principle

1. **Accelerator cannot work properly in the case of fall in demand beyond certain level** *(It works well in the period of rising demand, but during the period of declining demand the working of accelerator is limited)*
2. **Fluidity** *(The operation of the accelerator* ***depends*** *upon the fluidity and adjustability of the industrial system)*
3. **Nature of demand** *(The nature of demand for consumption goods should be such that it is permanent. A temporary increase in demand will not lead to additional investment & no entrepreneur will take up expensive investment to cater to the short-lived demand. The accelerator can work only if the demand is permanent)*

4. **Availability of resources** *(Whenever there is increased demand, there must be enough factors of production which could be easily pressed into services to meet the demand. So availability of resources is another condition for smooth operation of the accelerator)*

5. **Availability of credit** *(Supply of money & credit is an essential requirement for the smooth working of the accelerator. A shortage of money & credit would raise the rate of interest & thereby the cost of investment, therefore expected investments cannot take place).*

6. **Constant capital output ratio** *(It is further assumed in the working of accelerator principle the capital output ratio remains constant.* ***i.e.*** *the ratio between the output of consumer goods & the capital required for their production. In real world this ratio will not remain constant)*

7. Existence of excess capacity in investment goods industries *(* ***If there is not*** *excess capacity in investment goods industries, then the demand for capital goods cannot be met and the working of the accelerator would be impaired / damaged)*

8. **Non-existence of excess capacity in consumer goods industries** *(If there is unused or excess capacity in consumer goods industries, the accelerator principle will not operate. An increase in demand for consumer goods would be met by utilising the existence of excess capacity).*

9. **Prohibitory changes in the relative factor prices.**

10. Uncertainty

11. Time lag in acquiring capital

Fiscal policy

- Fiscal policy refers to policy where the government finances to achieve the macro economic goals
- A policy under which government uses its expenditure & revenue programs to produce attractive effects & avoid unwanted effects on the national income, production & employment
- The process of shaping taxation & expenditure to contribute the maintenance of growing, high employment economy
- Fiscal policy is the government programme of making changes in the pattern & level of its expenditure, taxation & borrowing in order to achieve economic growth, employment, income equality & stabilization of the economy on a growth part

Objectives of fiscal policy

- To mobilize resources for economic growth, especially for the public sector
- To promote economic growth in the private sector by providing incentives to save & invest
- To restrain inflationary forces in the economy in order to ensure price stability
- To ensure equitable distribution of income & wealth

Fiscal policy & macro economic goals

1. **Fiscal policy for economic growth**

a) *To promote savings*

b) *Tax measures generally used for the purpose of resource mobilization*

c) *Economic growth through borrowings includes internal & external borrowings*

2. **Fiscal policy for stabilization**

a) *Changes in taxation & government spending*

b) *Increasing in spending on goods & services in the private sector*

c) *Controlling business cycles*

3. Fiscal policy for economic equality

a) Re-allocating capital expenditure

b) Make provision for self employment

c) Imposing of wealth & property tax

4. **Fiscal policy for external balances**

a) *Reducing the gap between external payment & external earnings*

5. **Fiscal policy for employment**

Limitations of fiscal policy

- *Formulating appropriate fiscal policy requires reliable forecasting of the variables like GNP, consumption, investment, technology changes*
- *Changes in policy of government spending*
- *Decision & implementation lags*
- *Working in underdeveloped countries is limited by low levels of income, small proportion of population, inefficiency in administration,*
- *Excessive borrowings , deficit finance*

Kinds of fiscal policy

1. Automatic stabilization fiscal policy
2. Compensatory fiscal policy
3. Discretionary fiscal policy

UNIT 5

INFLATION

Meaning

- Inflation means ***rise in prices*** after full employment has been reached.
- Inflation refers to rise in prices or fall in the value of money *(i.e.)* prices are rising *(land present value & future value).*
- Inflation refers to too much money ***chasing too few goods*** *(out of 100 cars only 2 cars)*
- Inflation exists **when money income is expanding** more than in proportion to increase in earning activity.
- Inflation occurs when the general level of prices & costs is rising.
- A continuous rise in the general price level over a long period of time has been the most common feature of both developed & developing economies.

All these factors are very common in developing economies like India. The world in general has gone through inflation since Second World War.

Definition of inflation

1. "Inflation denotes a rise in the general level of prices"
2. "A state in which the value of money is falling, that is prices are raising"
3. "A sustained rise in prices"

Types of inflation

Inflation may be classified into several types

1. ***On the basis of speed with which prices rises***
2. ***On the basis of different processes through which inflation is induced*** *(give rise to)* *(or)* ***on the basis of inducement***
3. ***On the basis of the criterion of time***
4. ***Number of goods in which rise in price level takes place***
5. ***On the basis of price policy of the government.***

1. On the basis of speed with which prices rises

On the basis of speed with which prices rises, inflation can be divided into the following types.

a) *Creeping inflation (or) mild inflation (or) moderate inflation*

b) *Walking inflation*

c) *Running inflation (or) Trotting*

d) *Hyper inflation (or) Jumping (or) Galloping (or) Run away (or) Spiraling*

a) Creeping inflation (or) mild inflation (or) moderate inflation

- The name itself suggests, creeping inflation is slow moving & very mild.
- If the price level rises from 1 to 3% per annum, the inflation is called ***creeping inflation***
- When the general level of prices rises at a moderate rate over a long period of time, it is called creeping inflation
- *It is mild form of inflation*. It occurs when prices are rising slowly.
- The rate of inflation ***may vary from country to country***
- When the rate of inflation is less than 10% annually or single digit annual inflation rate is called creeping inflation
- Creeping inflation is a mild form of inflation & according to some economists ***is not dangerous to the economy***
- Some economists have described upto 3% annual rate of inflation as creeping inflation
- Samuelson's opinion, Moderate inflation is not a serious problem.

b) Walking inflation

- If inflation rises from 3 to 4% per year it is called walking inflation.
- If it exceeds 10% it is called walking inflation
- Where the rise in prices, becomes more pronounced *(noticeable)* compared to creeping inflation, ***presents a danger signal for the occurrence of running & hyper inflation***
- Walking inflation takes place when creeping gets momentum *(the force caused by the development of something)*. In this case the rise in price becomes more marked.

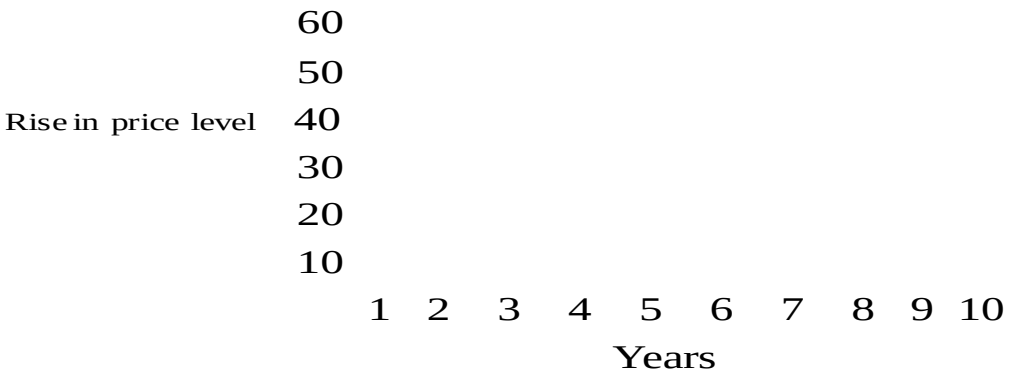
c) Running inflation (or) Trotting

- If the price level rises about 10% per year it is called running inflation
- Rise in prices will be very sharp & vigorous *(strong, forceful)*
- When the movement of prices accelerates rapidly, running inflation emerges

- Running inflation may record more than 100% rise in prices over a decade *(a period of 10 years)*
- Economists may say that a double digit inflation of 10 to 20% per annum is a running inflation. If it exceeds that figure, it may be called ***'galloping inflation'***

d) Hyper inflation (or) Jumping (or) Galloping (or) Run away (or) Spiraling

- Hyper inflation is **based on speed** with which prices rise.
- When prices begin to rise at more than three digit rate per annum, it is called hyper inflation.
- When the price level rises about 100% per year it is called hyper inflation. ***(for e.g.)*** if the price of commodity is Rs. 100 today it will become Rs. 200 in the next year
- In hyper inflation prices rise every month, every day & even every hour & there is **virtually no limit** of the height to which prices might rise.
- It is dangerous to the economy as it cannot controlled easily.



1. Creeping inflation a rise of 10% in the general level of prices takes place in about 8 years
2. In the case of walking inflation in the shorter period of a decade, a rise of approximately 30% in price takes place
3. When the inflation is running type, it takes only 3 years to record an increase of approximately 60% in the price.
4. In the case of jumping there is no limit to the increase in prices, in less than year the increase in the price level being more than 100%.

2. On the basis of inducement

a) ***Deficit inflation***

b) ***Wage inflation***

c) ***Profit inflation***

a) Deficit induced inflation

- This is caused by the adaption of unbalanced budgetary policies
- Which means government spending in excess of its revenues receipts

b) Wage induced inflation

- This denotes a rise in price due to an increase in money wages
- Increase in price level will make the labors demand more wages

c) Profit induced inflation

- Account of increase in the profits of manufactures will be the contributory factor t o another cause leading to an inflationary condition in the economy

3. On the basis of the criterion of time

- Sudden launching of war will strain the economy the government would option to deficit financing & there will be massive expansion of money supply for producing materials
- This will generate inflation, as all commodities will become scarce due to their diversion to war purpose

4. Number of goods in which rise in price level takes place

5. On the basis of price policy of the government.

Effects of inflation

- ***On producers*** *(all businessman, traders, gain during inflation) where the prices of goods increases faster*
- ***On working class*** *(Labors suffer during inflation where the prices rise as their wages do not rise)*
- ***On fixed income group*** *(People of fixed income group are the losers during inflation where the income do not rise)*
- ***Borrowers & lenders*** *(Borrowers gain & the lenders lose during the periods of inflation when price rises the real value of money falls & the debtors have to pay money which has less purchasing power)*
- ***Government*** *(government is the net gainer during the period of inflation where inflation increases both the direct & indirect taxes)*
- ***On economic growth*** *(inflation affects economic growth positively or negatively depends on whether it affects savings & investments positively or negatively)*

- ***On employment*** (A very strong conflict arises between growth & employment at high rte of inflation.)

Causes of inflation

- Consumer expenditure
- Foreign demand
- Rising imported raw materials cost
- Rising labor costs
- Higher indirect taxes imposed by the government
- A depreciation of the exchange rate
- The rapid growth of the money supply
- Faster economic growth in other countries
- Full employment

Control of inflation

1**.** ***Monetary measures***

a) Bank rate policy

b) Reserve ratio

c) Open market operation

d) Credit control

e) Issue of new currency

2. ***Fiscal measures***

a) Reduction in unnecessary expenditure

b) Increases in taxes

c) Public debt

3. ***Other measure***

a) Increase production

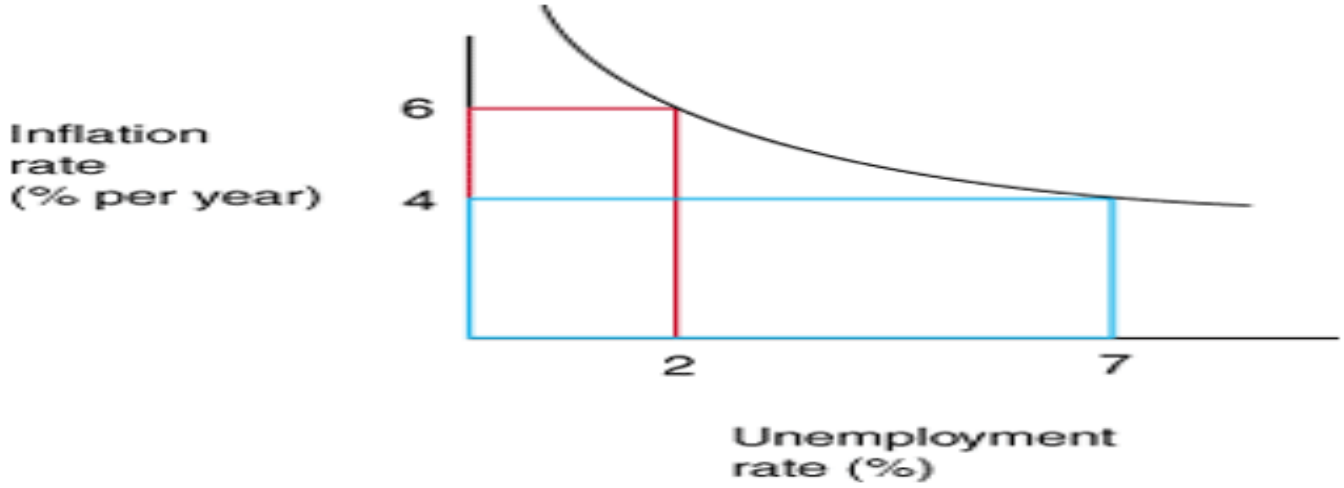
b) Direct control

c) Miscellaneous measures

d) Price & wage control

Phillips curve

- An economic concept developed by A. W. Phillips *stating that inflation and unemployment have a stable and inverse relationship.*
- According to the Phillips curve, the lower an economy's rate of unemployment, the more rapidly wages paid to labor increase in that economy.
- Macroeconomic policies are implemented in order to achieve government's main objectives of full employment and stable economy through low inflation. We can use *Philips Curve* as a tool to explain the trade-off between these two objectives.
- Philips Curve describes the relationship between inflation and unemployment in an economy.
- You already know that the Inflation is defined by increase in the average price level of goods and services over time.
- When there is inflation, value of money falls. A low inflation rate indicates that average price of goods would not rise as high.
- Unemployment exist when someone is actively seeking for job but unable to find any despite their willingness to accept the going market wage rate
- Demonstrates the inverse relationship between unemployment rates and inflation rates
- Assuming a constant short-run AS curve:
- Inflation rate↑ → Unemployment ↓ (when AD increases, there is a upward press ure on prices and UE therefore decreases)
- Inflation rate↓ → Unemployment ↑ (when AD decreases, there is a downward pressure on prices and UE therefore increases)
- Thus, the relationship is inverse as shown by the graph below:



- *For example*, after the economy has just been in recession, the unemployment level will be fairly high. This will mean that there is a labor surplus.
- As the economy has just started growing, the aggregate demand (AD) will increase and therefore leading to an increase in employment. In the beginning, there will be little pressure for a raise in wages. However, as the economy grows faster and more people are employed, wages will start rising slowly.
- This will increase the firm's cost of production and the high costs are usually passed on to the customers in the form of higher prices. Therefore a decrease in unemployment has led to an increase in inflation and vice versa.
- Not only that, unemployed might suffer from money illusion as they thought the increase in wages offered to them represented a real wage . They underestimate inflation by not realizing that higher wages will be eaten up by higher prices. Thus they will accept job more readily and this will reduce the *frictional unemployment* in the short run.
- The relationship we discussed above is a phenomenon in the short-run. But in the long run, since unemployment always returns to its *natural rate (unemployment rate at which GDP at its full-employment level that is, with no cyclical unemployment, there is no such trade-off).*

Remember that

• When unemployment rate is below natural rate, GDP is greater than potential output

– Economy's self-correcting mechanism will then create inflation

• When unemployment rate is above natural rate, GDP is below potential output

– Self-correcting mechanism will then put downward pressure on price level]

Stagflation's :

Definition

High inflation and high unemployment (stagnation) occurring simultaneously.

However, in the long term:

- Due to great unemployment, workers accept lower wages, and firms' costs decrease
- Foreign competition also holds down wages and price hikes
- Input prices is a determinant of AS, therefore when input prices (wages) decrease, AS will shift to the right
- A component of laissez-faire economics is the theory that the economy will self-correct. However, the economy will suffer great unemployment in the process.

UNEMPLOYMENT

Meaning

- In economics, unemployment refers to the condition and extent of joblessness within an economy, and is measured in terms of the unemployment rate, which is the number of unemployed workers divided by the total civilian labor force.
- Hence, unemployment is the condition of not having a job, often referred to as being "out of work", or unemployed

Types of unemployment

- ***Frictional unemployment (shortages of raw materials, break down of machinery)***
- ***Cyclical unemployment (During recession or trade cycle or general business declines)***
- ***Technological unemployment (changes in techniques)***
- ***Seasonal unemployment (seasonal variations)***
- ***Structural unemployment* (**
- ***Open unemployment (large labor force does not get work opportunities)***
- ***Underemployment (person does not get the type of work he is capable of doing)***
- ***Disguised unemployment (transfer of men from the more productive to less productive jobs during depression)***

- ***Hidden unemployment*** **(people who have effectively given up active search for jobs perhaps because they have been out of work for a long time and have lost both the motivation to apply for jobs and also the skills required)**

Causes Of Unemployment

- Rapid changes in technology
- Recessions
- Inflation
- Disability
- Undulating business cycles
- Changes in tastes as well as alterations in the climatic conditions. This may in turn lead to decline in demand for certain services as well as products.
- Attitude towards employers
- Willingness to work
- Perception of employees
- Employee values
- Discriminating factors in the place of work (may include discrimination on the basis of age, class, ethnicity, color and race).
- Ability to look for employment

Remedial measures for unemployment

a)Long term measures

- Rapid economic development
- Scientific methods should be adopted
- Population should be effectively checked in all communities
- Public works should be started

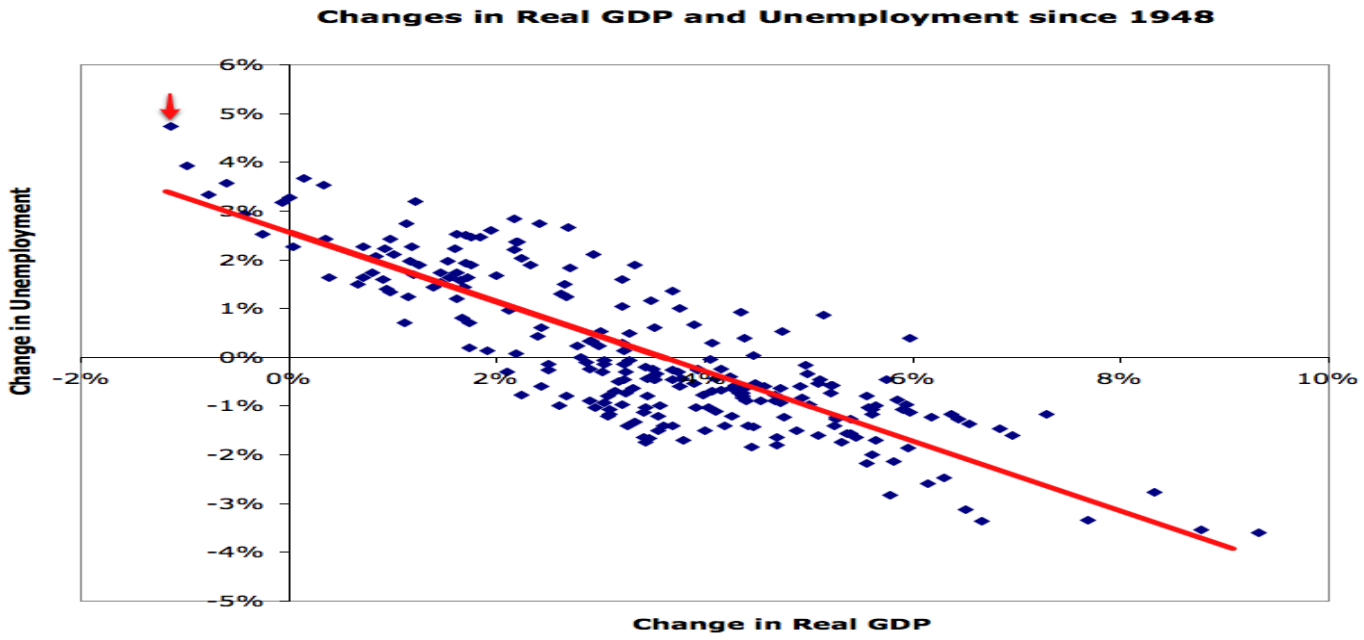
b) Short term measures

- Establishment of small industries
- Transport to be developed
- Slum clearance & housing schemes

- Private activity to be encouraged
- Development of backward areas

OKUN's Law

- Arthur Okun (1929 – 1979) was one of the most creative American economic policy makers of the post ware era.
- He created the concept relation between output & unemployment that is now known as Okun's Law.
- The most distressing consequence of any recession is a rise in the unemployment rate. As output falls, firms need fewer labour inputs, so workers are not hired & current workers are laid off.
- Okun's law states that for every 2 % that GDP falls relative to potential GDP, the unemployment rate rises about 1% point.
- Moreover if you want to bring the unemployment rate down, actual GDP must be growing faster than potential GDP.



- According to Okun's law, whenever output grows 2 % faster than potential GDP, the unemployment rate declines 1% point.
- This graph shows that unemployment changes are well predicted by the rate of GDP growth.

