

# Topics to be covered

- **Introduction to economics.**
  - Basic ideas, economic problem & questions
  - Economic systems & Efficiency.
- **Microeconomics**
  - Demand, Supply and Elasticity.
  - Utility theory.
  - Theory of the production and the firm.
  - Market structures.
  - Labour market.
  - Market failure and Government intervention.
- **Macroeconomics**
  - National income accounting and determination.
  - Money and Price level.
  - International trade.
  - Economic growth and development.

# Topics to be covered in term 1.

- Introduction to economics
  - economics, micro vs macro, positive vs normative, ceteris paribus.
- Types of goods
  - private, public, free, merit, demerit & externalities.
- Basic economic problem
  - scarcity, choice, opportunity costs & production possibility curve.
- Efficiency
  - economic, allocative, productive, dynamic & X-efficiency.
- Basic economic questions
  - What?, How?, & For whom?
- Economic systems
  - market, planned and mixed economy.
- Role of price mechanism
  - signalling, incentives, rationing.

# Economics

- Is the study of efficient allocation of scarce resources to satisfy unlimited human wants and needs.
- The study of the production, distribution and consumption of wealth in human society.
- The science which studies human behaviour as a relationship between ends and scarce means which have alternative uses (Lord Robbins 1932).
- It is often said that the central purpose of economic activity is the production of goods and services to satisfy our ever-changing needs and wants.
- It is based on assumptions that is Ceteris paribus.
- **Ceteris paribus**
  - means other things held constant or not changing. It is used to isolate the effects of one variable on another variable by assuming other variables are held constant or have no effect.
- It is divided into microeconomics and macroeconomics.

# Microeconomics vs Macroeconomics

## Microeconomics

- Micro means small.
- Is concerned with the study of the market system on a small scale.
- It looks at the **individual** markets that make up the market system.
- Is concerned with the choices made by small economic units such as individual consumers, individual firms, or individual government agencies.

## Macroeconomics

- Macro means large.
- Is concerned with the study of the market system on a large scale.
- It considers the **aggregate** performance of **all** markets in the market system.
- Is concerned with the choices made by the large subsectors of the economy.
- For example the household sector, which includes all consumers; the business sector, which includes all firms; and the government sector, which includes all government agencies.

# Positive vs Normative statements

- **Positive statements.**

- It deals with **objective statements** or **facts** that can be tested by looking at the available evidence and the testing and rejection of theories.
- For example:
  - If the government raises the tax on beer, this will lead to a fall in profits of the brewers.

- **Normative Statements.**

- Deals with **subjective statements** or people's **opinions** (value judgments) which can not be tested and rejected by looking available evidence.
- For example:
  - The retirement age should be raised to 70 to combat the effects of our ageing population.

# Types of goods

- **Free goods:**

- Are goods that are provided by nature and no consumption and production cost (opportunity cost and actually cost) for example fresh air

- **Private/Economic goods:**

- Require resources to produce them, have opportunity costs and have to pay to consume them. Rival, exclusive and refusible.

- **Public goods:**

- Goods provided by government for free to citizen and paid through taxes. Non-rival, non-exclusive and non-refusable.

- **Merit goods:**

- public goods that have greater social benefits than private benefits, for example education, health etc.

- **Demerit goods:**

- these are goods which have greater social costs than private costs, for example smoking.

- **Externalities:**

- these are effects (costs and benefits) to the third party or economic agents not directly involved in consumption and/or production. Positive externalities are external benefits and negative externalities are external costs, like pollution.

# Types of goods



# Basic economic problem

- Is concerned with scarcity, choice and opportunity costs, which are illustrated using a production possibility curve/frontier.
- **Scarcity**
- It is the excess of human wants over what can actually be produced to fulfil these wants. People's wants are ever changing.
- It the central idea in economics, which economists seek to address and it is a feature of all societies from the poorest to the most affluent/rich.
- Resources are scarce/limited when they are insufficient to satisfy unlimited people's wants.
- Labour is limited both in number and in skills, natural resources (land & raw materials) can not be use for all the purposes (mining, farming industrial, recreational and residential) and capital (factories, machines, equipment etc) it productivity is limited by the state of technology.
- It is illustrated by the fact that an economy can only produce along the Production Possibility Curve/Frontier PPC/F.



# Basic economic problem conti....

- **Choice**
- Because of scarcity, choices must be made by consumers, businesses and governments.
- Most people can not have all the goods and services they want, they have to makes choices.
- With no rise in income (wages), if someone wants to buy a car, they may have to spend less on education.
- All societies have make choices, whether they be individuals, groups or government.
- Choice is related to basic economic questions of what, how and for whom to produce.
- It is illustrated by the many possible combinations that an economy can produce given its available resources as shown along the PPC/F.

# Basic economic problem conti....

- **Opportunity Costs**

- Making a choice normally involves a trade-off , choosing more of one thing can only be achieved by giving up something else in exchange. This is opportunity costs.
- It is the sacrifice of alternatives made in consumption and /or production.
- It can also be defined as the value of the forgone good.
- It measures the cost of any choice in terms of the next best alternative foregone.
- The opportunity cost of deciding not to work an extra ten hours a week is the lost wages foregone. If you are being paid \$7 per hour to work at the local supermarket, if you take a day(8 hours) off from work you might lose over \$56 of income
- On the PPC if the economy decide to produce one combination, it would have forgone other alternatives.

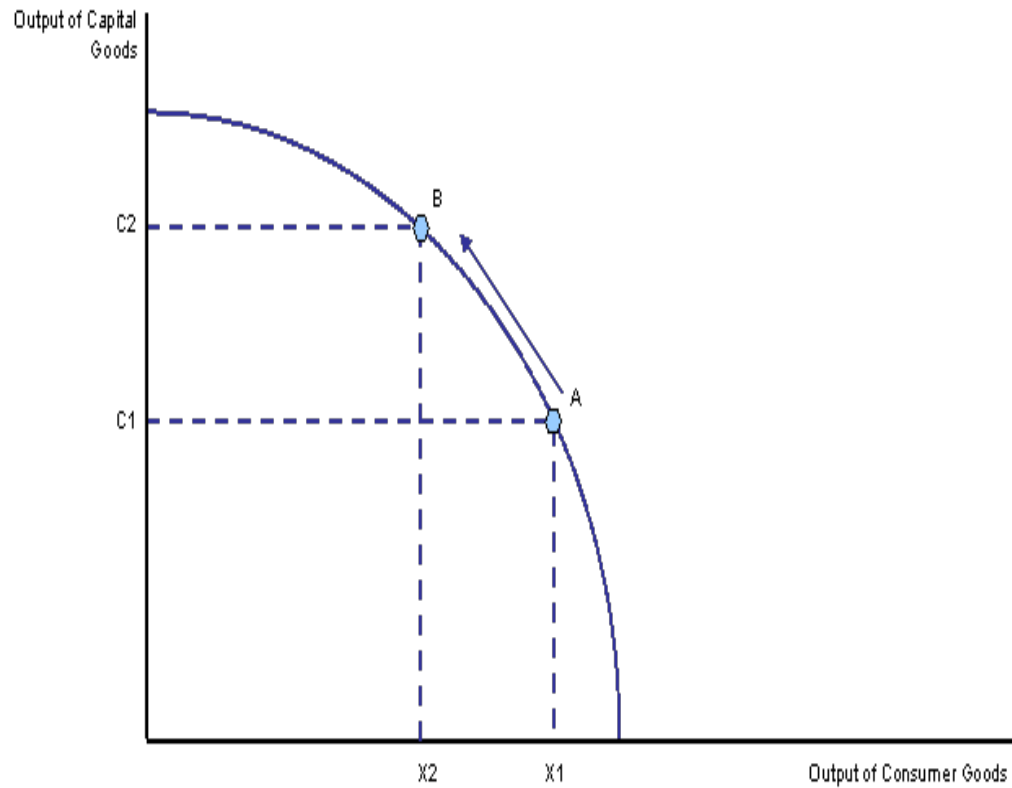
# Production Possibility Curve/Frontier (PPC/F)

- Is a curve or a boundary which shows the combinations of two or more goods and services that can be produced whilst using all of the available factor resources efficiently.
- It is concave to the origin, because the extra output resulting from allocating more resources to one particular good may fall.
- For example as we move down the PPF, as more resources are allocated towards Good Y, the extra output gets smaller and more of Good X has to be given up in order to produce the extra output of Good Y.
- This is known as the principle of **diminishing returns**. Diminishing returns occurs because not all factor inputs are equally suited to producing different goods and services.

# PPC/F conti....

- In the diagram below, combinations of output of goods X and Y lying inside the PPF occur when there are unemployed resources (inefficient allocation), point X in the diagram above.
- Combinations A, B and C are efficient as all available resources are full utilised.
- Point D is unattainable at the moment because it lies beyond the PPF.
- A shift in the PPC outward indicate economic growth, which achieved through an increase in factor resources, an increase in the efficiency (productivity) of factor resources and an improvement in technology.
- A shift inwards indicated economic decline.
- The slope of the PPC is the opportunity costs.
- Producing more of both goods would represent an improvement in our economic welfare providing that the products are giving consumers a positive satisfaction and therefore an improvement in what is called allocative efficiency

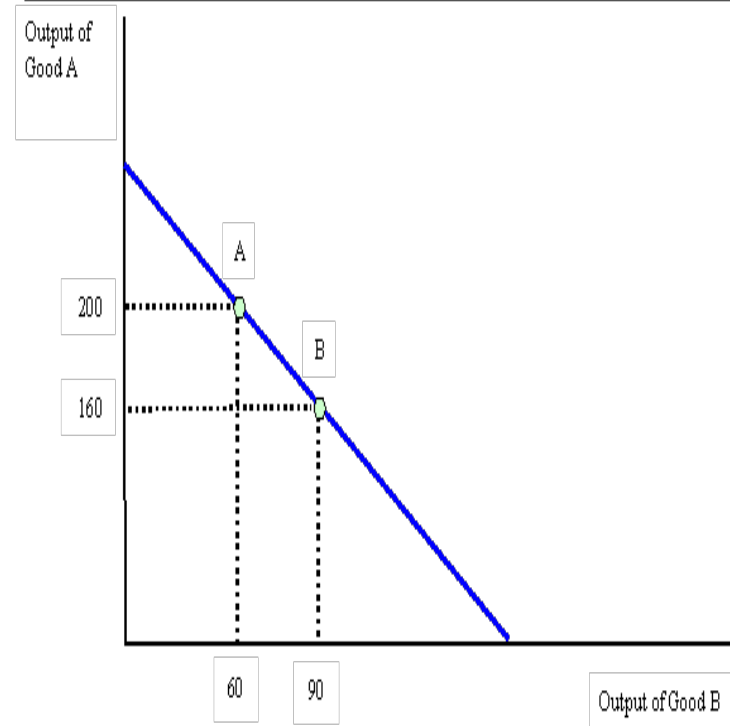
# PPC/F conti....



# PPC/F conti....

- The PPF does not always have to be drawn as a curve. If the opportunity cost for producing two products is constant, then we draw the PPF as a straight line. The gradient of that line is a way of measuring the opportunity cost between two goods.

A straight line PPF shows a constant opportunity cost between two products  
Increasing output of good B from 60 to 90 units implies giving up 90 units of good A  
The marginal opportunity cost for each extra unit of good B is 30 units of Good A

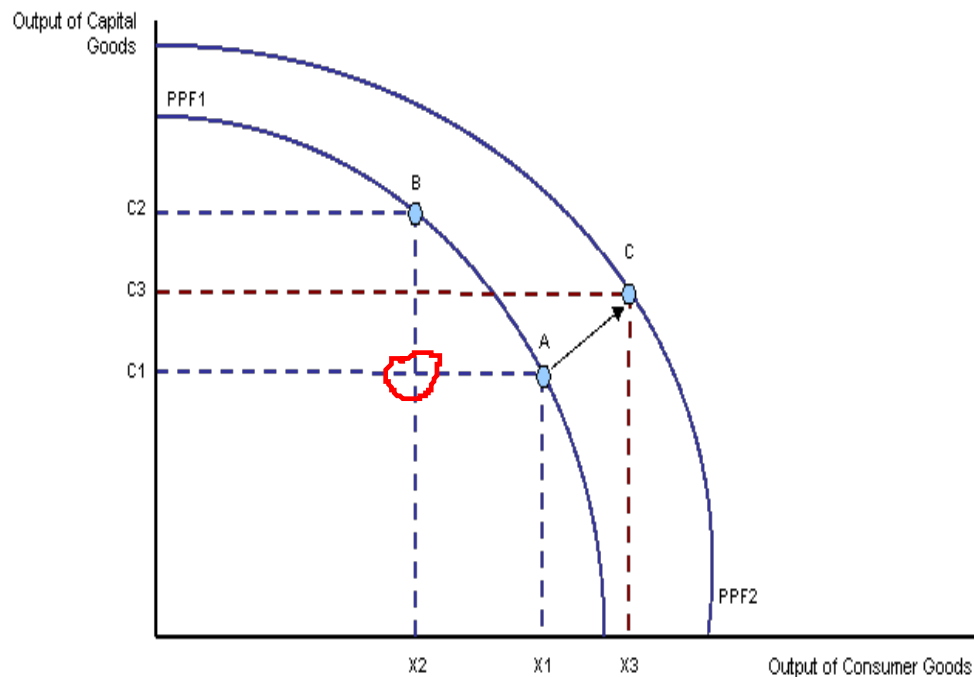


# PPC/F conti....

- The production possibility frontier will shift when:
- There are improvements in productivity and efficiency because of the introduction of new technology or advances in the techniques of production.
- More factor resources are exploited due to an increase in the size of the workforce or a rise in the amount of capital equipment available for businesses
- In the diagram below, there is an improvement in technology which shifts the PPF outwards.
- As a result of this, output possibilities have increased and we can conclude (providing the good provides positive satisfaction to consumers) that there is an improvement in economic welfare.
- Improved technology should bring market prices down and make products more affordable to the consumer.
- The exploitation of economies of scale and improvements in production technology has brought prices down for consumers and businesses.

# PPC/F conti....

An outward shift in the PPF shows that there has been either an improvement in productivity or an increase in the total stock of resources available to produce different goods and services. The outward shift represents an improvement in economic efficiency





# Economic Efficiency

- A situation where each good is produced at the minimum cost and where individual people and firms get the maximum benefit from their resources.
- It is achieved where goods are produced at minimum cost and where individual people and firms get maximum benefits from their resources.
- **Pareto efficiency**
- A situation where it is not possible to make one better-off without making the other worse-off. This is applied in production and consumption.
- An allocation is said to be Pareto optimal if it is not possible increases production/consumption of one product by changing the allocation/re-allocate resources without reducing the production/consumption of the next product.
- Economic efficiency is made up of productive efficiency and allocative efficiency.

# Productive Efficiency

- A situation where firms are producing the maximum output for a given amount of inputs, or producing a given output at the least cost.
- This is efficiency in production where production of each item is at minimum costs.
- All the points along the PPF are productive efficient. It is achieved where average cost is equal to price ( $AC=P$ ) or when the firm produces at the lowest possible costs.
- Is achieved when it is not possible to increase the output of one type of good or service without reducing the output of another.
- This means that all resources are fully employed and the economy is operating along its production possibility curve.
- It is concerned with the quantity of goods and services produced.

# Allocative Efficiency

- A situation where a the current combination of goods and services produced and sold, gives the maximum satisfaction for each consumer at their current level of income.
- Is achieved where consumers allocate their expenditure so as to get maximum satisfaction from their income or
- When the product mix reflects consumers' tastes and so resources are allocated in the right proportions to producing the different goods and services.
- Points along the PPF can be allocative efficient depending on consumer preferences. It is achieved where marginal cost is equal to price, ( $MC=P$ )
- Is concerned with the combination of goods and services produced.

# Basic Economic Questions

- What to produce?
- How to produce?
- For whom to produce?

# What to produce?

- It is concerned goods and services that are going to be produced and their quantities.
- Since there are not enough resources to produce all the products people desire, economic agents have to decide which combination along the PPF to produce.
- How many cars, how much wheat, how much insurance, will be produced?
- How resources are going to be allocated to produce which combination goods and services along the PPF.

# How to produce?

- It is concerned about the methods of production or how to combine economic resources in production.
- There are capital intensive vs labour intensive methods and also traditional vs modern ways of production.
- How are things going to be produced, given that there is normally more than one way of producing things?
- What resources are going to be used and in what quantities? What techniques of production are going to be adopted?
- Will cars be produced by robots (capital intensive methods) or by assembly line workers (labour intensive)? Will electricity be produced from coal, oil, gas, nuclear fission, renewable resources or a mixture of these?

# For whom to produce?

- It is concerned by the distribution of goods and services and income and wealth.
- For whom are things going to be produced? In other words, how will the nation's income and wealth be distributed?
- After all, the higher your income, the more you can consume of the nation's output.
- What will be the wages of farm workers, printers, cleaners and accountants? How much will pensioners receive? How much of the nation's income and wealth will go to shareholders or landowners?
- Pricing is used in the distribution of goods and services, while taxation is used to distributed income and wealth.

# Price Mechanism

- Adam Smith described the “invisible hand of the price mechanism” in which the hidden-hand of the market operating in a competitive market through the pursuit of self-interest, allocating resources in society’s best interest.
- The price mechanism describes the means by which millions of decisions taken by consumers and businesses interact to determine the allocation of scarce resources among competing uses
- The price mechanism plays three important functions in a market:
  1. Signalling,
  2. Transmission of preferences/Act an incentive,
  3. Rationing.

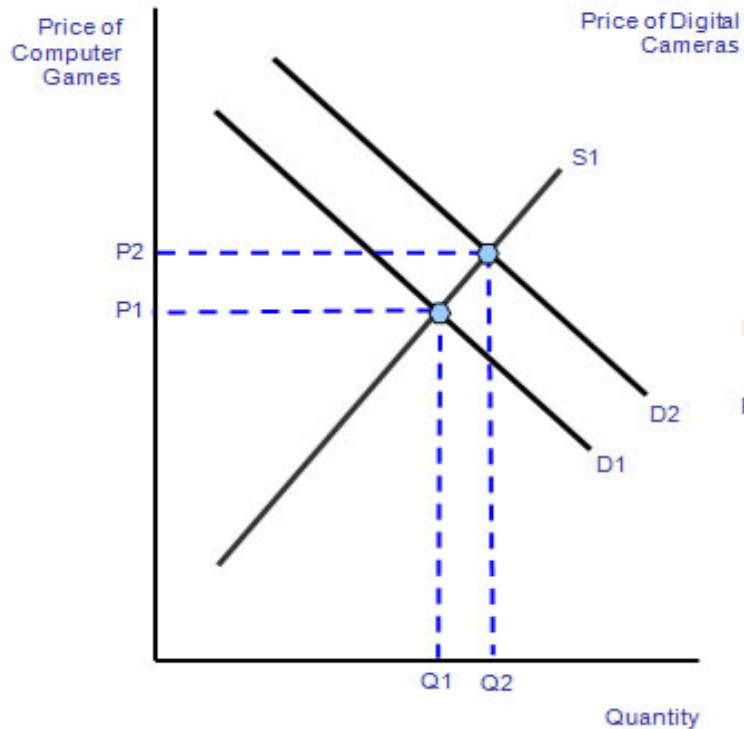


# Signalling

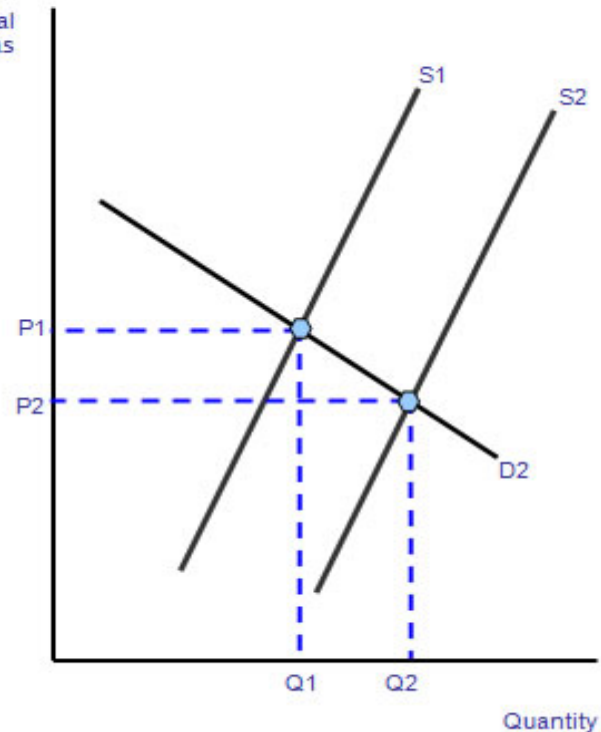
- Prices perform a signalling function, they adjust to demonstrate where resources are required, and where they are not. Prices rise and fall to reflect scarcities and surpluses.
- If prices are rising because of high demand from consumers, this is a signal to suppliers to expand production to meet the higher demand.
- If there is excess supply in the market the price mechanism will help to eliminate a surplus of a good by allowing the market price to fall.
- In the example on the right, an increase in market supply causes a fall in the relative prices of digital cameras and prompts an expansion along the market demand curve

# Signalling conti...

Higher demand signals to producers to step up production. Total revenue is higher at price  $P_2$  and output  $Q_2$



An increase in supply leads to lower market prices – a signal to consumers that their real income has increased



# Incentive

- Through their choices consumers send information to producers about the changing nature of needs and wants. Higher prices act as an incentive to raise output because the supplier stands to make a better profit.
- When demand is weaker in a recession then supply contracts as producers cut back on output.
- One of the features of a market economy system is that decision-making is decentralised, for example there is no single body responsible for deciding what is to be produced and in what quantities. This is a remarkable feature of an organic market system.
- However government intervene to incentives consumers and producers changing relative prices by the introducing of government subsidies and taxation.

# Rationing

- Prices serve to ration scarce resources when demand in a market outstrips supply.
- When there is a shortage, the price is bid up leaving only those with the willingness and ability to pay to purchase the product.
- Be it the demand for tickets among soccer supporters for an Bosso vs Dembare game or the demand for a rare commodity, the market price acts a rationing device to equate demand with supply.
- The popularity of auctions as a means of allocating resources is worth considering as a means of allocating resources and clearing a market.

# Economic Systems/Allocative Mechanism

- An economic system is a network of organisations used by a society to resolve the basic questions of what, how much, how and for whom to produce.
- Market/Free market/Capitalist
- Planned/Command/Socialist/Communist
- Mixed

# Components of an economic system

- Ownership and control resources.
- Role of private sector.
- Role of government.
- Major motive/s in production.
- Production decisions.
- Level of competition.
- Role of price mechanism.
- Degree of freedom of choice.

# Market Economy

- Is an economic system where resources are privately owned and controlled.
- Price mechanism plays a major role in resources allocation.
- The major motive for production by firms is to make profit, maximise satisfaction (utility) by consumers and maximise income (wages and salaries) by workers.
- There is limited role of government. Government limits itself to protecting property rights of people and businesses using the legal system and protecting the value of money or the value of a currency.
- There is high level competition, as there are many firms in the economy.

# Market Economy main features

## Private property

- Individuals have the right to own, control, and dispose of land, buildings, machinery, and other natural and man-made resources. They have right to the income from resources like rent, interest and profits
- **Freedom of enterprise and choice**
- Individuals are free to buy and hire economic resources, to organise these resources for production and sell their products in markets of their choice.
- Entrepreneurs are free to enter and leave any industry. Owners of land and capital may use these resources as they see fit. It also means that workers are free to enter and leave any occupations for which they are qualified.
- **Self-interest/profit as the dominating motive**
- Firms will act in ways which, they believe ,will lead to maximum profits (or minimise losses), owners of land and capital will employ these assets so as to obtain the highest possible rewards.
- Workers will tend to move to those occupations and locations which offer the highest wages and consumers will spend their incomes on those things which yield maximum satisfaction.



# Main features conti....

## **Competition**

- In the market for each commodity, there are large numbers of buyers and sellers. Each buyer and seller accounts for an insignificant share of the business transacted and hence has no influence on the market demand or market supply.
- It is the forces of total demand and total supply which determine the market price, and participants, whether buyers or sellers, must take this price as given since it is beyond their influence or control.
- It limits the use of economy power since no single firm or individual is large enough or strong enough to control a market and exploit the other buyers and sellers.

## **A reliance on the price system.**

- It allocating resources to various uses. The decisions of producers determine the supply of a product; the decisions of buyers determine the demand.
- The interactions of demand and supply cause changes in market prices and it is these movements in market prices which bring about the changes in the ways in which society uses its resources.

# Advantages of Free Market Economy

- **Consumer sovereignty** – this means that consumers have a say in what and how to produce in the economy. Consumers do this by revealing their preferences. If a producer produce chicken using Genetically Modified Organism (GMOs) and consumers do not like such chickens, they will not buy them, therefore determining what and how to produce.
- **Promotes innovation** – countries that follow free market are known of being innovative and developed many new and better ways of production, which has lead to a variety of goods produced.
- **Fair competition** – it encourages establishment of many companies that led to fair competition, leading to lower and stable price and improved quality of goods and services.
- **It encourages entrepreneurship** – individuals are free to start their own business.
- **It attracts investments to the country** – investors are attracted to countries where they will operate freely or have full control of their investment.
- **It increases efficiency and productivity** – it happens from the survival of the fittest aspect. All firms are forced to be efficient (producing quality goods at the lowest costs and charging affordable prices.)

# Disadvantages of Free Market Economy

- **Non-provision of public goods** – this is because the profit motive. Public goods are not profitable and marketable, because their non-rivalry and non-exclusive features. Consumers are not willing to directly pay for these goods.
- **Over-provision of demerit goods** – free market tend to over-produce demerit goods, as most of them are profitable because they inelastic demand.
- **Under-provision of merit goods** – free market if left alone tends to under produce merit goods and charged high prices. This is because of the public nature of merit goods. These include education and health services.
- **Social cost** – free market firms produce negative externalities, like air, land, water and noise pollution.
- There is wastage of resources due to unnecessary competition and duplication of roles, for example multiple railway lines by different providers.
- It is characterised by inequalities especially of income and wealth, as owners of resources exploit consumers by charging high prices, to maximise profit.

# Planned Economy

- A planned economy is one in which the government makes the decisions on what to produce, how to produce, and who gets it.
- For example communist regimes in Cuba and North Korea.
- In a planned or command system associated with a socialist or communist system, scarce resources are owned by the government.
- The state allocates resources, and sets production targets and growth rates according to its own view of people's wants. Market prices play little or no part in informing resource allocation decisions and queuing rations scarce goods.
- In a command economy, planning directs resources to where the state thinks there is greatest need and production decisions are made by government.
- Prices are controlled and regulated by the government.
- The major motive is the welfare of citizens, which include availability of products, affordability of products and employment of all people.
- There is no or little competition, as all resources and firms are owned by government.

# Advantages of a Planned Economy

- **Low levels of inflation** – government is able to keep prices low through the use of price controls and this translate to better standards of living.
- **Provision of public goods** – government through the imposition of taxes is able to fund through provision of public goods, like national security, roads etc.
- **Externalities** – government can also regulate the production of externalities which impose social costs, like air, water, land and noise pollution. It does this by imposing taxes and fines to defaulters.
- **Inequalities** – government is able to reduce inequalities in the economy through equitable distribution of income and wealth, using tax system (progressive) which impose high taxes on high income earners as compared to low income earners.
- It also equally distribute goods and services, through the price system. Government also provide other initiatives like income generating projects and policies that address inequalities in the economy like Indigenisation and Economic Empowerment Policy.
- **Consumer protection** – government protect consumer from exploitation by producers who charge high price for goods and services, by setting low and affordable price using price control. It also regulate the standards of products produced and restricting monopoly power using anti-monopolies and collusion legislation.

# Disadvantages of a Planned Economy

- **High level of inefficiency** – it is characterised by high level of inefficiency, where government misallocate resources in the production of goods even though there is no demand for such goods.
- State monopolies lack incentive for efficiency and innovation because of lack of competition. This leads to poor quality products.
- **Low levels of investment** – government regulation of economic activities discourages investments, as no investor is comfortable of being dictated what to do with his or her investment.
- **Bureaucracy** – government has several layers of decision making which delays decision making process. It takes a long time for problem recognition, reporting and finding the solution and implementing the solution to the problem.
- This leads to delays the running of the business and subsequently to corruption.
- **Shortages** – some producers may protest price controls and other government regulations by hoarding and channelling their products to black market. This is because price controls erode their profits.

# Mixed Economy

- In a mixed economy, some resources are owned by the public sector (government) and some resources are owned by the private sector.
- It comprises of a market sector and a non-market sector, where the government (or state) uses planning to provide public goods and services such as police, roads and merit goods such as education, libraries and health.
- The public (or state) sector typically supplies public, quasi-public and merit goods and intervenes in markets to correct perceived market failure.
- Nearly all economies in the world are mixed.

# How are the basic questions answered or resources allocated in market economy?

- It depends on the major motives for production and consumption.
- In a market economy the major motive is to minimise costs and maximise revenue thereby making profit.
- Therefore resources are allocated to produce goods to achieve maximum profits.
- This done by allocating resources to produce only products that gives the firm profit, for example private goods.
- These goods will be produced using capital intensive methods which minimises costs (lower wages and salaries).
- The goods will be distributed to consumers who are able to pay high prices, by charging high prices, which increases profit.



# How are the basic questions answered or resources allocated in planned economy?

- It depends on the major motives for production and consumption.
- In a market economy the major motive is availability and affordability of products, unemployment and equal distribution of product and income and wealth
- Therefore resources are allocated to achieve society's interest.
- This done by allocating resources to produce more products that government thing people need, thereby achieving availability of products.
- These goods will be produced using labour intensive methods and establishing many and or big firms which ensures many people will be employed, thereby reducing unemployment.
- The goods will be distributed to all consumers by charging low and affordable prices and by imposing high taxes from the rich than the poor, thereby achieving equality.

# How are the basic questions answered or resources allocated in mixed economy?

- It depends on the major motives for production and consumption.
- In a mixed economy the basic economic questions are answered by both the private and government.
- There is a balance between the planned and market economy.

# Changing Economic Systems

- Following the collapse of communism in the late 1980s and early 1990s, the market-based economy is now the dominant system in most countries, even though there are many imperfections in the operation of the market.
- The role of the price mechanism in allocating resources has also increased in many African and Asian countries.
- China whilst still a communist country, has undertaken a number of economic reforms including introducing a stock market.

# Changing Economic Systems conti...

- market.

# Changing Economic Systems conti ....

- Following the

# **Demand Supply and Elasticity**

# Demand

**Demand** is the willingness and ability to buy a product.

**Quantity demanded** the number of units of a product that are demanded at different prices at a certain point in time.

**Individual demand** the demand by an individual.

**Market demand** is the demand all individual in the market and is found by adding individual demands.

**Law of demand** it says there is an inverse or negative relationship between quantity demanded and price. As the price increases, quantity demanded decreases and vice versa.

**Demand schedule** is a table which shows the quantity demanded and different prices

**Demand curve** is a curve that shows the quantity demanded at different prices. It slopes downwards following the law of demand.

# Demand schedule and curve

Price (\$)	Quantity Demanded By Ncube L	Quantity Demanded By Moyo T	Market Demand
0.1	12	10	22
0.3	10	8	18
0.5	7	6	13
0.7	5	4	9
0.9	3	3	6
1.1	1	2	3
1.3	0	1	1

Price (\$)

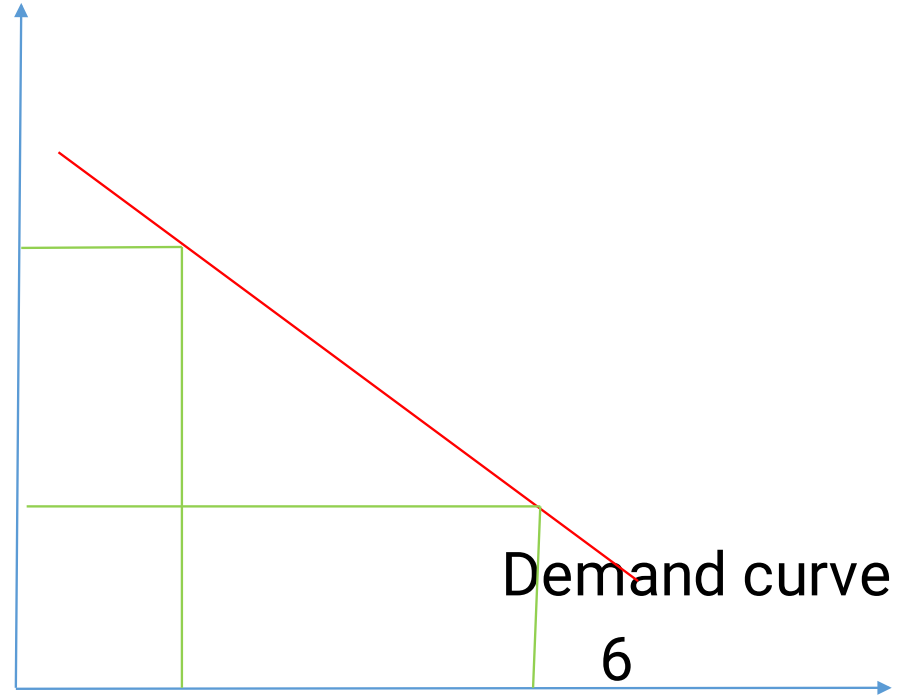
1.3

0.9

Demand curve

6

Quantity demanded (units)



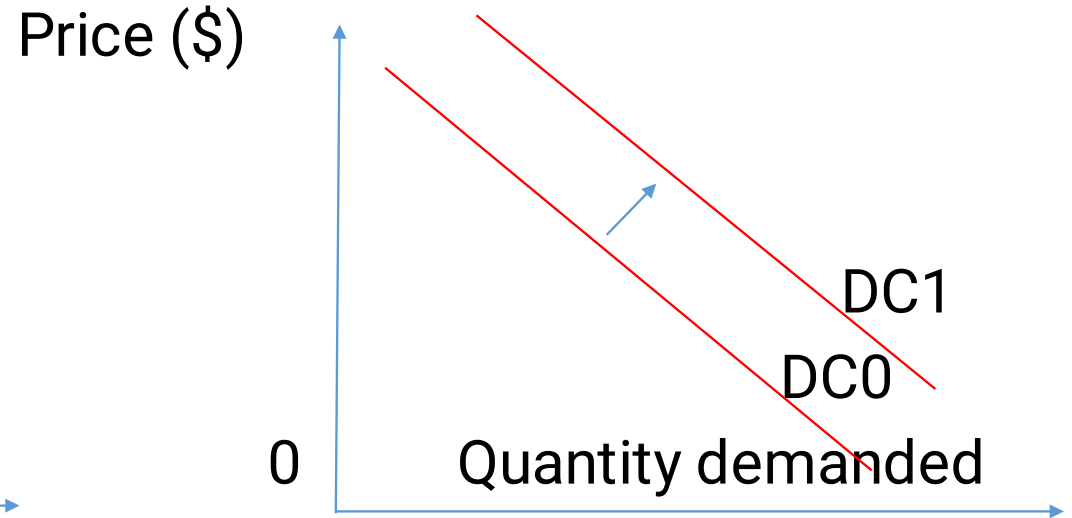
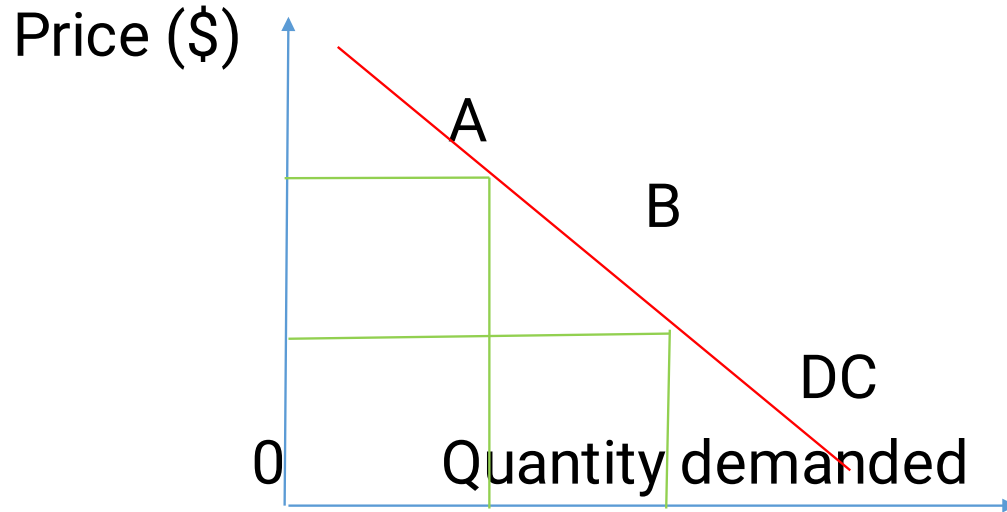


# Movements along and shifts of the demand curve

Movement along is caused by change in the own prices of commodity and is called the change in quantity demanded. A shift caused by changes in other determinants of demand, such as income and is the change in demand.

Movement along

Shift



# Determinants of Demand

**Tastes** – The more desirable people find the good, the more they will demand. Tastes are affected by advertising, by fashion, by observing other consumers, by considerations of health and by the experiences from consuming the good on previous occasions.

**The number and price of substitute good** – The higher the price of **substitute goods**, the higher will be the demand for this good as people switch from the substitutes. For example, the demand for coffee will depend on the price of tea. If tea goes up in price, the demand for coffee will rise.

**The number and price of complementary goods - Complementary goods** are those that are consumed together: cars and petrol, shoes and polish, fish and chips. The higher the price of complementary goods, the fewer of them will be bought and hence the less will be the demand for the good under consideration.

For example, the demand for batteries will depend on the price of handheld games. If the price of handheld games comes down, so that more are bought, the demand for batteries will rise.

# Determinants of Demand conti...

**Income** – As people's incomes rise, their demand for most goods will rise. Such goods are called **normal goods**. There are exceptions to this general rule, however. As people get richer, they spend less on **inferior goods**, such as supermarket 'value' ranges, and switch to better quality goods.

**Distribution of income** – If national income were redistributed from the poor to the rich, the demand for luxury goods would rise. At the same time, as the poor got poorer they might have to buy more inferior goods, whose demand would thus rise too.

**Expectations of future price changes** – If people think that prices are going to rise in the future, they are likely to buy more now before the price does go up.

**Seasons** – some goods and services are needed during certain seasons or time of the year, so their demand is high in those seasons. For example the demand for ice cream is high during the summer season.

# Supply

**Supply** is the willingness and ability of producers to provide a product.

**Quantity supplied** is the number of units supplied at a given price and at a certain period of time.

**Individual supply** is the supply by one company and **market supply** is the supply of all companies in the market and is found by aggregating individual supplies.

**Law of supply** it says there is a positive relationship between quantity supplied and price of a product. Suppliers are willing to supply more goods and services at high prices and vice versa.

**Supply schedule** is a table showing the different quantities of a good that producers are willing and able to supply at various prices over a given time period.

**Supply curve** is a graph showing the relationship between the price of a good and the quantity of the good supplied over a given period of time.

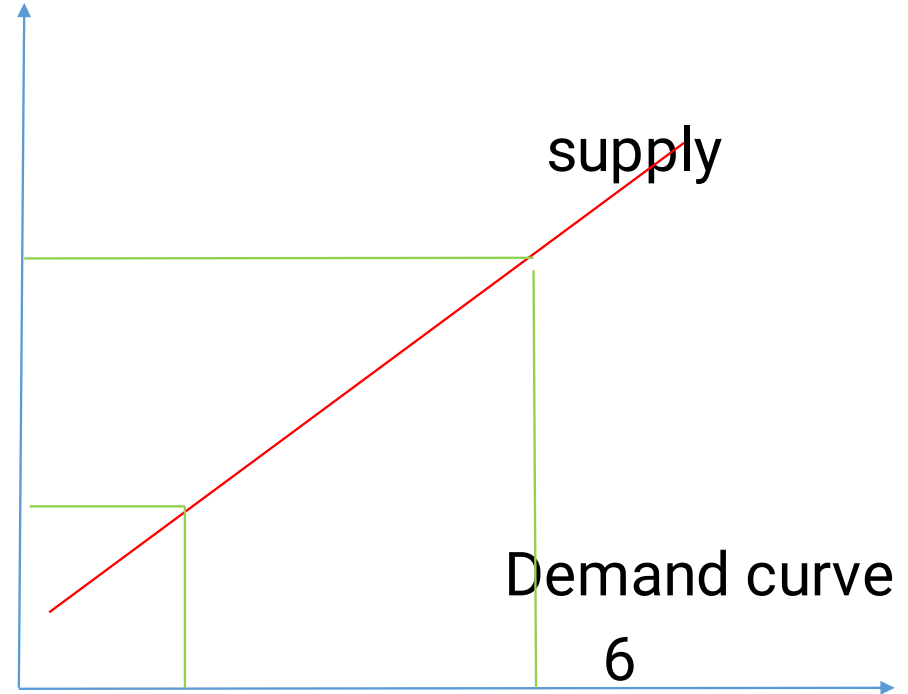
# Supply schedule and curve

Price (\$)	Quantity supplied By Lobels.	Quantity by Bakers Inn	Market Supply
0.1	0	1	1
0.3	1	2	3
0.5	3	3	6
0.7	5	4	9
0.9	7	6	13
1.1	10	8	18
1.3	12	10	22

Price (\$)

1.3

0.9

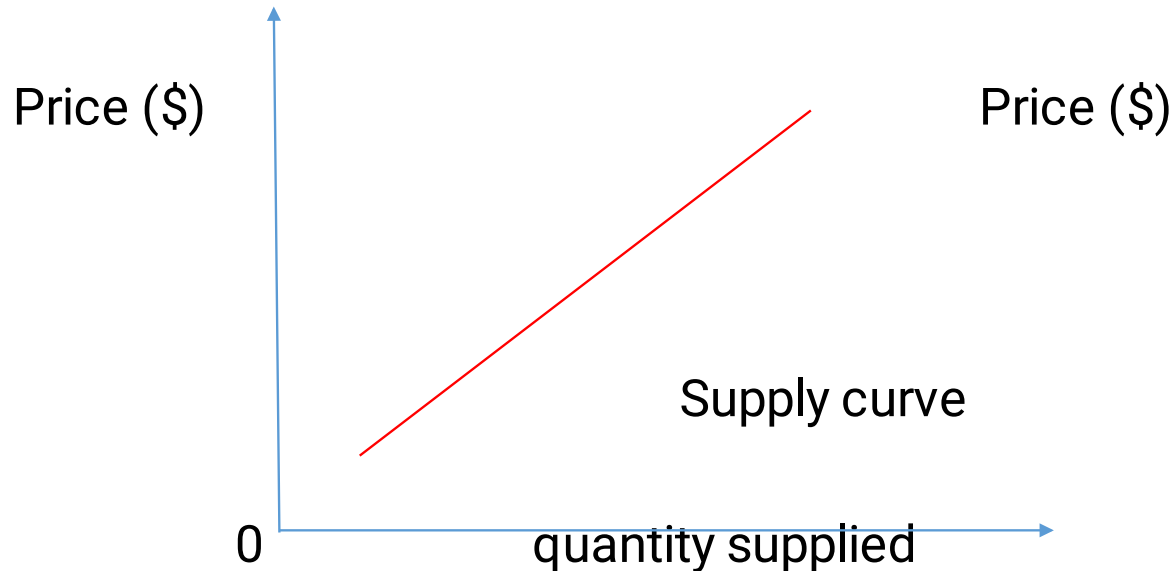


Quantity supplied (units)

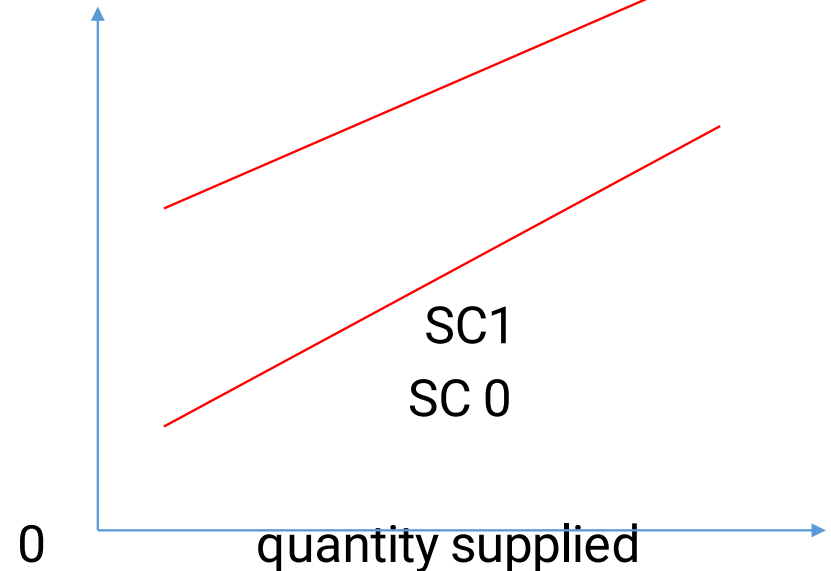
# Movement along and Shift of the Supply curve

Movement along is caused by changes in the own prices of commodity and is called the change in quantity supplied. A shift of the supply curve is called by changes in other determinants of supply, such as costs of production and is called the change in supply.

Movement along



Shift



# Determinants of supply

**The costs of production** - The higher the costs of production, the less profit will be made at any price. As costs rise, firms will cut back on production, probably switching to alternative products whose costs have not risen so much. The main reasons for a change in costs are as follows; change in input prices (wages), raw material prices, rents, interest rates, government policy (costs will be lowered by government subsidies and raised by various taxes) and organisational changes (various cost savings can be made in many firms by reorganising production).

**Change in technology** - technological advances can fundamentally alter the costs of production. Consider, for example, how the microchip revolution has changed production methods and information handling in virtually every industry in the world.

**The profitability of alternative products (substitutes in supply)** - If a product which is a substitute in supply becomes more profitable to supply than before, producers are likely to switch from the first good to this alternative. Supply of the first good falls. Other goods are likely to become more profitable if their prices rise and/or their costs of production fall. For example, if the price of carrots goes up, or the cost of producing carrots comes down, farmers may decide to cut down potato production in order to produce more carrots.

# Determinants of supply

**The profitability of goods in joint supply** - Sometimes when one good is produced, another good is also produced at the same time. These are said to be goods in joint supply. An example is the refining of crude oil to produce petrol.

Other grade fuels will be produced as well, such as diesel and paraffin. If more petrol is produced, due to a rise in demand and hence its price, then the supply of these other fuels will rise too.

**Nature, 'random shocks' and other unpredictable events** - In this category we would include the weather and diseases affecting farm output, wars affecting the supply of imported raw materials, the breakdown of machinery, industrial disputes, earthquakes, floods and fire, etc.

**The aims of producers** - A profit-maximising firm will supply a different quantity from a firm that has a different aim, such as maximising sales. For most of the time we shall assume that firms are profit maximisers.

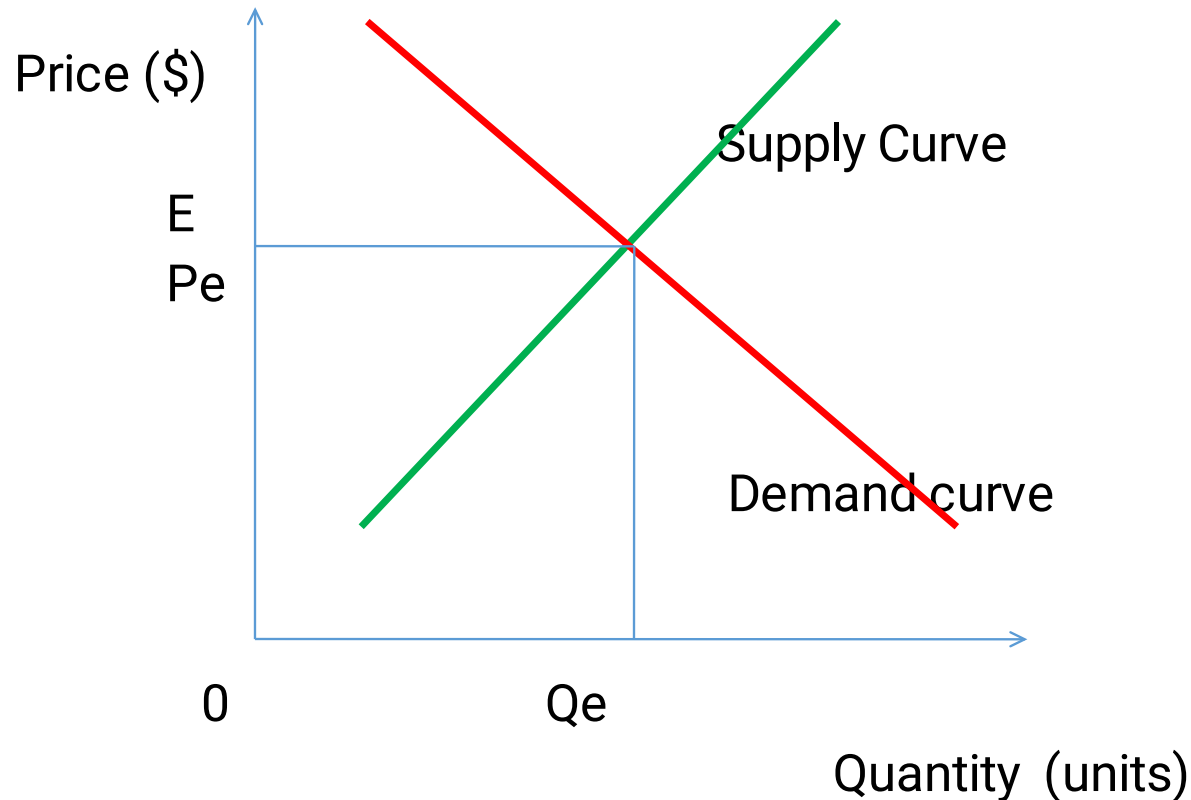


# Determinants of supply

- **Expectations of future price changes.** If price is expected to rise, producers may temporarily reduce the amount they sell. They are likely to build up their stocks and only release them on to the market when the price does rise. At the same time they may install new machines or take on more labour, so that they can be ready to supply more when the price has risen.
- **The number of suppliers.** If new firms enter the market, supply is likely to increase.