MONETARY POLICY

Meaning

Monetary policy is essentially a programme of action undertaken by the monetary authorities, generally the central bank***, to control & regulate the supply of money with the public & the flow of credit with a view to achieving predetermined macroeconomic goals***

Scope of monetary policy

- Level of monetization of the economy
- Level of develop of the capital market
- Price stabilization
- Exchange stability
- Full employment
- Economic growth
- Equal balance in payments
- High rate of growth
- Equality in distribution of wealth

Instruments of monetary policy

1. ***Quantitative measure***

a) *Open market operations*

b) *Discount rate or bank rate*

c) *Cash reserve ratio*

2. ***Qualitative or selective credit controls***

a) *Credit rationing*

b) *Change in lending markets*

c) *Moral suasion of money & credit supply*

d) *Direct controls*

e) *Deficit financing*

Limitations of monetary policy

- Time lag
- Problems in forecasting

- Non banking financial activity
- Underdevelopment of money & capital markets
- Political Issues
- Lack of Coordination
- unplanned Consequences

Problems	Recession & unemployment	Inflation
	•Central bank buys securities through open market operation •It reduces CRR •It lowers bank rate	•Central bank sells securities through open market operation •It raises CRR •It raise bank rate
	Money supply increases	Money supply decreases
	Interest rates fall	Interest rate rises
	Investment increases	Investment expenditure declines
	Aggregate demand increase	Aggregate demand declines
	Aggregate output increases by a multiple of the increases in investment	Price level falls

Fiscal policy

- Fiscal policy refers to policy where the **government finances to achieve the macro economic goals**
- A policy under which government uses its **expenditure & revenue** programs to produce attractive effects & avoid unwanted effects on the national income, production & employment
- The process of shaping taxation & expenditure to **contribute the maintenance of growing**, high employment economy
- Fiscal policy is the government programme of making **changes in the pattern & level of its expenditure, taxation & borrowing in order to achieve economic growth,** employment, income equality & stabilization of the economy on a growth part

Objectives of fiscal policy

- **To mobilize resources for economic growth**, especially for the public sector
- To **promote economic growth in the private sector** by providing incentives to save & invest
- To restrain inflationary forces in the economy in order to **ensure price stability**

- To ensure equitable distribution of **income & wealth**

Fiscal policy & macro economic goals

1. **Fiscal policy for economic growth**

b) To promote savings

c) Tax measures generally used for the purpose of resource mobilization

d) Economic growth through borrowings includes internal & external borrowings

2. **Fiscal policy for stabilization**

a) Changes in taxation & government spending

b) Increasing in spending on goods & services in the private sector

c) Controlling business cycles

3. **Fiscal policy for economic equality**

a) Re-allocating capital expenditure

b) Make provision for self employment

c) Imposing of wealth & property tax

4. **Fiscal policy for external balances**

a) Reducing the gap between external payment & external earnings

5. **Fiscal policy for employment**

Limitations of fiscal policy

- *Formulating appropriate fiscal policy requires reliable forecasting of the variables like GNP, consumption, investment, technology changes*
- *Changes in policy of government spending*
- *Decision & implementation lags*
- *Working in underdeveloped countries is limited by low levels of income, small proportion of population, inefficiency in administration,*
- *Excessive borrowings, deficit finance*

Kinds of fiscal policy

1. **Automatic stabilization fiscal policy**

2. **Compensatory fiscal policy**

3. **Discretionary fiscal policy**

Demand for money:

DEMAND - how much money would people like to have.

- There are several classical versions for the theory of money.
- *All the versions of quantity theory of money* demonstrate that there is strong relationship between money & price level.

1. ***Fisher's version of the quantity theory of money & price (or) the quantity theory of exchange.***
2. ***Cambridge version of quantity theory of money.***
3. ***Keynesian theory of demand for money.***

1. Fisher version of the quantity theory of money & price

- It is originally called the quantity theory of exchange.

$$\mathbf{MV = PT} \quad \textit{(or)} \quad \mathbf{P = MV / T}$$

M – Represents the quantity of money in circulation

V -Velocity of money *(in a particular period how much time money is exchange)* ***(i.e.)*** 1 Year ***(e.g. Rs.100)***

P – General price

T – The total volume of transaction for which money payments are made. It includes goods & services.

- The product M & V gives the supply of money during the particular period of time.
- The product P & T represents the money volume of all goods & services brought during the given period of time.
- Fisher points out that in a country during any given period of time, the total quantity of money **(MV)** will be equal to the total value of all goods & services bought & sold **(PT)**

$$\mathbf{MV = PT}$$

Supply of money = Demand for money

- This equation is referred as 'cash transaction equation'.

- It is expressed as **P = MV/T** which Implies that the quantity of money determine the price level.
- The Price level varies directly with the quantity of money.

2. The Cambridge version of quantity theory of money (or) cash balance approach

- The Cambridge version of quantity theory of money was first developed by a great ***"Cambridge economist" Alfred Marshall.***
- It was later modified by his followers.
- This is why Marshall's version is properly known as Cambridge version of quantity theory of money.
- It is also often referred to as ***"Neo classical theory of money" (or) cash balance approach.***
- In this approach money has been considered as a **store value.**
- ***The value of money depends upon the demand for & supply of money.***
- The value of money reaches equilibrium when the demand & supply of money become equal.
- The changes in the value of money are due to the changes either in the supply of money or demand for money or both.
- According to this approach the Cambridge economists considered the demand for & supply of money only at a particular point of time & not over a period.
- The supply of money is the stock at a particular point of time.
- The demand for money is to hold money. It is the total money held by private individuals, business houses & the government to meet the daily requirements.
- The demand for money is the function of people's desire to hold money. ***(i.e.)*** the demand for cash balance *(or)* liquid preference.
- This is a fundamental difference between Fisher and the Cambridge approach.
- The value of money is determined by the supply of money & demand of money,
- ***As increase in the demand for money denotes people's desire to hold more money, which means lesser demand for goods & services.***
- Where the price level will fall but the value of money will rise.
- On the other hand a fall in demand for money means lesser demand for money for holding.

- This will lead to higher expenditure.
- Where the price level increases the value of money will fall.

Thus according to their approach aggregate demand for money can be expressed as,

$$\mathbf{M}d = k\mathbf{PY}$$

Where

Y – Real national income

P – Average price level of currently produced goods & services

PY – National Income

k – Proportion of national income **(PY)** that people wants to hold as cash balances

M*d* – demand for money

3.Keynesian theory of demand for money (or) motives for liquidity preference (or) 3 main motives of demand & supply for money

- According to Keynes money is demanded for three motives.
    a) ***Transaction motive or demand for money***
    b) ***Precautionary motive or demand for money***
    c) ***Speculative motive or demand for money***

a) Transaction motive

- People demand money to carry on transaction by selling and buying goods and services.
- Higher the income, higher will be the demand for money for transaction purpose.
- Lower the income, lower will be the demand.
- The need for holding money arises because there is a time gap between the receipt of income and expenditure.
- Income is received periodically, weekly, monthly or annually.
- Where as it is spent on goods and services over time as and when need arises.

(For e.g.) Individuals getting their salary on monthly basis do not spend the entire income on the first day of the month. They hold some money for telephone and electricity bills and house tax and so on…to be paid as and when the demand is received.

- The transaction demand for money is directly related to the level of income.

- People know by their experience the amount of money they need for transacting their planned expenditure.
- According to Keynes the aggregate transaction demand for money is a function of the national income.

$$\mathbf{M}t = f(\mathbf{Y})$$

Where

M*t* = transaction demand for money

Y = income

- In the Keynesian system the proportion of income held for transaction motive is constant and fairly stable in the short run.
- It implies that given income and its distribution, the short run relationship between income and transaction for money can be satisfied as ,

$$Mt = Ky$$

Where

k = a constant proportion of income demanded for transaction purpose.

b) Precautionary motive

- Besides for spending people demand money as a precaution.
- People would like to have some excess money ***to face sickness or other unexpected expenses.***
- Precautionary motive for holding money refers to the desire of the people to hold cash balance for unforeseen contingencies.
- People hold a certain amount of money to provide for the danger of unemployment, sickness, accidents and the other uncertain perils.
- The amount of money demanded for this motive will depend on the psychology of the individual and the condition in which he lives.
- This relationship is expressed in functional form as,

$$\mathbf{M}p = f(\mathbf{Y})$$

M*p* = precautionary demand for money

Y = income

c) Speculative motive

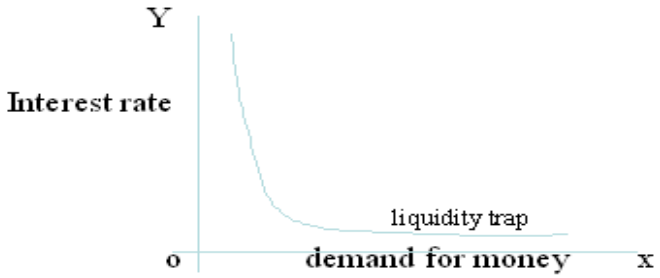
- The speculative demand for money depends upon the rate of interest.
- ***Higher the rate of interest lower will be the demand for money***
- ***Lower the rate of interest higher will be the demand for money***
- According to Keynes, people hold a part of their income in the form of idle cash balance for speculative purpose.
- The desire ***to hold idle cash balance for speculative purpose arises from the desire to take advantage of the changes in money market.***

In Keynes view

- If the interest rate does increase in future the bond prices go down.
- The person who holds the idle cash can buy the bond at a lower price and make a capital gain.
- Besides he earns a higher rate of return on the bond.
- The higher rate of return arises because he earns a given income on a bond which has a price lower than its face value.
- If interest rate does not increase those holding idle cash balance lose interest on it.
- Thus if a person decides to hold idle cash balance in expectation of rise in the interest rate under the ***condition of uncertainty*** the person is speculating.
- Speculation involves an element of risk.
- Keynes called this kind of cash balance to holding as ***speculative demand for money.***

Liquidity trap

- A situation when the market rate of interest falls to a minimum level
- When the rate of interest goes below a minimum level ***a level below*** which people prefer to hold idle cash balance & bank pulls down their shutters Keynes called this kind of a situation as "liquidity trap"



- If the monetary authorities ***increases money supply to lower the rate of interest*** the entire money supply gets trapped into liquidity as extra idle cash balance. This is what Keynes called "liquidity trap"

Supply of money

- Money supply plays a curial role in the determination of price & interest rate
- In economics it is generally presumed that money supply is determined by the policy of central bank of the country & the government

Importance of money supply

- Economic development
- Price stability
- Deficit financing
- Stimulate investment
- Savings

Measures of money supply

RBI measures money supply in terms of

1) *Stock of money*
2) *Means of payment & a store value*
3) *Households, firms & institutions'*

- Measure of money vary from country to country from time to time &
- from propose to purpose
- The RBI measures are changing

RBI measure of money supply

M1 = C + DD + OD

M2 = M1 + Savings with post office

M3 = M1 + Net time deposits with the commercial banks

M4 = M3 + Total deposits with post offices *(including NSC)*

Where

C= Currency held by the public

DD = Net demand deposits with banks

OD= Other deposits with RBI

NSC =National savings certificates

Factors determining money supply's

- ***RBI analysis***
- ***Bank credit to the government***
- ***Bank credit to commercial or Private sector***
- ***Changes in foreign exchange***
- ***Government currency liabilities to public*** *(Coins & one rupee notes represents Government currency liabilities to public) If* Government currency liabilities increases the money supply also increases)

QUESTION BANK

2 MARKS

UNIT - 1

1) What do you mean by Production-possibility frontier (PPF)? ***Jan 2010/ May/ June 2012***

Production Possibility Curve **(PPC)** is a curve that shows the possible combinations of any two economic goods an economy can produce by using the available scarce resources.

It is sometimes called Production Possibility Frontier, Production Possibility Boundary and Transformation Curve as the concept illustrates the potential productive capacity of the economy.

2. What do you understand by Macro economics? ***Jan 2011/*** **Nov/Dec 2009**

The term **'macros'** in Greek means **large**. Macro economics is the study of aggregates (total or whole).

It studies about aggregate (total) demand, aggregate consumption, aggregate production, aggregate income and aggregate investment, etc.

It studies all parts or components of the whole economy and it is not concerned with individual aspects of the economy.

Macro economics examines the **forest** and not the **trees**.

3.) What do you understand by Productive efficiency? ***Jan 2010/*** **Nov/Dec 2009**

1. Efficient selection of goods to be produced,

2. Efficient allocation of resources in the production of these goods with efficient choice of method of production, and

3. Efficient allotment of the goods produced among consumers.

4.) State the meaning of microeconomics. ***Jan 2011***

- The term **'mikros'** in Greek means **small**.
- Micro economics refers to the study of small units. In other words, micro economics studies the individual parts or components of the whole economy.
- Micro- economics is the study of particular firms, particular households, individual prices, wages, income, individual industries and so on.
- Micro economics as the name implies is concerned with parts of the economy rather than with the economy as a whole

5. State the fundamental economic problems. ***Jan 2010/ May/ June 2012***

What to produce?

How to produce?

To whom to produce?

6. Explain the Economic efficiency ***Jan 2012***

Economically efficient production is organized to minimize the ratio of inputs to outputs.

A situation where each good is produced at the minimum cost

The extent to which a given set of resources is being allocated

7. Explain the Productive efficiency ***May/ June 2012/***

Productive efficiency (also known as "technical efficiency") occurs when the economy is utilizing all of its resources, and operating at its production possibility frontier (PPF).

This takes place when production of one good is achieved at the lowest cost possible

Productive efficiency requires that all firms operate using best-practice technological and managerial processes.

By improving these processes, an economy or business can extend its production possibilit

8) What do you mean by efficiency? ***Jan 2012***

- Efficiency is one of the most important concepts to use in Economics course.
- There are several meanings of the term - but they generally relate to how well an economy allocates scarce resources to meets the needs and wants of consumers.
- Economic efficiency is a term typically used in microeconomics when discussing product.
- Production of a unit of good is considered to be economically efficient when that unit of good is produced at the lowest possible cost.
- Economic efficiency is used to refer to a number of related concepts. It is the using of resources in such a way as to maximize the production of ...
- The extent to which a given set of resources is being allocated across uses or activities in a manner that maximizes whatever value they are
- Economically efficient production is organized to minimize the ratio of inputs to outputs.

9) What do you mean by economic growth? ***Jan 2012***

- A positive change in the level of production of goods and services by a country over a certain period of time. Economic growth is usually brought about by technological innovation and positive external forces.
- **Economic growth** is an increase in activity in an economy. It is often measured as the rate of change of gross domestic product (GDP).
- Economic growth refers only to the quantity of goods and services produced; it says nothing about the way in which they are produced

UNIT 2

1) Define the term market. ***May/ June 2012/ Nov/Dec 2009***

- The word market is not easy to define because it is used in many sense.
- The word is derived from the Latin word mercatus from the verb mercari which means to trade.
- It is the act or technique of buying or selling.
- A market need not be situated in a particular place or locality
- Buyers & sellers need not come into personal contact. The transactions can even be carried through telephones, agents etc.
- A market may refer to a commodity or services like fish market, vegetables market, money market, or share market.

2.) What is monopoly? ***Jan 2010***

- **Monopoly-** It is a market where the entire supply is controlled by one supplier in the particular market area.
- In such a situation the monopolist will have power to fix the price as large.

3.) What is demand? ***Jan 2012***

"The various quantities of a given commodity or services which consumers would buy in one market in a given period of time at various prices or at various incomes or at various prices of related goods"

"A desire for a commodity backed by willingness & ability to pay a price"

The amount of a particular economic good or service that a consumer or group of consumers will want to purchase at a given price. The demand curve is usually downward sloping, since consumers will want to buy more as price decreases.

4) State law of demand? ***Jan 2011***

- The law of demand indicates the relationship between the price of a commodity & the quantity demanded in the market
- Consumers & merchants know that if you lower the price of a goods or services without altering its quantity or quality people will beat a path to your doorway. This is referred to as law of demand.

5.) What is elasticity of demand? ***May/ June 2012***

Elasticity means the capacity of demand to shrink or stretch in response to change in price

1. The elasticity of demand in a market is great or small according to the amount demanded increase much or little for a given rise in price
2. The elasticity of demand is a measure of the relative change in the amount purchased in response to a relative change in price on a given demanded curve

6.) What is supply? ***Nov/Dec 2009***

- Supply means the commodity offered for sale.
- Supply always relates to price
- **The quantity supplied of a commodity increases when the price increases & the quantity supplied of a commodity decreases when the price decreases**

7.) State law of supply? ***Jan 2010***

1. The law of supply states that there is a direct relationship between price & quantity supplied. When the price rises the quantity supplied increases, & when the price falls the quantity supplied also falls.
2. In other words the law of supply states that the producers are willing to produce & offer for sale more of their product at a higher price than at a lower price.

8.) What is elasticity of supply? ***Jan 2011***

Elasticity of supply is measured as the ratio of proportionate change in the quantity supplied to the proportionate change in price. High elasticity indicates the supply is sensitive to changes in prices, low elasticity indicates little sensitivity to price changes, and no elasticity means no relationship with price. Also called price elasticity of supply.

9) What is marginal utility? ***Jan 2010/ May/ June 2012***

The addition made to the total utility by the addition of consumption of one more unit of a commodity.

10) What is consumer equilibrium? ***Jan 2012***

Point of maximum consumer satisfaction: the point at which a consumer is deriving maximum satisfaction from his or her purchases

- When consumers make choices about the quantity of goods and services to consume, it is presumed that their objective is to **maximize total utility. (Satisfying power of a commodity or a services which determines the demand for commodity is called utility)**

11) What is consumer surplus? ***Jan 2010***

- The concept of consumer surplus was introduced by **Proff. Alferd Marshall**
- What a consumer is willing to pay for one unit of commodity & what he actually pays, measures the monetary cost the expected utility
- **If a person is willing to pay Rs 50 . For a toy but he buys for Rs 30. It is said Rs 20 is consumer surplus.**
- He gets higher satisfaction than the price he actually pays for him
- **Consumer surplus = Potential price – Actual price**
- The difference between the potential price & actual price is consumer surplus
- The sum total of surplus in enjoyed by the consumer.

12) What is fixed cost? ***Nov/Dec 2009***

- Fixed cost are those which are fixed in production
- These cost do not vary with every change in output
- Fixed cost includes depreciation of machinery, building, maintenance of land

13) What is sunk cost? ***Nov/Dec 2009***

- Cost which remain **unaltered** even after a change in the level or nature of business activity
- These are known as specific cost
- The best example for sunk cost is depreciation

UNIT - 3

1.) Define labour ***Jan 2011***

- Labor signifies the contribution of human elements in production.
- Labour refers to any exertion physical or mental undertaken in expectation of a reward, the reward usually begins the payment of money *(the payment of wages)*

2.) What is division of labour? ***May/ June 2012***

Division of labour refers to dividing & sub dividing labour into a number of groups each performing only one complete process of production, if the making of an article is split up into several processes & each process is entrusted to a separate set of workers is called division of labour

3.) What is business cycle? ***Jan 2010***

- Business cycle or trade is a part of the capitalist system. ***It refers to boom & depression.***
- In business cycle there are wave like fluctuations in aggregate income, employment, output & price level.
- Fluctuations in economic activity have been occurring periodically in a more or less regular fashion. ***These fluctuations have been called business cycle.*** It may be noted that ***calling there fluctuations as cycle*** means they are periodic & occur regularly.
- The duration of a business cycle has not been of the same length, it has varied from a minimum of two years to a maximum of 10 to 12 years.
- Some business cycle have been very short lasting for only 2 to 3 years, while others have lasted for several years.

4.) What is capital? ***May/ June 2012***

- Capital refers to produced means of production
- Capital includes all finished goods which are useful for the production of consumer goods
- The reward paid to capital as a factor of production is called interest

5.) What are the four phases of business cycles? ***Nov/Dec 2009***

The following phases of business cycle have been distinguished

5. Expansion ***(Boom, upswing or prosperity)***
6. Peak ***(upper turning point)***
7. Contraction (***downswing, recession or depression)***
8. Trough ***(lower turning point)***

UNIT - 4

1. State the meaning of national income? ***Jan 2012***

National income has been defined by various writers from different angles.

1. Generally it refers to the money value of the flow of goods and services available annually in an economy.

2. National income is the total money value of goods & services produced in a country (i.e.) 1 Year.

3. National income is, the money value of all final outcome of all economic activities of the people of a country.

4. National income estimate which measures the volume of commodities and services turned out during a given period, counted without duplication.

5. National income is the value of goods and services produced during a given period counted without duplication.

6. Total income of the country is called 'national income'.

2. What are the methods of computation of national income? ***Jan 2011***

There are 3 methods of computation of national income

4. **Product method (or) Census method (or) Value added method (or) Production method (or) Output method**
5. **Income method**
6. **Expenditure method**

3. What do you mean by income method? ***May/ June 2012***

- Income is calculated by adding up the rent of land, wages, salaries of employees, interest on capital, profits of entrepreneurs & income of the self employed people.
- Income is obtained by summing up of the income of all individuals of a country.
- While estimating national income through income method certain precautions should be taken (i.e.) which should be included & not included.

4. What is circular flow of income? ***Jan 2011***

The modern economy is a monetary economy. In the modern economy, money is used in the process of exchange. money has removed the difficulties of barer system. thus money acts as a medium of exchange.

4. Circular flow of income TWO- Sector economy (income & expenditure)
5. Circular flow of income THREE- Sector economy (income & expenditure with government)
6. Circular flow of income Four- Sector open economy (income & expenditure with government & foreign sector)

5. State aggregate demand ***May/ June 2012***

- It is the total expenditure which all households & business firms want to make on goods & services.
- In a two sector model the aggregate demand consists of 2 components
- ➢ There is consumption demand
- ➢ There is a demand for capital goods which is called investment demand.
- Thus by aggregate demand we mean how much expenditure the households & the entrepreneurs are undertaking on consumption & investment.

Aggregate demand = Consumption demand + investment demand

6. State aggregate supply ***Jan 2010***

The aggregate supply means the total money value of goods & services produced in an economy in a year. ***The supply or output of final goods & services in a year.***

- It is important to note that aggregate supply is the same thing as ***national product*** as both represents the value of output of final goods & services produced.
- The ***aggregate supply of goods of an economy depends upon the stock of capital, the amount of labour used & the state of technology.***

7. What is transfer payments? ***Nov/Dec 2009***

- We have explained about the determination of national income in the three sector economy when government expenditure is financed by imposition of lump sum tax.
- We now extend our model to include transfer payments & see how they affect determination of national income.
- ***Transfer payments*** are payments to the people by the government for which it receives no services or goods in return from them.

- Transfer payments are made by the government to promote social welfare. Unemployment allowances, poverty relief grants, social security contributions, old age pensions are some important examples of transfer payments.
- ***(Transfer payments are opposite of tax)*** Where as tax reduces disposable income of people, transfer payments increases their disposable income.
- Transfer payments are financed through tax, then transfer payments become a part of government expenditure which reduces disposable income.
- Since transfer payments increases the disposable income of the people, they will increase their consumption expenditure depending on their propensity *(tendency)* to consume.

8. Define multiplier Jan *2012*

Multiplier is a kind of ratio, which expresses the relationship between ***the increase in national income & the increase in investment*** *which induces the raise in Income*

- *A large change in income for a small change in investment is called as multiplier.*
- The total effect of an increase in investment, on income is called the ***multiplier.***

➢ A multiplier can be defined as " the change in investment is multiplied in order to present us with the resulting change in income"

Generally, an increase in investment in the economy, will increase the income of the people & this will be an additional investment.

9. What is closed economy? *Jan 2011*

Working of the multiplier depends upon the fact whether economy is closed or open. A closed economy implies absence of international trade. ***More imports over exports act as a leakage*** on the income.

10. State accelerator principle *Jan 2010*

The concept of multiplier is not sufficient to explain the aggregate income. Therefore, Keyens had explained in this principle.