# Determination of equilibrium price and quantity

The equilibrium is determined by the interaction of demand and supply as shown below.



# Consumer and Producer surplus

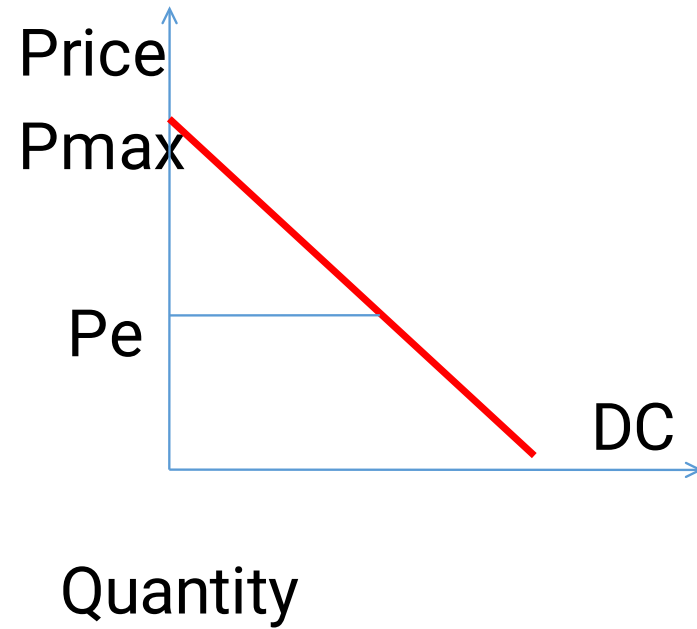
**Consumer surplus** is the difference between the maximum price a consumer is prepared to pay and market price.

It is illustrated by the area below the demand curve but above the equilibrium price.

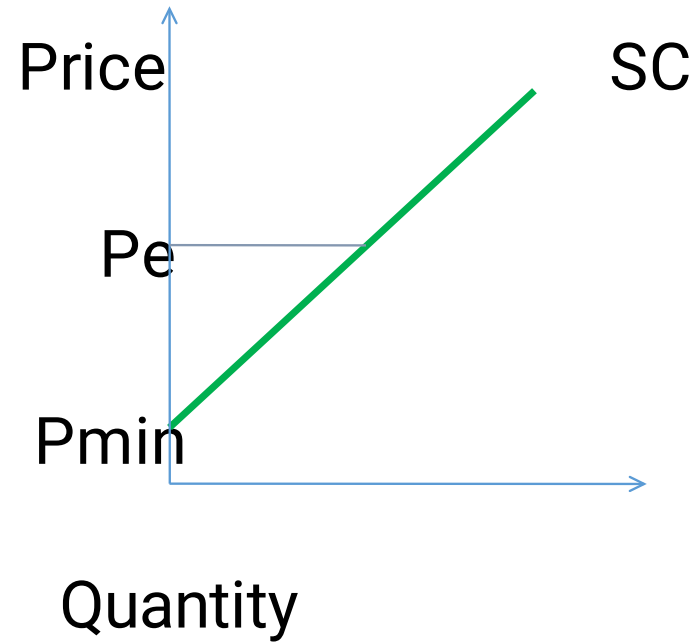
**Producer surplus** is the difference between market price and the minimum price the producer is prepared to pay.

It is illustrated by the area above the supply curve but below the equilibrium price.

## Consumer surplus



## Producer surplus



# Elasticity

Is the responsibility of one variable (demand/supply) to another (determinants).

Price Elasticity of Demand (PED)

Cross Elasticity of Demand (CED)

Income Elasticity of Demand (IED/YED)

Price Elasticity of Supply (PES)

Factors affecting elasticity

Usefulness of Elasticity

# Price Elasticity of Demand (PED)

It is the responsiveness of quantity demanded to change in the own price of a commodity.

Formula

PED = percentage change in quantity demanded  
percentage change in price

$\% \Delta Q_d = [(Q_2 - Q_1)/Q_1]100.$

$\% \Delta P = [(P_2 - P_1)/P_1]100.$

PED > 1 elastic or relative elastic. A change in price leads to a relatively large in quantity demanded or consumer is sensitive/responsive to changes in prices. The demand for luxury product is a good example.

# Price Elasticity of Demand (PED) conti...

$PED < 1$  inelastic or relative inelastic. A change in price leads to a relatively small change in quantity demanded or a consumer is less sensitive/responsive to price changes. The demand for necessity is good example.

$PED = 1$  unit/unitary elastic. A change in price will lead to a equal change in quantity demanded.

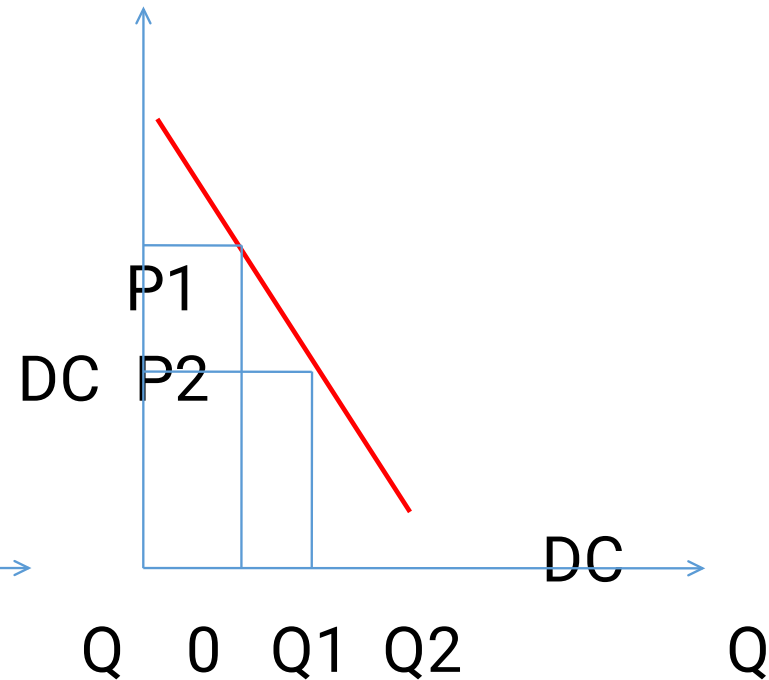
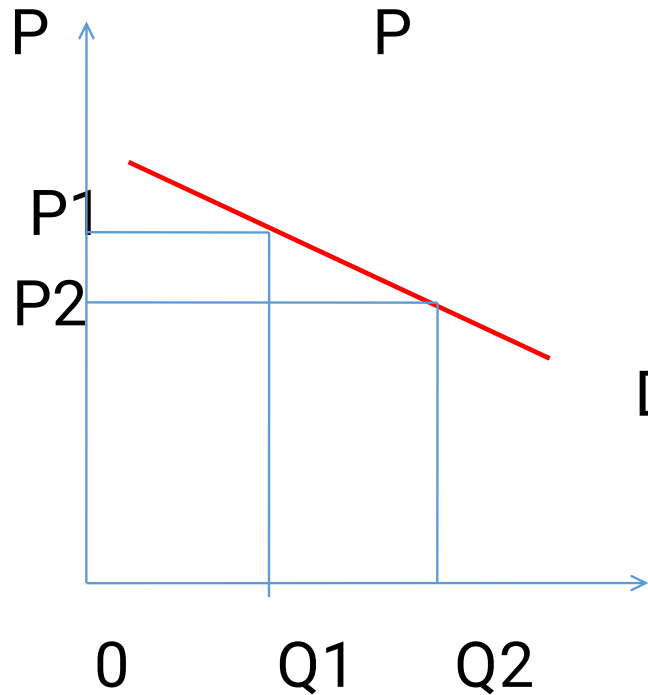
$PED = +/- \infty$  (infinity/large number) perfect elastic. Quantity demanded is very sensitive/responsive to any change in price.

$PED = 0$  perfect inelastic. Quantity demanded is not sensitive/responsive to changes in price.

# Price Elasticity of Demand (PED) conti...

$PED > 1$

$PED < 1$

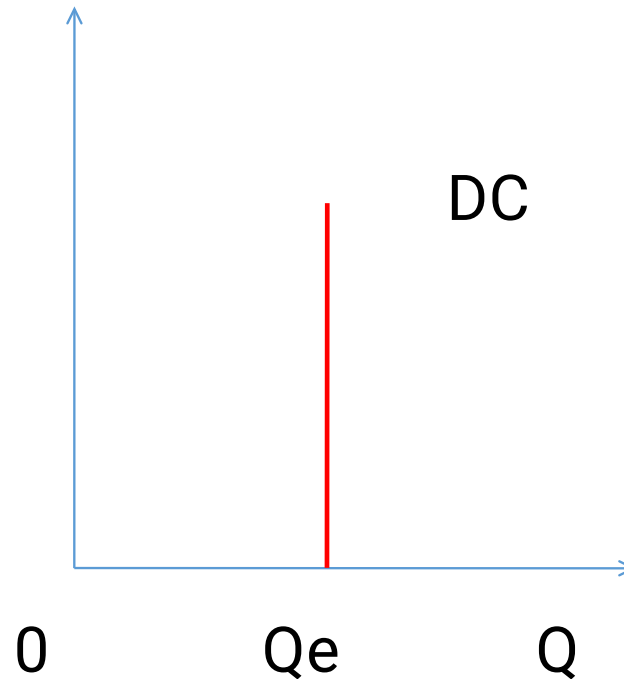
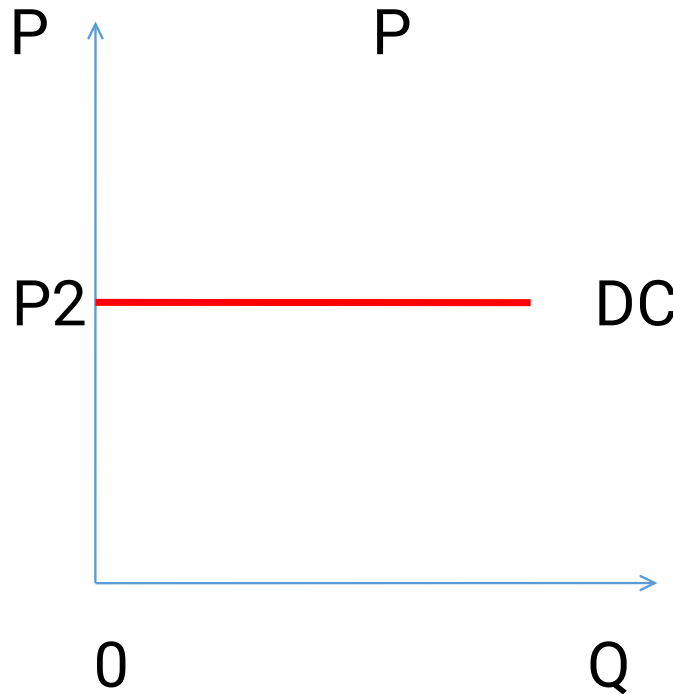




# Price Elasticity of Demand (PED) conti...

$$PED = +/- \infty$$

$$PED = 0$$



# Cross Elasticity of Demand (CED)

It is the responsiveness of quantity demanded of one commodity to changes of the price of another commodity. It is calculated using the following formula;

$$\text{CED} = \frac{\text{percentage change in quantity demanded of good x}}{\text{percentage change in price of good y}} \times 100$$

## Interpretation

When CED is positive it means goods are substitutes, positive but greater than 1, goods are strong/close substitutes and positive but less than 1, goods are weak substitutes.

When CED is negative, it means goods are compliments, negative but less than -1, goods are strong/closed compliments, negative but greater than -1, goods are weak compliments.

# Income Elasticity of Demand (CED)

It is the responsiveness of quantity demanded of a commodity to changes of the income. It is calculated using the following formula;

$$\text{YED} = \frac{\text{percentage change in quantity demanded}}{\text{percentage change in income}} \times 100$$

## Interpretation

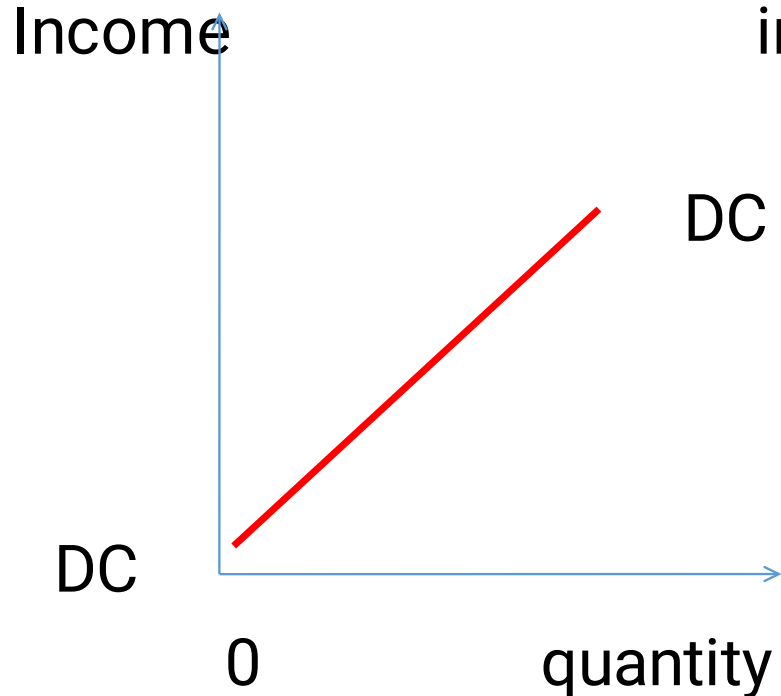
When YED is positive it means goods normal goods, positive but greater than 1, goods are luxury goods and positive but less than 1, goods are necessities.

When YED is negative, it means goods are inferior goods, an increase in income leads to decrease in demand. For example poor quality products like chunks as compared to beef.

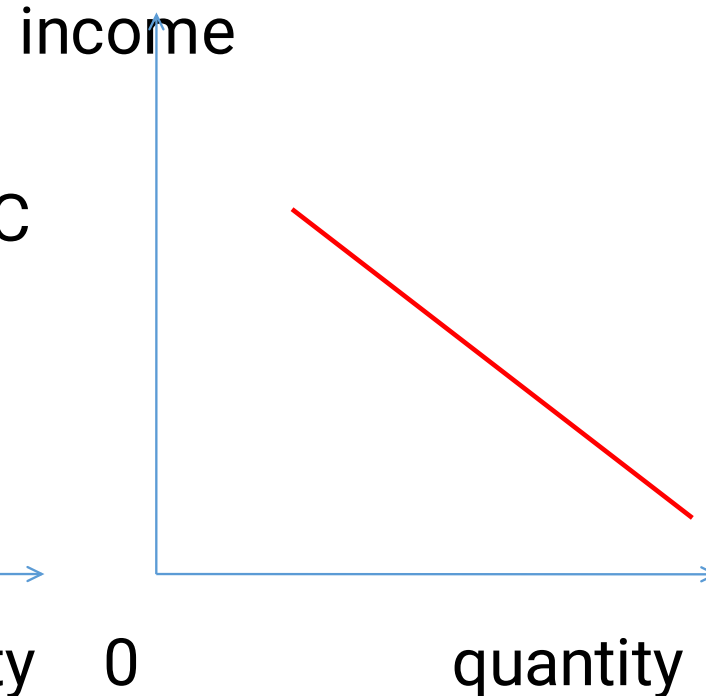
# Income Elasticity of Demand (PED) conti..

- 

YED is positive



YED is negative



# Determinants of Elasticity

Availability of substitutes.

Proportion of income spent on a product.

Proportion of labour costs to total costs

Types of goods (luxury and necessity)

Advertising (brand loyalty)

Time period (short and long-run)

Availability of space capacity

Level of income.

# Determinants of Elasticity

**Availability of substitutes** – The more substitutes, the more the elasticity the demand and vice versa.

**Income level** – the higher income level the less responsible the demand and vice versa.

**Habit forming product** – some products (luxuries) such as cigarettes are habit forming and have become necessities to uses, who can not do without. Their demand is inelastic.

**Proportion of income spent on a product** – the high the proportion of income is spent on a product the more elastic/responsible is the demand and vice versa.

**Types of goods** – necessities have inelastic demand, while luxuries have elastic demand.

**Availability of space capacity** – firms which has space capacity are able to respond to changes in prices, as they are able to use their space capacity to increase quantity supply. Therefore availability of space capacity makes supply elastic and vice versa.

**Proportion of labour costs to total costs** – the high the proportion of labour costs to total costs the more elastic is the demand and vice versa.

**Time period** – demand and supply are inelastic in the short-run and elastic in the long-run. This is because consumers and producers usually make long-term plans which are take time to adjust.

# Usefulness of Elasticity

## In raising revenue and pricing

When  $PED > 1$  (elastic), an increase in price will lead to a decrease in revenue and vice versa. When  $PED < 1$  (inelastic), a decrease in price will lead to an increase in price.

Therefore in order to raise revenue a company should reduce the price for a good whose demand is elastic and increase the price for a good whose demand is inelastic. In other words the knowledge PED is useful in pricing (market segmentation and sales forecasts).

Supply more of normal goods whose YED is positive, when income level are high or increasing and vice versa. Supply more of inferior goods whose YED is negative, when income level are low or decreasing.

When CED is positive (substitutes), supply more of the substitute good/s, when the price of one good increase.

# Usefulness of Elasticity

## **In the labor market**

If the product produced by labour has  $PED < 1$  (inelastic), also labour demand elasticity will be inelastic. Therefore trade union will demand increase in wages, since a firm can raise revenue by increasing price, then use the proceeds to increase wages and better working conditions.

## **Government**

Impose taxes on demerit goods to raise revenue since they have elastic demand, since a tax will increase the price leading to increase in tax revenue collected.

## **Correcting BOP deficit**

Impose tariffs (customs duty) on imports whose demand is elastic. This will increase the import price, leading to decrease expenditure on imports, thereby correcting the deficit.

Expenditure on imports can be reduced by devaluation of the local currency. Devaluation make imports expensive or increase price and if the demand is elastic, expenditure on imports will be reduced, thereby correcting BOP deficit.



# Limitations of Elasticity

- Elasticity assumes that nothing else has changed. However market conditions are always changing making accurate calculating of elastic almost impossible.
- Elasticity calculated may be outdated because of changing consumer tastes and preference.
- The data needed to calculate elasticity could be quite old and market conditions might have changed.

# Utility theory/Consumer Behaviour

## **Total utility (TU)**

Is the total satisfaction a person gains from all those units of a commodity consumed within a given time period.

## **Measure of Utility**

**Cardinal approach** – utility is subjective, so people can only rank their preferences. One derives high utility from consuming more units of a product than fewer units of a product.

**Ordinal approach** – utility can be measure using physical units called utils. For example Mr Ncube derives 10 utils from consuming 2 oranges.

## **Marginal Utility (MU)**

is the change in utility or utility gained from consuming one extra unit of a product.

# Utility theory conti...

## Law of diminishing marginal utility

As more units of a good are consumed, additional units will provide less additional satisfaction than previous units. Marginal utility first increases then decreases. The point where marginal utility starts to decrease is called the diminishing marginal utility point.

**A rational consumer** weighs up the costs and benefits to him or her of each additional unit of a good purchased.

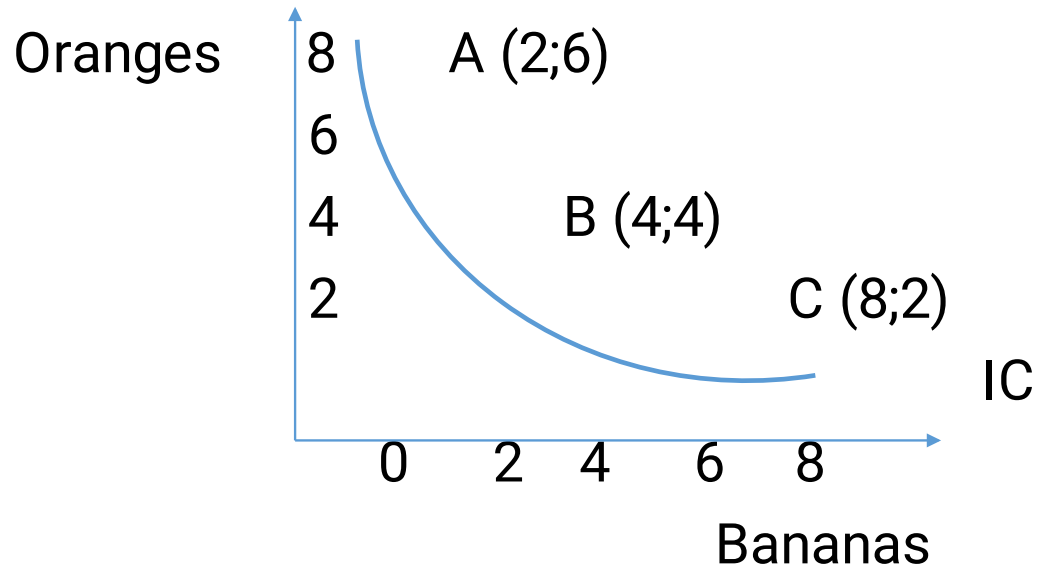
Number of oranges	Total utility	Marginal utility
0	0	0
2	2	2
3	5	3
4	9	4
5	12	3
6	13	1

# Indifference curve analysis

It involves the use of indifference curves and budget lines. It adopts a cardinal approach to utility.

## Indifference curve

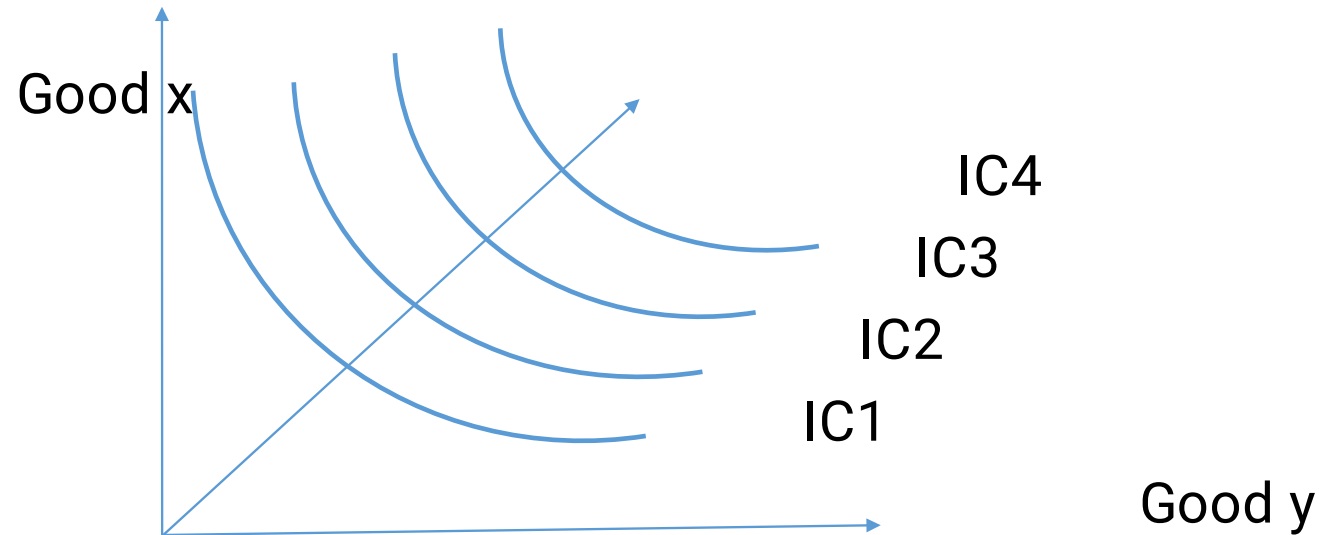
It shows all the combinations of two goods that give an equal amount of satisfaction or utility to a consumer.



# Indifference curve analysis conti...

An indifference curve map shows a number indifference curves showing different levels of utility. The further from the origin is an indifference curve, the higher the utility. Indifference curves never cross each other.

The slope of the indifference curve (marginal rate of substitution) is the rate at which a consumer exchange one good for another. It is the ratio of marginal utilities of the two goods.  $MRS_{xy} = MU_x/MU_y$ .

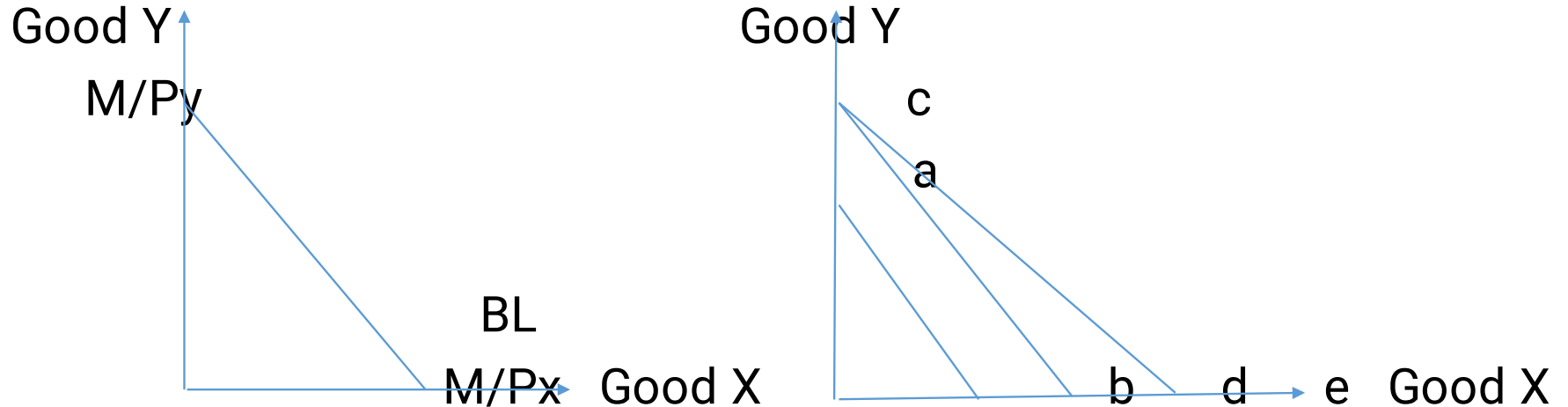


# Indifference curve analysis conti...

**Budget line (BL) –  $M = P_xX + P_yY$**

It shows all possible combinations of two goods a consumer can buy, given his/her income and the prices of the two goods. The slope of the BL is the ratio of prices of the two goods ( $P_x/P_y$ ).

When income changes the BL shift outwards (ab to cd, increase in income) or inwards (cd to ab, decrease in income), whilst when prices changes, the BL pivot shift (cd to ce) as shown below.



# Consumer equilibrium

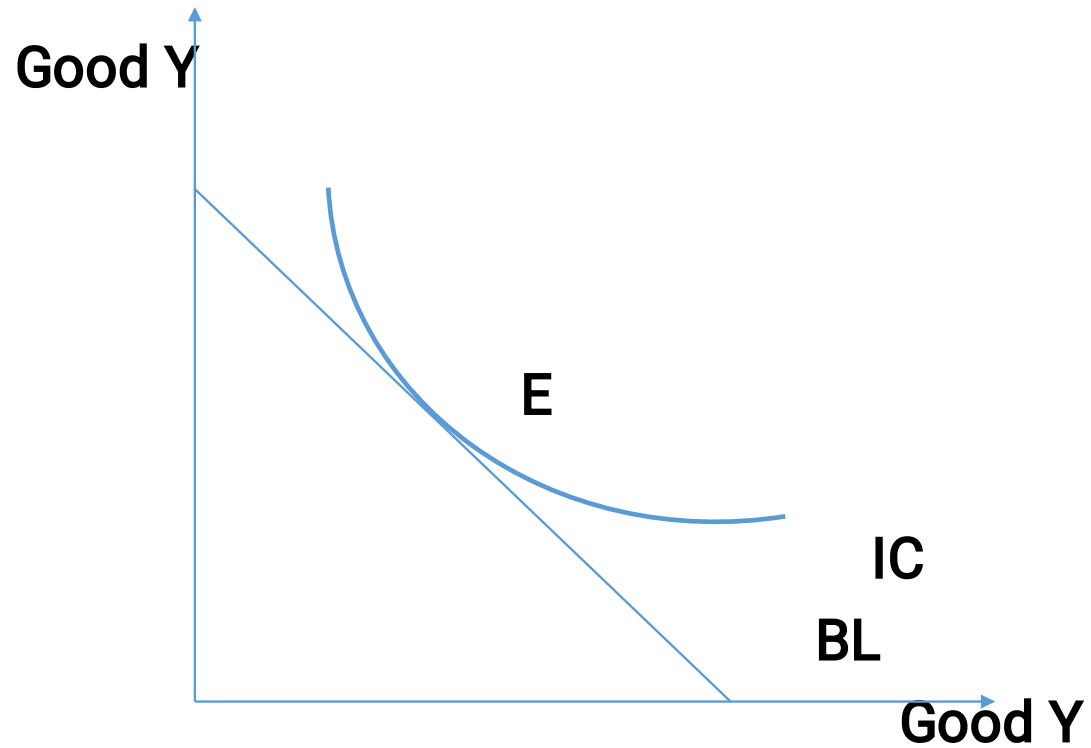
Consumers seek to maximise utility subject to income and prices by consuming that combination of the two goods where marginal utility of a good is equal to its price. Under two goods the marginal rate of substitution ( $MRS_{xy}$  or  $MU_x/MU_y$ ) will be equal to ratio of prices ( $P_x/P_y$ ), where indifference curve is tangent to the budget line.

$$\text{Re-arranging: } \frac{MU_x}{MU_y} = \frac{P_x}{P_y} \quad \text{therefore} \quad \frac{MU_x}{P_x} = \frac{MU_y}{P_y}$$

Therefore, ratios of marginal utility to price must be equal for the goods. When there are many goods (Equi-marginal principle), ratios of marginal utility to price must be equal for all goods.

$$\frac{MU_1}{P_1} = \frac{MU_2}{P_2} \dots\dots\dots = \frac{MU_n}{P_n}$$

# Consumer equilibrium





# Substitution and Income effects of a price change

When a price change (increase or decrease) the consumer demand changes (decrease or increase) respectively for two reasons;

Change in real income (income in terms of how much it can buy) – income effect. It is the portion of the change in quantity demanded arising from a price change that is attributed to the changes in real income. It is shown by a movement from one budget line (compensated BL) to another budget line (new BL) with same slope and different indifference curves showing different levels of utility. The direction depends on the type of the good.

One good is now more expensive/cheaper relative to the other good, therefore consumers substitute relatively expensive good for a relatively cheaper good – substitution effect. It is the part of a change in quantity demanded arising from a price change that is attributed to the change in relative prices. It is shown by movement along same indifference curve showing same level of utility and from original budget line to compensated budget line with different slopes showing different levels of real income due to price change.

Inferior good is one whose quantity demanded decreases as income increases.

# Substitution and Income effects of a price decrease for normal good

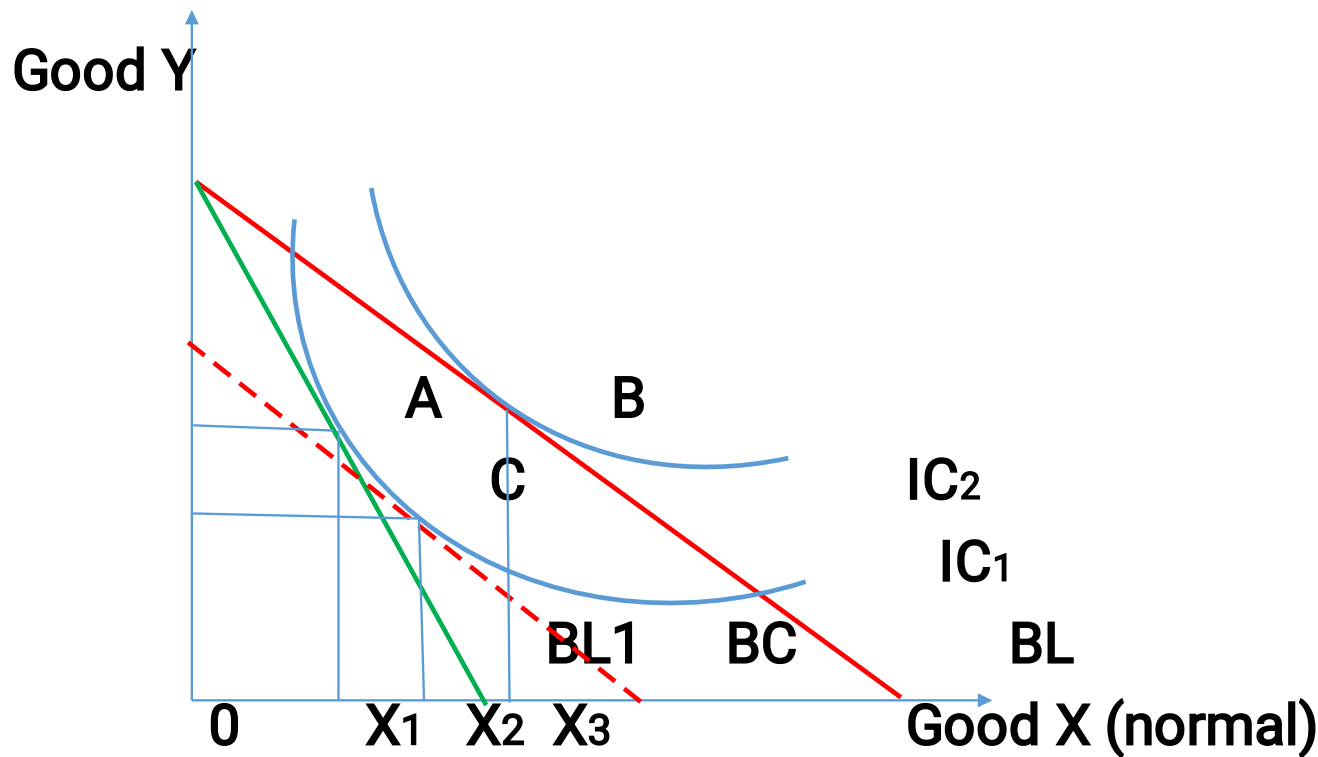
A normal good is one whose quantity demanded increases as income increases. In the diagram below decrease in the price of a good X (normal good) will lead to a pivot shift of the budget line from BL1 to BL2. Initially the consumer equilibrium is A where the consumer consumes  $X_1$  and new equilibrium is B, where the consumer consumes  $X_3$ . The decrease in price of X make good X relative cheaper than good Y. Therefore the consumer substitute good Y for good X.

The decrease in the price of good X increase the real income so that the consumer attains high utility, consuming along IC2 at point B as compared to point A along IC1.

However we want the consumer to attain the same level of utility as before price changes, therefore another budget line BC (compensated budget line) must be drawn parallel to the new budget line BL2 and tangent to IC1 at point C where the consumer consumes  $X_2$  of good X. It is parallel to BL2 showing new price and tangent to IC1 showing same utility level. SE is from point A to C and IE is from point C to B. The SE and IE reinforce each other or move in the same direction.

# Substitution and Income effects of a price change.

SE =  $X_1$  to  $X_2$  and IE =  $X_2$  to  $X_3$



# Substitution and Income effects of a price increase for inferior good

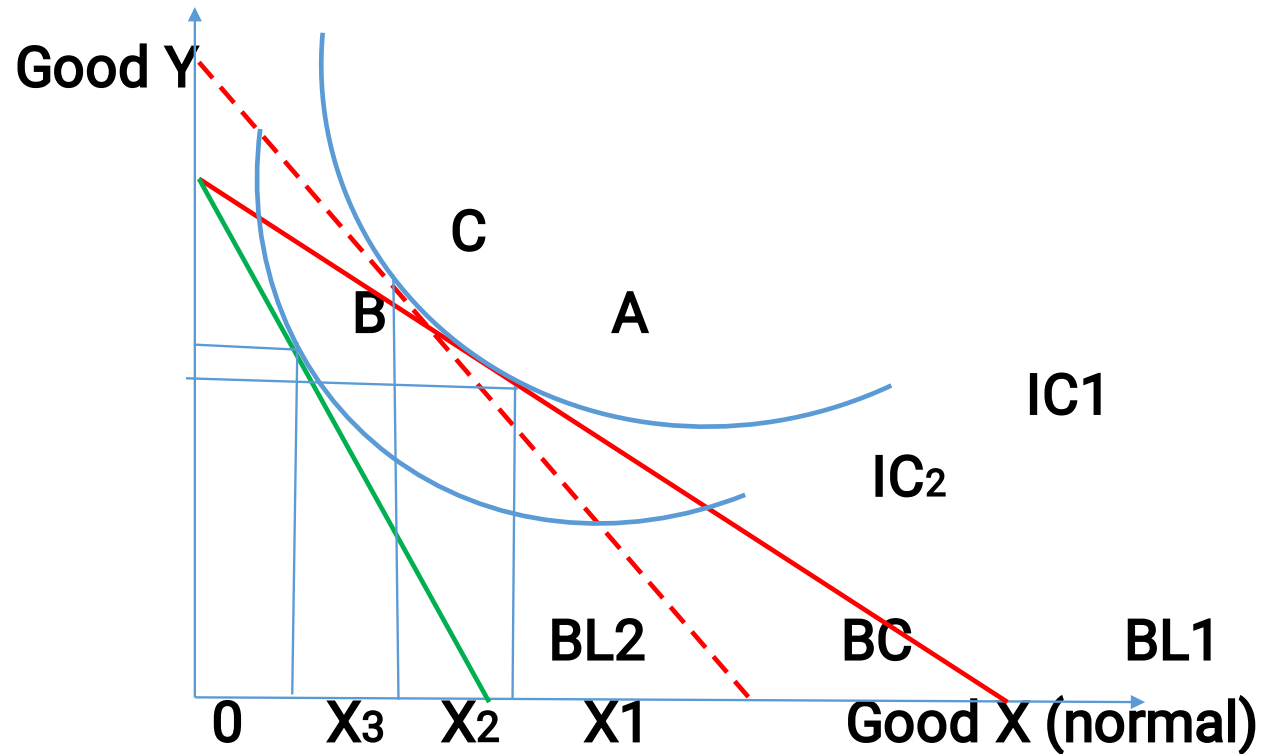
A inferior good is one whose quantity demanded decreases as income increases. In the diagram below increase in the price of a good X (inferior good) will lead to a pivot shift of the budget line from BL1 to BL2. Initially the consumer equilibrium is A where the consumer consumes  $X_1$  and new equilibrium is B, where the consumer consumes  $X_3$ . The increase in price of X make good X relative cheaper than good Y. Therefore the consumer substitute good Y for good X.

The increase in the price of good X decrease the real income so that the consumer attains low utility, consuming along IC2 at point B as compared to point A along IC1.

However we want the consumer to attain the same level of utility as before price changes, therefore another budget line BC (compensated budget line) must be drawn parallel to the new budget line BL2 and tangent to IC1 at point C where the consumer consumes  $X_2$  of good X. It is parallel to BL2 showing new price and tangent to IC1 showing same utility level. SE is from point A to C and IE is from point C to B. The SE and IE oppose each other or move in different directions.

# Substitution and Income effects of a price change.

SE =  $X_1$  to  $X_2$  and IE =  $X_2$  to  $X_3$



# Theory of the Firm and Production

Production occurs in the short-run and long-run. Short-run period is the time over which at least one factor of production is fixed and long-run period is the time over which all factors of production are variable. Fixed factor is an input that cannot be changed/varied within/over a given period, eg land. A variable factor can be varied/changed over an given period.

A production function is a mathematical relationship among inputs used in production and it also shows relationship between inputs and output. Output of a product per period of time obtained from a given amounts of inputs is called Total Physical Product (TPP), output per unit of variable factor is Average Product, given by the formula,  $\text{TPP} \div \text{output}$  and Marginal Product is the change in TPP as a result of employing one extra/more unit of a variable factor and is given by the formula,  $\text{change in TPP} \div \text{change in variable factor}$ .

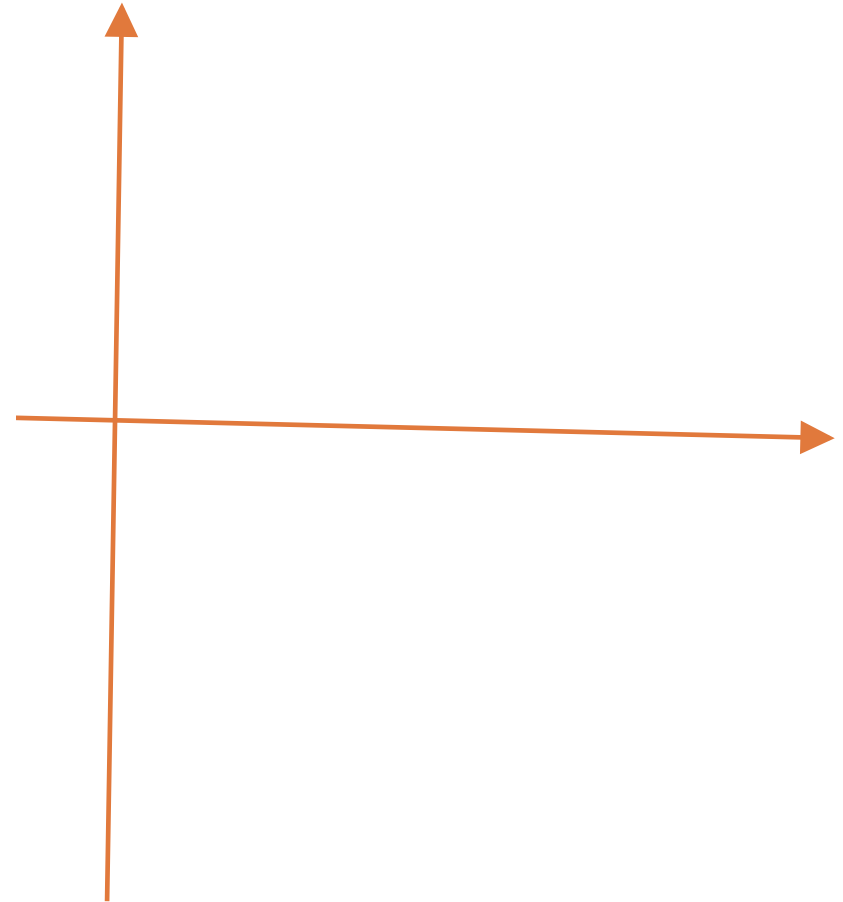
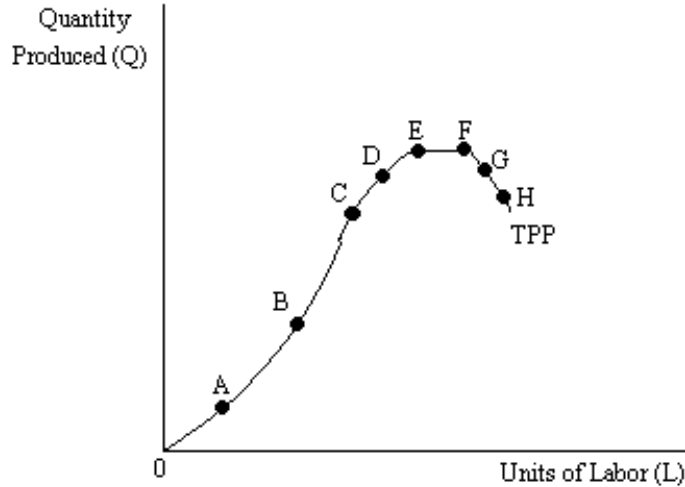
# Theory of the Firm and Production

The law of diminishing returns or diminishing marginal returns says as more variable factor is used with a given units of a fixed factor, there will be a point when each extra unit increase in the variable factor will produce less extra output than then previous unit.

In other words, TPP will be increasing by decreasing units and MP will be declining. The point at the law becomes effective is called diminishing returns point.

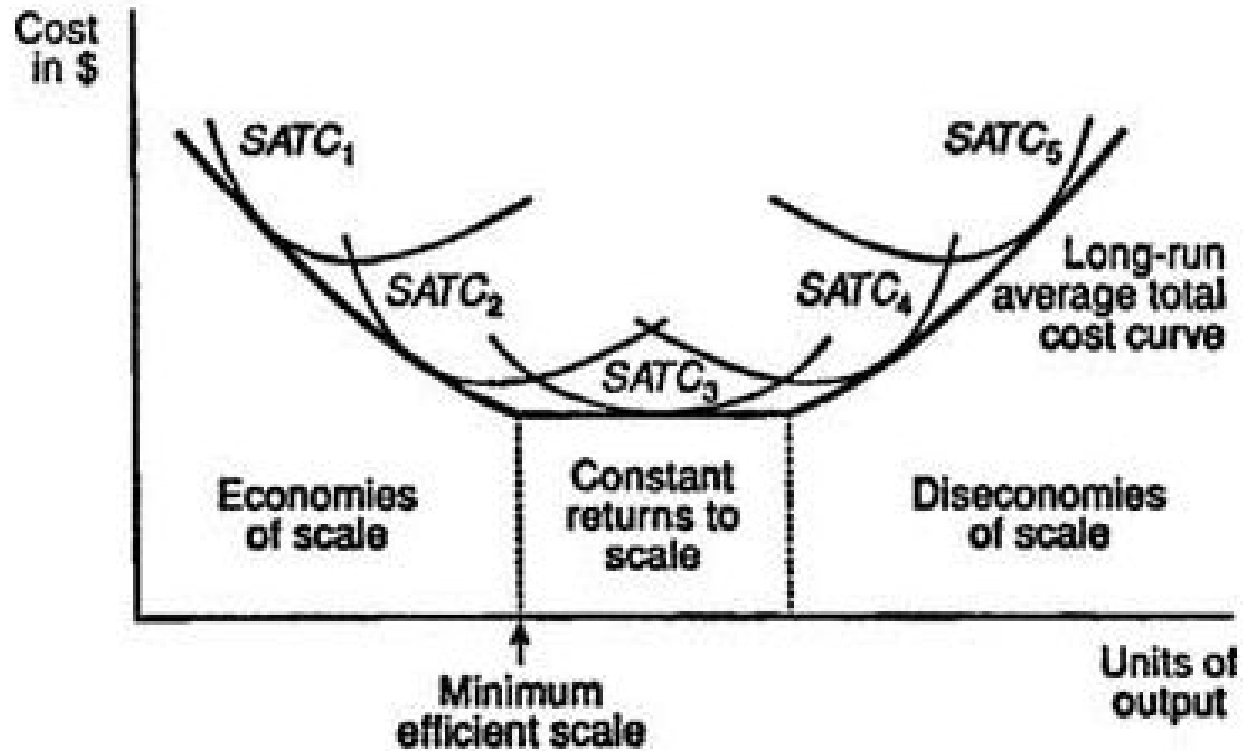
# Theory of the Firm and Production

Units of labour	TPP	MP	AP
0	0		
1	3		
2	8		
3	11		
4	13		
5	12	-1	2.4





# Long-run average costs



**Figure 1**

Short- and long-run average total cost curves

# Oligopoly

Is a market situation where the total output is concentrated in the hands of few firms. It occurs when just a few firms share a large proportion of the industry. Is a market dominated by few large firms. Duopoly is where the market is shared between two big players.

## Characteristics

Interdependence of the firms or mutually dependent. Each firm is affected by its rivals' actions in response to its actions or strategy.

High barriers to entry of new firms.

They produce identical or differentiated products.

There is uncertainty and risks associated with price competition may lead to price rigidity or stability.

Firms may or may not choose to maximise profits.

Firms may choose to collude with each other to jointly maximise industry profits or compete with the rivals to gain a bigger share of industry profits.

# Oligopoly conti ...

## Collusive behaviour

Oligopoly firms may agree on one price, market share and advertising expenditure among other things. This is done to reduce uncertainty they face like price wars and retaliatory advertising, which could reduce industry profits.

A **cartel** is a formal collusive agreement meant to maximise profits when firms act like a monopoly. Having agreed on the cartel price, the members may then compete against each other using non-price competition, to gain as big a share of market. They may agree to divide the market between them through a quota. However cartels are illegal. They are viewed as a means of driving up prices and profits, and being against the public interest.

**Tacit collusion** is where firms keep to the price set by leader. The leader may be the largest firm, dominating the industry. This is known as dominant firm **price leadership**. A price leader may be most reliable firm to follow: the one that is the best barometer/measure of market conditions. This is known as **barometric firm price leadership**.

**Average cost pricing** - producers add a certain percentage for profit on top of average costs.

# Oligopoly conti ...

## Factors favouring collusion

**Firms** are not secretive with each other about costs and production methods.

Similar production methods and average costs, and are thus likely to want to change prices at the same time and by the same percentage.

Produce similar products and can thus more easily reach agreements on price.

There is a dominant firm.

There are significant barriers to entry and therefore little fear of disruption by new firms.

The market is stable. If industry demand or production costs fluctuate wildly, it will be difficult to make agreements, partly due to difficulties in predicting and partly because agreements may frequently have to be amended.

There is a particular problem in a declining market where firms may be tempted to undercut each other's prices in order to maintain their sales.

There are no government measures to curb collusion.

# Oligopoly conti ...

## **Non collusive behaviour and kinked demand theory**

It is based on two assumptions;

If one firm cuts its price, its rivals will feel forced to follow suit and cut theirs, to prevent losing customers to the first firm.