Accelerator (or) the principle of acceleration is another important tool in economic analysis.

Multiplier & Accelerator are parallel concepts. The multiplier shows the effect of change in invesment on consumption & income, whereas the accelerator shows the effect of change in income & consumption of investment.

Multiplier explains how the consumption depends on investment.

Accelerator explains how the investment depends on consumption.

UNIT 5

1. What is inflation? ***Jan 2012***

- Inflation means ***rise in prices*** after full employment has been reached.
- Inflation refers to rise in prices or fall in the value of money *(i.e.)* prices are rising *(land present value & future value).*
- Inflation refers to too much money ***chasing too few goods*** *(out of 100 cars only 2 cars)*
- Inflation exists **when money income is expanding** more than in proportion to increase in earning activity.
- Inflation occurs when the general level of prices & costs is rising.
- A continuous rise in the general price level over a long period of time has been the most common feature of both developed & developing economies.

All these factors are very common in developing economies like India. The world in general has gone through inflation since Second World War.

2. What is hyper inflation (or) Jumping (or) Galloping (or) Run away (or) Spiraling? ***May/ June 2012***

- Hyper inflation is **based on speed** with which prices rise.
- When prices begin to rise at more than three digit rate per annum, it is called hyper inflation.
- When the price level rises about 100% per year it is called hyper inflation. ***(for e.g***.) if the price of commodity is Rs. 100 today it will become Rs. 200 in the next year
- In hyper inflation prices rise every month, every day & even every hour & there is **virtually no limit** of the height to which prices might rise.
- It is dangerous to the economy as it cannot controlled easily.

3. What is unemployment? ***Jan 2011***

- In economics, unemployment refers to the condition and extent of joblessness within an economy, and is measured in terms of the unemployment rate, which is the number of unemployed workers divided by the total civilian labor force.
- Hence, unemployment is the condition of not having a job, often referred to as being "out of work", or unemployed

4. State Okun's Law ***Jan 2012***

- Arthur Okun (1929 – 1979) was one of the most creative American economic policy makers of the post ware era.
- He created the concept relation between output & unemployment that is now known as Okun's Law.
- The most distressing consequence of any recession is a rise in the unemployment rate. As output falls, firms need fewer labour inputs, so workers are not hired & current workers are laid off.
- Okun's law states that for every 2 % that GDP falls relative to potential GDP, the unemployment rate rises about 1% point.
- Moreover if you want to bring the unemployment rate down, actual GDP must be growing faster than potential GDP.

5. How RBI measure of money supply *Jan 2010/ Nov/Dec 2009*

M1 = C + DD + OD

M2 = M1 + Savings with post office

M3 = M1 + Net time deposits with the commercial banks

M4 = M3 + Total deposits with post offices *(including NSC)*

Where

C= Currency held by the public

DD = Net demand deposits with banks

OD= Other deposits with RBI

NSC =National savings certificates

UNIVERSITY QUESTIONS

16 MARKS

UNIT 1

2) Enumerate and explain the fundamental economic problems. Jan 2010

Or

Discuss the three fundamental economic problems and suggest suitable measures to overcome these problems Jan 2011

Or

Explain the various economic problems of India Jan 2012/ May/ Jun 2012

Meaning of economics.

- Economics deals with a wide range of human activities to satisfy human wants.
- It deals with the society problems such as unemployment, poverty, productivity and government policies.
- It studies man in the ordinary business of life and how he earns his income and how he satisfies his wants.
- It is concerned *(involves)* not with individuals actions but with social actions.
- It studies about problems arising out of multiplicity *(large number).*
- It studies how wealth *(money)* is produced with limited resources in order to satisfy human wants.

Importance of the study of economics.

- The knowledge of economics helps in solving many problems.
- The knowledge of economics is essential to conquer (overcome a problem) poverty of the millions of people and to raise their standard of living.
- It explains the relationship between the producer and consumer, the labour and the management.
- It gives the businessmen and industrialists the knowledge of modern methods.
- By studying economics we can discover new factors that may lead to increase the national wealth. Without the knowledge of economics, this is absolutely impossible.
- The knowledge of economics is very essential for **the finance minister**.

a*) It helps in framing the system of taxation.*

b) It helps in formulating the budget for development.

c) It helps in removing unemployment.

- Supply of money, effective credit system, effective working of the banking system can be analysed in the country only by having a thorough knowledge of economics by the people who admire these sectors.
- The knowledge of economics is very essential for the legislators and parliamentarians. They will be able to frame laws effectively only by having knowledge of the subject.
- The study is not undertaken merely for the sake of knowledge. It is to lay down principles and policies for removing poverty and increasing human welfare.

3) How do different forces interact to determine over all micro economic activity? Illustrate. May? Jun 2012

Micro Economics

- The term **'mikros'** in Greek means **small**.
- Micro economics refers to the study of small units. In other words, micro economics studies the individual parts or components of the whole economy.
- Micro- economics is the study of particular firms, particular households, individual prices, wages, income, individual industries and so on.
- Micro economics as the name implies is concerned with parts of the economy rather than with the economy as a whole.

Importance of micro economics

- It explains how the market economy operates.
- It explains the method or manner in which scarce resources are allocated for different uses.
- It explains how goods and services are produced and distributed to the people.

Areas covered by micro economics are

d) Theory of product pricing

e) Theory of factor pricing *(rent, wages, interest and profits)*

f) Theory of economic welfare *(happiness and safety).*

Limitations of micro economics

- It may not give an idea about the functioning of the whole economy.
- The results of micro economics studies may not be applicable to aggregates (total or whole).
- It fails to give correct guidance to government to formulate economic policies.
- It fails to give practical explanation.
- Certain economic problems cannot be analysed.

4) How do different forces interact to determine over all micro economic activity? Illustrate. May/Jun 2012/ Jan 2010

Macro economics

- The term **'macros'** in Greek means **large**. Macro economics is the study of aggregates (total or whole).
- It studies about aggregate (total) demand, aggregate consumption, aggregate production, aggregate income and aggregate investment, etc.
- It studies all parts or components of the whole economy and it is not concerned with individual aspects of the economy.
- Macro economics examines the **forest** and not the **trees**.

Macro economics deals

a) not with individual quantities but with aggregate of these quantities,

b) not with individual income but with national income,

c) not with individual outputs but with total outputs.

Importance of macro economics

- It is very helpful in studying the vast *(huge)* and complex *(hard to understand)* nature of economic.
- It deals with many economic problems such as unemployment, inflation, depression *(make very unhappy, push down or make less active)* & recession *(a temporary decline or loss in economic activity).*
- It is used as a tool to analyse the level of employment, level of prices, etc.
- It is useful for the government in formulating suitable economic policies regarding general price level, wages, etc.

- It is only through macro economic approach the problems of economic growth could be solved.
- All nations, particularly developing nations are eager to increase their national income within the concern of macro economics.

Areas covered by macro economics are

e) Theory of income, output and employment.

f) Theory of prices

g) Theory of economic growth

h) Theory of distribution.

Importance of macro economics *in points*

10. Functioning of whole economy
11. Formulation of economic policies
12. Understanding & controlling economic fluctuations
13. Understanding macro economics
14. Inflation & deflation
15. Study of national income
16. Study of economic development
17. Performance of an economy
18. Nature of material welfare *(nature & size of the nations)*

Limitations of macro economics

- Macro analysis cannot be precise because it deals with aggregates (total) which are divergent *(avoiding common assumptions in making deductions)* in nature.
- In aggregative (total) thinking the elements have to be chosen carefully.

(For e.g.) adding all fruits together is a meaningful aggregate. Adding fruits with other machinery is an absurd *(unreasonable)* aggregate. *(i.e.)* apple+ bike

- Macro analysis may reveal *(make known)* that the national income of the country has increased by 50%, but the real fact will be that a good majority of people will be living in poverty.
- Composition of aggregates may be imperfect in macro analysis.

(e.g.) Prices of many commodities would have fallen in the economy, but the prices of very essential *(necessary)* commodities might have risen many times.

- The limitations of macro analysis are in the nature of practical difficulties rather than inherent weakness.

Limitations of macro economics *in points*

6. Excessive thinking in terms of aggregates
7. Heterogeneous elements
8. Differences within aggregates
9. Aggregates must be functionally related
10. Limited applications

Macro economic policy

Macro economic policy can be defined as "a programme of action undertaken to control, regulate and manipulate **macro economic variables** to achieve the macro economic goals of the society"

- Macro economics is, thus, a policy oriented subject. It deals with a number of policies of macro nature to solve many issues & problems.
- A macroeconomic policy is, in fact an instrument of policing the economy to achieve certain economic goal.
- Macroeconomic policies have macroeconomic goals to fulfill.

The macro economic goals include

1. Price stability
2. Economic stability
3. Exchange rate stability
4. Maintenance of full employment
5. Economic growth
6. Economic justice *(law)*
7. Improvement of standard of living
8. Eradication of poverty
9. Equilibrium in the balance of payments

10. Equitable distribution of national income *(or)* economic equity

There are number of macro – economic policies

9. Monetary policy
10. Fiscal policy
11. Income policy
12. Trade police
13. Industrial policy
14. Import- Export policy
15. Banking policy
16. Planning policy.

Objective of macro economic policy in India

7. Achieving a growth rate of 5- 6 % per annum.
8. Creating job opportunities for unemployed & underemployed *(not having sufficient demanding paid work)*
9. Removing economic disparity *(differences)*
10. Eradication of poverty
11. Controlling inflation & price stabilization
12. Preventing balance of payments imbalances.

Macro economic theories

Macro – economic theories provide explanation to inter – relationship among different macro – economic variables & issues relating to the problems.

There are number of macro – economic theories

11. Theory of income & employment
12. Theory of general price level
13. Theory of distribution
14. Theory of consumption function
15. Theory of investment

16. Theories of trade cycles

17. Theories of economic growth

18. Theories of inflation

19. Theories of monetary policy

20. Theories of fiscal policy

Macro economic variables

Variables- *(often changing)*

These are macro-economic variables

1. National income *(total income of the country is called 'national income')*

a) **National product** *(it consists of all goods and services produced by the community (a group of people living together in a place) or firm and exchanged for money during a year).*

b) **National dividend / income** *(a sum of money paid to a shareholder out of its profit, it consists of all the incomes, in cash and kind)*

c) **National expenditure** *(the total spending or outlay of the firm or community (a group of people living together in a place) on good and services produced during a given year).*

2. Concept of employment

3. Consumption *(it refers to total consumption of the household sector and firms)*

4. Savings (it refers to savings of the community or firms as a whole)

Savings = Total income – total consumption

5. Investment *(total investment of the firms)*

6. Government expenditure *(government sector spends on consumption and investment)*

7. Households *(household sector includes all consuming)*

8. Firms *(firm sector includes all producing)*

4) How can economic growth and stability are balanced. Nov /Dec 2009/ Jan 2012

Economic growth

- A positive change in the level of production of goods and services by a country over a certain period of time. Economic growth is usually brought about by technological innovation and positive external forces.

- **Economic growth** is an increase in activity in an economy. It is often measured as the rate of change of gross domestic product (GDP).
- Economic growth refers only to the quantity of goods and services produced; it says nothing about the way in which they are produced
- Economic development, a related term, refers to change in the way goods and services are produced; positive economic development involves the introduction of more efficient or "productive" technologies or forms of social organisation.
- Economic growth can either be positive or negative. Negative growth can also be referred to by saying that the economy is ***shrinking*** *(reduction).*
- Negative growth is associated with economic recession and economic depression.
- An important aspect of **economic growth** is that it is never uniform or same across all sectors in an economy or all states of a country.
- For example in Australia, mining sector has done well along with services sector. In comparison to these two sectors, manufacturing sector has not been that good a performer as far as contribution to economic development of Australia is concerned.
- Often when costs of goods and services go up, it has an poor effect on prospects of economic growth of that particular country.
- Quite often governments play important roles in economic development of a nation by inventing and implementing plans and strategies that address imbalances within an economy. They also upgrade facilities, which are already in a good state.

1. **What is productivity efficiency? How productivity efficiency works in PPC curve. Nov /Dec 2009**

Productive efficiency

- **Productive efficiency** (also known as "technical efficiency") occurs when the economy is utilizing all of its resources, and operating at its production possibility frontier (PPF).
- This takes place when production of one good is achieved at the lowest cost possible
- Productive efficiency requires that all firms operate using best-practice technological and managerial processes.
- By improving these processes, an economy or business can extend its production possibilit

Economic efficiency

- Economically efficient production is organized to minimize the ratio of inputs to outputs.

- A situation where each good is produced at the minimum cost
- The extent to which a given set of resources is being allocated

PPC CURVE

- This concept is founded by a great Professor called ***Paul A. Samuelson,*** who was the first American to receive a Nobel Prize in Economics in 1970.
- He was also an economics adviser to the American President, John F. Kennedy for many years.

Every country's aim would be to produce commodities that can be sold in the domestic and in the international markets with a favorable price. In other words, right goods should be produced with right factor inputs at right times.

Definition

Production Possibility Curve ***(PPC)*** is a curve that shows the possible combinations of any two economic goods an economy can produce by using the available scarce resources.
It is sometimes called Production Possibility Frontier, Production Possibility Boundary and Transformation Curve as the concept illustrates the potential productive capacity of the economy.

Assumptions of the concept – PPC

Economists criticize the concept of PPC on the different grounds since it is based on the certain assumptions like;

1. Human wants are unlimited.

2. The resources are limited but which has alternative uses

3. It takes into consideration the production of **only two** goods. However, in reality the economy will produce many goods. The life on the earth is not possible only with two goods.

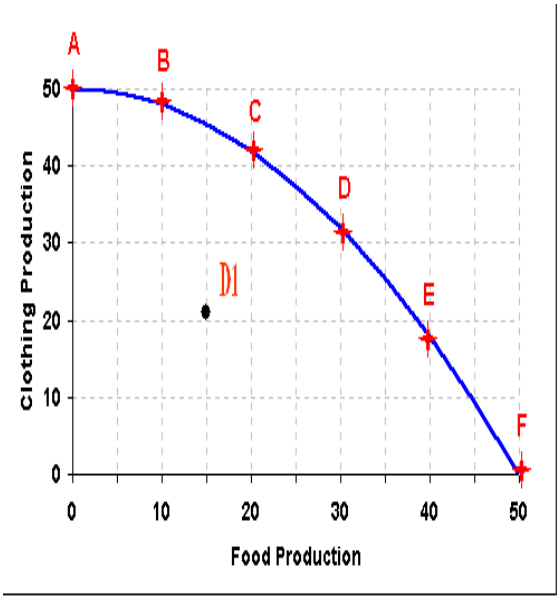
4. It also assumes that the economy has utilized scarce resources efficiently and fully. In other words, the economy is in full employment.

5. PPC is drawn provided that the state of technology is given and it remains constant over the period.

6. Resources available in the economy *(which are called factors of production such as land, labour, capital and organizer)* are fixed and constant. However, resources can be shifted from one commodity to another.

7. The economy is not able to change the quality of the factors of production. They are also given and constant.

8. It is also assumed that the production only related to short-period rather than long period.



S.NO	CLOTHING	FOOD
A	50	0
B	48	10
C	42	20
D	30	30
E	18	40
F	0	50

Production Possibility Curve

- ✓ The economy has to decide what to produce with their limited resources.
- ✓ The concept of production possibility curve helps to decide how to allocate resources & choose the possible combination of goods.
- ✓ The production possibility curve gives the possibilities of producing grains or wines with the available resources
- ✓ Point A in the diagram points out that it can produce OA amount of CLOTHS with the available scarce resources.
- ✓ If it wants to produce wine alone OB amount of FOOD can be produced
- ✓ If it wants to produce a combination of CLOTH & FOOD it has to choose a point between A & F for *e.g. D*
- ✓ The line *connecting points A & F is called production possibility curve*
- ✓ A production possibility curve implies that it can produce either OA of cloths or OF of food

- ✓ If it chooses a combination of the two, it has to prefer less than OA of cloths & less than OF of food
- ✓ As the resources are scarce if it wants to have food the nation has to sacrifice certain amount of cloths for the sake of food
- ✓ This sacrifice involved is known as opportunity cost.
- ✓ Any point on the PPC implies full employment, it means maximum use of the available scarce resources
- ✓ If the country choose to produce the combination of the two goods at point D1 the country faces unemployment *(i.e.)* the economy is not producing a full capacity
- ✓ To achieve full employment the economy has to move away from point D to a point on the curve ACF.
- ✓ Countries plan & formulate the policies to produce at any point on the PPC only.

Importance and Application of the Concept

The concept has got the following importance:

1. Since PPC shows the productive capacity of the economy, it gives reliable answers for the fundamental economic problems of what to produce?, How to produce?, and To whom to produce?.

2. Secondly, it illustrates the concept of opportunity cost. Here the country is trying to produce any two goods. So the production of the one commodity can be increased by reducing the production of other good. This is due to the fact that economic resources are scarce. Also opportunity cost ratios can be calculated.

3. Thirdly, it leads to the efficient allocation of scarce economic resources.

4. The growth of the economy can be judged from the shifts in the PPC. Economics growth in both quantitative and qualitative terms can be known from PPC.

5. It is very useful in order to achieve the social welfare of the community.

6. Last but not least, PPC can be used by the producers to make their decisions regarding the use of factors of production and it assist in the determination of the costs of the production.

PPC, therefore, shows unemployment of resources, Technological Progress, economic growth and economic efficiency.

According to Professor Dorfman, PPC explains three efficiencies. They are:

1. Efficient selection of goods to be produced,

2. Efficient allocation of resources in the production of these goods with efficient choice of method of production, and

3. Efficient allotment of the goods produced among consumers.

Usually this concept is applied for individual countries. Also this concept can be applied to the individual companies, farms etc to find out the production possibilities.

UNIT 2

5) Elucidate the different types of market structure. May/Jun 2012

Or

Explain the different market structure. Jan 2011

Market

- The word market is not easy to define because it is used in many sense.
- The word is derived from the Latin word mercatus from the verb *mercari* which means to trade.
- It is the act or technique of *buying or selling.*
- A market need not be situated in a particular place or locality
- Buyers & sellers need not come into personal contact. The transactions can even be carried through telephones, agents etc.
- A market may refer to a commodity or services like fish market, vegetables market, money market, or share market.

In the language of economics the term market should imply certain things

5. There should be *buyers or sellers (producers)* of the commodity.
6. *Contact* between the buyers & sellers is essential for the market
7. The buyers & sellers deal with the same commodity or variety since the market in economics is identified on the basis of the commodity
8. There should be a price for the commodity bought or sold in the market

Market

AREA

1. ***Local -*** A local market for a product exists when buyers & sellers of commodity carry on business in particular locality or village or area where the demand & supply conditions are influenced by local conditions only

(e.g.) Perishable goods like butter, milk, gee, eggs, vegetables etc,

2. National- Commodities that are demanded & supplied over the region or country are known as national markets.

(e.g.) Markets for wheat, rice or cotton exists throughout the country & they have national markets

3. International – *When demand & supply conditions are influenced at global level we have international markets*

(e.g.) gold, silver etc

TIME

5. **Very short period** – Refers to which commodities are perishable & the supply of commodities are fixed *(e.g.) Vegetables, fish, fruits,* where the supply cannot be changed within a short period of time, the rates differ in timings

6. **Short period** – In a short period market the commodity is not perishable & reproduce able. *(e.g.) cloth, crackers (season sales)*

7. **Long period**- The supply of commodity can be increased or decreased. The price of product may vary from time to time, day to day, *(e.g.) cloth, pulses, grains, cars etc.*

8. **Very long period (or) secular period**- Factors of production like land, labor, capital & organization technique. The prices are fixed in secular period.

Competition

b) **Perfect –** This type of market situation arises when there are large number of buyers & sellers in the market dealing in *homogeneous product.*

In perfectly competitive market there is no competition among the suppliers. In other words in this type of market there is absence of direct competition among agents. *(e.g.)* two wheelers market in India is highly competitive *but the competition is completely different from quality, strength, price & stuff.*

c) **Pure-** It is a part of perfect competition. Pure competition is pure in sense that there is *no element of monopoly*

d) ***IMPERFECT***

2. **Monopoly-** It is a market where the entire supply is controlled by *one supplier* in the particular market area.

In such a situation the monopolist will *have power to fix the price as large.*

2. **Monopolistic competition**- There will be a large number of firms producing the commodity. Many will be competing the market. *Prices will differ slightly. (e.g.)soaps. Buyers are attached to their favorite brands.*

3. **Oligopoly –** There are few sellers the product may be homogeneous or heterogeneous in the *case of petrol, fertilizers or drugs. Prices may be through agreement*

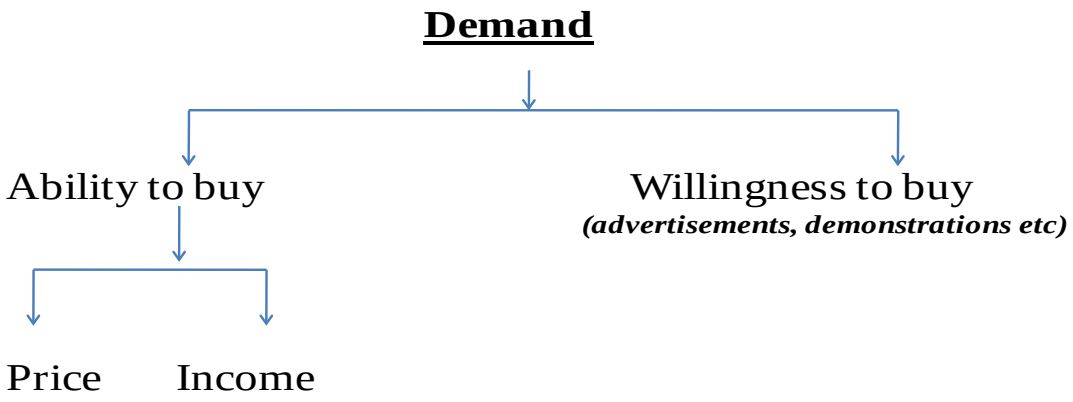
4. **Duopoly-** There are only two sellers who control the entire supply. The output & price policy of one is dependent on the other.

Number of firms	Large	One	Many but not too many	Few
Nature of product	Homogeneous	Single without alternate	Product differentiation	Homogeneous or heterogeneous
Price policy	Price taking	Price making	Slight	Agreement
Entry	Free	No entry	Easy	Restricted
Profit	Normal	Irregular	Loss or profit in periods	Irregular

6) Discuss law of demand. Explain the determinants of demand. Nov / Dec 2009

Demand

- Demand means a desire or wish to buy & consume a commodity or services.