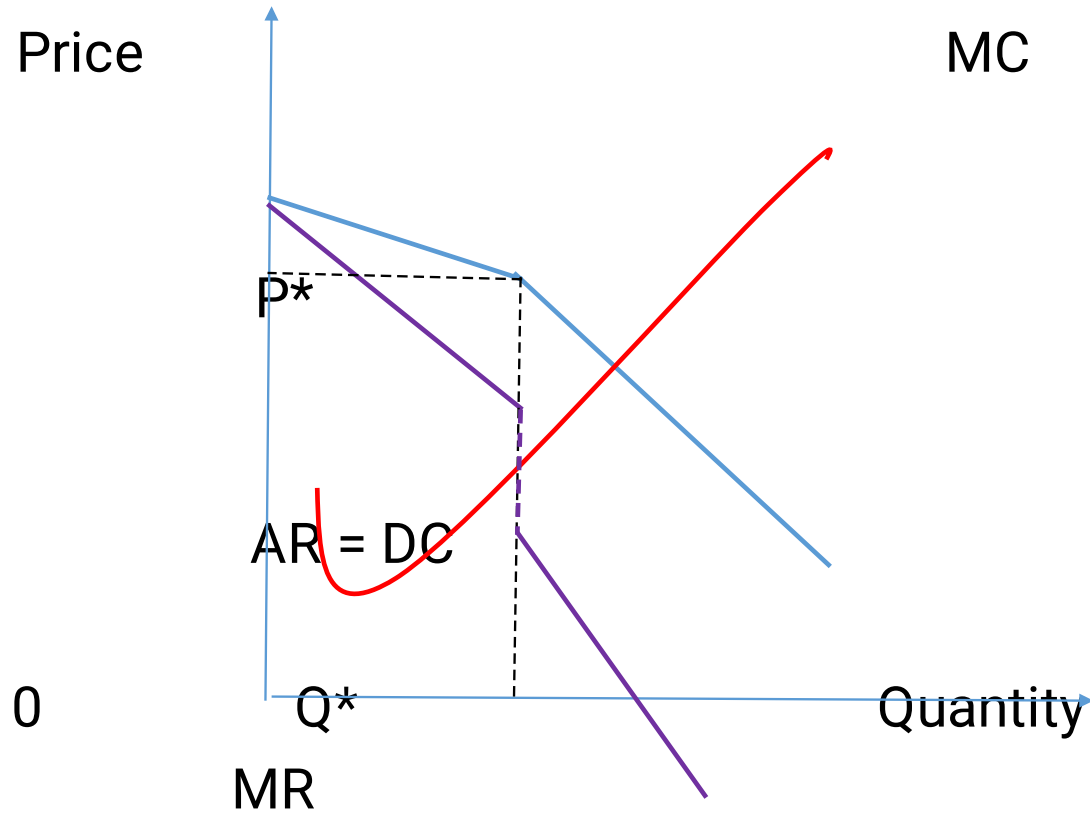
If one firm raises its price, however, its rivals will not follow suit since, by keeping their prices the same, they will thereby gain customers from the first firm.

Based on these assumptions each firm will face a demand curve that is kinked at the current price and output. A rise in price will lead to a large fall in sales as customers switch to the now relatively lower-priced rivals. Therefore firms will be reluctant to raise its price. Demand is relatively elastic above the kink.

On the other hand, a fall in price will bring only a modest increase in sales, since rivals lower their prices too and therefore customers do not switch. Therefore firms will be reluctant to lower its price. Demand is relatively inelastic below the kink. Thus firms will be reluctant to change prices at all, therefore there will be price stability.

# Oligopoly conti ...

kinked demand curve



# Oligopoly conti ...

## Criticism

Depending on the size of the individual firms, there may be less scope for economies of scale to mitigate the effects of market power.

Firms are likely to engage in much more extensive advertising than a monopolist.

Supernormal profit are used for research and development to improve product design allowing the firm to capture a larger share of the market for some time before rivals can respond with a similarly improved product. Technological improvement lowers addition costs, resulting higher profits will improve the firm's capacity to withstand any price war.

Non-price competition through product differentiation may result in greater choice for the consumer, through product specifications, which meet the specific requirements of different consumers.

# Criticism and comparison of PC and monopoly

Higher price and lower output than in monopoly than in PC.

PC is productively efficient, producing the optimum output and allocatively efficient ( $P=MC$ ), whilst a monopoly is productively inefficient, producing less than optimum output in search of extra profit and allocatively inefficient ( $P>MC$ ).

A monopoly captures consumer surplus and turns it into abnormal profit.

PC is theoretical ideal, it does not exist in the real world. So a monopoly must be compared to real world models of monopolistic and oligopoly. PC may also lead to a waste of resources in competitive advertising.

A monopolist cannot always make abnormal profit depending on its costs structures.

Monopolist enjoy economies of scale and can use abnormal profits to invest in process of innovation, implementing new techniques of production with the objective of lowering unit costs.

Monopoly profits can be used to finance product innovation which will add to the consumer welfare in the future, through improvement in products quality and wide range of products at lower prices.



# Constable markets

Is a market which there are no costs of entry and exit, such as perfect competition and monopolistic competition. Features include;

Free entry new and existing firms will have same cost structure as in PC.

Number and size of firm are irrelevant.

Normal profit only can be earned in the long-run.

Threat of potential entrants into the market is over-riding, that it forces firms to efficient.

All firms are subject to same regulations and government control irrespective of size.

Mechanisms must be in place to prevent the use of unfair pricing by established firms to stop new entrants from entering the market.

# Measuring size of firms

Market share, number of employees, technological adoption and advancement, capital employed.

## **Survival of small firms**

**Niche marketing** – is providing special needs of the market without being in direct competition with big firms.

**Linkages** – serving the market segment which large firms find uneconomical to serve, because there is no possibility of earning economies of scale.

**Subcontracting** – working with big firms, providing non core activities to small firms, so that big firms can concentrate or focus on the core business. For example in construction.

**Scale of production** – serving sectors which require production at low scales of production. Scale of production does not allow or favour the presence of large firms in some sectors. For example shoe repair services.

**Location** – location in areas where there no large firms to avoid competition. Some location may not favour large firms because of the size of the market. For example growth points and rural areas.

# Growth of firms

**Takeover** is a hostile/unfriendly bidding by a large/strong company to take control of a small or struggling firm. There is no agreement between the two companies, but a financially strong company takeover a weak company.

**Mergers** is where there is a mutual agreement between the two companies to combine their assets in order to consolidate/increase/protect their market share.

**Vertical integration** is when two firms at different levels of production merge to become one. It can be backward, where a firm moves backwards to merge with its suppliers to ensure constant supply of raw materials. It can be forward, where a firm moves forward to merge with its distributors in order to be closer to its customers.

**Horizontal integration** is where firms at the same level of production merge in order to avoid unnecessary competition and increase market share.

# Labour Market Economics

- Determination of the wage rate.
- Activities of Trade Unions in perfect competition and monopsony markets
- Wage differentials.

# Determination of the wage rate

Labour is all human physical and mental efforts. As an economic resources it has the market, where it is bought and sold. The interaction of market forces (demand and supply) determine the price of labour (wage rate).

## **Labour demand**

Labour demand is derived demand. Workers are demanded to produce output of goods and services. Labour is not demanded for its only seek, but for what it contributes in production or its productivity. It is derived or taken from the demand of products it is used to produce. To produce goods and services, firms use economic resources, which labour is one. Therefore, the demand of goods and services creates demand for labour.

Firms are the ones that demand labour. Assuming perfect competition market where each firm is a price taker, each will demand any number of workers at a given wage rate, therefore individual demand curve is perfect elasticity. The industry demand curve is however downward sloping. The higher the wage rate the lower the labour demanded.

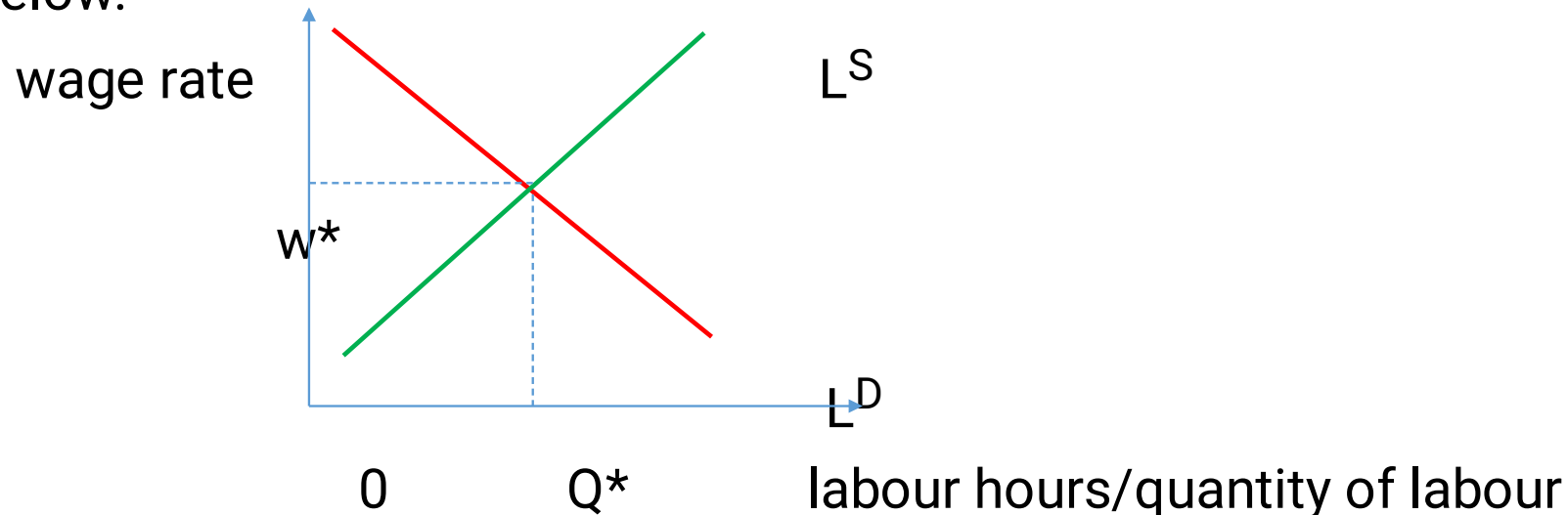
## **Labour supply**

Labour as a factor of production is supplied by households or individual workers

# Determination of the wage rate conti...

Assuming a perfect competition labour market, where workers are price (wage rate) takers, they decide how much time to devote in the market or they supply any number of labour hours at a given wage rate. This gives a perfect elastic individual labour supply. Workers will supply more labour or will devote more labour hours in the labour market at a higher wage rate or more workers will be willing work at a higher wage rate and vice versa. Therefore, the market labour supply is upward sloping.

The interaction of labour demand and supply determine the market wage rate as shown below.



# Marginal Revenue Productivity (MRP) Theory

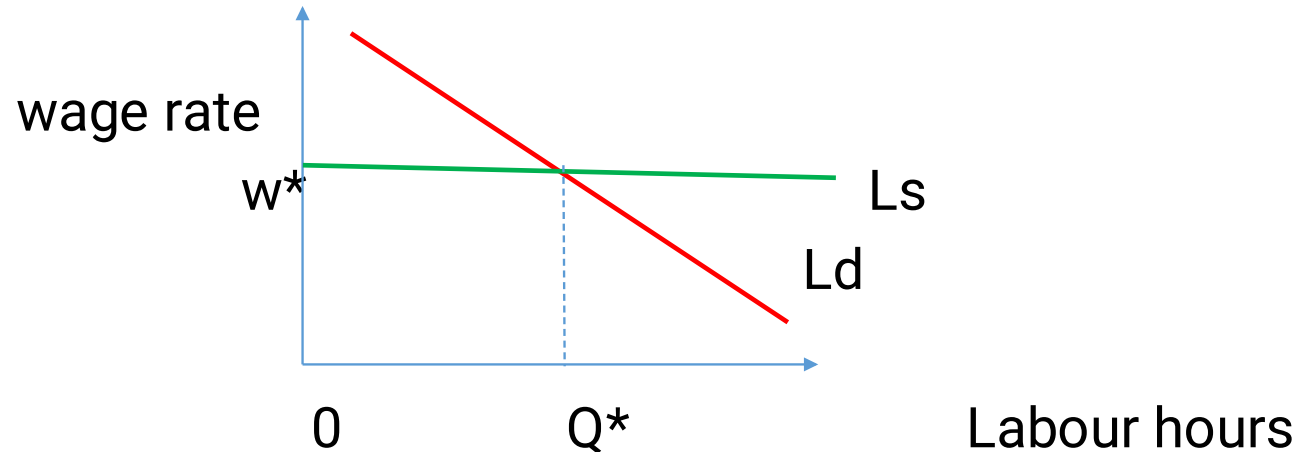
Is the theory that explains the determination of the wage rate. The theory is based on perfect competitive labour market with the following assumptions;

- Workers are homogenous in terms of skills, so they are perfect substitutes.
- Firms and workers are price takers. No firm or worker has market power to influence the wage rate, at which they demand and supply labour, respectively.
- There are no barriers to entry and exit and no trade unions.
- Workers productivity can be clearly and objectively measured.
- There are many buyers and suppliers of labour.
- Firms seek to maximise profit, employing where marginal revenue product is equal to marginal factor cost or wage rate.

Firms demand labour for its productivity. The demand for labour is affected by the labour productivity and the price (P) of the commodity which labour is used to produce. Productivity of a worker is measured by the marginal physical product (MPP), the change in output or output produced as a result of employing one extra worker.

# MRP Theory conti....

The output is sold at certain price. In monetary terms, the value of each worker is found by multiplying marginal physical product by price. This is the marginal revenue product (MRP), the change in total revenue as a result of selling the extra output produced by employing one extra worker. Therefore workers are paid based on their productivity (MRP). The labour supply curve is perfect elastic, because workers are perfect substitutes, occupational and geographically mobile, they can be hired at a constant wage rate. A firm will demand more labour as it become relatively cheaper, for each level of productivity. This is shown in the diagram below.





# Criticisms

There are many other factors that affect that determine wages like: supply (inelastic supply = higher wages), monopsony vs Competitive markets, trade unions / minimum wages, difficulty of determining MRP of workers, firms non profit maximising, part time / full time and service sector / private sector.

It can not be used as a valid basis for discussing labour demand for all types of labour. This is because in many cases, it is not easy to objectively measure labour productivity. Some workers do not produce physical output for example in the services industry. Even in cases where productivity can be objectively measured, output produced may not be sold at a market price, making it hard to place the exact valuation on output of each worker or productivity.

In other cases wages may be set independently of the state of market operations. For example public sector workers their pay is directly set by government.

It is based on perfect competition assumptions which may be unrealistic in the real world.

However it is useful for explaining labour demand in many industries where workers produce physical units. It provides a basis of explaining labour demand or why firms demand labour.

# Determinants of labour demand

- Type and elasticity of the product produced.
- Power of trade unions.
- Proportion of labour costs in total costs.
- Nature of the market.
- Government policy.

# Backward blending labour supply curve

The labour supply curve bends backwards at a higher level of the wage rate, due to substitution and income effects of a wage increase. Workers have two options on how to spend their time: commit all the time in the labour market to earn income use to buy goods and services or commit time in leisure activities ( staying at home, holiday, education etc)

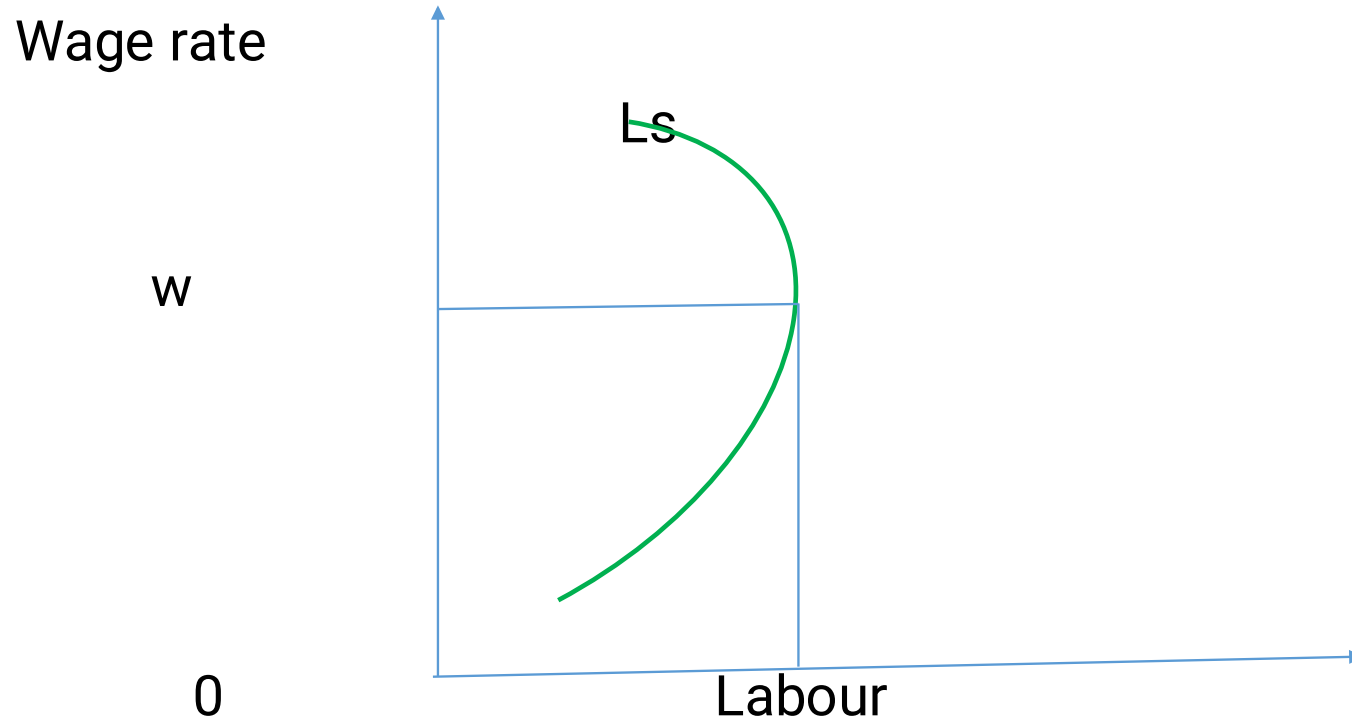
At a lower wage rate workers commit all the time in the labour market to earn income (the opportunity cost of leisure). In other words they are substituting leisure for work, because they cannot afford both work and leisure. This is substitution effect, workers are consuming more of a cheaper good, work and less/nothing of leisure, the expensive good. So at lower levels of wage rate the substitution effect dominates.

As the wage rate increases, workers real income increase, so they can afford both leisure and work. This is income effect. At this level of wage rate, workers can afford to work less hours, hence the labour supply bend backwards. At higher wage rate the income dominate.

Labour supply is affected by: population characteristics (size, age composition, death & birth rate, and migration), government policies, trade unions activities and substitution argument.

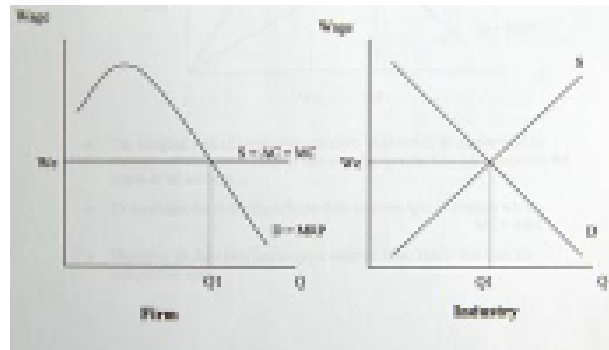
# Backward blending labour supply curve

Below  $w$  SE dominate IE and above  $w$  IE dominate SE



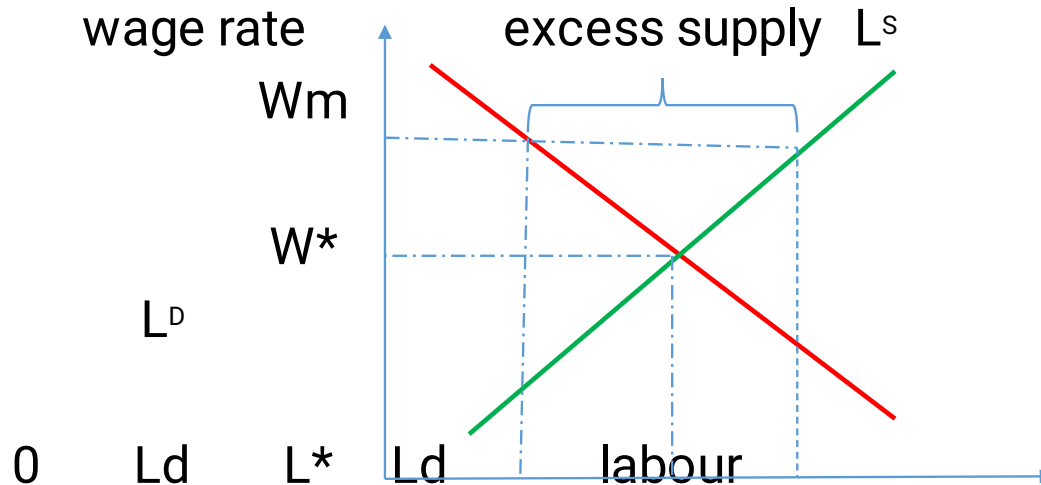
# How wages are determined in a perfectly competitive labour market.

- A perfectly competitive labour market will have the following features: Many firms, Perfect information about wages and job conditions, Firms are offering identical jobs and Many workers with same skills.
- The equilibrium wage rate in the industry is set by the meeting point of the industry supply and industry demand curves. In a competitive market firms are wage takers because if they set lower wages workers would not accept the wage. Therefore they have to set the equilibrium wage rate. Because firms are wages takers the supply curve of labour is perfectly elastic therefore  $AC = MC$ . The firm will maximise profits by employing at  $Q_1$  where  $MRP$  of Labour =  $MC$  of Labour



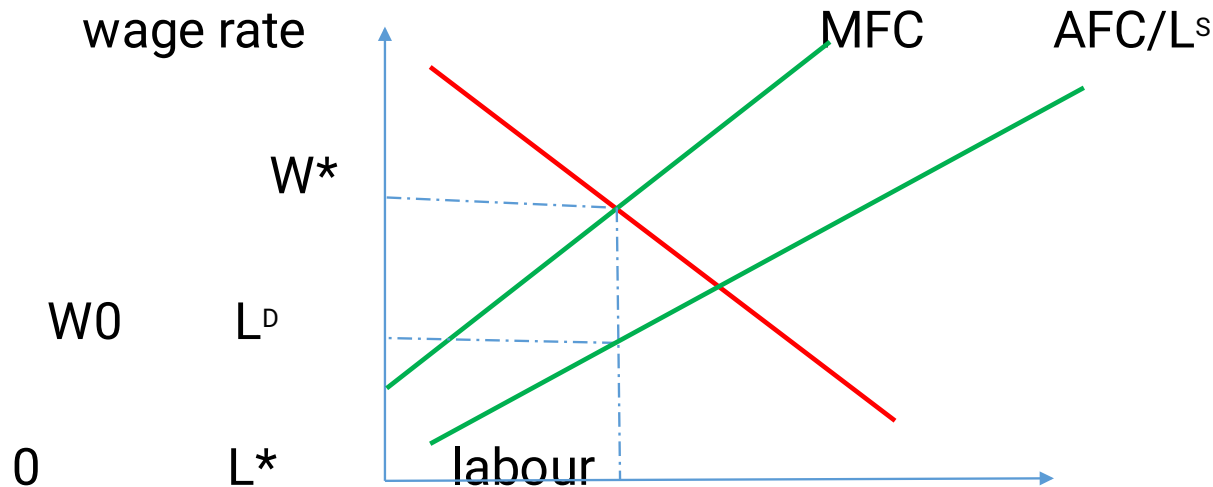
# Activities of trade unions in PC

Trade unions intervene in the market by setting or demanding minimum wages to raise welfare of their members. They usually do so especially when they view the prevailing wage rate as unfair. However trade union's demands of minimum wages has opportunity cost of unemployment. Successful wage bargaining will increase the wage rate at the expense of employment. At the minimum wage more workers will be willing to work, while firms can only employ few workers, therefore there will be excess supply (unemployment).