Demand can be defined as

4. "The various quantities of a given commodity or services which consumers would buy in one market in a given period of time at various prices or at various incomes or at various prices of related goods"
5. "A desire for a commodity backed by willingness & ability to pay a price"
6. The amount of a particular economic good or service that a consumer or group of consumers will want to purchase at a given price. The demand curve is usually downward sloping, since consumers will want to buy more as price decreases.

Economists distinguish between the terms demand & quantity of demand

Quantity of demand

•The amount of product that people are willing & able to purchase at a specific price.

Demand

•The amount that people would be willing & able to purchase at every possible price.

Law of demand

- The law of demand indicates the relationship between the price of a commodity & the quantity demanded in the market

- Consumers & merchants know that if you *lower the price of a goods or services without altering its quantity or quality* people will beat a path to your doorway. This is referred to as law of demand.

According to law of demand

- People purchase more of something when the price of that item fall
- The law of demand states that the quantity of some item that people are willing & able to purchase during a particular period of time decreases as the price rises.

Assumptions of law of demand

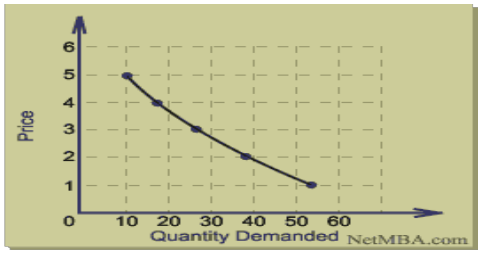
The law of demand is based on following assumptions

- The consumer tastes & preference do not change with changes in fashions & seasons
- The income of consumers remain same
- The prices of substitutes & other related goods remain same
- Perfect competition exists *(There are large number of sellers where the buyer should be aware of the various prices offered & their perfect conditions so that they have no reasons to prefer one seller to another)*
- Absence of close substitutes
- The existence of continuous demand for goods

Demand Schedule

The demand schedule is a statement which explains the relationship between the price of a commodity & the quantity demanded of it.

Price	Quantity Demanded d
5	10
4	17
3	26
2	38
1	53



- In this diagram Quantity demand is measured along the OX & the price is represented along the OY axis.
- By plotting the various combinations the demand curve DD is drawn

- The demand curve indicates that more quantities are demanded or brought at lower prices & lesser quantities are demanded or brought at higher prices.

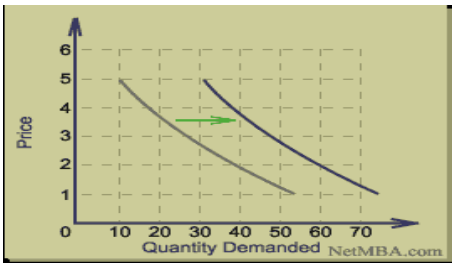
Demand curve

- A demand curve is a graph of demand schedule
- The demand curve *slopes downwards because as prices fall quantity demand increases.*

- The demand curve may be of any type. It may be straight line or concave curve, or convex curve. Most of the curves are wavy line rather than straight line.

Shifts in the Demand Curve

- When there is a change in an influencing factor ***other than price,*** there may be a shift in the demand curve to the left or to the right, as the quantity demanded increases or decreases at a given price. ***For example,*** if there is a positive news report about the product, the quantity demanded at each price may increase, as demonstrated by the demand curve shifting to the right



Shifts in the Demand Curve

- A number of factors may influence the demand for a product, and changes in one or more of those factors may cause a shift in the demand curve.

Some of these demand-shifting factors are:

- ✓ *Customer preference*
- ✓ *Prices of related goods*
  - *Complements* - an increase in the price of a complement reduces demand, shifting the demand curve to the left.
  - *Substitutes* - an increase in the price of a substitute product increases demand, shifting the demand curve to the right.
- ✓ *Income* - an increase in income shifts the demand curve of normal goods to the right.
- ✓ *Number of potential buyers* - an increase in population or market size shifts the demand curve to the right.
- ✓ *Expectations of a price change* - a news report predicting higher prices in the future can increase the current demand as customers increase the quantity they purchase in anticipation of the price change.

Why does demand curve slopes downwards?

1.Income effect (When the price of a commodity falls, the consumer can buy more quantity of the commodity with his given income, as a result of a fall in the price of the commodity, consumer's real income or purchasing power increases. This increase induces the consumer to buy more of that commodity. This is called income effect.)

2.Taste

3. Price related to goods & services

4. Substitutes effect (When the price of a commodity falls, it becomes relatively cheaper than other substitute commodities. This induces the consumer to substitute the commodity whose price has fallen for other commodities, which have now become relatively expensive. As a result of this substitution effect, the quantity demanded of the commodity, whose price has fallen, rises.)

5. Expectations

6. Entry of new consumers or number of buyers

7. Law of diminishing marginal utility

- **When the consumer buys more & more quantities of commodity the *law of Diminishing Marginal Utility operates.***
- ***MU = P (Marginal utility is equal to price)***
- **A fall in price leads to a fall in marginal utility also.**
- **Every customer spends his limited income in such a way as to get the same marginal utility from all the commodities.**
- **Hence a consumer is encourage to buy additional or more units of a commodity in order to maximize his satisfaction or utility**

3) Explain the determinants of demand and supply. May / Jun 2012

Factors that determine demand

The quantity of demand for any commodity is determined by several factors

D = f(t,y,Ps,N,Fp,Dy,C,B)

D- Quantity of demand

T- Taste & preference of consumers

Y- Income of consumers

Ps- Price of substitute *(alternate or other related goods)*

N- Number of customers

Fp- Future price rise expectation

Dy-Distribution of income

C- Climate & weather

B- State of business

4) What is elasticity of demand? Explain its types Jan 2010

Elasticity of demand

***Elasticity means* the capacity of demand to shrink or stretch in response to change in price**

Meaning

- The law of demand generally states that *demand expands for a fall or raise in price*
- How much is the change in demand for a given fall or raise in price

- In other words elasticity of demand refers to the effect upon the quantity demand for a given change in price
- The relationship between small change in price & consequent changes in the amount demanded is known as elasticity of demand. *This tells the rate of change.*
- The elasticity of demand shows the extent of response in demand to the change in price.

Definition

3. The elasticity of demand in a market is great or small according to the amount demanded increase much or little for a given rise in price
4. The elasticity of demand is a measure of the relative change in the amount purchased in response to a relative change in price on a given demanded curve

Elasticity of demand can be classified into different kinds they are

4. ***Price elasticity of demand***
5. ***Cross elasticity of demand***
6. ***Income elasticity of demand***

1. Price elasticity of demand

- Price elasticity of demand is the percentage change in quantity demanded of a commodity divided by the percentage change in price of that commodity.
- *This can be expressed through formula*

$$\textbf{Price } E_D = \frac{\text{Percentage changes in quantity demanded of commodity X}}{\text{Percentage change in price of commodity X}}$$

$$\textbf{Percentage change in quantity demanded of commodity X} = \frac{\text{Change in quantity demanded of a commodity}}{\text{Original demand}}$$

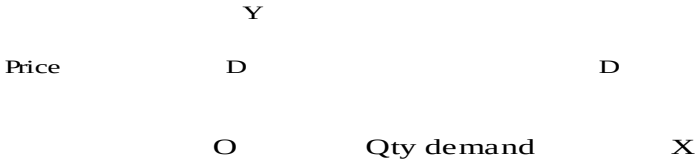
$$\textbf{Percentage change in price of a commodity} = \frac{\text{Change in the price of commodity}}{\text{Original price}}$$

Price elasticity of demand is of **five** types

1. ***Perfectly elastic demand***
2. ***Perfectly inelastic demand***
3. ***Unit elasticity of demand***
4. ***Elastic demand***
5. ***Inelastic demand***

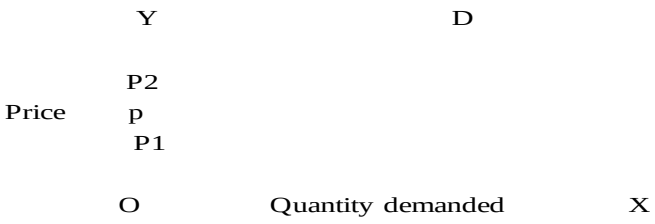
1. Perfectly elastic demand

It refers to change in demand for a small change in price



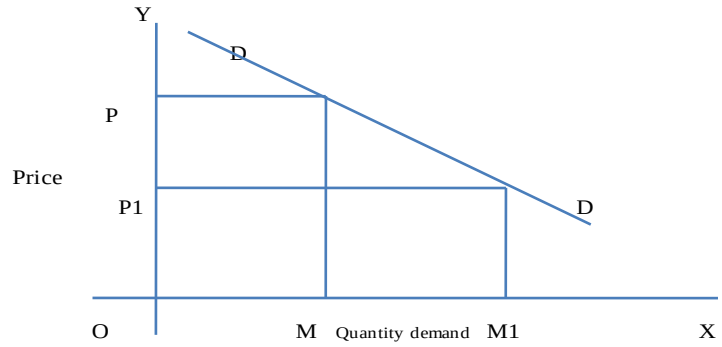
2. Perfectly inelastic demand

It refers to the situation where demand remains unchanged irrespective of any rise or fall in price



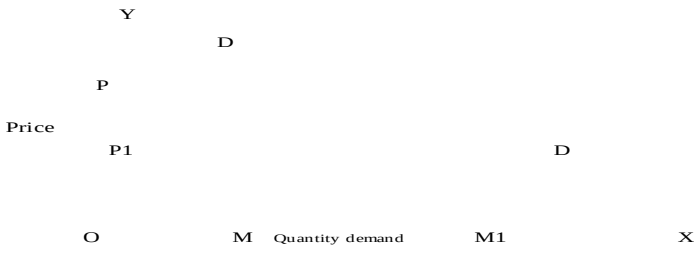
3. Unit elasticity of demand

It refers to an equal change in demand for a change in price



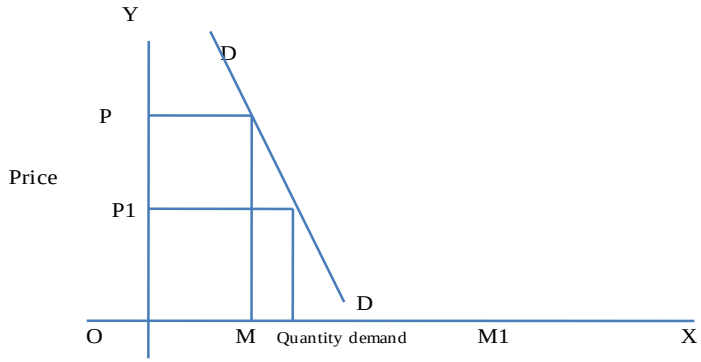
4. Elastic demand

It refers to a higher change in the quantity demanded for a small change ***(i.e.) rise or fall in price***



5. Inelastic demand or Elasticity less than demand

It refers to a small change in the quantity demanded for a big change ***(i.e.) rise or fall in price***



2. Cross elasticity of demand

- The cross elasticity of demand is the percentage change in the quantity demanded of commodity x divided by the percentage change in the price of some related commodity Y
- *The two commodity X & Y may be substitutes or compliments*
- *This can be expressed through formula*

Cross elasticity of demand =

$$\frac{\text{Percentage change in quantity demanded of commodity X}}{\text{Percentage change in quantity demanded of commodity Y}}$$

3. Income elasticity of demand

- The income elasticity of demand is the percentage change in quantity demanded of a commodity divided by the percentage change in income of the consumer
- *This can be expressed through the formula*

Income elasticity of demand =

$$\frac{\text{Percentage change in quantity demanded of commodity}}{\text{Percentage change in income of the consumer}}$$

Factors determining elasticity of demand

9. Availability of substitutes
10. Extent of uses of commodity

11. Nature of the commodity
12. Habits & customs
13. Level of prices
14. Percentage of income spent on the product
15. Time factor
16. Postponement of commodity *(if the umbrella is torn we get it repaired & postponed the purchase of a new umbrella)*

1. Discuss law of supply. Explain the determinants of supply. Jan 2011

Supply

- Supply means the commodity offered for sale.
- Supply always relates to price
- ***The quantity supplied of a commodity increases when the price increases & the quantity supplied of a commodity decreases when the price decreases***

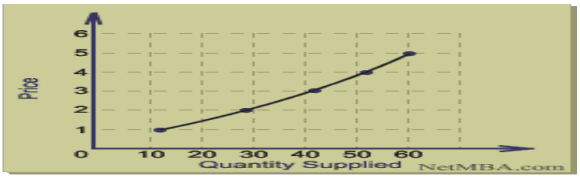
Law of supply

1. The law of supply states that there is a direct relationship between price & quantity supplied. *When the price rises the quantity supplied increases, & when the price falls the quantity supplied also falls.*
2. In other words *the law of supply states that the producers are willing to produce & offer for sale more of their product at a higher price than at a lower price.*

Supply schedule

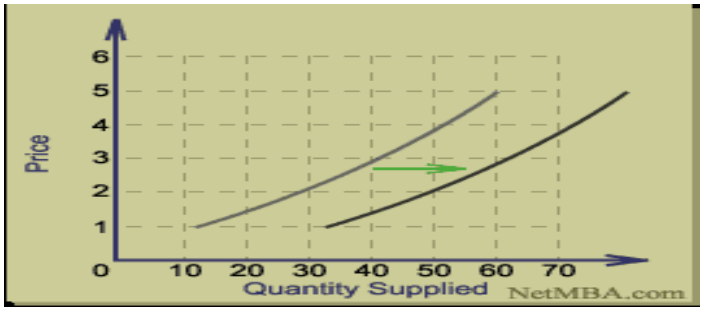
- Price usually is a major determinant in the quantity supplied.
- For a particular good with all other factors held constant, a table can be constructed of price and quantity supplied based on observed data. Such a table is called a supply schedule, as shown in the following example:

1	12
2	28
3	42
4	52
5	60



- As with the demand curve, the convention of the supply curve is to display quantity supplied on the x-axis, and price on the y-axis.

- The supply curve SS slopes upwards from left to right, the supply curve maps the relationship between price & quantity supplied.
- The upward movement of supply curve show not only the sellers desire to make profit, but also the rise in the cost of production.



- ***There are several factors that may cause a shift in a good's supply curve. Some supply-shifting factors include:***
- ***Prices of other goods - the supply of one good may decrease if the price of another good increases, causing producers to reallocate resources to produce larger quantities of the more profitable good.***
- ***Number of sellers - more sellers result in more supply, shifting the supply curve to the right.***
- ***Prices of relevant inputs - if the cost of resources used to produce a good increases, sellers will be less inclined to supply the same quantity at a given price, and the supply curve will shift to the left.***
- ***Technology - technological advances that increase production efficiency shift the supply curve to the right.***
- ***Expectations - if sellers expect prices to increase, they may decrease the quantity currently supplied at a given price in order to be able to supply more when the price increases, resulting in a supply curve shift to the left.***

Factors that determine supply

- Production technology
- Prices of factors of production
- Prices of other products
- Number of producers
- Future price expectations
- Taxes
- Substitutes
- Factors outside the economic

- Change in government policy

2. What is elasticity of supply? Explain Jan 2011

Elasticity of supply

- The concept of elasticity of supply tells the responsiveness of supply to change in price
- Supply is elastic when the given percentage change in price brings about an *even greater percentage change in quantity supplied*

Definition

- Elasticity of supply is measured as the ratio of proportionate change in the quantity supplied to the proportionate change in price. High elasticity indicates the supply is sensitive to changes in prices, low elasticity indicates little sensitivity to price changes, and no elasticity means no relationship with price. Also called price elasticity of supply.

- Supply is said to be inelastic when the percentage change in quantity supplied is less than the percentage change in price

Elasticity of supply =

$$\frac{\text{Proportionate change in quantity supplied}}{\text{Proportionate change in price}}$$

Proportionate change in quantity supplied=

$$\frac{\text{Change in quantity supplied}}{\text{Original supply}}$$

Proportionate change in price=

$$\frac{\text{Change in Price}}{\text{Original price}}$$

Factors that determine elasticity of supply *(or)* affecting

- Change in the cost of production
- Behavior pattern of the producers
- Availability of facilities expanding output or factors of production
- Supply in short & long periods *(time)*

7) What is Production function? Discuss its managerial uses. May/Jun 2012

Production

- Production in simple means creation of utility
- Production is the outcome of the combination of the four factors

5. ***Land***
6. ***Labour***
7. ***Capital***
8. ***Organization***

- Even if one factor is not used production is impossible
- The aim of the producer is to bet maximum profit at a minimum cost which is possible if he maximizes the productivity.

Production function

- ❑ The functional relationships between physical inputs & physical outputs of a firm is known as production function
- ❑ Production function is a technical relation between inputs & outputs.
- ❑ The production function shows for a given ***state of technology & managerial ability, the maximum rates of output*** that can be obtained from different combinations of the productive factors during a period time or unit of time
- ❑ It relates to the question of how much quantity of output can be obtained from a given quantity of various inputs
- ❑ The output of a firm depends upon the quantities of inputs used.
- ❑ If the firms increases or decreases its input, it can correspondingly increases or decreases its output.

Production function as an equation

- There are several ways of specifying the production function.
- In a general mathematical form, a production function can be expressed as:
- ***Q = f(X1,X2,X3,...,Xn*)**

where:

- *Q* = quantity of output
- *X*1,*X*2,*X*3,...,*Xn* = factor inputs ***(such as capital, labour, land or raw materials).***

Assumptions of production function

The production function is based on the following assumptions

5. Period of time

6. Technique or method of production adopted
7. Managerial ability
8. Factors of production

8) Explain returns to scale and its types. What are the uses of return to scale? Jan 2011

Law of returns (or) law of variable proportion

Law of returns are of three kinds they are

4. ***Law of diminishing returns***
5. ***Law of increasing returns***
6. ***Law of constant returns***

1. Law of diminishing returns

- Among several laws of production, the law of Diminishing returns is the oldest law.
- This law establishes a relationship between input & output
- The law of diminishing returns is the marginal product of each unit of input will decline as the amount of that input increases, holding all other inputs constant.
- ***(For e.g.)*** *Water are very vital for a plant's life, the next unit of water will keep the plant healthy & growing smartly. But as more & more water gets added, the soil becomes water-logged & most crops will perish. The law of diminishing returns can be understood with this example.*
- Let us suppose a farmer having a plot of land measuring 10 acres is interested in increasing the output from his land by investing more & more of capital & labour.
- ***Now we have to study how the inputs when increased as successive does not result in extra output.***
- The land is kept as a fixed factor & the input (labour & capital) has been the variable factor.
- Now we can distinguish three types of output from the table they are

a) ***Total output or total returns***

b) Average output or Average returns

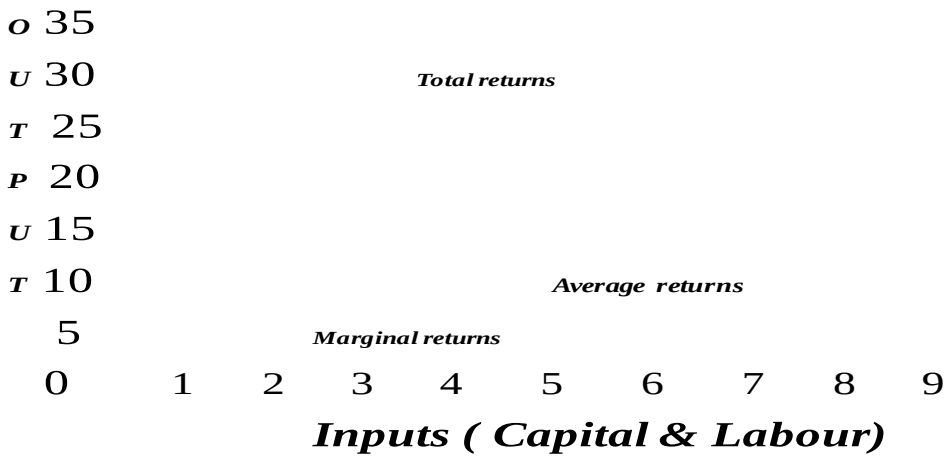
c) Marginal output or marginal returns

Total returns is the total output of corn for the total of capital & labour applied

- Column 2 of the table gives total returns for the total inputs.
- One unit of capital & labour combined the outcome is to 10 units of corn,
- By combining same plot with 2 units of capital & labour the total output comes to 18 units
- When 3 units of input are invested the output becomes 24 units
- The total returns is increasing from 10 to 18, 24, 28, 30 units etc
- However the rate of increasing is diminishing. The total output is maximum when the input is 5 or 6 units.
- Average returns refers to the output per unit of capital & labour invested.
- This is arrived by dividing the total outputs with the total units of input.
- Column 3 of the table gives average output which is decreasing.
- Marginal returns refers to the output of corn increases in one unit of the input
- Column 4 refers to the marginal output.
- When 1 unit is invested, the output is 10 units, when 2 units are invested the output is 18 units of corn. Where extra 8 units of corn have been realized because of increasing the input from 1 to 2 units
- The response for the second units of input is 8 units of corn. This is the marginal output for the second unit of input.
- When there are 3 units of input the total returns stands at 24 units of corn. the extra output is 6 units of corn due to the increase of one more unit
- By increasing the total input to 4 units the total output has gone up to 28 units, the extra output is 4 units of corn due to the increase of one more unit
- The table shows that the marginal output goes on declining for every increase in input.
- This shows that the increase in input does not give output equally .
- The first input gives 10 units of corn
- The second input gives 8 units of corn

- The third input gives 6 units of corn
- The marginal output goes on diminishing when the input is increased by units
- This is meant by law of diminishing marginal returns as the marginal return diminishes with marginal inputs
- At the 6th input the marginal returns comes to zero

1	10	10	***10***
2	18	9	***8***
3	24	8	***6***
4	28	7	***4***
5	30	6	***2***
6	30	5	***0***
7	28	4	***-2***
8	24	3	***-4***



- In this figure, X axis represents inputs in units of capital & labour, Y axis represents the output of corn in units.

- ***TR curve represents total returns***
- ***AR curve represents average returns***
- ***MR curve represents marginal returns***
- *These three curves illustrates two basic facts namely*

a) Total output increases at a diminishing rate

b) Average & marginal output decreases

According to the modern economists, the law of diminishing marginal returns works not only in agriculture , but also in other fields of economic activity including manufacturing industries.