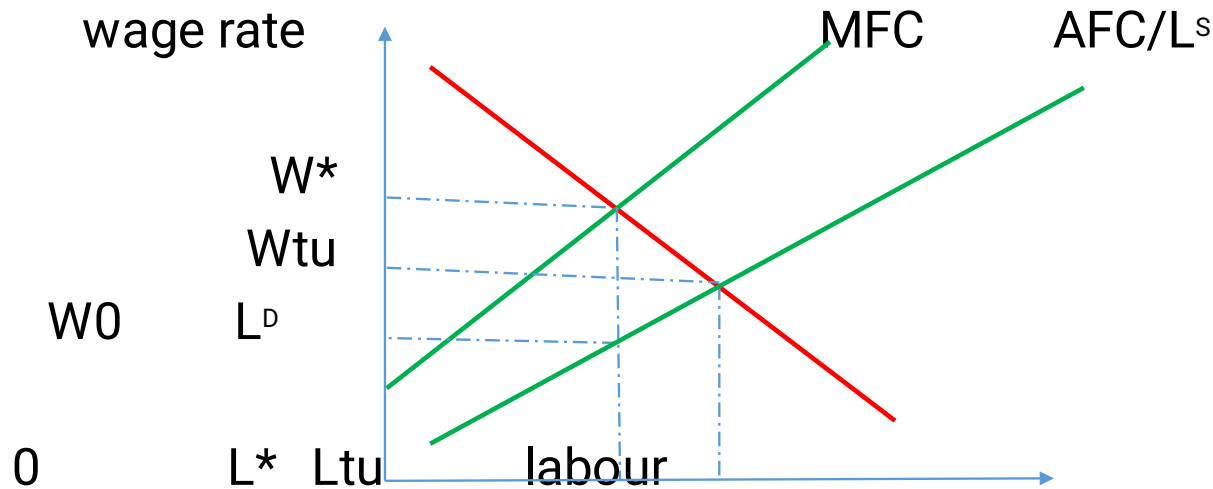
# How wages are determined in a perfectly competitive labour monopsony

It is a case where there is one demander of labour on a market, while labour is perfectly supplied. The firm is able to set the wage rate at which it can hire different units of labour. Therefore average factor cost curve (supply curve) is not equal to the marginal factor cost curve. The firm is a profit maximize, it will hire labour where marginal factor cost is equal to marginal revenue product. The monopsony will pay  $W_0$  and employ  $L^*$ . There is no incentive for the firm to pay  $W^*$  the highest wage rate.



# Activities of trade unions in a Monopsony

Trade unions are motivated to raise the wage rate in order to improve standard of living for their members. It is impossible in a monopsony market to raise the wage rate and employment simultaneously. Raising wage rate can be done within a certain range (between minimum and maximum wage rate) that a monopsony can afford. In the diagram below trade unions can increase the wage rate from  $W_0$  to  $W_{tu}$  and employment to  $L_{tu}$ . However the firm can only afford to pay  $W_{tu}$  and employ  $L^*$  of labour.





# Wage differentials

Is the difference in wages between workers with different skills in the same industry or between those with comparable skills in different industries or localities. Are also known as inter-industry, inter-firm, inter-area or geographical differentials. As there are individual differences, so are wage differentials also. An organisation offers different jobs, thus, differentials in wages for different jobs are inevitable. Causes are;

**Risk compensation** - higher pay can often be some reward for **risk-taking** in certain jobs, working in poor conditions and having to work **unsocial hours**.

**A reward for human capital** - in a competitive labour market equilibrium, wage differentials compensate workers for (opportunity and direct) costs of human capital acquisition. There is an opportunity cost in acquiring qualifications, measured by the current earnings foregone by staying in full or part-time education. This can be explained by human capital theory, which shows that increases expected life earnings with level of education.

**Occupational Differences/Skills requirement** - the gap between poorly skilled and highly skilled workers gets wider each year. One reason is that the market demand for skilled labour grows more quickly than the demand for semi-skilled workers.

# Wage differentials

This pushes up pay levels. Highly skilled workers are often in inelastic supply and rising demand forces up the wage rate in an industry. Occupations in an organisation widely differ from one another in terms of skill requirement and the extent of requirement and the extent of responsibility. Accordingly, wages vary from occupation to occupation. Such differences in occupations induce workers to undertake more challenging jobs, encourage workers to develop their skills by way of education and training.

**Differences in labour productivity and revenue creation** - workers whose efficiency is highest and ability to generate revenue for a firm should be rewarded with higher pay. City economists and analysts are often highly paid not least because they can claim annual bonuses based on performance. Top sports stars like Ronaldo and Messi can command top wages because of their potential to generate extra revenue from ticket sales and merchandising.

**Employer discrimination** - is a factor that cannot be ignored despite equal pay legislation in place.

# Wage differentials

**Trade unions and their collective bargaining power** - unions might exercise their bargaining power to offset the power of an employer in a particular occupation and in doing so achieve **a mark-up** on wages compared to those on offer to non-union members

**Inter-firm Differentials** - there are wage differentials of workers in different plants in the same area and occupation. Factors like differences in quality of labour employed by different firms, imperfections in the labour market and differences in the efficiency of equipment's and supervision result in inter-firm wage differentials. Added to these are differences in technological advance, managerial efficiency, financial capability, firm's age and size, availability of raw material, power and transport facilities also account for differences in wages among firms.

**Regional Differences** - not only wages differ among occupations, but these also differ in case of workers working in the same occupation at different geographical regions. These differences are the result of working conditions prevalent in different regions of the country. For example; the Government employees serving in the remote and disturbed areas are paid additional remuneration in the form of the Remote Area Allowance. Sometimes, such wage differentials are used to attract people to serve in particular regions.

# Wage differentials conti...

## **Inter-Industry Differences:**

These differences in wages surface in case of workers working in the same occupation and the same area but in different industries. These differences are the result of varying skill requirements, level of unionisation, nature of product market, ability to pay, the stage of development of an industry, etc.

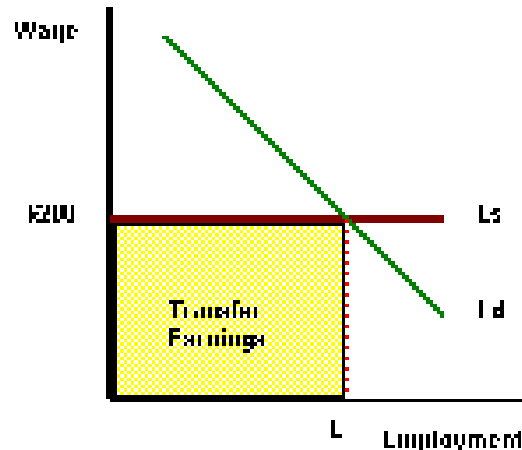
## **Personal Wage Differences:**

These differences arise because of the differences in the personal characteristics (age or sex) of workers working in the same unit and occupation. Though provision of 'equal pay for equal work' is certainly there, but it is still not the reality. Instances are there when woman worker is paid less than her male counterpart for doing the same job. Of course, there are other reasons also which cause wage differentials between male and female workers.

After all, what is the rationale behind wage differentials? There are two views about it. One, in view of the principles of socialistic pattern of society in which the object of the representative Government is to minimise inequalities, in incomes and distribution of wealth. Two, wage differentials are justified given the wide differences in demand and supply of jobs along with wide variations in job requirements like skill, ability, aptitude, knowledge, experience and so on. That wage differentials full exploitation of the national resources is yet another justification given in support of wage differentials.

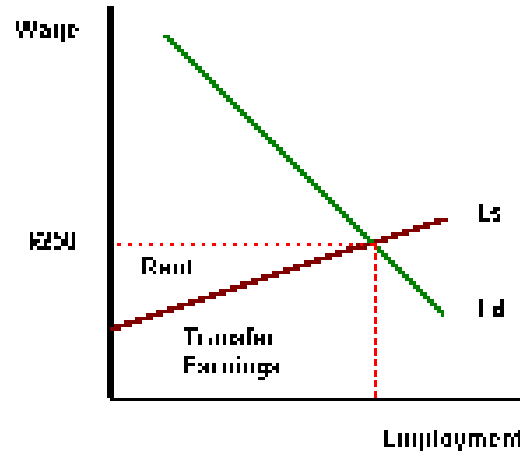
# Transfer earnings, economic rent and quasi-rent

Transfer earnings are defined as the minimum reward required to keep labour in its present occupation. It is the opportunity cost an individual forgoes when deciding to work in one job rather than the next best alternative. This is shown by the area under the labour supply curve. In the diagram above there is a perfectly elastic supply curve to a particular labour market. The ruling equilibrium wage is at £200 per week. The wage that workers receive is equal to the minimum they are prepared to supply their labour at. Thus the entire factor earnings (shaded in yellow) are transfer earnings.



# Transfer earnings, economic rent and quasi-rent

For an upward sloping labour supply curve, total factor earnings comprise transfer earnings and economic rent. Economic rent is a payment received by a factor of production over and above what would be needed to keep it in its present value. It is the amount which someone can earn which is in excess of their transfer earnings (what they could earn elsewhere). It is a demand determined reward to labour and will be earned when labour is to some degree in inelastic supply. This is shown in the diagram below.



# Quasi-rent

Is transfer earnings that become economic rent in the long run. It occurs due to short-term increase in demand which increases transfer earnings.

# **Market failure and Government intervention**



# Market failure

Market failure occurs when the price mechanism fail to operate optimally leading to a loss of economic and social welfare. Is a situation where, in any given market, the quantity of a product demanded by consumers is not to the quantity supplied by suppliers.

It happens when the price mechanism fails to allocate scarce resources efficiently or when the operation of market forces lead to a net social welfare loss and the competitive outcome of markets is not satisfactory from the point of view of society.

**Complete** market failure occurs when the market simply does not supply products at all 'missing markets'.

**Partial** market failure occurs when the market does actually function but it produces either the wrong quantity of a product or at the wrong price.

# Costs and benefits Analysis (CBA)

Is a frame work used by the government and private sector to evaluate the desirability of a project by looking at the costs and benefits. Government use cost-benefit analysis to decide on the desirability of their intervention in the market to correct market failure.

The procedure is to; Identify all relevant costs and benefit, Putting monetary value on all costs and benefits, Forecasting future benefits and costs and Make decision/ decision making. The decision rule is to implement a project when project has greater benefits than costs.

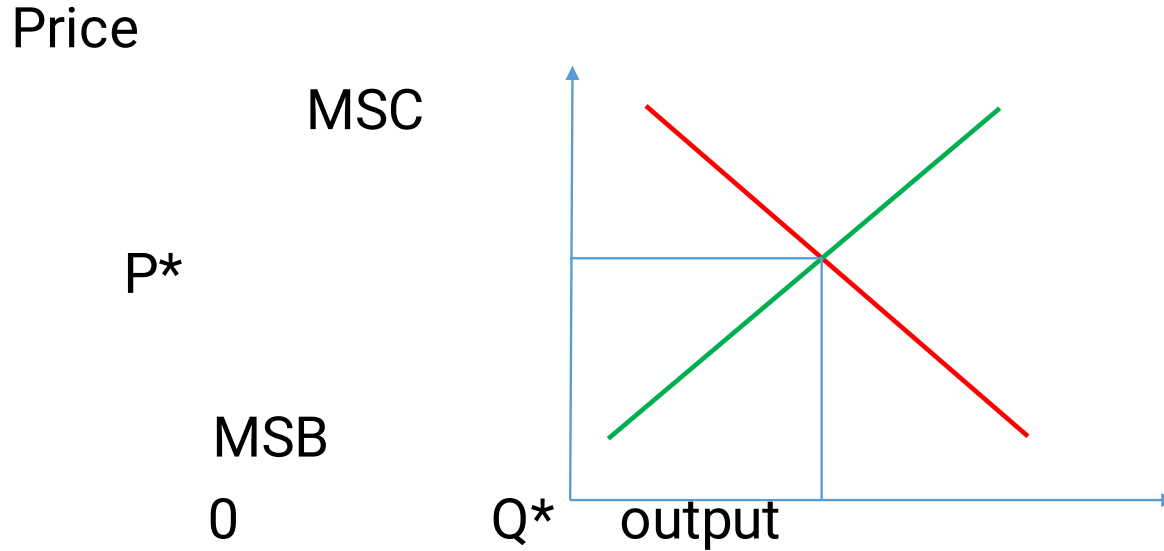
Costs include social costs (SC) the costs that accrue to the society as a whole, private costs (PC) costs that accrue to an individual or organisation undertaking an activity and external costs (EC) (negative externalities) costs that accrue to third parties.

Benefits include social benefits (SB) benefits to the society as a whole, private benefits (PB) benefits to the individual or organisation that undertake the activity and external benefits EB) (positive externalities) benefits to third party.  $SC = PC + EC$  and  $SB = PB + EB$ .

Social optimum output is where marginal social costs (MSC) is equal to marginal social benefits (MSB). This is shown in the diagram in the following slide.

# Costs and benefits Analysis (CBA)

Social efficient output and price



# Sources/causes of market failure conti...

## **Incomplete markets:**

Markets for certain things are incomplete or missing under perfect competition. For example public goods and common property resources. There is no way to equate their social and private benefits and costs either in the present or in the future because their markets are incomplete or missing. Markets may fail to form, resulting in a failure to meet a need or want, such as the need for public goods, such as defence, street lighting, and highways. Markets may fail to produce enough merit goods, such as education and healthcare.

## **Common Property Resources:**

Common ownership when coupled with open access, would also lead to wasteful exploitation in which a user ignores the effects of his action on others. Open access to the commonly owned resources leads to waste and inefficiency. For example, fish in a lake anyone can catch as much as they want, but no one has an exclusive property right over it. It means that a common property resource is non-excludable (anyone can use it) and non-rivalry (no one has an exclusive right over it). The lake is a common property for all fishermen.

# Valuation of costs and benefits.

## **Market prices**

for projects that involve goods and services that are sold in the market, the costs and benefits are found by looking at the market prices of those goods and services used.

## **Shadow prices**

Are the value of a product as expressed by consumers or the price which consumers are willing to pay for a unit of a product. It is not necessarily the market price.

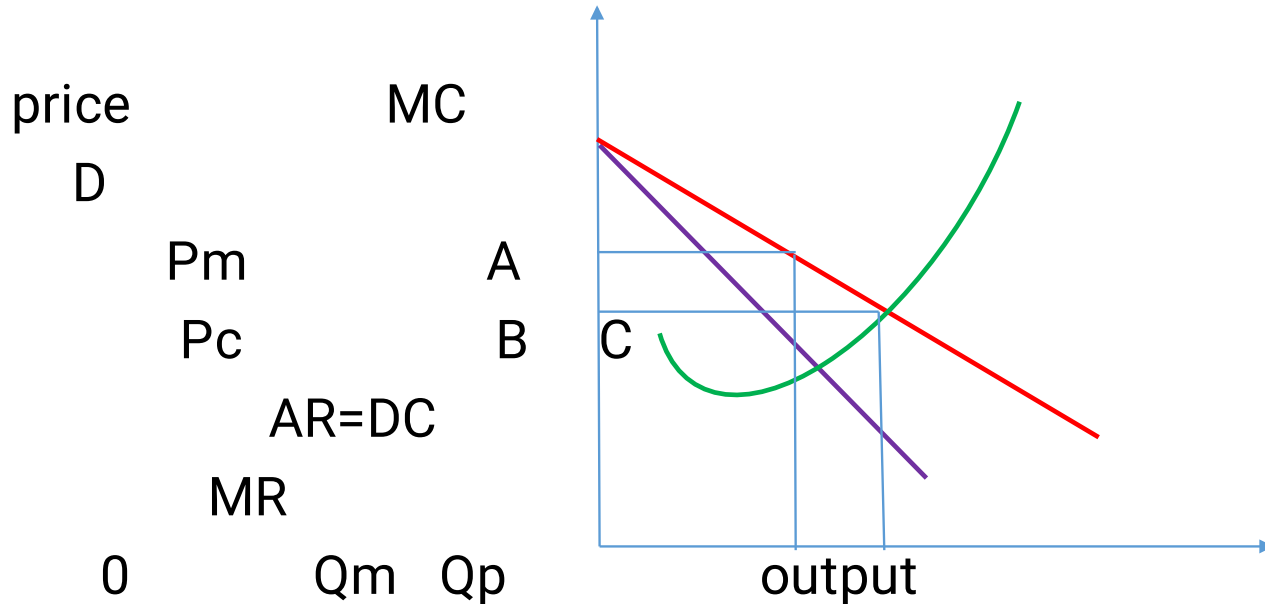
## **Value of life approach**

Some projects involve loss of life, therefore it difficult to establish costs and benefits, since value of life is infinity. In such cases the value of lost earnings or expected life earnings is used to establish costs and benefits a project like evacuation of people trapped in a flood.

# Sources/causes of market failure

## Imperfect competition/markets

Market dominance by monopolies can lead to under-production and higher prices than would exist under conditions of competition, causing a reduction in consumer welfare. This reduces consumer surplus from CPcD to APmD and produce deadweight ABC.



# Sources/causes of market failure conti...

## **Imperfect information or asymmetric Information:**

Operations the market assumes that producers and consumers have perfect information regarding market behaviour. In the real world, there is asymmetric (incomplete) information due to ignorance and uncertainty on the part of buyers and sellers. Thus they are unable to equate social and private benefits and costs.

Suppose a producer introduces a new product in the market. But it is very difficult for him to predict the current demand of his product. On the other hand, consumers may be ignorant about quality and utility of this product. In some cases, information about market behaviour in the future may be available but that may be insufficient or incomplete. Thus market asymmetries, fail to allocate efficiently.

Markets may not provide enough information because, during a market transaction, it may not be in the interests of one party to provide full information to the other party.

# Sources/causes of market failure conti...

## Externalities

An externality is an effect on a third party that is caused by the consumption or production of a good or service .

A positive externality is a positive spill-over or third party effects that results from the consumption or production of a good or service. For example, although public education may only directly affect students and schools, an educated population may provide positive effects on society as a whole.

A negative externality is a negative spill-over effect on third parties. For example the direct costs of a bag of cement is the costs of raw materials and labour, there are also external costs like pollution.

The existence of externalities leads to market failure where goods are over or under provided.



# Sources/causes of market failure conti...

## **Public Goods:**

A public good is one whose consumption or use by one individual does not reduce the amount available for others. An example of a public good is water which is available to one person and is also available to others without any additional cost. It is non-excludable if it can be consumed by anyone. It is non-rivalry if no one has an exclusive rights over its consumption. Its benefits can be provided to an additional consumer at zero marginal cost. The private sector in a free-markets cannot profitably supply to consumers pure public goods and quasi-public goods that are needed to meet people's needs and wants.

## **De-merit and merit goods**

Markets may also fail to control the manufacture and sale of goods like cigarettes and alcohol, which have less merit than consumers perceive. Demerit goods are overproduced whilst merit goods are under produced.

## **Unstable markets**

Sometimes markets become highly unstable, and a stable equilibrium may not be established, such as with certain agricultural markets, foreign exchange, and credit markets. Such volatility may require intervention.

# Sources/causes of market failure conti...

## Inequality

Markets may also fail to limit the size of the gap between income earners, the so-called income gap. Market transactions reward consumers and producers with incomes and profits, but these rewards may be concentrated in the hands of a few

# Government intervention

Government intervene in the market to control market failure and it uses the following methods:

Taxes (direct and indirect), subsidies, price control ( price ceiling and price floor), direct provision of goods and services, provision of information, defining property rights and buffer stock.

## **Taxes**

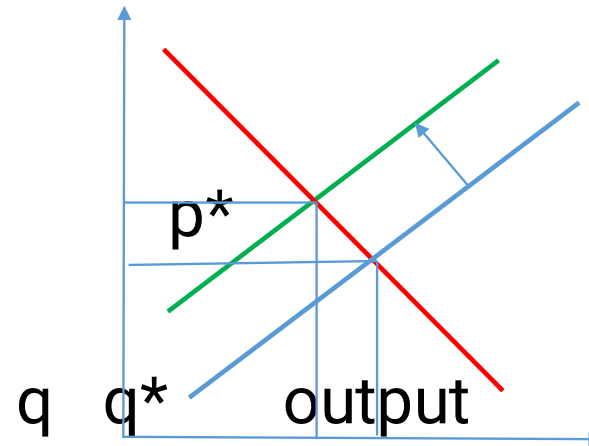
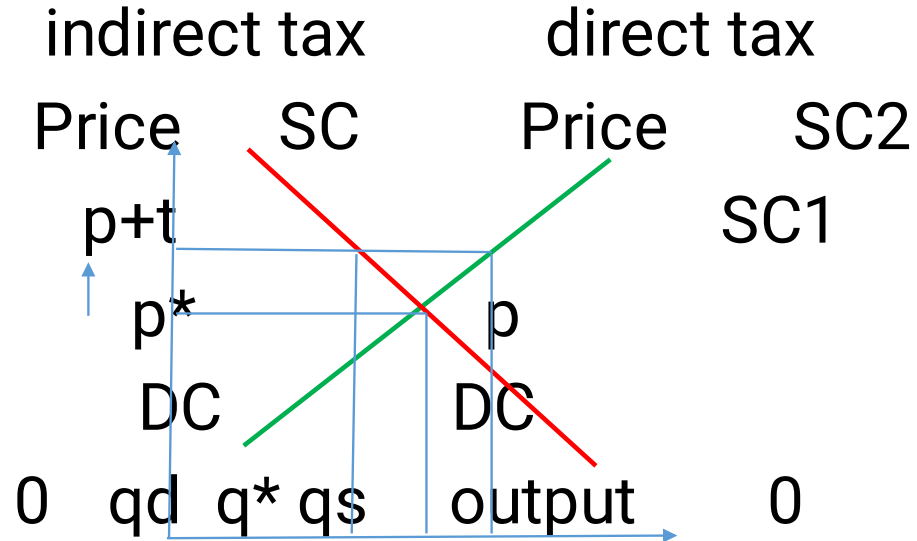
Taxes are payments to government by individuals and companies based on their income and expenditure.

**Indirect taxes** are imposed on spending, for example value added tax(VAT). Price increases by the value of the tax rate. It is used to discourage consumption of demerit goods and correct balance of payment using customs duty.

**Direct taxes** are levied on income, for example pay as you earn (PAYE). Direct taxes affect the consumer disposable income and cost of production leading to a decrease in demand and increase in price. It is used to discourage consumption of demerit goods and control negative externalities.

The effectiveness of taxes depends on the elasticity of demand and supply.

# Government intervention conti...

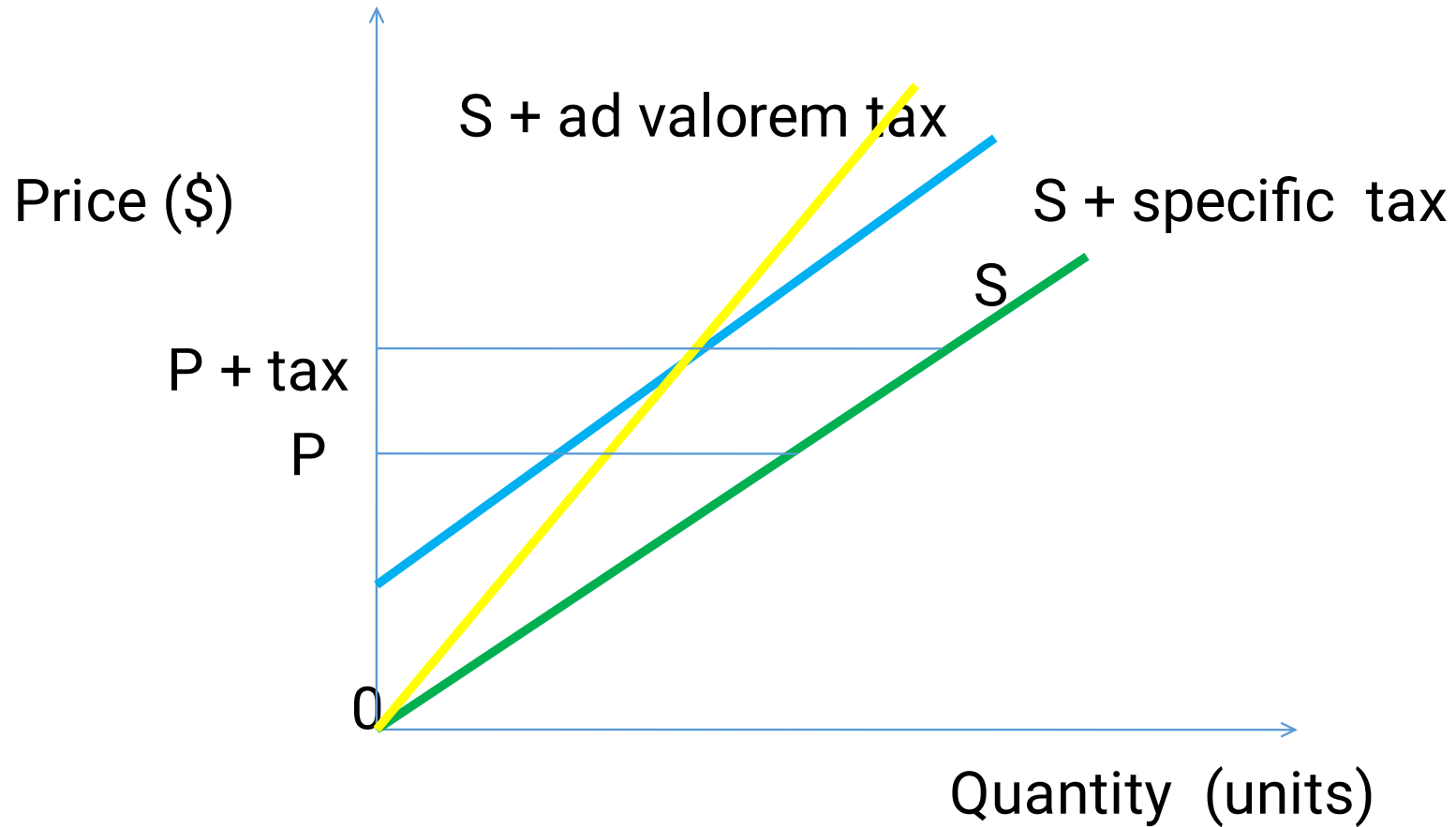


# Government intervention conti...

Taxes can be a specific tax (fixed amount per unit sold) or ad valorem tax (percentage of price).