This law will operate in all fields where one or two factors of production are fixed while the others are variable.

Assumptions of law of diminishing returns

- The law is applicable only if one factor of production is kept constant or fixed.
- The factors of production utilized successively should be the same units
- The technique of production remains constant
- It should be understood that in earlier stages of cultivation, we may come across with increasing returns & not diminishing returns

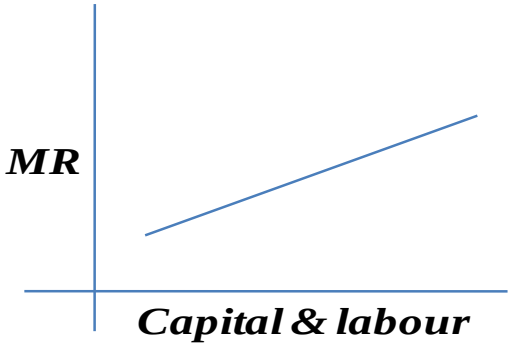
Limitations

- The law is more applied in agriculture
- When land is taken for cultivation the productivity increases initially
- Increased application of agriculture inputs like fertilizers etc, will enable land to yield more return in the earlier stage.

2. Law of increasing returns

- The law of increasing returns is closely related to the law of diminishing returns
- This law operates because the efforts are made by the producer to increase outputs
- An increase of labour & capital leads to improve organisation.

Labour & capital	MR (Meters)	TP (Meters)
First	1000	1000
Second	1500	2500
Third	2000	4500
Fourth	2500	7000
Fifth	3000	10000



3. Law of constant returns

- The law of constant returns represents the shift from the increasing to decreasing returns
- The law of constant returns is said to operate when the total output increases exactly in proportion to increase in the factors of production
- If the actions of the law of increasing & diminishing returns are balanced, we have the law of constant returns
- The law of constant returns operate both in agriculture & industry, if the factor prices are constant

First	50	50
Second	100	50
Third	150	50
Fourth	200	50
Fifth	250	50

Law of returns to scale

- The law of returns to scale describes the *relationships between inputs & output* in the long run when all the inputs are increased
- Returns to scale studies the behavior of output when all factors are increased in the same percentage
- When the scale is increased the firm may experience either increasing returns, constant returns & decreasing returns.

Three phases to scale

- **Increasing returns**
- **Constant returns**
- **Decreasing returns.**
- **Increasing returns to scale**

When the increased in inputs leads to a more than proportionate increase in output, *returns to scale are said to be increasing.*

- **Constant returns to scale**

When the firm increases in all factors, inputs is equal to increase in output in same proportion, *returns to scale are said to be constant.*

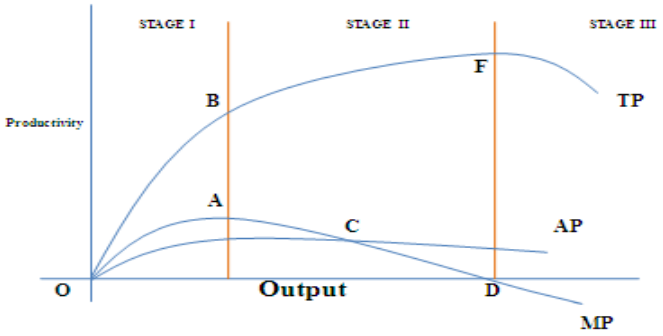
- **Decreasing returns to scale**

If increase in all factors leads to less than proportionate increase in output, *returns to scale are said to be decreasing*

Assumptions of returns to scale

- Existence of perfect competition
- Output is measured in terms of physical quantities
- Fixed state of technology
- All factor inputs except organization are variable
- Workers work with given tools & implements

1	20	20	20	
2	50	30	25	
3	90	40	30	
4	140	50	35	
5	185	45	37	I
6	220	35	37	I
7	245	25	35	II
8	245	0	30	II
9	235	-10	26	III



The following table explains the following stages

Stage I

- In this table labour is a variable factor & capital is applied to fixed factor
- When we apply more & more labour the total productivity increases in the early stages.
- Capital remain fixed the increase in total productivity can be traced to increase in the MP of labour
- TP is increasing at an increasing rate so long as the MP is increasing

STAGE II

- In the next stage MP falls down implying the total productivity increases but at a decreasing rate
- This stage continues till MP is ZERO
- In the second stage both average product & marginal product are declining but both are positive

STAGE III

- In the third stage MP is negative, the TP declines
- The decline in MP can be traced to limited availability of fixed factor

Thus the TP, MP & AP pass through three phases, increasing, diminishing & constant returns

1. Explain the economics of scale. Jan 2012

Economies of scale (Large scale production)

- Large scale production enjoys both internal & external economies
- Internal economies are those economies which appear from within the firm

Internal economies may be classified into five kinds they are

6. **Technical**
7. **Financial**
8. **Managerial**
9. **Risk spreading**
10. **Commercial**

External economies

- External economies are those economies which arises from outside the firm due to some external factors

External economies may be classified into five kinds they are

5. **Economies of concentration**
6. **Economies of information**
7. **Economies of disintegration**
8. **Miscellaneous economies**

Diseconomies

- If a firm continuous to grow & expand beyond a certain limit, the economies of scale disappear & will give rise to diseconomies.
- The diseconomies are nothing but the disadvantages or loss of advantage which the firm had been hitherto *(up till now) enjoying.*
- *Diseconomies can be classified as internal diseconomies & external diseconomies*

Internal diseconomies

- Refers to the increased problems & complexities of large scale management
- When the size of the firm increases the administrative difficulties of coordinating all activities delay decision making arises

External diseconomies

- Too much of concentration & localization of industries beyond a certain limit may create diseconomies in production which will be common to all firms in locality
- Delay in transportation raw materials & finished goods there may be rise in the price of raw materials due to their increased demand
- There may be high cost of labour as their demand may increase there may be difficulties in banking & financing

10) Explain the short and long run cost functions. Jan 2010

Cost

- The supply of commodity in a market depends on various factors like the number of firms in the industry, state of technology, price, non pricing factors like floods, wars.
- The relationship between cost & output is called cost function
- It is assumed that the firm chooses a combination of factors which minimizes its cost of production for a given level of output

Cost of production

- The term cost of production means the expenses incurred in the production of commodity
- This refers to the total amount of money spent on the production of the commodity

Various concepts of costs

- Money cost
- Real cost
- Opportunity cost *or* alternative cost
- Implicit cost *or* book cost
- Explicit cost *or* cash cost *or* out of pocket cost
- Private cost
- Social cost
- Fixed cost
- Variable cost
- Incremental cost

- Sunk cost
- Shut down cost
- Abandonment cost
- Short run cost
- Long run cost

Money cost

- When an entrepreneur undertakes production he has to take money expenditure on various items
- Payment of wages & salaries, cost of raw materials, interest on capital, other expenses

Real cost

- The real cost is expressed in terms of efforts & pains
- The production of a commodity requires different kinds of labour & capital
- The real cost represents pain involved in producing a commodity besides the mioney incurred

Opportunity cost or Alternative cost

- It arises because of scarcity & alternative use of sources
- The opportunity cost is the income which the people have to make choices between the alternatives
- ***(For e.g.)*** Suppose a boy has got Rs 10 With this he can get 5 cups of ice creams. Each ice creams costs Rs 2 with that Rs 10 he can get 10 chocolates each cost Re 1 The boy realizes that he can either have 5 ice creams or 10 chocolates. If he wants both he has to give up the consumption of one for the other. By scarifying 1 ice creams he can have 2 chocolates.

Implicit cost

- Implicit cost differ from other cost
- This is also called imputed cost
- Implicit cost may be defines as the earnings of owners resources employed in their best alternative uses.

- ***(for e.g.)*** An entrepreneur does not utilizes services in his own business & works as a manager in some firm on salary basis. If he starts own business, he foregoes his salary as manger. The loss of salary is an implicit cost of own business
- It is implicit because the income foregone by entrepreneur is not charged

Explicit cost

- Cost involved cash payments which are made by employer to the owners of the resources as the services are purchased by him.
- This is also called paid out cost
- ***(for e.g.)*** The payments of wages, salaries, interest, rent, purchase of raw materials, insurance fee etc.

Private cost

- For a firm both explicit & implicit cost are private cost

Social cost

- Social cost implies the cost which a society bears on account of production of a commodity
- ***(for e.g.)*** Mills & factories located in a city causes ai pollution by emitting smoke, leather factories cause water pollution, cars & buses cause both air & noise pollution
- The money spent towards medical expenses connected with treatment or disease arising out of the pollution is social cost

Fixed cost

- Fixed cost are those which are fixed in production
- These cost do not vary with every change in output
- Fixed cost includes depreciation of machinery, building, maintenance of land

Variable cost

- Variable cost are those which vary in the output
- These cost increases with an increase & decreases with decreased output
- Variable cost includes running expenses, fuel, repairs etc

Incremental cost

- Incremental cost refers to the ***additional cost*** incurred due to change in the level or nature of activity
- Incremental cost are also known as differential costs Incremental cost measures the difference between old & new cost

Sunk cost

- Cost which remain ***unaltered*** even after a change in the level or nature of business activity
- These are known as specific cost
- The best example for sunk cost is depreciation

Shut down cost

- Shut down cost is one which would be incurred in the event of suspension ***(delay)***of the plant operation & which would be saved if the operations are continued
- ***(For e.g.)*** Cost of constructing sheds for sheltering plants & equipments & for storing exposed property. Further additional expenses may be incurred when business operations are started in re employment of workers & giving them training

Abandonment cost

- Cost involved in the ***discontinuance*** of tram services in Bombay & Delhi
- Abandonment cost are those cost of altogether abandoning ***(throw away***)the plant from services

Historical cost

- A cost paid in order to acquire an asset

Replacement cost

- Cost of the assets which are computed at the current prices *(Prices to be paid currently to acquire the same asset)*

(For e.g.)

- *Price paid in the purchase of a machinery two years ago might be Rs. 10,000. this is historical cost*
- *Replacement cost is the cost prevailing now in the market. If the price of the machine is Rs 13,000*

Long run cost

- Long run cost are those which are flexible completely to the changes in the rate of output
- In long run cost there is sufficient scope for changing all input factors

Short run cost

- Short run cost are those which are flexible partially to changes in the rate of output
- In short run cost there is no scope to vary plant, machinery

Cost & output relations

- Cost output relationships are expressed through a cost function
- Cost function is a function derived from the production function & the market supply of inputs
- The basic concepts used in the analysis of cost behavior are total cost, average cost & marginal cost

Total cost

- Total cost is defined as the ***total actual cost incurred by an entrepreneur*** to produce a given quantity of output
- Total cost are composed of two major elements, total fixed cost, total variable costs

$$TC = TFC + TVC$$

- TFC is the sum of explicit fixed cost & the implicit cost incurred by an entrepreneur
- TFC remains fixed in the short run or at a certain level of output
- TVC varies with the variation in the output
- *The total fixed cost remains constant, this shows that the total fixed cost will be incurred even if the output is zero*

- TVC begin from the starting point, this shows when output is zero the variable cost are nil
- After that it starts rising upwards showing that as output increases the total variable cost also increases
- Y TVC
- COST

O Output X

Average cost

- Average cost per unit is the total cost divided by the number of units produced
- Average cost is also obtained by adding average fixed cost &average variable cost

$AC = \frac{TC}{q}$ *(or)* $AC = AFC + AVC$

where q is number of units produced

$AFC = \frac{TFC}{q}$

$AVC = \frac{TVC}{q}$

$AC = \frac{TFC}{q} + \frac{TVC}{q}$

Average fixed cost

- Average fixed cost diminishes with every increase in output
- AFC is the total fixed cost divided by the number of units produced

$$AFC = \frac{TFC}{q}$$

- AFC is the fixed cost per unit of output
- The greater the output of the firm, the smaller will be the AFC
- AFC diminishes as the output increases

Average variable cost

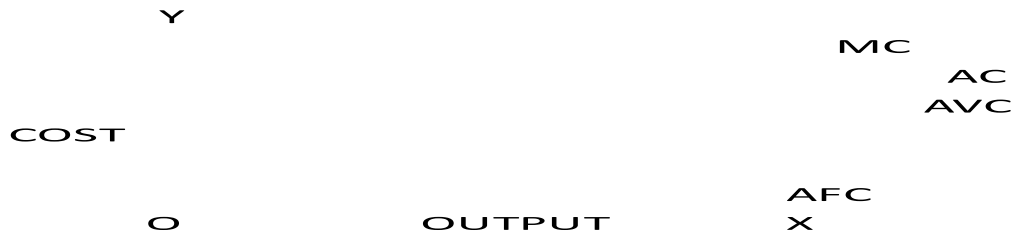
- Average variable cost is obtained by dividing the total variable cost by quantity

$$AVC = \frac{TVC}{q}$$

- AVC declines in the beginning up to a certain point & then rising sharply

Average cost

- AC is the combination of AVC & AFC
- When the output increases beyond the level, the employment of more workers & bad organization will lead to many difficulties
- This results the variable cost per unit goes on increasing with every increase in output



Marginal cost

- Marginal cost is the change in the total cost resulting from the change in the total output
- It means that addition made to the total cost caused by producing one more unit of output

$$MC = \frac{TC}{q}$$

change in total cost / change in the quantity

$$TC = TFC + TVC$$

$$MC = \frac{TVC}{q}$$

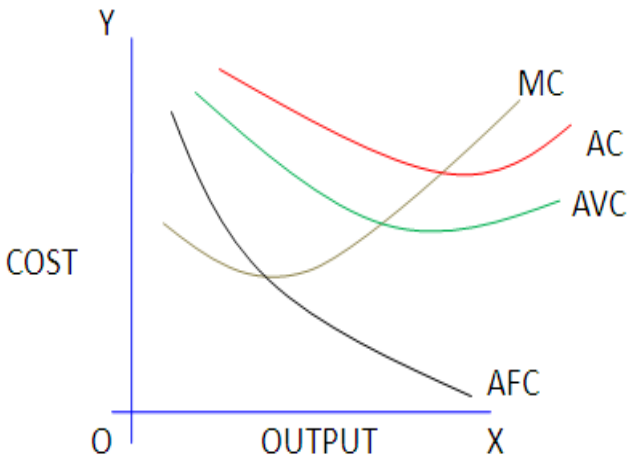
- Marginal costs changes due to the change in variable costs
- The marginal product first rise reaches a maximum & then decline
- This ensures that marginal cost curve of a firm decline first reaches a maximum & then rises
- That is why marginal cost curve of a firm has a U shape

Y MC

Marginal cost

O Output X

No of units (output)	TC	MC	AC
1	20	20	20
2	50	30	25
3	90	40	30
4	140	50	35
5	185	45	37
6	220	35	37
7	245	25	35
8	245	0	30
9	235	-10	26



UNIT 3

7) "Demand for labor reflects marginal productivity"- Discuss Jan 10 / Nov/ Dec 2009/ May/Jun 2012/

Labour

- Labor signifies the contribution of human elements in production.
- Labour refers to any exertion physical or mental undertaken in expectation of a reward, the reward usually begins the payment of money *(the payment of wages)*

Characteristics of labour

- Labour is inseparable from labourer *(skill is used but not himself)*
- Labour has poor bargaining power
- Labour is perishable
- Labour is less mobile *(sentimental attachments)*

Division of labour

Division of labour refers to dividing & sub dividing labour into a number of groups each performing only one complete process of production, if the making of an article is split up into several processes & each process is entrusted to a separate set of workers is called division of labour

Advantages of division of labour

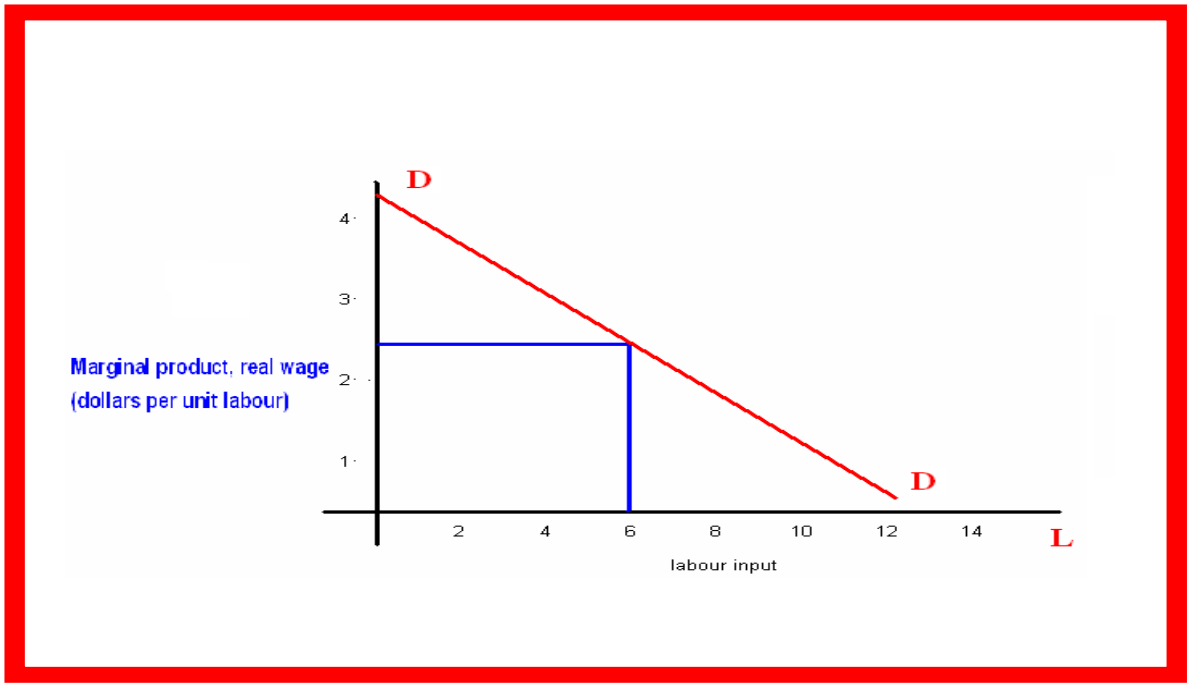
- Increase in productivity
- Increases in skill
- Inventions are possible
- Saving timings
- Improvements in quality of products
- Large scale production
- Reduction in cost of production
- Right man in right place
- Diversification of employment opportunities

Disadvantages of division of labour

- Monotony (same job over & over again)
- No sense of responsibility
- Loss of skill
- Worker is reduced in application of mind
- peacefulness of labour

Demand for labour

- The demand for labour is determined by its output.
- The labour demand curve shifts up & out over time with capital, technological & improvements in labour quality.
- At a given time with a given state of technology there exists relationship between the quantity of labour inputs & the amount of output.
- By law of diminishing returns each additional unit of labour input will add a smaller & smaller slab of output.



Factors determining wages

- Price level
- Regularity of work

- Nature of work
- Trade expenses
- Conditions of work
- Social prestige
- Future prospects

- **Discuss the business cycle in detail Jan 2010 / Jan 2012/ Nov / Dec 2009**

BUSINESS CYCLE

- Business cycle or trade is a part of the capitalist system. ***It refers to boom & depression.***
- In business cycle there are wave like fluctuations in aggregate income, employment, output & price level.
- Fluctuations in economic activity have been occurring periodically in a more or less regular fashion. ***These fluctuations have been called business cycle.*** It may be noted that ***calling there fluctuations as cycle*** means they are periodic & occur regularly.
- The duration of a business cycle has not been of the same length, it has varied from a minimum of two years to a maximum of 10 to 12 years.
- Some business cycle have been very short lasting for only 2 to 3 years, while others have lasted for several years.

Definition

3. The business cycle in the general sense may be defined as "alternation of periods of prosperity & depression of good and bad trade".
4. "A trade cycle is composed of periods of good trade characterised by rising prices & low unemployment percentages altering with periods of bad trade characterised by falling prices & high unemployment percentages".

Phases of business cycle

- Capitalist countries such as USA & Great Britain have rapid economic growth during the last two years. But economic growth in there countries has not followed steady & smooth upward trend.
- Periodically there have been large fluctuation in economic activity ***(i.e.)*** change in output, income, employment & prices.

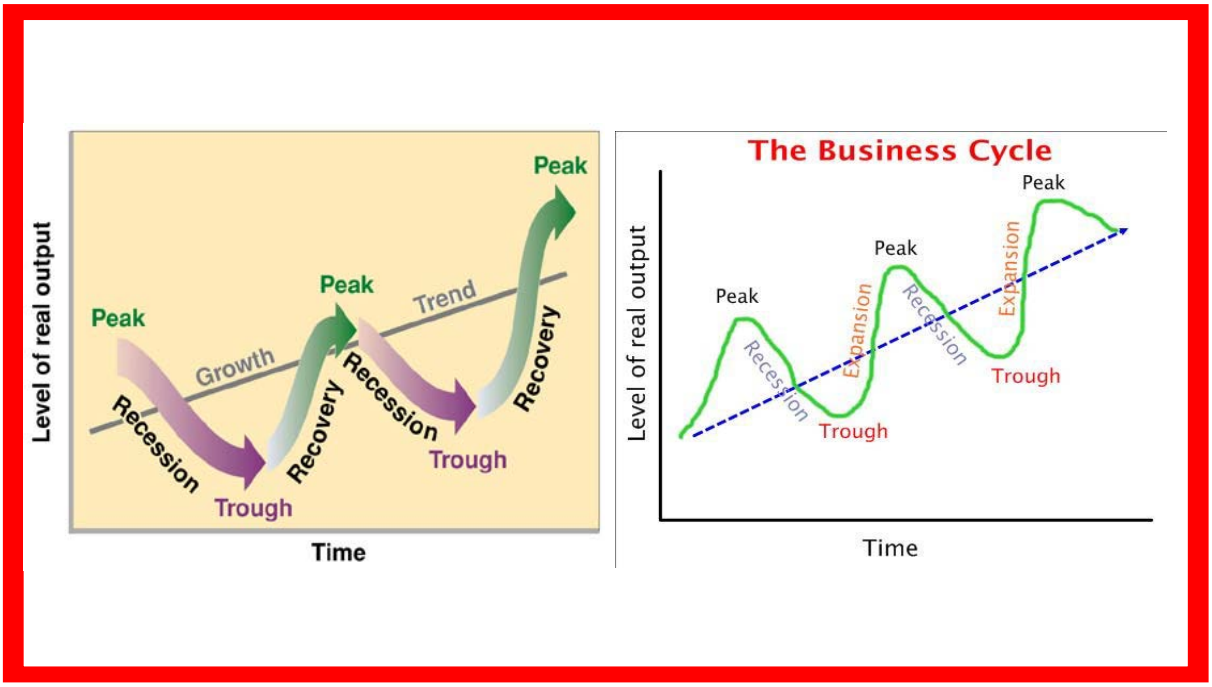
- The period of high income, output & employment has been called the period of expansion, upswing or prosperity & *the period of low income, output and employment has been described as contraction, recession, downswing or depression.*
- The period of expansion alternates ***(occur repeatedly)*** with the period of contraction.
- These alternating period of expansion & contraction in economic activity has been called business cycle. **They are also known as trade cycle.**

The four phases of business cycles have been shown

- We start from depression or through when the level of economic activity ***(i.e.)*** level of production and employment is at the lowest level.
- With the revial of economic activity the economic moves into the expansion phases.
- The expansion cannot continue, where contraction *(or)* downswing starts.
- When the contraction gathers we have depression.
- The downswing continues till the lowest turning point which is also called trough is reached.