A tax shift the supply upwards by the amount of the tax. Specific tax cause a pivot shift in the supply curve, whilst ad valorem tax cause a parallel as shown below.

# Government intervention conti...



# Buffer stock

It is a scheme operated by the government with the main aim of stabilizing prices and protecting producers' income from sudden demand and supply shifts.

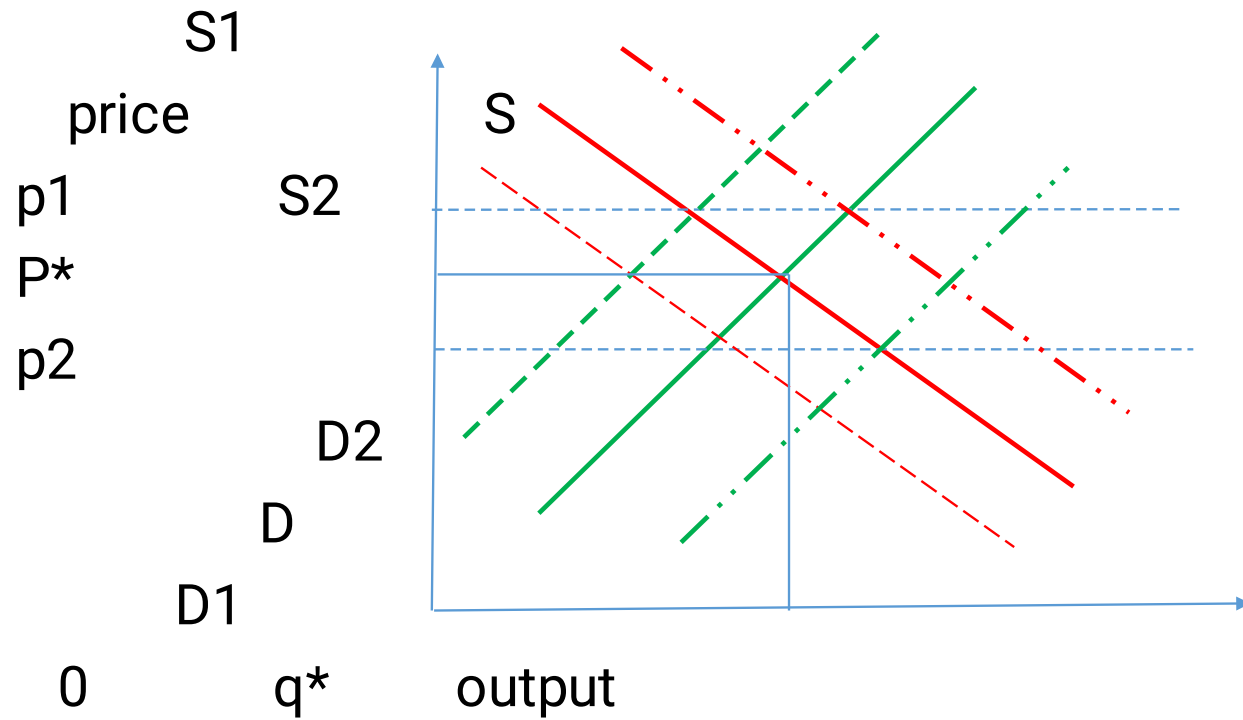
Government buy and stock large quantities of goods in times of plenty which it uses to buffer/supplements shortages. Government also buys and stock goods when the price is low and then supply goods when the price is high in order to reduce it.

It can also set upper and lower boundaries which it enters the market as buyers when the price falls below the lower boundary in order to increase it and enters as a supplier when price exceed the upper boundary in order to decrease it.

This done to protect consumers from high prices and producers from lower prices that reduces their income.

# Buffer stock

Buffer





# Price ceiling (maximum price)

Is maximum price set by government for a commodity. It is set below the equilibrium price, as it set to promote equity and enable poorer members of the community purchase necessities.

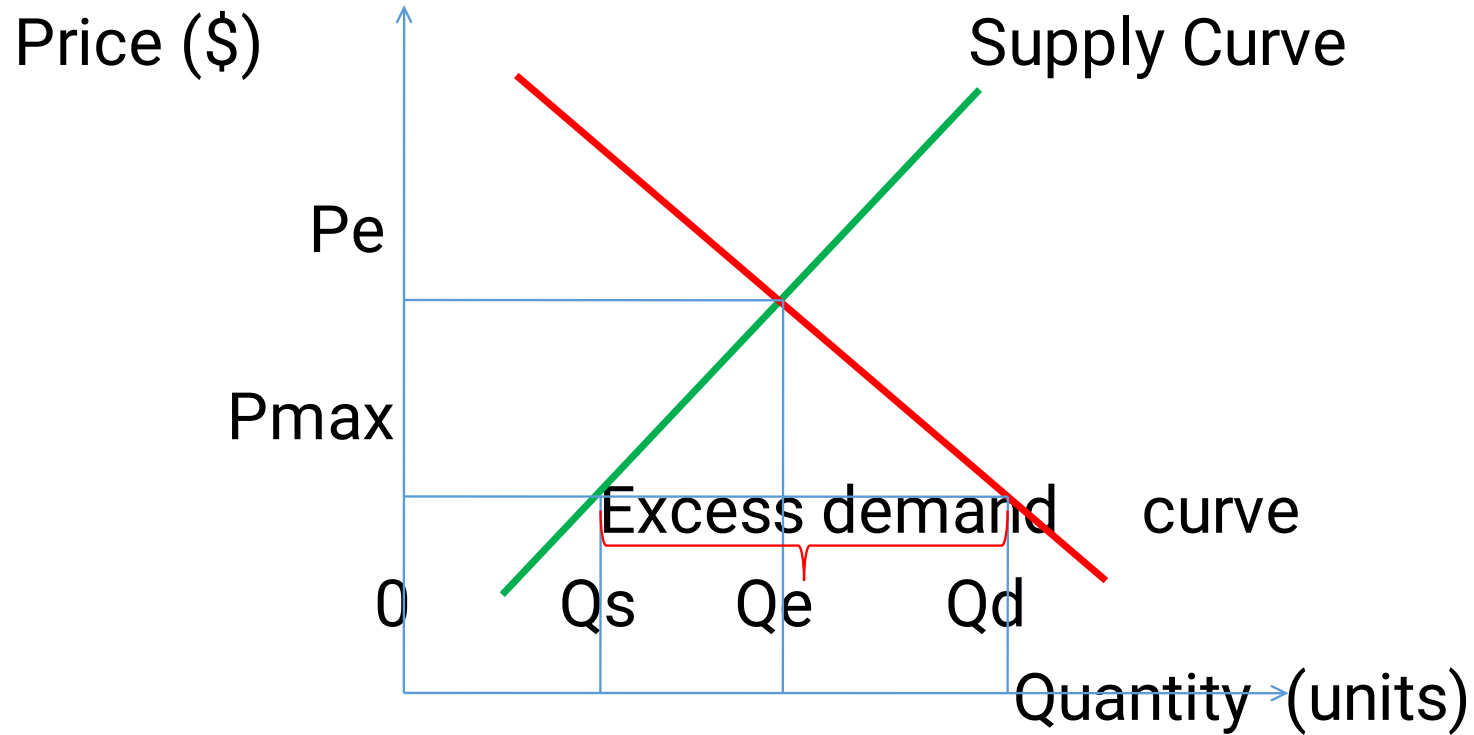
However, there will be excess demand ( $D_d > Q_s$ ), so products have to be allocated based on queuing (first come and first served) or rationing.

Price ceiling may lead to black market as companies hoarding their goods in protest of lower price.

On the other side price ceiling increases consumer surplus (difference maximum price a consumer is prepared to pay and market price)

The price ceiling is showed below.

# Price ceiling conti...



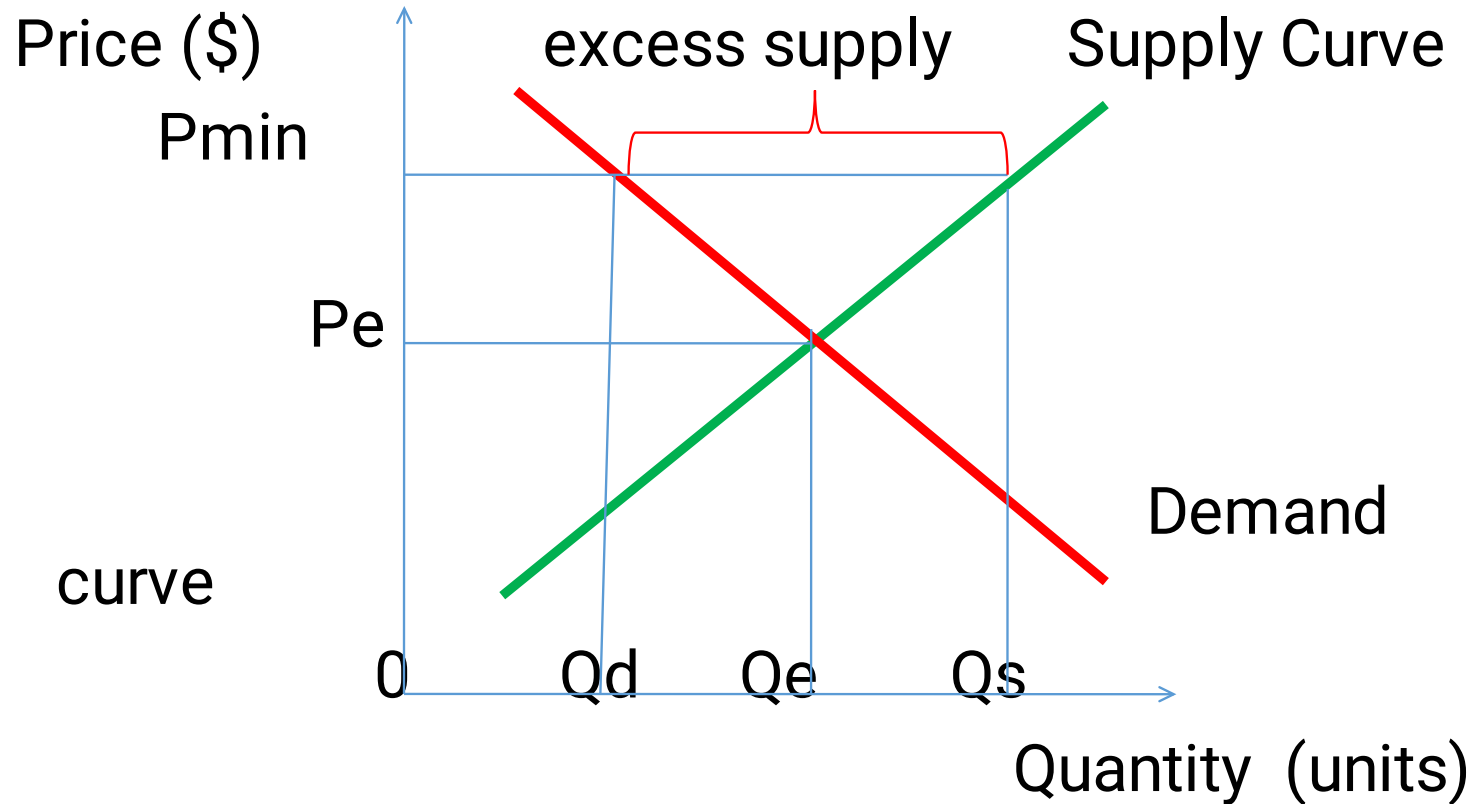
# Price floor (minimum price)

It is the minimum price set by government for a product. It is set above the equilibrium price, as it is set to protect producers' incomes in industries subject to supply fluctuations and price inelastic demand.

In the labour market (minimum wage legislation) it is set to prevent exploitation by employers by paying low wages.

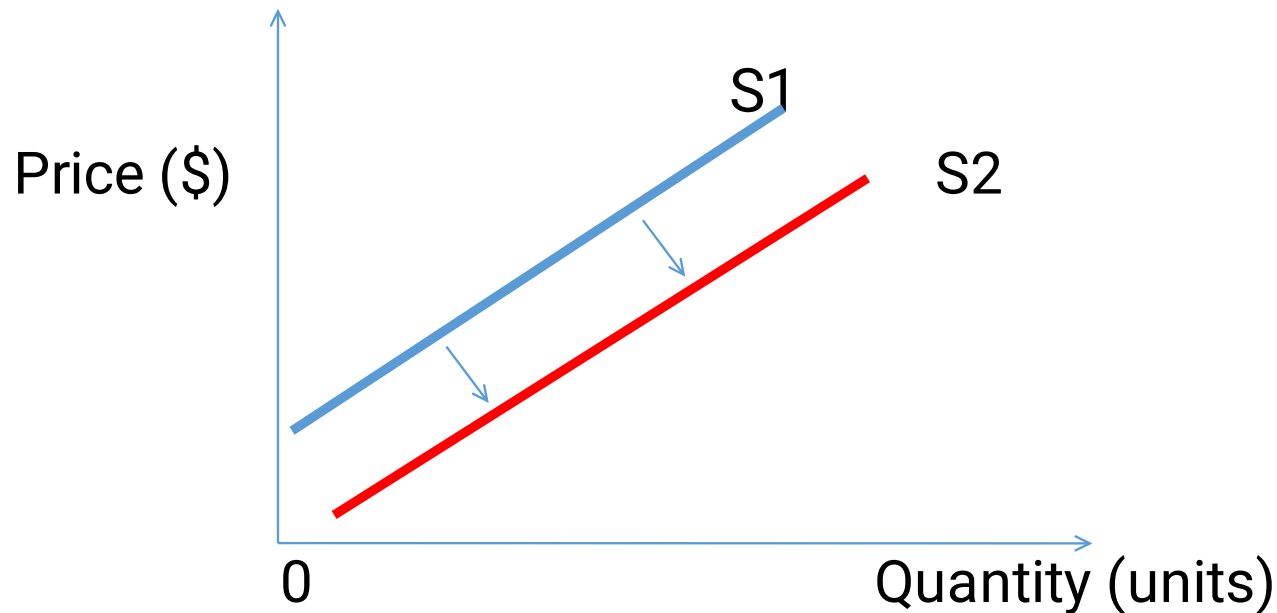
However price floor creates excess supply or surplus and unemployment as more people are willing to work but companies can only employ a few workers.

# Price floor conti....



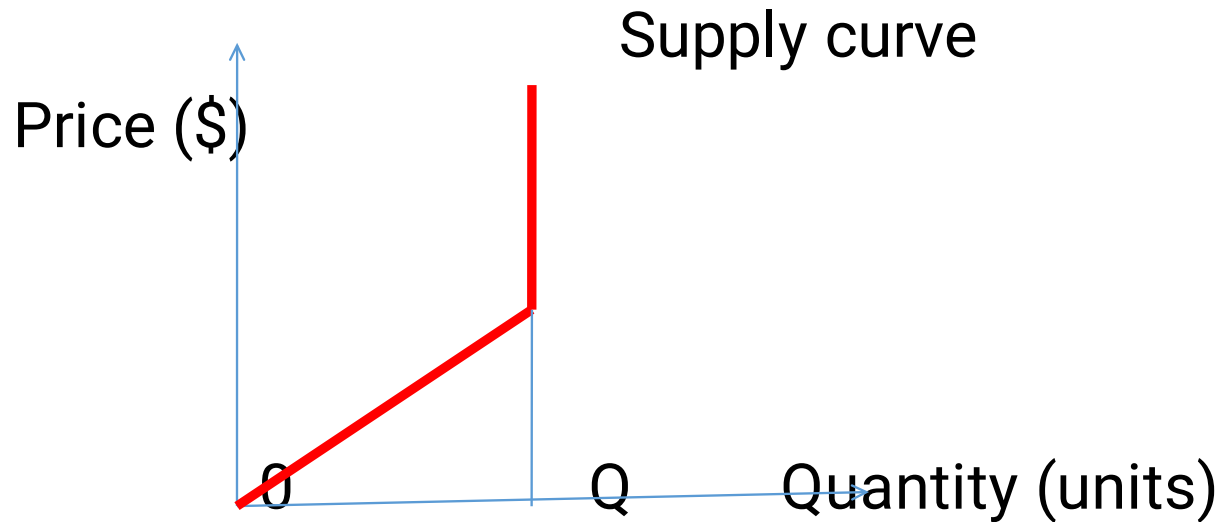
# Subsidies

Is a negative taxes or support give to producers to reduce production costs and consequently lower prices to consumers. A subsidies has an effect of increasing the supply of goods and services or shifting the supply curve to the right as shown below.



# Quota and Embargo

A quota is a quantity restriction of imports or production. A quota makes then supply curve inelastic. An embargo is a ban on importation or production of goods.



# Direct provision of goods and service

- Government may seek to overcome the problem of non-provision of public goods and underprovision of merit goods by producing the goods themselves. They do this by direct provision through establishing companies or contracting to private sector firms.
- The effectiveness of this intervention depends on the financial strength of government. Government and its companies may be financially constrained leading to poor quality products. Also government is characterised by bureaucracy and corruption due to political interference.

# Properly defining property rights

- Market failure can arise due to lack of properly defined property rights. Therefore government should properly define property rights, which put the owner in charge of a resource to prevent market failure in form of over exploitation and neglecting of resources.
- However in some resources like air, water etc, property rights seem not to exist. The government to come up with laws which put the community in charge of their environment so that whoever wants to use community resources has to negotiate with the community.
- Regulatory bodies like EMA must be given teeth to bite in order to enforce environmental laws like requirement of environmental impact assessment for any project and polluter pay schemes.



# Government intervention conti...

**Legislation and force** - The second strategy is to use the force of the law to change behaviour. For example, by banning cars from city centres, or having a licensing system for the sale of alcohol, or by penalising polluters, the unwanted behaviour may be controlled.

**Regulation, standards and legal controls** - the use of demerit goods : restrictions on the sales of tobacco products and alcohol. It plays an important role in reducing many forms of environmental pollution that would otherwise have been unavoidable.

**Tradable permits** - It is achieving a desired environmental outcome consistent with the country's maximum level of permitted emissions

In the majority of cases of market failure, a combination of remedies is most likely to succeed.

# Government intervention to solve market failure.

In a **free market system**, governments take the view that markets are best suited to allocating scarce resources and allow the market forces of supply and demand to set prices. The role of the government is to protect property rights, uphold the rule of law and maintain the value of the currency. Competitive markets often deliver improvements in allocative, productive and dynamic efficiency

But there are occasions when they fail – providing a case for intervention. The main reasons for policy intervention are: to correct for **market failure**, to achieve a more **equitable distribution of income and wealth** and to improve the **performance of the economy**

# Government intervention to solve market failure.

Type of Market Failure	Consequence of Market Failure	Example of Government Intervention
Factor immobility	Structural unemployment	State investment in education and training
Public goods	Failure of market to provide pure public goods, free rider problem	Government funded public goods for collective consumption
Demerit goods	Over consumption of products with negative externalities	Information campaigns, minimum age for consumption
Merit goods	Under consumption of products with positive externalities	Subsidies, information on private benefits
Imperfect information	Damaging consequences for consumers from poor choices	Statutory information / labeling
High relative poverty	Low income families suffer social exclusion, negative externalities	Taxation and welfare to redistribute income and wealth
Monopoly power in a market	Higher prices for consumers causes loss of allocative efficiency	Competition policy, measures to encourage new firms into a market

# Discuss the role of government in addressing common market failures

If markets are competitive, if accurate information is available, if resources are mobile, and if individuals engaging in the transactions bear the full costs and receive the full benefits of their transactions, economic efficiency will be achieved; however, these criteria are rarely met. An externality is any effect on people not involved in a particular transaction. Governments can intervene by taxing negative externalities or subsidizing positive externalities. Free markets will generally produce less than the optimal amount when a good is non-excludable and non-rivalry, which means that a government can make the market more efficient by producing the public good itself.

Public good a good that is both non-excludable and non-rivalry in that individuals cannot be effectively excluded from use and where use by one individual does not reduce availability to others. Free rider one who obtains benefit from a public good without paying for it directly. Externality an impact, positive or negative, on any party not involved in a given economic transaction or act.

# Discuss the role of government in addressing common market failures conti.

Economic efficiency is something much more than producing goods at the lowest possible cost. It involves providing individuals with the goods and services they desire, in the quantities, qualities, places, and times they desire them, with the least use of society's scarce resources. Economists argue that if markets are competitive, if accurate information is available, if resources are mobile, and if individuals engaging in the transactions bear the full costs and receive the full benefits of their transactions, economic efficiency will be achieved.

Markets rarely meet all these criteria, and when deviations from the ideal occur, the result is said to be market failure. Of course, most deviations from the ideal are minor and do not impose significant costs on society. But when deviations are significant there is often a call for the government to do something about the problem. For example, markets can deviate significantly from the competitive ideal -- e.g., firms may acquire significant market power, undertake deceptive practices, collude, etc. When this happens, government intervention can produce markets that operate more efficiently than they would on their own.

# Discuss the role of government in addressing common market failures conti.

Consider one type of market failure that leads to inefficiency: externalities. An externality is any effect on people not involved in a particular transaction. Pollution is the classic example. When a coal plant producing electricity causes pollution, there is a transaction between the company and the resident who purchases the product. But if you live near the coal plant and suffer from asthma due to the smog it produces, you are an affected party not directly compensated from the transaction. Externalities will generally cause competitive markets to behave inefficiently from a social perspective, since those involved in the economic transaction do not bear the full costs of the transaction. In this case, governments can intervene by taxing the transaction and using the money to negate the harmful effects or to compensate those affected by the negative externality. Similarly, when a transaction produces positive externalities, efficiency is achieved when the government subsidizes the transaction. Education is an example of a transaction that has a positive effect on society.

Another case in which markets do not operate efficiently on their own is the market for public goods. A public good has two attributes: nonexcludability, which means the producer cannot prevent the use of the good by others, and nonrivalry, which means that many people can use the good simultaneously.

# Discuss the role of government in addressing common market failures conti.

Consider a company offering a fireworks display. Pretty much anyone nearby can watch the fireworks, and people with houses in the right place have a great view of them. The company that creates the fireworks cannot compel those with nearby homes to pay for the fireworks, and so a lot of people get to watch them without paying. This will make it difficult or impossible for the fireworks company to make a profit. In addition, fireworks offer nonrivalry, in that one person's viewing of the display does not impinge significantly on another's viewing.

Free markets will generally produce less than the optimal amount when a good is nonexcludable and nonrivalrous, which means that a government can make the market more efficient by producing the public good itself. By using tax revenue, governments can avoid the problem of free riders and produce an efficient quantity of public goods even when the free market cannot .

# MACROECONOMICS



# Macroeconomics

- Macroeconomics looks at the economy as a whole, dealing with such aggregate phenomena as growth in total output and living standards, commonly called 'economic growth', business cycles, inflation, unemployment, and the balance of payments.
- It focuses on the cycle in activity, whereas growth theory focuses on determinants of the long-run trend in output.
- The objectives are stable and low inflation, low unemployment, balance of payments and exchange rate and economic growth.
- These objectives are achieved using instruments like;
  - fiscal policy,
  - monetary policy,
  - exchange rate policy etc.

# National Income Accounting

Is the recording and analysis of the total production in a country for a particular period, for example quarterly, half yearly and annually. It is also a measure of the value of the output of the goods and services produced by an economy over a period of time, usually one year. It is also a measure of the incomes which flow from that output and the expenditure involved in purchasing that output.

## **Importance of national income**

It enables us to study events that affect the economy as a whole without getting into too much detail about specific products and sectors.

To measure the level of economic performance in terms of production, investment, consumption and other criteria.

To give an insight into the nature and composition of production and income. For example how does production takes place, which goods and services are produced and where does income come from.

It helps to formulate, implement and evaluation of policies. For example helping government to identify solutions or policies and implement them to correct problems and grow the economy and at a later stage evaluate the effectiveness of those policies.

It is used by international financial institutions like IMF, World Bank, Development Banks, to assess the performance of their loans, grants and donations to the country.

# Measuring National Income

National income is measured by adding or aggregating total production at **market prices** or **factor costs**. The value of a commodity is measured once by taking the value of the final product alternatively adding the value of the first product plus value added in each stage of production. This is meant to avoid double or multiple counting.