The following phases of business cycle have been distinguished

9. Expansion ***(Boom, upswing or prosperity)***
10. Peak ***(upper turning point)***
11. Contraction (***downswing, recession or depression)***
12. Trough ***(lower turning point)***



Explanation

2. Expansion or boom (1st 2 points are same)

- In its expansion phase *(the expansion of business activity takes place),* both output & employment increases till we have full employment & production at the highest level.
- The level of production is at maximum level.
- A good amount of net investment is occurring & demands for durable goods are also high.
- Prices also generally rise during the expansion phase but to high level of economic activity people enjoy a high standard of living.

The important features of upswing are

Money wage raise, rising prices, high level of employment, Job opportunities, expansion of credit and borrowing, rise in profits and income. **(e.g.) IT Industries**

3. Recession

- The ***turning point from boom condition is called recession.***
- The failure of a company or a bank bursts the boom & brings a phase of recession.
- Investment are reduced, production comedown, & income & profits decline, business activity shows sign of dullness.

- During recession, not only there is a fall in GNP but also level of employment reduces. The agricultural class and wage earners would be worst hit.
- At times of depression prices also generally fall due to fall in aggregate demand.
- **Depression occur** when banks start reducing credit ***(i.e.)*** contraction in bank credit may cause downswing. ***(e.g.)*** like low rate of interest for banks, other investment reduces injection of money.

4.Trough

- There is a limit to which level of economic activity can fall. ***(i.e.)*** it may last for sometime.
- After a period of depression, recovery sets in. This is the turning point from depression to revival towards upswing.
- Expansion of money and credit is injected in the economy and the income of the people goes up. ***(i.e.)*** if the banking system starts expanding credit and because of new technology coming into existence.

Theories of business cycle

- Trade cycle is a highly complex phenomenon and it can't be explained by a single factor.
- However several theories have been put forward to explain the causes of trade cycle.

h) ***Sun spot theory or Climate theory***

i) ***Psychological theory***

j) ***Hawtrey's theory or monetary theory***

k) Keyen's theory or trade cycle

l) Von Hayek's theory (or) over investment theory

m) Over savings (or) under- consumption theory

n) Schumpeter's innovation theory

a) Sun spot theory

- This is oldest theory of business cycle.
- Sun spot theory was developed in 1975 by Stanley Jevons.

- Sun spots are storms on the surface of the sun caused by violent nuclear explosion there.
- Since economies are the **older world were heavily dependent on agriculture,** changes in climate condition due to sun spots produced fluctuations in agricultural output.
- The climate variations are due to spots in the sun. Hence the theory is called sun spot theory.
- Whenever there is good harvest, the economies enjoy prosperous boom period. There goods periods are intercepted bad period due to bad harvest and we call them depression.

b) Psychological theory

- The psychological feeling of **optimism *(success)*** *(good must always happen)* and **pessimism *(no confident, thinking everything in wrong)*** in business are responsible for boom and depression.
- This theory is ***only partially true***. The psychological factors may help in gathering momentum in the upswing or bring the downswing suddenly.
- This theory does not explain how the booms or slump is initiated.
- The theory fails to explain as to how a depression starts and how a recovery begins.

d) **Monetary theory** *(Talks about money supply)*

- According to Hawtrey "Trade cycle is purely a monetary phenomenon" and he strongly advocated that **changes in the flow of money** are exclusively responsible for the changes in economic activity which in turn creates boom or depression.
- ***The basic cause of boom or depression to Hawtrey is***

c) Increasing in the quantity of money raises the availability of bank credit for investment.

d) Thus, by increasing the supply of credit expansion in money supply causes rate of interest to fail.

- Lower rate of interest induces businessmen to borrow more for investment in capital goods and also for investment in keeping more inventories of goods.
- If the rate of interest is increased, borrowing gets reduced and as such the business activities gets reduced.

In short, Hawtrey's theory is nothing but inflation and deflation created by the rate of interest.

e) **Keyen's theory:**

- According to Keyen, the primary cause of ***cyclical fluctuations is marginal efficiency of capital (i.e.)*** changes in rate of profits on current investment outlay and also due to changes in the rate of interest.
- According to him MEC forms the vital factor in guiding investment ***(more or less)*** decisions of businessmen.
- But this factor depends on ***business men psychology.***
- This theory approaches very near to psychological theory.
- The rate of interest is a function of quality of money while the MEC depends upon

c) **The supply price of capital assets**

d) **The expected profits *(i.e.)* from such capital assets.**

- Investment outlay will generate multiple amounts of income and employment.

Weakness of the theory

- The theory does not throw away any light on the aspects of trade cycle.
- A sizable fall in the rate of interest will do helpful in investment. But in actual practice, rate of interest does not have any influence on investment.
- According to Keynes, MEC from the essential factor in guiding the investment decision of entrepreneurs. But this factor depends o the final analysis of the entrepreneurs ***(i.e.)*** the psychology of the investors.

SEE PAGE NO 235 AUJHA for extra notes

e) Von Hayek's theory (or) over investment theory

- According to Hayek business cycle, it is the result of ***over issue of credit at an artificially low rate of interest***. The market rates begin lower than the natural rate.
- A fall in the market rate of interest below the natural rate will lead to more investment and therefore an upward swing takes place.
- A rise in the market rate of interest over the natural rate will lead to fall in investment and downswing takes place.
- Change in money supply which causes a change in market failure of the banking system to keep the supply of money is constant is responsible for the business cycle.

f) Over savings (or) under- consumption theory:

According to this theory the business cycle is the result of over saving by which the richer class and under consumption by the poor classes.

- In a free capitalist society, rich have larger incomes. They save the income and automatically invest them as the richer class is unable to spend all income. This leads to **over- production of goods**.
- In the free capitalistic economy, majority of people are poor with low income and low prosperity to consume. Hence, there is a glut *(excess supply)* in the market leading to depression. ***(i.e.)*** supply will be there but low consumption.
- It assumes that all savings are automatically invested. But practically it is not.
- Mere saving will not lead to investment.
- This theory is inadequate to explain business cycles.

h) **Schumpeter's innovation theory**

- The theory stresses the role of aggressive businessmen who come along with new ideas, investment and innovation.
- Innovation should not be confused with inventions.
- It is only the application of new techniques of production, new materials or new methods of doing business.
- Innovation may consist of:

d) **Introduction of new product**

e) **Introduction of some new method.**

f) **Opening of a new market for the product.**

Characteristics of business cycle

2. It occurs periodically.

2. It is all embracing *(hold closely in your arms or include).*

- The business cycle implies that the depression will affect all industries in the entire economy and also affecting the economies of other countries.

3. It is wave like *patterns* *(business cycle has set of patterns)*

- Rising prices, production, employment which will become the features of the upward movement.

- Falling prices, employment will become the features of the downward movement.

4. International in character

- Once if it is started in one country it spreads to other countries through TRADE RELATIONS between them.
- ***(e.g.)*** if there is a recession in USA which is a large importer of goods from other countries, will cause a fall in demand for the imports of other countries.

5. Profits fluctuate more than any other type of income.

- Business cycle causes a lot of uncertainty for business man and makes it difficult to forecast the economic condition.
- During the period of depression, profit may even become negative and many businesses go bankrupt.

6. Inventories of goods

- When depression sets in, the inventories start beyond ***(i.e.) increase*** the desired level. This leads to cuts in production of goods.
- *(When we stock more goods would be wasted, so they cut the production at certain level).*
- When recovery starts, the inventories go below the desired level
- *(i.e.)* where all the stock will be sold and no stock would be available.
- This encourages business man to place more orders for goods whose production picks up and stimulates investment in capital goods.

7. Consumption of durable goods *(cars, houses, refrigerators)*

- Consumption of durable good**s** is affected mostly by the cyclical fluctuations.
- Expectations of entrepreneurs change quite often in making investment.

8. Consumption of non durable goods

- Consumption of non durable goods does not vary much during different phases of business cycle *(even if loss people have to eat)*

9. The cycles will be similar, but not identical *(same)*

10. It affects the whole economy

- Generally depression will affect all industries in the entire economy

11. It is a cumulative process

- The movements are cumulative in process.
- Once the upward movement starts, it creates future movements in the same direction by feeding on itself.
- Similarly, when downward movement starts, it persists ***(continue)*** in the same direction, leading to the worst depression till it is to gain an upward movement.

Control of trade cycle

- The trade cycle creates havoc *(a great destruction or disorder)* in the economy by

making fluctuations & instability.

- It has become the duty of the government to control the fluctuations caused by trade cycle & to ensure smooth economic activity.

The trade cycle cannot be controlled by a single operation. It consists of many sided

activities which are as follows

g) ***Monetary policy***

h) ***Fiscal policy***

i) ***Anti – cyclical budgeting***

j) ***Economic activity***

k) ***Tax rates***

l) ***Government involvement***

UNIT 4

8) What is national income? How is national income measured by income method? Discuss Nov/Dec 2009 / Jan 2010

Or

Explain the process of determination of National Income. May / Jun 2012

Meaning of National income

National income has been defined by various writers from different angles.

1. Generally it refers to the money value of the flow of goods and services available annually in an economy.

2. National income is the total money value of goods & services produced in a country (i.e.) 1 Year.

3. National income is, the money value of all final outcome of all economic activities of the people of a country.

4. National income estimate which measures the volume of commodities and services turned out during a given period, counted without duplication.

5. National income is the value of goods and services produced during a given period counted without duplication.

6. Total income of the country is called 'national income'.

Concepts of national income

9. Gross Domestic Product- GDP
10. Gross National Product- GNP
11. Net Domestic Product- NDP
12. Net National Product- NNP
13. National Income- NI
14. Personal Income-PI
15. Disposable Personal Income- DPI
16. Personal savings

1. Gross Domestic Product- GDP

It is the money value of final goods & services produced in the domestic country during a year.

In other words GDP is the income generated (created) by the factors of production during a year within the country by its own resources. ***It does not include the income earned from abroad.*** (money earned by citizens in foreign country)

GDP = *Market value of goods & services produced by the residents in the country*

Plus (+) income earned in the country by foreigners

Minus (-) income received by residents of a country from abroad.

2. Gross National Product- GNP

Only our country income is calculated

Note *-when calculating total GNP* ***income earned in the country by the foreigners is reduced.***

GNP = GDP + Net income from abroad *(money earned by residents in foreign country)*

GNP = Market value of domestically produced goods & services

Plus (+) income earned by the residents of a country in foreign countries

Minus (-) income earned in the country by the foreigners. ***(foreign people will take their money).***

3. Net Domestic Product- NDP

It is the sum total of money value of final goods & services produced in the country in a year ***excluding*** depreciation cost.

Depreciation

Refers to all those expenditure undertaken by the producers to replace the worn out *(damaged)* parts of the capital goods like machinery, tools, equipments & buildings used up in the production of goods & services.

NDP = GDP - depreciation

4. Net National Product- NNP

NNP = GNP – depreciation.

The sum total of money value of final goods & services produced in an economy in a year excluding deprecation cost. It includes income from abroad.

5. National Income- NI

NI = NNP – indirect taxes + subsidies

The firm have to pay indirect taxes on goods & services to the government. These taxes have to be deducted from the NNP to find out total national income.

Direct taxes- people pay

Indirect taxes - firms pay

Subsidies - a some of money given to keep the price of some thing low ***(government expenditure)***

The government levies indirect taxes on goods sold on market. These taxes are collected from firms. At the same time, the government also provides subsidies to the firms which sell the goods fixed by the government. ***Selling the goods at a price fixed by the government will cause loss to the firms*** *when the firms are not selling the goods at market prices.* ***Such a loss is compensated by subsidies given by the government.***

6. Personal Income-PI

PI = NI - (corporate profits + social security contributions + Corporate income tax) + transfer payments

PI = The actual income received by the individuals or households in the country during the year.

Transfer payments = (unemployment allowances, old age & widow pensions, relief payments, interest payment on public debts, etc)

7. Disposable Personal Income - DPI

DPI = PI – direct taxes

The whole of PI is not available to individuals for consumption as they have to pay direct taxes. The part of PI which is left after payment of personal direct taxes is called DPI

8. Personal savings

PS = DPI - personal consumption expenditure

What we save from personal income without adding consumption is known as personal savings.

GDP	**000**
(-) Depreciation	**000**
NDP	**0,000**
GNP	**000**
(-) Deprecation	**000**
NNP	**000**
(-) Tax	**000**
(+) Sub	**000**
NI	**000**
(-) Cop profits, contribution	**000**
(+) Dividend	**000**
(+) Transfer payment	**000**
PI	**000**
(-) Direct tax	**000**
DPI	**000**
(-) Consumption expenditure	**000**
PS	**0,000**

9) Explain the various methods used to calculate National Income. Jan 2010/ Jan 2012

Or

State the various methods of measuring national income. Jan 2011

Methods of computation of national income

There are 3 methods of computation of national income

7. **Product method (or) Census method (or) Value added method (or) Production method (or) Output method**
8. **Income method**
9. **Expenditure method**

1. Product method (or) Census method (or) Value added method (or) Production method (or) Output method

- The total products produced in the economy are calculated for a year.
- Under this method, the economy is divided into different individual sectors such as agriculture, fishing, mining, construction, manufacturing, trade & commerce, transport, communication & other services.
- The net value by each ***productive*** enterprise as well as by each industry or sector is estimated.
- In order to arrive net cost by an enterprise we have to subtract the following from the value of output of an enterprise.

d) Deprecation *(Capital consumption)*

e) Indirect taxes

f) Intermediate consumption *(such as raw materials, fuels purchased from other firms)*

- Here care must be taken to avoid double counting
- While estimating national income through product method certain precautions should be taken *(i.e.)* should be added or deducted.

2. Income method

- Income is calculated by adding up the rent of land, wages, salaries of employees, interest on capital, profits of entrepreneurs & income of the self employed people.
- Income is obtained by summing up of the income of all individuals of a country.
- While estimating national income through income method certain precautions should be taken (i.e.) which should be included & not included.

3. Expenditure method

- Expenditure method arrives income by adding up all expenditure made on goods & services during the year.

e) Expenditure by consumers on goods & services

f) Expenditure by private manufacturer on capital or investment goods.

g) Expenditure by government on consumption as well as capital goods.

h) Money received from export of goods & services.

- While estimating national income through expenditure method certain precautions should be taken (i.e.) which should be included & not included.

National product, National income, National expenditure

4. National product
5. National income
6. National expenditure

NP = NI = NE

1. National product

It consists of all the goods & services produced by the community & exchanged for money during a year. It does not include goods & services which are not paid for such as hobbies, house wives services charitable work etc.***(e.g.)*** value of all goods & services produced by the firms in the economy.

2. National income

It consists of all the income in cash & kind accruing to the factors of production. It represents the total income flow by the economy during the year.***(e.g.)*** value of all incomes earned in making these goods & services

3. National expenditure

This represents the total spending or outlay of the community on the goods & services of all types (capital as well as consumption) produced during a given year.***(e.g.)*** one's man expenditure becomes other man's income in the economy.

3) How income flows in economy? Explain the circular flow of income. May / Jun 2012

Circular flow of income

The modern economy is a monetary economy. In the modern economy, money is used in the process of exchange. Money has removed the difficulties of barer system. Thus money acts as a medium of exchange.

7. Circular flow of income TWO- Sector economy (income & expenditure)

8. Circular flow of income THREE- Sector economy (income & expenditure with government)

9. Circular flow of income Four- Sector open economy (income & expenditure with government & foreign sector)

1. Circular flow of income TWO- Sector economy (income & expenditure)

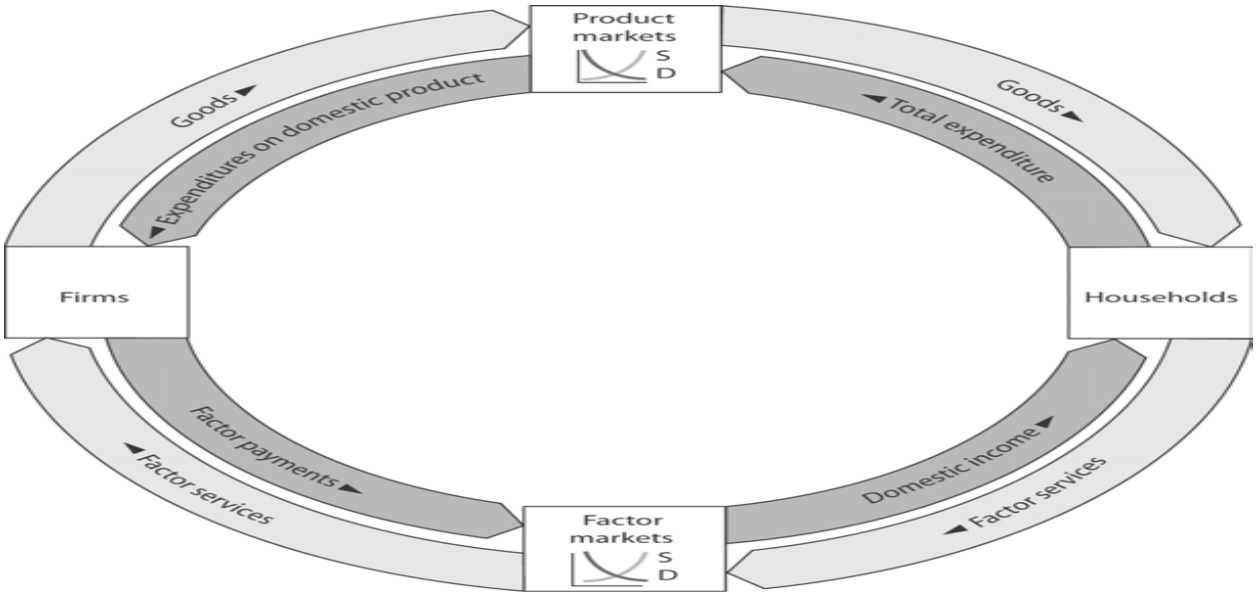
Two basic principles on which circular flow of income are explained

2. In any exchange activity, the income received by the producer ***is equal*** to the amount spent by the consumer.

3. Goods & services produced, ***flow in clock wise direction*** & money payments to purchase these goods ***flow in antic clock wise direction***. These activities causes circular flow.

EXPLAINATION

- In any economy both production & consumption are considered to be the basic economic activity.
- We shall explain the flow of income in an economy by taking a model of a simplified economy in which only two sector operates *(i.e.) household* sector & producer's sector or firm.
- The upper loop shows flow of goods & services in the economy.
- Household supply services to the firm.
- Business firms by utilising the services produce goods & services.



- The firms supply goods to household as a reward to their services. (i.e.) goods flow from firms to households. *(when money was not introduced).*
- Such flow of goods & services is described as real flow in the economy.
- In the modern economics*(when money has been introduced),* factor payment are not made in kind but in terms of money.
- *Factor payment (i.e.) house holds receive their reward in the form of money as shown in the lower loop.*
- House holds utilise this money to purchase goods & services produced by the firms (thus money flows from firms to house hold & back to firms.
- Since the income flow in a circular way between firms & households, this flow is also known as circular flow of income.
- In this model only consumption expenditure of the house hold & investment expenditure of firms are included as shown in the following equation.

$$Y = C + I$$

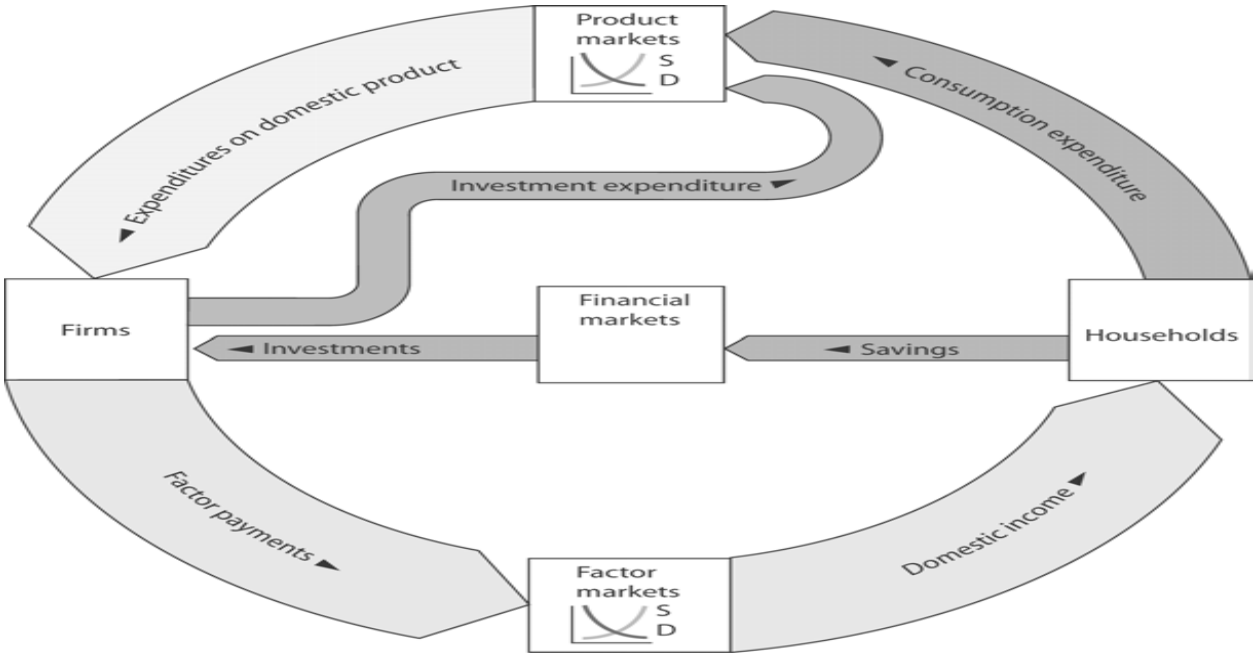
Y = National income

C = Consumption expenditure

I = Investment expenditure.

Circular flow of income TWO- Sector economy with saving & investment

- In the above analysis of the circular flow of income we have assumed that all income which the house hold receive, they spend it on consumer goods & services.
- If house holds save a part of their income, their saving will affect money flow in the economy.
- When house holds save in ***financial markets*** their expenditure on goods & services will decline.
- Savings reduce the flow of money ***(profits)*** to the business firms & will cause a fall in income for them.
- It is business man who borrow from the financial markets for investment in goods such as machines, factories, tools etc. Firm spend on investment in order to expand their productive capacity in future.

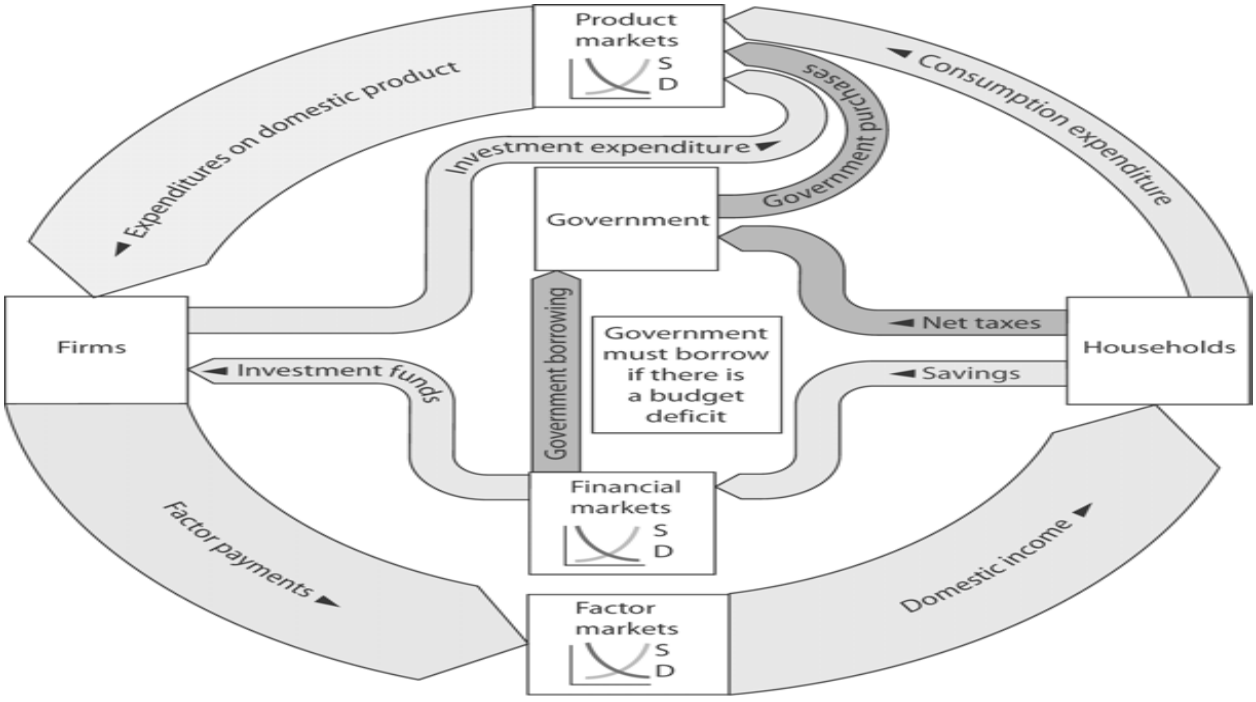


3. **Circular flow of income THREE- Sector economy *(income & expenditure with government)***

The three sector model including government sector is explained

- Government plays a significant role in the economic life of any country. Government acts both as a consumer & producer in the modern economics.
- It has its own source of income & also it has to incur expenditure in a number of ways.
- Government collects taxes both from the firms & the house holds.

- Tax is the major source of income for the modern government. Withdrawing some amount from the households & the firms.
- A government spends the income on a number of activities which are so designed to benefit both the households & the firms. *(for e.g.)* ***like old age pensions, sickness benefit, housing, unemployment***. This type of activity will satisfy the needs of the society.
- Likewise it is also possible that the government may incur expenditure to render some services to the firm sector. *(e.g.)* the government may decide to subsidies *(pay part of the cost for producing something)* the production of few important commodities. Similarly government ***may purchase*** goods & services from the firms for the use of society.



- Another method of financing government expenditure is borrowing from the financial market.
- After including the government spending, the equation will be

$$Y = C + I + G$$

Y = National income

C = Consumption expenditure

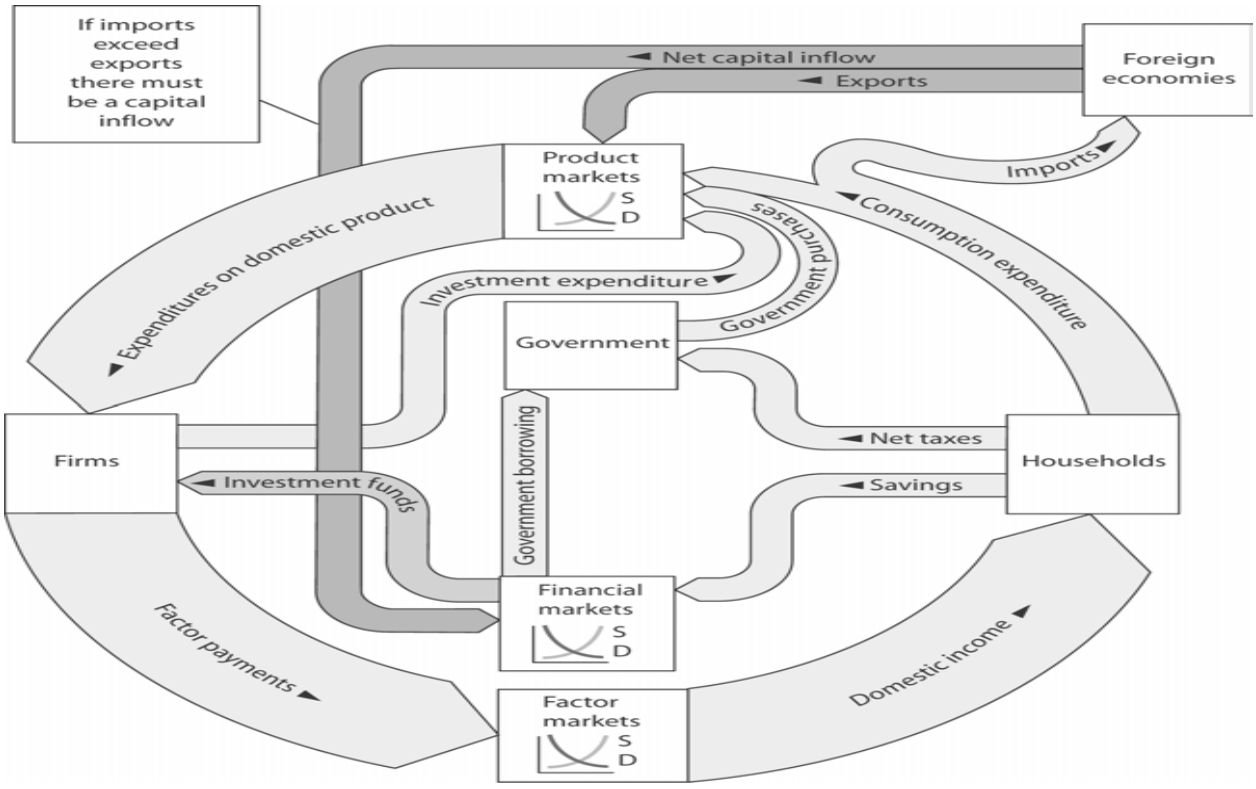
I = Investment expenditure.

G = Government expenditure

3. Circular flow of income Four- Sector open economy *(income & expenditure with government & foreign sector)*

- The four sector model includes foreign sector in addition to household, business enterprises & government sector in circular flow of income.
- Export causes an injection of money into the circular flow of money. When foreigners buy goods & services produced by domestic firms they are ***exports*** in circular flow of money.
- ***Imports*** are considered as leakages from the circular flow. They are expenditure incurred by the household sector to purchase goods from foreign countries.
- Take an *(e.g.)* household sector that buys goods imported from abroad & makes payment to the foreign firms thus is considered leakage from the circular flow of money.
- The household may receive transfer payments from the foreign sector for the ***service rendered*** by them in foreign.

The business firm export goods to foreign countries & get receipts from them. Such activities bring fresh injection of money in the circular flow. When firms purchase goods from the foreign firms & make payment to them, it causes leakage in the flow of money.



- Apart from this domestic firms also receive royalties, *(a sum of money)* interest, dividends, profits for investment made in foreign countries.
- Domestic firms also make payments for imports of machineries, capital goods, raw materials, consumer goods & services from abroad. Such import causes leakages for the circular flow.
- Like business firms, the government sector also makes payment for the goods imported & receive payment for the goods exports to foreign countries.
- Inclusion of foreign sector in the income equation will be shown as

$$Y = C + I + G + (X - M)$$

Y = National income

C = Consumption expenditure

I = Investment expenditure.

G = Government expenditure

X = Denotes income through exports

Y **=** Payments for imports

(X-M) **=** Difference between export & import gives net income earned from abroad.

- Net income earned from abroad may be minus or plus depending upon the size of export & import.
- If the export is greater than the import, net income would be *(positive),* on the other hand if the export is lower than the import then net income earned would be *(negative).*

Factors determining national income

There are number of factors which determines the size of the national income in a

country.

4. Quality & quantity of factors of production
5. The state of technical known how
6. Political stability.

1. Quality & quantity of factors of production

- Quality & quantity of ***factors of production*** is one of the most important determinants in national income.
- The quality & quantity of **land** determines the quality & quantity of agricultural production & the national income.
- The quality & quantity of **labour** determining upon intelligence, education, training, etc. determines the volume of industrial production.
- The quality & quantity of **capital** is one of the greatest determinants on total output.
- The quality & quantity of **organisation** ability is also an important element determining the size of national income of a country.

2. The state of technical known how

- This is another important determinants operating in our country.
- A country with a poor technical knowledge cannot have a large size national income, as it will be incapable of exploiting its resources efficiently.
- The extent of technical known how & technology of production determine the capital formation in the country.

- Advanced technology will go in a long way in increasing the size of national income or economic development.

3. Political stability

- The economic development of several countries, have been hindered *(delayed)* in the past by political stability.

The key to develop & increase in national income rest ***(stopped)*** on important factors like ***capital formation, technical, political stability etc***. In backward economies, all these factors will be deplorably *(shockingly bad)* lacking & the size

of the national income will be small.

UNIT 5

10) Identify the causes of inflation and discuss its effects on multidimensional public. May / Jun 2012

Or

What is inflation? List the reasons and impacts of inflation. Nov/Dec 2009

Or

Discuss the Controlling factors of inflation. Jan 2010

INFLATION

Meaning

- Inflation means ***rise in prices*** after full employment has been reached.
- Inflation refers to rise in prices or fall in the value of money *(i.e.)* prices are rising *(land present value & future value).*
- Inflation refers to too much money ***chasing too few goods*** *(out of 100 cars only 2 cars)*
- Inflation exists **when money income is expanding** more than in proportion to increase in earning activity.
- Inflation occurs when the general level of prices & costs is rising.
- A continuous rise in the general price level over a long period of time has been the most common feature of both developed & developing economies.

All these factors are very common in developing economies like India. The world in general has gone through inflation since Second World War.

Definition of inflation

4. "Inflation denotes a rise in the general level of prices"
5. "A state in which the value of money is falling, that is prices are raising"
6. "A sustained rise in prices"

Types of inflation

Inflation may be classified into several types

6. ***On the basis of speed with which prices rises***

7. ***On the basis of different processes through which inflation is induced*** *(give rise to)* *(or)* ***on the basis of inducement***
8. ***On the basis of the criterion of time***
9. ***Number of goods in which rise in price level takes place***
10. ***On the basis of price policy of the government.***

1. On the basis of speed with which prices rises

On the basis of speed with which prices rises, inflation can be divided into the following types.

e) *Creeping inflation (or) mild inflation (or) moderate inflation*

f) *Walking inflation*

g) *Running inflation (or) Trotting*

h) *Hyper inflation (or) Jumping (or) Galloping (or) Run away (or) Spiraling*

a) Creeping inflation (or) mild inflation (or) moderate inflation

- The name itself suggests, creeping inflation is slow moving & very mild.
- If the price level rises from 1 to 3% per annum, the inflation is called ***creeping inflation***
- When the general level of prices rises at a moderate rate over a long period of time, it is called creeping inflation
- *It is mild form of inflation*. It occurs when prices are rising slowly.
- The rate of inflation ***may vary from country to country***
- When the rate of inflation is less than 10% annually or single digit annual inflation rate is called creeping inflation
- Creeping inflation is a mild form of inflation & according to some economists ***is not dangerous to the economy***
- Some economists have described upto 3% annual rate of inflation as creeping inflation
- Samuelson's opinion, Moderate inflation is not a serious problem.

b) Walking inflation

- If inflation rises from 3 to 4% per year it is called walking inflation.
- If it exceeds 10% it is called walking inflation

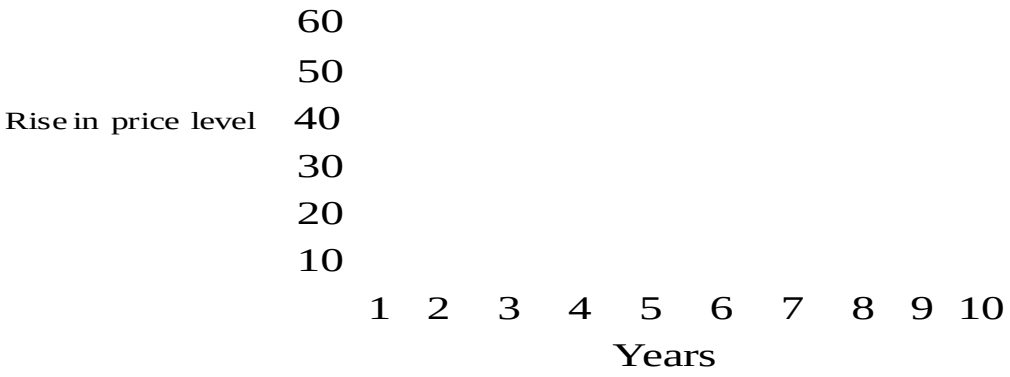
- Where the rise in prices, becomes more pronounced *(noticeable)* compared to creeping inflation, ***presents a danger signal for the occurrence of running & hyper inflation***
- Walking inflation takes place when creeping gets momentum *(the force caused by the development of something)*. In this case the rise in price becomes more marked.

c) Running inflation (or) Trotting

- If the price level rises about 10% per year it is called running inflation
- Rise in prices will be very sharp & vigorous *(strong, forceful)*
- When the movement of prices accelerates rapidly, running inflation emerges
- Running inflation may record more than 100% rise in prices over a decade *(a period of 10 years)*
- Economists may say that a double digit inflation of 10 to 20% per annum is a running inflation. If it exceeds that figure, it may be called ***'galloping inflation'***

d) Hyper inflation (or) Jumping (or) Galloping (or) Run away (or) Spiraling

- Hyper inflation is **based on speed** with which prices rise.
- When prices begin to rise at more than three digit rate per annum, it is called hyper inflation.
- When the price level rises about 100% per year it is called hyper inflation. ***(for e.g***.) if the price of commodity is Rs. 100 today it will become Rs. 200 in the next year
- In hyper inflation prices rise every month, every day & even every hour & there is **virtually no limit** of the height to which prices might rise.
- It is dangerous to the economy as it cannot controlled easily.



1. Creeping inflation a rise of 10% in the general level of prices takes place in about 8 years
2. In the case of walking inflation in the shorter period of a decade, a rise of approximately 30% in price takes place
3. When the inflation is running type, it takes only 3 years to record an increase of approximately 60% in the price.
4. In the case of jumping there is no limit to the increase in prices, in less than year the increase in the price level being more than 100%.

2. On the basis of inducement

d) ***Deficit inflation***

e) ***Wage inflation***

f) ***Profit inflation***

a) Deficit induced inflation

- This is caused by the adaption of unbalanced budgetary policies
- Which means government spending in excess of its revenues receipts

b) Wage induced inflation

- This denotes a rise in price due to an increase in money wages
- Increase in price level will make the labors demand more wages

c) Profit induced inflation

- Account of increase in the profits of manufactures will be the contributory factor t o another cause leading to an inflationary condition in the economy

3. On the basis of the criterion of time

- Sudden launching of war will strain the economy the government would option to deficit financing & there will be massive expansion of money supply for producing materials
- This will generate inflation, as all commodities will become scarce due to their diversion to war purpose

6. Number of goods in which rise in price level takes place

7. On the basis of price policy of the government.

Effects of inflation

- ***On producers*** *(all businessman, traders, gain during inflation) where the prices of goods increases faster*
- ***On working class*** *(Labors suffer during inflation where the prices rise as their wages do not rise)*
- ***On fixed income group*** *(People of fixed income group are the losers during inflation where the income do not rise)*
- ***Borrowers & lenders*** *(Borrowers gain & the lenders lose during the periods of inflation when price rises the real value of money falls & the debtors have to pay money which has less purchasing power)*
- ***Government*** *(government is the net gainer during the period of inflation where inflation increases both the direct & indirect taxes)*
- ***On economic growth*** *(inflation affects economic growth positively or negatively depends on whether it affects savings & investments positively or negatively)*
- ***On employment*** (A very strong conflict arises between growth & employment at high rte of inflation.)

Causes of inflation

- Consumer expenditure
- Foreign demand
- Rising imported raw materials cost
- Rising labor costs
- Higher indirect taxes imposed by the government
- A depreciation of the exchange rate

- The rapid growth of the money supply
- Faster economic growth in other countries
- Full employment

Control of inflation

1**.** ***Monetary measures***

f) Bank rate policy

g) Reserve ratio

h) Open market operation

i) Credit control

j) Issue of new currency

2. ***Fiscal measures***

d) Reduction in unnecessary expenditure

e) Increases in taxes

f) Public debt

3. ***Other measure***

e) Increase production

f) Direct control

g) Miscellaneous measures

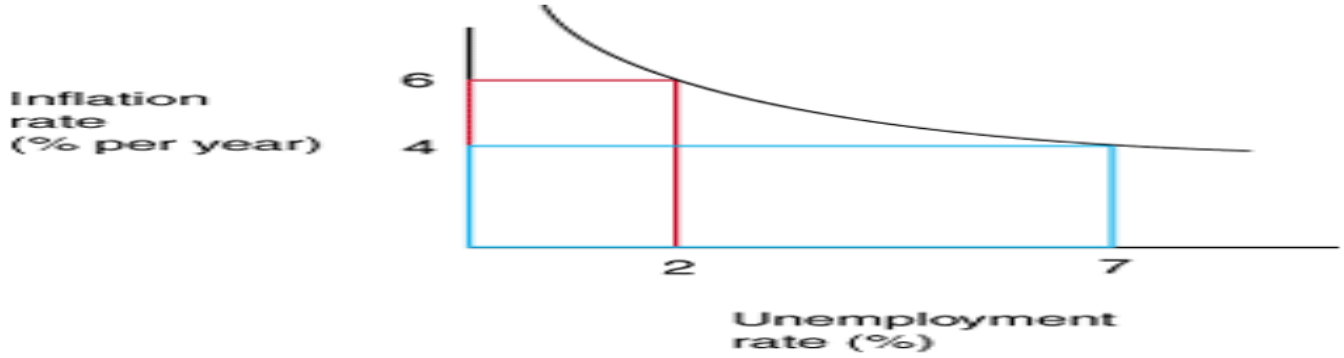
h) Price & wage control

2) Explain Phillips curve? May/Jun 2012/ Nov/Dec 2009

Phillips curve

- An economic concept developed by A. W. Phillips *stating that inflation and unemployment have a stable and inverse relationship.*
- According to the Phillips curve, the lower an economy's rate of unemployment, the more rapidly wages paid to labor increase in that economy.

- Macroeconomic policies are implemented in order to achieve government's main objectives of full employment and stable economy through low inflation. We can use *Philips Curve* as a tool to explain the trade-off between these two objectives.
- Philips Curve describes the relationship between inflation and unemployment in an economy.
- You already know that the Inflation is defined by increase in the average price level of goods and services over time.
- When there is inflation, value of money falls. A low inflation rate indicates that average price of goods would not rise as high.
- Unemployment exist when someone is actively seeking for job but unable to find any despite their willingness to accept the going market wage rate
- Demonstrates the inverse relationship between unemployment rates and inflation rates
- Assuming a constant short-run AS curve:
- Inflation rate↑ → Unemployment ↓ (when AD increases, there is a upward pressure on prices and UE therefore decreases)
- Inflation rate ↓ → Unemployment ↑ (when AD decreases, there is a downward pressure on prices and UE therefore increases)
- Thus, the relationship is inverse as shown by the graph below:



  - *For example,* after the economy has just been in recession, the unemployment level will be fairly high. This will mean that there is a labor surplus.
  - As the economy has just started growing, the aggregate demand (AD) will increase and therefore leading to an increase in employment. In the beginning, there will be little pressure for a raise in wages. However, as the economy grows faster and more people are employed, wages will start rising slowly.

- This will increase the firm's cost of production and the high costs are usually passed on to the customers in the form of higher prices. Therefore a decrease in unemployment has led to an increase in inflation and vice versa.

- Not only that, unemployed might suffer from money illusion as they thought the increase in wages offered to them represented a real wage . They underestimate inflation by not realizing that higher wages will be eaten up by higher prices. Thus they will accept job more readily and this will reduce the *frictional unemployment* in the short run.

- The relationship we discussed above is a phenomenon in the short-run. But in the long run, since unemployment always returns to its *natural rate (unemployment rate at which GDP at its full-employment level that is, with no cyclical unemployment, there is no such trade-off).*

Remember that

• ***When unemployment rate is below natural rate, GDP is greater than potential output***

– Economy's self-correcting mechanism will then create inflation

• ***When unemployment rate is above natural rate, GDP is below potential output***

– Self-correcting mechanism will then put downward pressure on price level]

a) Critically evaluate the impact of unemployment. Jan 2010

Or

State the ways and means of tackling unemployment. Jan 2011

Or

What is unemployment? List the impacts of unemployment Jan 2012

Or

Explain the historical views and the causes of unemployment. Nov/Dec 2009

UNEMPLOYMENT

Meaning

- In economics, unemployment refers to the condition and extent of joblessness within an economy, and is measured in terms of the unemployment rate, which is the number of unemployed workers divided by the total civilian labor force.

- Hence, unemployment is the condition of not having a job, often referred to as being "out of work", or unemployed

Types of unemployment

- ***Frictional unemployment (shortages of raw materials, break down of machinery)***

- ***Cyclical unemployment (During recession or trade cycle or general business declines)***
- ***Technological unemployment (changes in techniques)***
- ***Seasonal unemployment (seasonal variations)***
- ***Structural unemployment* (**
- ***Open unemployment (large labor force does not get work opportunities)***
- ***Underemployment (person does not get the type of work he is capable of doing)***
- ***Disguised unemployment (transfer of men from the more productive to less productive jobs during depression)***
- ***Hidden unemployment* (people who have effectively given up active search for jobs perhaps because they have been out of work for a long time and have lost both the motivation to apply for jobs and also the skills required)**

Causes Of Unemployment

- Rapid changes in technology
- Recessions
- Inflation
- Disability
- Undulating business cycles
- Changes in tastes as well as alterations in the climatic conditions. This may in turn lead to decline in demand for certain services as well as products.
- Attitude towards employers
- Willingness to work
- Perception of employees
- Employee values
- Discriminating factors in the place of work (may include discrimination on the basis of age, class, ethnicity, color and race).
- Ability to look for employment

Remedial measures for unemployment

a)Long term measures

- Rapid economic development
- Scientific methods should be adopted
- Population should be effectively checked in all communities
- Public works should be started

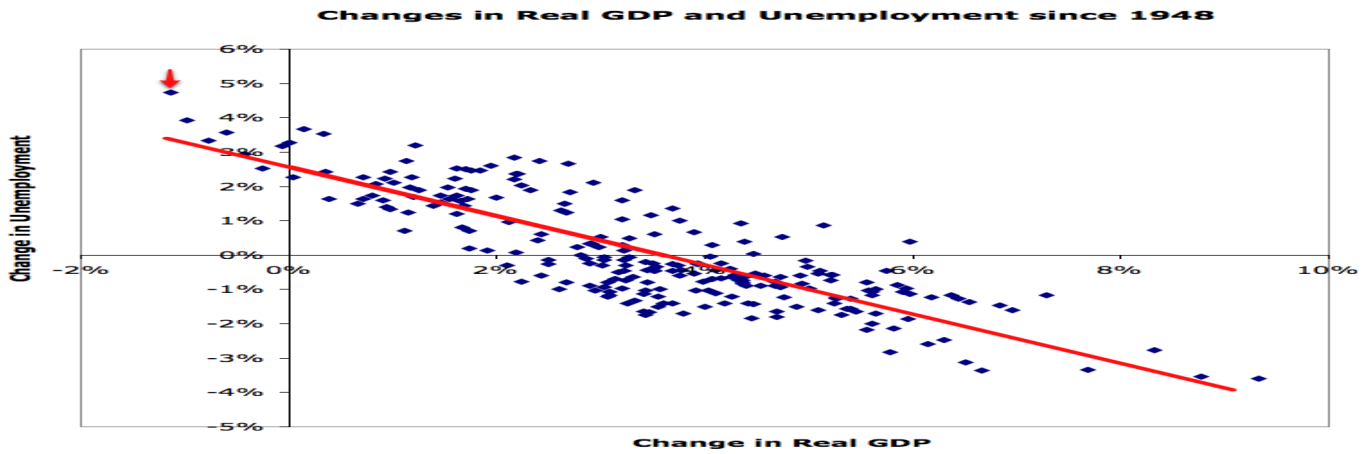
b) Short term measures

- Establishment of small industries
- Transport to be developed
- Slum clearance & housing schemes
- Private activity to be encouraged
- Development of backward areas

4) State Okuns law. Explain Jan 2010

OKUN's Law

- Arthur Okun (1929 – 1979) was one of the most creative American economic policy makers of the post ware era.
- He created the concept relation between output & unemployment that is now known as Okun's Law.
- The most distressing consequence of any recession is a rise in the unemployment rate. As output falls, firms need fewer labour inputs, so workers are not hired & current workers are laid off.
- Okun's law states that for every 2 % that GDP falls relative to potential GDP, the unemployment rate rises about 1% point.
- Moreover if you want to bring the unemployment rate down, actual GDP must be growing faster than potential GDP.



- According to Okun's law, whenever output grows 2 % faster than potential GDP, the unemployment rate declines 1% point.
- This graph shows that unemployment changes are well predicted by the rate of GDP growth.

a) Enumerate and explain the impact of monetary policy on business. Jan 2011

Or

Critically examine the Indian monetary policy. Jan 2012

Or

Write about the roles of monetary policies. May/Jun 2012

Or

Explain the Monetary policy tools. Nov/Dec 2009

MONETARY POLICY

Meaning

Monetary policy is essentially a programme of action undertaken by the monetary authorities, generally the central bank***, to control & regulate the supply of money with the public & the flow of credit with a view to achieving predetermined macroeconomic goals***

Scope of monetary policy

- Level of monetization of the economy
- Level of develop of the capital market
- Price stabilization
- Exchange stability

- Full employment
- Economic growth
- Equal balance in payments
- High rate of growth
- Equality in distribution of wealth

Instruments of monetary policy

2. ***Quantitative measure***

d) *Open market operations*

e) *Discount rate or bank rate*

f) *Cash reserve ratio*

3. ***Qualitative or selective credit controls***

f) *Credit rationing*

g) *Change in lending markets*

h) *Moral suasion of money & credit supply*

i) *Direct controls*

j) *Deficit financing*

Limitations of monetary policy

- Time lag
- Problems in forecasting
- Non banking financial activity
- Underdevelopment of money & capital markets
- Political Issues
- Lack of Coordination
- unplanned Consequences

Problems	Recession & unemployment	Inflation
	•Central bank buys securities through open market operation •It reduces CRR •It lowers bank rate	•Central bank sells securities through open market operation •It raises CRR •It raise bank rate
	Money supply increases	Money supply decreases
	Interest rates fall	Interest rate rises
	Investment increases	Investment expenditure declines
	Aggregate demand increase	Aggregate demand declines
	Aggregate output increases by a multiple of the increases in investment	Price level falls

6) Give an account of Fiscal policy. Examine its impact on business. Jan 2010

Or

Explain the theories of fiscal policy. Jan 2011

Fiscal policy

- Fiscal policy refers to policy where the **government finances to achieve the macro economic goals**
- A policy under which government uses its **expenditure & revenue** programs to produce attractive effects & avoid unwanted effects on the national income, production & employment
- The process of shaping taxation & expenditure to **contribute the maintenance of growing**, high employment economy
- Fiscal policy is the government programme of making **changes in the pattern & level of its expenditure, taxation & borrowing in order to achieve economic growth,** employment, income equality & stabilization of the economy on a growth part

Objectives of fiscal policy

- **To mobilize resources for economic growth**, especially for the public sector
- To **promote economic growth in the private sector** by providing incentives to save & invest
- To restrain inflationary forces in the economy in order to **ensure price stability**
- To ensure equitable distribution of **income & wealth**

Fiscal policy & macro economic goals

1. **Fiscal policy for economic growth**

e) To promote savings

f) Tax measures generally used for the purpose of resource mobilization

g) Economic growth through borrowings includes internal & external borrowings

3. Fiscal policy for stabilization

d) Changes in taxation & government spending

e) Increasing in spending on goods & services in the private sector

f) Controlling business cycles

3. Fiscal policy for economic equality

d) Re-allocating capital expenditure

e) Make provision for self employment

f) Imposing of wealth & property tax

5. Fiscal policy for external balances

b) Reducing the gap between external payment & external earnings

6. Fiscal policy for employment

Limitations of fiscal policy

- *Formulating appropriate fiscal policy requires reliable forecasting of the variables like GNP, consumption, investment, technology changes*
- *Changes in policy of government spending*
- *Decision & implementation lags*
- *Working in underdeveloped countries is limited by low levels of income, small proportion of population, inefficiency in administration,*
- *Excessive borrowings, deficit finance*

Kinds of fiscal policy

4. Automatic stabilization fiscal policy

5. Compensatory fiscal policy

6. Discretionary fiscal policy

7) Enunciate the factors involved in determining the demand and supply of money. May/ Jun 2012

Demand for money:

DEMAND - how much money would people like to have.

- There are several classical versions for the theory of money.
- *All the versions of quantity theory of money* demonstrate that there is strong relationship between money & price level.

4. ***Fisher's version of the quantity theory of money & price (or) the quantity theory of exchange.***
5. ***Cambridge version of quantity theory of money.***
6. ***Keynesian theory of demand for money.***

1. Fisher version of the quantity theory of money & price

- It is originally called the quantity theory of exchange.

MV = PT *(or)* **P = MV / T**

M – Represents the quantity of money in circulation

V -Velocity of money *(in a particular period how much time money is exchange)* ***(i.e.)*** 1 Year ***(e.g. Rs.100)***

P – General price

T – The total volume of transaction for which money payments are made. It includes goods & services.

- The product M & V gives the supply of money during the particular period of time.
- The product P & T represents the money volume of all goods & services brought during the given period of time.
- Fisher points out that in a country during any given period of time, the total quantity of money **(MV)** will be equal to the total value of all goods & services bought & sold **(PT)**

MV = PT

Supply of money = Demand for money

- This equation is referred as 'cash transaction equation'.

- It is expressed as **P = MV/T** which Implies that the quantity of money determine the price level.
- The Price level varies directly with the quantity of money.

2. The Cambridge version of quantity theory of money (or) cash balance approach

- The Cambridge version of quantity theory of money was first developed by a great ***"Cambridge economist" Alfred Marshall.***
- It was later modified by his followers.
- This is why Marshall's version is properly known as Cambridge version of quantity theory of money.
- It is also often referred to as ***"Neo classical theory of money" (or) cash balance approach.***
- In this approach money has been considered as a **store value.**
- ***The value of money depends upon the demand for & supply of money.***
- The value of money reaches equilibrium when the demand & supply of money become equal.
- The changes in the value of money are due to the changes either in the supply of money or demand for money or both.
- According to this approach the Cambridge economists considered the demand for & supply of money only at a particular point of time & not over a period.
- The supply of money is the stock at a particular point of time.
- The demand for money is to hold money. It is the total money held by private individuals, business houses & the government to meet the daily requirements.
- The demand for money is the function of people's desire to hold money. ***(i.e.)*** the demand for cash balance *(or)* liquid preference.
- This is a fundamental difference between Fisher and the Cambridge approach.
- The value of money is determined by the supply of money & demand of money,
- ***As increase in the demand for money denotes people's desire to hold more money, which means lesser demand for goods & services.***
- Where the price level will fall but the value of money will rise.
- On the other hand a fall in demand for money means lesser demand for money for holding.

- This will lead to higher expenditure.
- Where the price level increases the value of money will fall.

Thus according to their approach aggregate demand for money can be expressed as,

$$\mathbf{M}d = k\mathbf{PY}$$

Where

Y – Real national income

P – Average price level of currently produced goods & services

PY – National Income

k – Proportion of national income **(PY)** that people wants to hold as cash balances

M*d* – demand for money

3.Keynesian theory of demand for money (or) motives for liquidity preference (or) 3 main motives of demand & supply for money

- According to Keynes money is demanded for three motives.
    a) ***Transaction motive or demand for money***
    b) ***Precautionary motive or demand for money***
    c) ***Speculative motive or demand for money***

a) Transaction motive

- People demand money to carry on transaction by selling and buying goods and services.
- Higher the income, higher will be the demand for money for transaction purpose.
- Lower the income, lower will be the demand.
- The need for holding money arises because there is a time gap between the receipt of income and expenditure.
- Income is received periodically, weekly, monthly or annually.
- Where as it is spent on goods and services over time as and when need arises.

(For e.g.) Individuals getting their salary on monthly basis do not spend the entire income on the first day of the month. They hold some money for telephone and electricity bills and house tax and so on…to be paid as and when the demand is received.

- The transaction demand for money is directly related to the level of income.

- People know by their experience the amount of money they need for transacting their planned expenditure.
- According to Keynes the aggregate transaction demand for money is a function of the national income.

$$\mathbf{M}t = f(\mathbf{Y})$$

Where

M*t* = transaction demand for money

Y = income

- In the Keynesian system the proportion of income held for transaction motive is constant and fairly stable in the short run.
- It implies that given income and its distribution, the short run relationship between income and transaction for money can be satisfied as ,

$$Mt = Ky$$

Where

k = a constant proportion of income demanded for transaction purpose.

b) Precautionary motive

- Besides for spending people demand money as a precaution.
- People would like to have some excess money ***to face sickness or other unexpected expenses.***
- Precautionary motive for holding money refers to the desire of the people to hold cash balance for unforeseen contingencies.
- People hold a certain amount of money to provide for the danger of unemployment, sickness, accidents and the other uncertain perils.
- The amount of money demanded for this motive will depend on the psychology of the individual and the condition in which he lives.
- This relationship is expressed in functional form as,

$$\mathbf{M}p = f(\mathbf{Y})$$

M*p* = precautionary demand for money

Y = income

c) Speculative motive

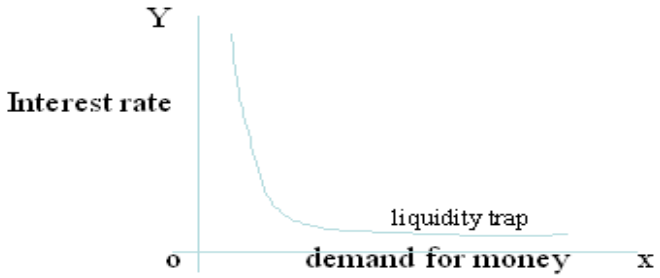
- The speculative demand for money depends upon the rate of interest.
- ***Higher the rate of interest lower will be the demand for money***
- ***Lower the rate of interest higher will be the demand for money***
- According to Keynes, people hold a part of their income in the form of idle cash balance for speculative purpose.
- The desire ***to hold idle cash balance for speculative purpose arises from the desire to take advantage of the changes in money market.***

In Keynes view

- If the interest rate does increase in future the bond prices go down.
- The person who holds the idle cash can buy the bond at a lower price and make a capital gain.
- Besides he earns a higher rate of return on the bond.
- The higher rate of return arises because he earns a given income on a bond which has a price lower than its face value.
- If interest rate does not increase those holding idle cash balance lose interest on it.
- Thus if a person decides to hold idle cash balance in expectation of rise in the interest rate under the ***condition of uncertainty*** the person is speculating.
- Speculation involves an element of risk.
- Keynes called this kind of cash balance to holding as ***speculative demand for money.***

Liquidity trap

- A situation when the market rate of interest falls to a minimum level
- When the rate of interest goes below a minimum level ***a level below*** which people prefer to hold idle cash balance & bank pulls down their shutters Keynes called this kind of a situation as "liquidity trap"



- If the monetary authorities ***increases money supply to lower the rate of interest*** the entire money supply gets trapped into liquidity as extra idle cash balance. This is what Keynes called "liquidity trap"

Supply of money

- Money supply plays a curial role in the determination of price & interest rate
- In economics it is generally presumed that money supply is determined by the policy of central bank of the country & the government

Importance of money supply

- Economic development
- Price stability
- Deficit financing
- Stimulate investment
- Savings

Measures of money supply

RBI measures money supply in terms of

4) *Stock of money*
5) *Means of payment & a store value*
6) *Households, firms & institutions'*

- Measure of money vary from country to country from time to time &
- from propose to purpose
- The RBI measures are changing

RBI measure of money supply

M1 = C + DD + OD

M2 = M1 + Savings with post office

M3 = M1 + Net time deposits with the commercial banks

M4 = M3 + Total deposits with post offices *(including NSC)*

Where

C= Currency held by the public

DD = Net demand deposits with banks

OD= Other deposits with RBI

NSC =National savings certificates

Factors determining money supply's

- ***RBI analysis***
- ***Bank credit to the government***
- ***Bank credit to commercial or Private sector***
- ***Changes in foreign exchange***
- ***Government currency liabilities to public*** *(Coins & one rupee notes represents Government currency liabilities to public) If* Government currency liabilities increases the money supply also increases)

Question Paper Code : J1103

M.B.A. DEGREE EXAMINATION, FEBRUARY/MARCH 2018.

First Semester

DBA 7103 — ECONOMIC ANALYSIS FOR BUSINESS

(Common to All Branches)

(Regulations 2013)

Time : Three hours Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. Distinguish between productive efficiency and economic efficiency.

2. What do you understand by Scarcity?

3. What is meant by Demand?

4. What do you understand by Elasticity of supply?

5. What is meant by imperfect market?

6. What is meant by Factor market?

7. What do you understand by macro economic equilibrium?

8. What is meant by Market efficiency?

9. What is unemployment trade off?

10. What is meant by Money Market?

PART B — (5 × 13 = 65 marks)

11. (a) List out and explain in detail the themes and the three fundamental problems of economics.

Or

(b) Explain the macro and micro analysis in economics and show their inter dependencies.

12. (a) Explain the different types of elasticity of demand and list out and explain the various factors determining the elasticity of demand.

Or

(b) What are the different factors affecting the production function and explain the main basis for increasing return to scales?

13. (a) Explain the different types of Market structure and illustrate the conditions for the establishment of a firm's equilibrium under perfect competition.

Or

(b) What is General equilibrium? Explain in detail.

14. (a) What are the various factors determining the National income in India? Also list out and explain the difficulties involved in estimating National income.

Or

(b) (i) Write short notes on Macro economic equilibrium. (7)

(ii) Briefly explain the circular flow of Macro Economic activity. (6)

15. (a) What is Inflation? Explain its causes and how do you eliminate them.

Or

(b) (i) What are the impact of unemployment problems in India? (7)

(ii) Write short notes on the roles of monetary policy. (6)

PART C — (1 × 15 = 15 marks)

16. (a) "Consumer's equilibrium is at the point of tangency of the price line with an indifference curve". Can you give an instance of exceptions to this rule? Give diagrams to illustrate your answer.

Or

(b) Explain in detail the limitations and leakages of Multiplier.

Reg. No. : | | | | | | | | | | | | | |

Question Paper Code : BS2103

M.B.A. DEGREE EXAMINATION, AUGUST/SEPTEMBER 2017.

First Semester

DBA 7103 — ECONOMIC ANALYSIS FOR BUSINESS

(Common to All Branches)

(Regulations 2013)

Time : Three hours Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. What is stability?

2. What do you understand by economic efficiency?

3. Define economies of scale.

4. What are the essentials of the market?

5. Explain autonomous demand.

6. Mention the factors of production.

7. What is Multiplier?

8. Define macroeconomic equilibrium.

9. What is the importance of the study of economics?

10. State any two causes of deflation.

PART B — (5 × 13 = 65 marks)

11. (a) Discuss the need and importance of economic growth and stability in the country's business development.

Or

(b) 'The scarcity of the resources gives rise to various basic economic problems which have to be solved by an economy if it is to fulfill its purpose' – Explain such problems.

12. (a) Discuss in detail the different forms of utility.

Or

(b) (i) Explain the features of perfect competition. (7)

(ii) Explain price discrimination and its types. (6)

13. (a) Critically examine the Ricardian theory of Rent.

Or

(b) Explain the Price-Output determination under different cost conditions.

14. (a) Explain the objectives of fiscal policy. Discuss its impact on business.

Or

(b) Explain the different methods of computing national income.

15. (a) Explain the reasons and the impacts of inflation and its influences in business growth.

Or

(b) Explain the factors involved in determining the demand and supply of money.

PART C — (1 × 15 = 15 marks)

16. (a) 'Micro economics occupies a vital role in economics and it has both theoretical and practical importance' – Discuss.

Or

(b) Analyse the role and importance of markets and governments in economic development exclusively in the present scenario with suitable examples.

Reg. No. : | | | | | | | | | | | | | |

Question Paper Code : KJ1103

M.B.A. DEGREE EXAMINATION, FEBRUARY/MARCH 2017.

First Semester

DBA 7103 – ECONOMIC ANALYSIS FOR BUSINESS

(Common to All Branches)

(Regulations 2013)

Time : Three hours | Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. Distinguish between productive efficiency in an economy and economic efficiency in a production unit.
2. Is steepness measurable in production possibility frontier?
3. What is the use of market equilibrium?
4. Which cost curve is the base for shutdown decision of firms in the short-run production?
5. What is the nature of elasticity in the demand curve under perfect competition?
6. What is the reason for excess capacity prevailing in monopolistic competition?
7. Define the concept of partial equilibrium and outline its limitations with an example.
8. What is meant by monetarism?
9. What are the components of money supply in Indian economy?
10. How does the short-run Phillip curve differ from long-run Phillip curve?

PART B — (5 × 16 = 80 marks)

11. (a) What is meant by 'production possibility frontier'? What factors determine the production possibility frontier of an economy? How are points below and above the production possibility frontier different from the points on the frontier curve?

Or

(b) Critically analyze the three main economic functions of government in a market economy.

12. (a) Explain the constrained utility maximization in the theory of consumer behavior and the marginal utility interpretation of consumer optimization.

Or

(b) Describe the production and cost in the long run.

13. (a) How are price and output determined under perfect competition? What is meant by competitive equilibrium in perfect competition?

Or

(b) Distinguish between marginal efficiency of capital and marginal efficiency of investment. Describe the basic concepts of interest and capital and the relationship among capital, profit and interest.

14. (a) Examine the usefulness of the concepts of national income in analyzing an economy's aggregate behavior and explain the conceptual problems involved in the estimation of national income.

Or

(b) Elucidate the circular flow of income and product in four sector open economy.

15. (a) Explain the money market equilibrium, the money multiplier and the significance of the following as either as ultimate or intermediate target or an instrument of monetary policy.

(i) Nominal GDT

(ii) The discount rate

(iii) The money base

(iv) M_1

(v) The treasury bill rate

(vi) The unemployment rate.

Or

(b) What are the main causes for the current inflationary trends in Indian economy? What are the steps taken by the Government of India to contain inflationary trends in Indian economy?