**Gross domestic product (GDP)** - is the total value of output produced (and incomes received) by domestic residents (firms and households) located within the domestic economy in a year.

$$\text{GDP} = \sum PQ \text{ or } P_1(Q_1) + P_2(Q_2) + \dots + P_n(Q_n)$$

**Gross national product (GNP)** - is the value of output produced (and incomes received) by domestic residents from their ownership of resources, wherever these resources are located, whether inside or outside the domestic economy. For example, GNP takes account of the fact that some Zimbabweans residents (firms and households) earn incomes such as profits, interest and rent from owning resources located abroad whilst overseas residents (firms and households) earn such incomes from owning resources located in the Zimbabwe.

$$\text{GNP} = \text{GDP} + \text{Net Property Income (NPI) from/to abroad.}$$

# Measuring National Income

**Net National Product (NNP)** – is the value of output produced using resources a country's resources less depreciation.

$$\text{NNP} = \text{GNP} - \text{Depreciation.}$$

**Depreciation** - is the cost of fixed capital goods or value of production that a country consume without getting into fixed investments. It is the declined in value of equipment due to wear and tear and obsolescence.

**Net Property Income (NPI) from/to abroad is the net** value to a country's residents of the factor receipts from abroad and their equivalent factor payments abroad. **Factor receipts** are receipts received by citizens of a country from foreigners for their means of production located outside the country and **factor payments** are payments by citizens of a country to foreigners for their means of production located in the country.

**Personal income (PI)** – is the income received by factors of production plus any transfer earnings from government and foreign sector. **Disposable Income (DI)** is the income after tax. **Transfer earning** is payment without corresponding commodity in exchange.

# Measuring National Income

**Consumption(C)** is income (Y) used in the current period. **Savings** is income that is not consumed in the current period. **Investment (I)** is output consumed by firms in buying capital goods or borrowing in order to buy capital goods. Therefore:

$$Y = C + S \text{ and } S = I$$

**Market prices** is value of output uses the prices observed in the market place. Prices may be distorted by taxes and subsidies. Taxes increases the prices and subsidies reduces the prices. **Factor cost** is the value of output using factor payments or excluding the price distortions. Therefore output at market prices is equal to output at factor costs minus taxes plus subsidies and output at factor costs is equal to output at market prices plus taxes minus subsidies.

**Nominal GDP** is GDP at market prices. Is the value of output using prices and quantities of the current year. **Real GDP** is output at constant prices. Is the value of output using prices of the base year and quantities of the current year. The base year is the starting point or the year where economic activities were considered to be normal or better.

# Measuring National Income

GDP deflator is equal to current year prices ( $P_{cy}$ ) over base year prices ( $P_{by}$ ) and is used to capture the effects of inflation or changes in prices from one year to another.

$$RGDP = NGDP / \text{GDP deflator.}$$

$$NGDP = RGDP \times \text{GDP deflator.}$$

$$\text{GDP deflator} = NGDP / RGDP$$

$$\text{GDP deflator} = P_{cy} / P_{by}$$

$$NGDP = \sum P_{cy} \times Q_{cy}$$

$$RGDP = \sum P_{by} \times Q_{cy}$$

# Circular flow of Income

Is a model that show how the 'equilibrium' level of national income is determined in an economy. It shows the movement of income and expenditure between two sectors: households and firms and two markets: commodity market (goods and services) and factor market.

Domestic households provide factor services (labour, land, capital & entrepreneurship) to domestic firms which use their services to produce an output of goods and services. These factor services from households are rewarded by income in the form of wages, rent, interest and profit. With no savings, no tax and no spending on imports, all the income received by domestic households goes in consumption expenditure on the output of domestic firms. This is called a closed economy without government.

In a open economy there are saving, investment, government involvement through taxes and expenditure and international trade (exports and imports). There will be **leakages/withdrawals** (W) from the circular flow of income, shown by a minus (-) sign, and certain **injections** (J), shown by a plus (+) sign. Withdrawals are any income received by a domestic household not passed on to a domestic firm, or any income received by a domestic firm not passed on to a domestic household. These include savings, taxes and imports.

# Circular flow of Income

**Savings (S)** are personal savings and business savings (undistributed profits), **Taxes (T)** are taxes (income tax, council tax, corporation tax, business rates and VAT and **Imports (M)** are goods or services from overseas firms or households.

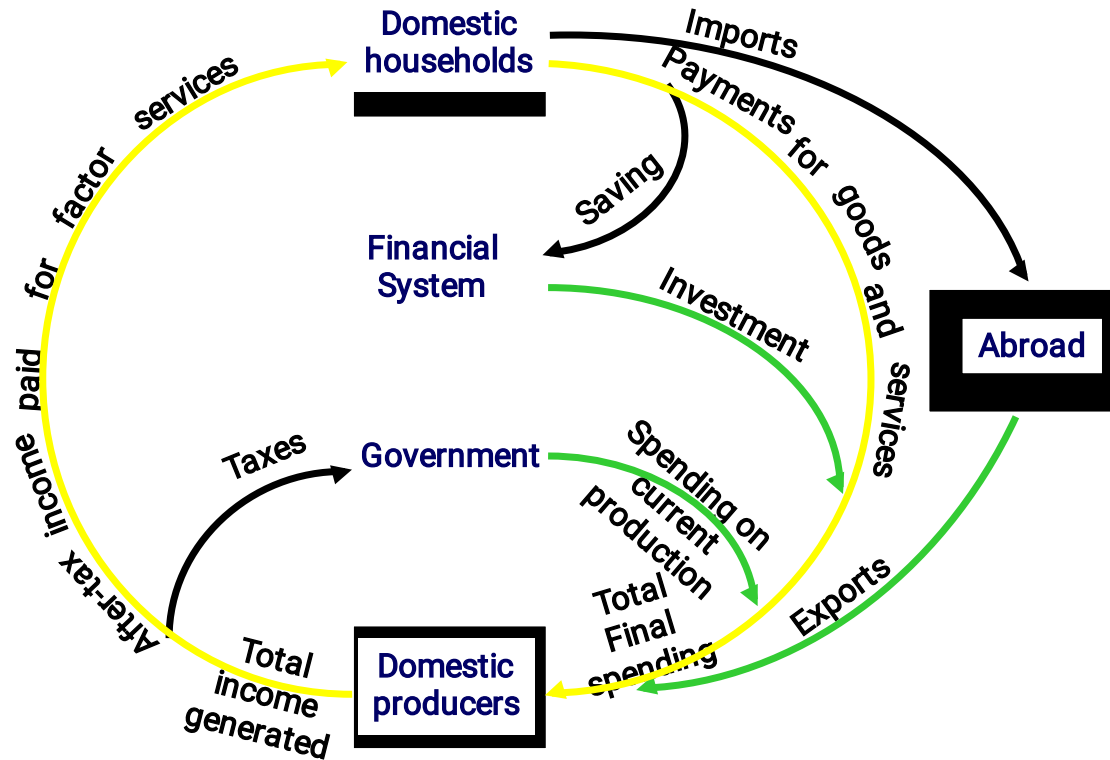
$$\text{Withdrawals} = \text{Savings (S)} + \text{Taxes (T)} + \text{Imports (M)}$$

**Injectors (J)** is any income received by a domestic household that does not come from a domestic firm and any income received by a domestic firm that does not come from a domestic household. These are: **Investment (I)** is income received by domestic firms from other domestic firms who purchase capital equipment, building for investment purposes. **Government expenditure (G)** is income received by domestic firms from the government (government contracts) and income is received from employment by the government (public sector workers). **Exports (X)** is income received by domestic households firms from overseas households and firms (interest and dividend payments from overseas, consultancy payments from overseas etc.

$$\text{Injectors} = \text{Investment (I)} + \text{Government expenditure (G)} + \text{Exports (X)}$$



# The Circular Flow of Income, Output, and Expenditure



# Methods of measuring National output/ economic activity (GDP)

## Expenditure approach:

It measures output by adding up all final expenditure on current production. GDP is equal to Consumption (C) + Investment (I) + Government Expenditure (G) – Net exports. Net exports = Exports (X) – Imports (M).

Consumption is the current expenditure by households on durable and non-durable commodities which are meant for final consumption.

Investment is current expenditure by the business sector and government in real physical capital goods and inventories used to facilitate future production.

Government is the sum of government recurrent on purchasing finished goods and services, wages and services, transfer payments (pensions, war vets, gratuity, students grants, social welfare grants).

Exports are domestically produced commodities sold to foreign residents and income earned by factors of production in exporting country. Imports includes expenditure on foreign produced commodities plus domestic income earned outside the country.

The NPI is added to the total expenditure total which will also be adjusted to factor cost by deducting indirect taxes and adding subsidies.

## Income approach

It measures national income by taking into account the cost of producing final goods and services or the income earned by factors of production. Therefore GDP is equal to wages & salaries, interest, rent and profits & dividends.

## Output Approach

It measures national income by adding the *output* of all firms in the economy, by either sum only the *value added* at each stage of production or the sum only the *value of final output* produced for the various goods and services. This is done to avoid double counting.

# Using National income

It is used as a means of expressing changes in the nation's standard of living over time and as a means of comparing the standard of living in different countries. Standard of Living (SOL) is concerned about the quality of life. It is affected by availability of goods and services, environmental issues, social issues like democracy & freedom and cultural issues like the role of women in society.

**Material well-being and GDP** - higher GDP means that there are more goods and services available in the country, for citizens to enjoy. Therefore, higher GDP means higher material well-being.

**Unemployment and GDP** – higher GDP means more people are employed to produce high output and the wage rate is higher so that workers can enjoy both leisure and work (income effect outweigh substitution effect)

**Government revenue and GDP** – higher GDP means government can raise more revenue to finance its expenditure, without resorting to other political unpopular ways of raising revenue, like increasing tax rates.

# Using National income

However great care has to be taken when using national income statistics, because of the following:

**Inflation and GDP-** inflation increase the nominal values of national income and this does not mean real values will be increasing.

**Population and GDP** – population increase affect real national income that would have to be shared out among more people. Changes in the population are taken into account using *real per capita income* (or real income per head) by dividing real national income by the population. This will give an average figure for how much national income there is for each member of the economy.

**Labour and GDP-** obtaining a figure for real income per head may still not give a true picture of the nation's living standards. Real income per head could have increased as a result of a *longer working hours*. With less leisure time there may, in fact, be a reduction in the well-being of society, not an increase.

**Inequality and GDP** - real income per head is as stated 'an average'; it does not, indicate how the real national income is distributed in the economy. There may be a skewed distribution with a small percentage of very rich people, and a large percentage of the population who are very poor and not sharing in any increase in living standards.

# Using National income

**Quality and GDP-** per capita income cannot take account of changes in *quality*. A car purchased in 2004 will give a better performance and be more reliable and, therefore it gives a larger increase in welfare than a car purchased in 1959.

Countries may provide other differences in quality of life which are even more difficult to reflect in terms of a monetary value. For example feelings of safety from attack, freedom to express one's viewpoint without fear of retribution, access to the countryside.

**Environment and GDP -** A major limitation of per capita income is its failure to take account of *environmental* issues. An increase in pollution and transport congestion will influence living standards negatively but this effect is not yet measured in the national income statistics.

**Exchange rate and GDP-** exchange rate fluctuations over time between the countries being compared affect income values, therefore it can not be used for comparison international because of the following.

**Nature of production and GDP –** it does not show the nature of production, that is which goods and services and how they are produced. For example GDP can be high because of high production of capital goods, which does not directly influence  
GNI

# Using National income

**Reliability and GDP** - there may be differences not only in the way national income is calculated but also in the reliability of the collected data.

**Needs & Tastes and GDP**- the two countries in question may have different climates. So, for example, when comparing Sweden and Greece, Sweden may need to spend a higher proportion of its national income on heating and clothing in order to achieve the same 'quality of life' as Greece. Countries will, therefore, have different needs and tastes which cannot be readily taken into account when making international comparisons.

**Informal sector, unreported & illegal activities and GDP** – output of unrecorded activity, such as activity in the informal ('black') economy, do-it-yourself and housewife services, prostitution, gambling.

# National Income Determination

It is concerned with determination of national income. It looks at how changes in aggregate demand affect national employment of resources and price levels in the economy. Expenditure can be autonomous/exogenous/unplanned or endogenous/planned. Autonomous expenditure is expenditure determined outside the circular flow of income and endogenous expenditure is determined with the system or expenditure which households, firms and governments intend to spend on the output of domestic firms.

Aggregate demand/expenditure is the total demand/spending on output in a country. Some expenditure items affect national income through the multiplier, that is they have multiple effects of national income and some expenditure items affect national income through the accelerator, that is the tend to accelerate the changes in national income.

## Models

- Keynesian multiplier

- Injects-Withdrawals

- Savings-Investment

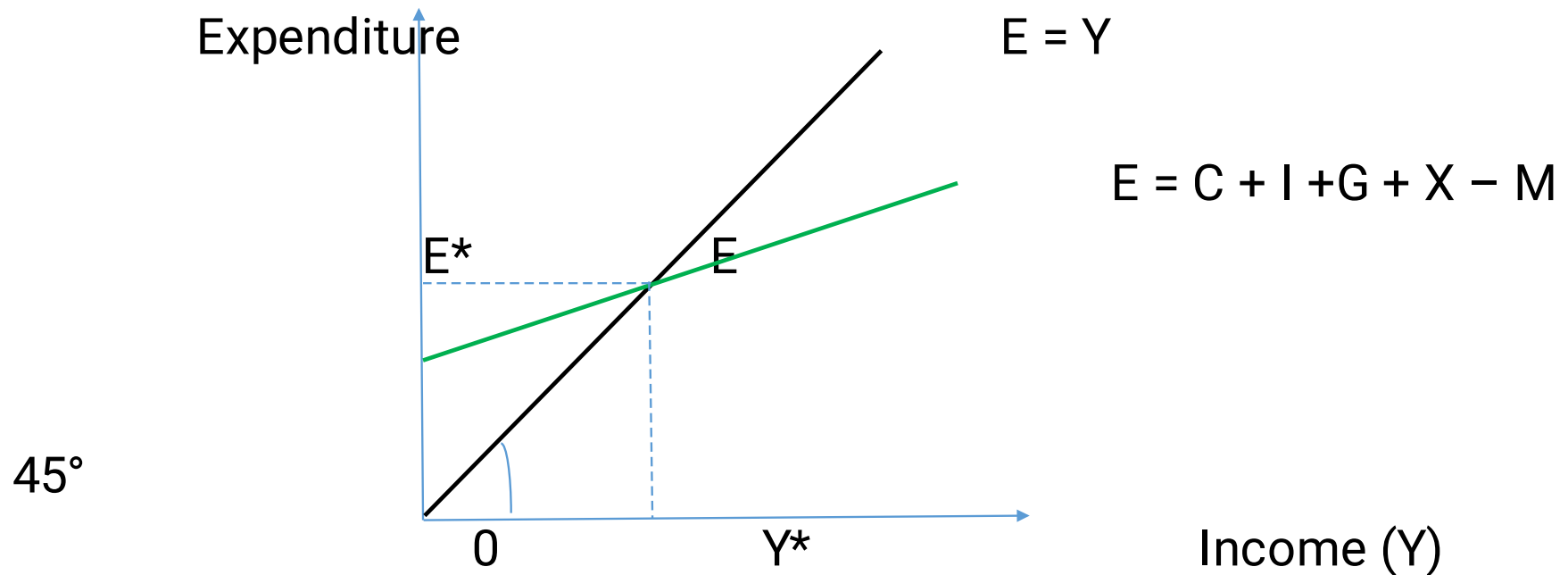
- Aggregate demand Aggregate supply



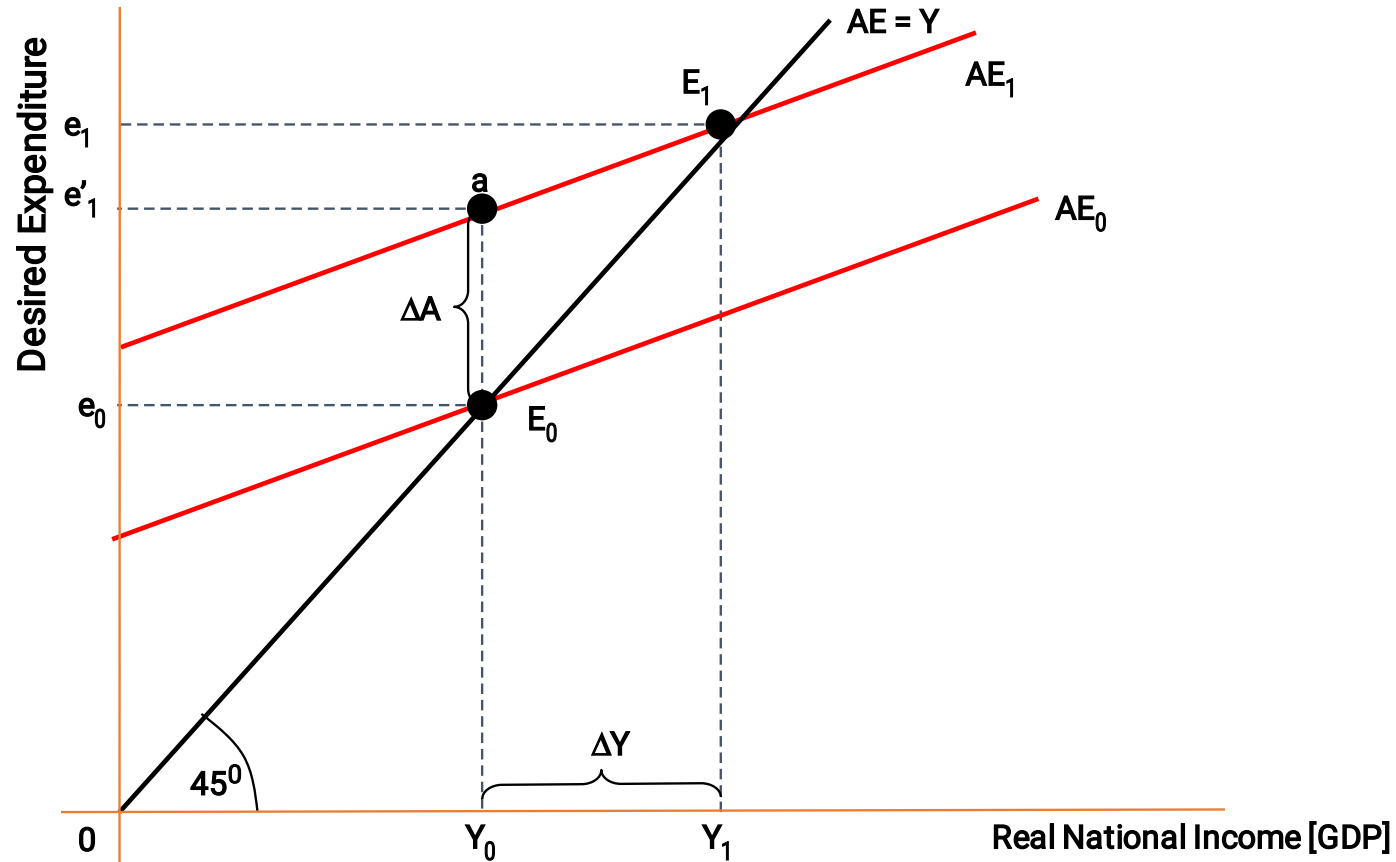
# Keynesian multiplier

## Graphical or 45° diagram approach

Equilibrium national income is determined where expenditure (E) (planned and unplanned) is equal to actual national income (Y). Along the 45° line expenditure is equal to actual output.



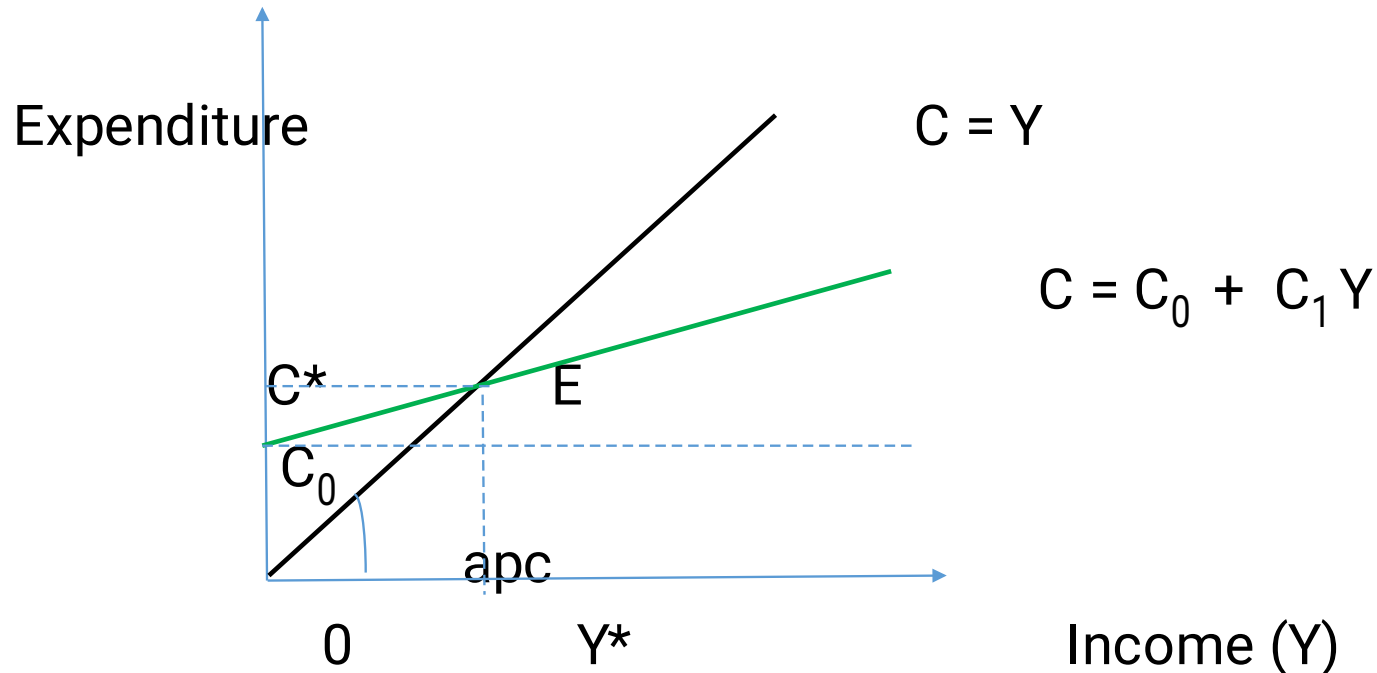
# Keynesian Multiplier



# Keynesian multiplier

## Consumption function

Is made of autonomous consumption ( $a$  or  $C_0$ ) and planned consumption ( $bY$  or  $C_1Y$ ), where  $C_1$  is marginal propensity to consume (MPC), the change in consumption as a result of changes in income ( $\Delta C/\Delta Y$ ). Average propensity to consume (APC) is proportion of income that goes toward consumption ( $C/Y$ ).



# Keynesian multiplier

## Mathematical approach

**Two sector** (closed economy without government)

Expenditure (E) = Income Y. But  $E = C + I$

So:  $Y = C + I$ . but  $C = C_0 + C_1 Y$

So  $Y = (C_0 + C_1 Y) + I$ .

Solving for Y

$$Y^* = (C_0 + I) / (1 - C_1) .$$

$$\text{Let } K = 1 / (1 - C_1)$$

$$\text{therefore } Y^* = K (C + I)$$

$Y^*$  is equilibrium income and K is the multiplier.

$$K = \Delta(C + I) / \Delta Y$$

# Keynesian multiplier

## Mathematical approach

**Three sector** (closed economy with government; introducing taxes)

Expenditure (E) = Income Y. But  $E = C + I + G$

So:  $Y = C + I + G$ .

But  $C = C_0 + C_1 Y_d$ ,  $Y_d = Y - t$ , So  $C = C_0 + C_1 (1 - t) Y$

Therefore  $Y = [C_0 + C_1 (1 - t) Y] + I + G$

Solving for Y

$$Y^* = (C_0 + I + G) / (1 - C_1 + t) .$$

Let  $K = 1 / (1 - C_1 + t)$  or therefore  $Y^* = K (C + I + G)$

$Y^*$  is equilibrium income, K is the multiplier. t is the marginal rate of tax.

$$K = \Delta(C + I + G) / \Delta Y$$

# Keynesian multiplier

## Mathematical approach

**Four sector** (open economy introducing exports and imports)

Expenditure (E) = Income Y. But  $E = C + I + G + X - M$

So:  $Y = C + I + G$ .

but  $M = F_0 + F_1 Y$ ,  $F_1$  is the marginal propensity to import

So Therefore  $Y = [C_0 + C_1 (1 + t) Y] + I + G + X + F_0 + F_1$

Solving for Y

$$Y^* = (C_0 + I + G + X + F_0) / (1 - C_1 + t + F_1) .$$

$$\text{Let } K = 1 / (1 - C_1 + t + F_1)$$

$$\text{therefore } Y^* = K (C + I + G + X + F_0)$$

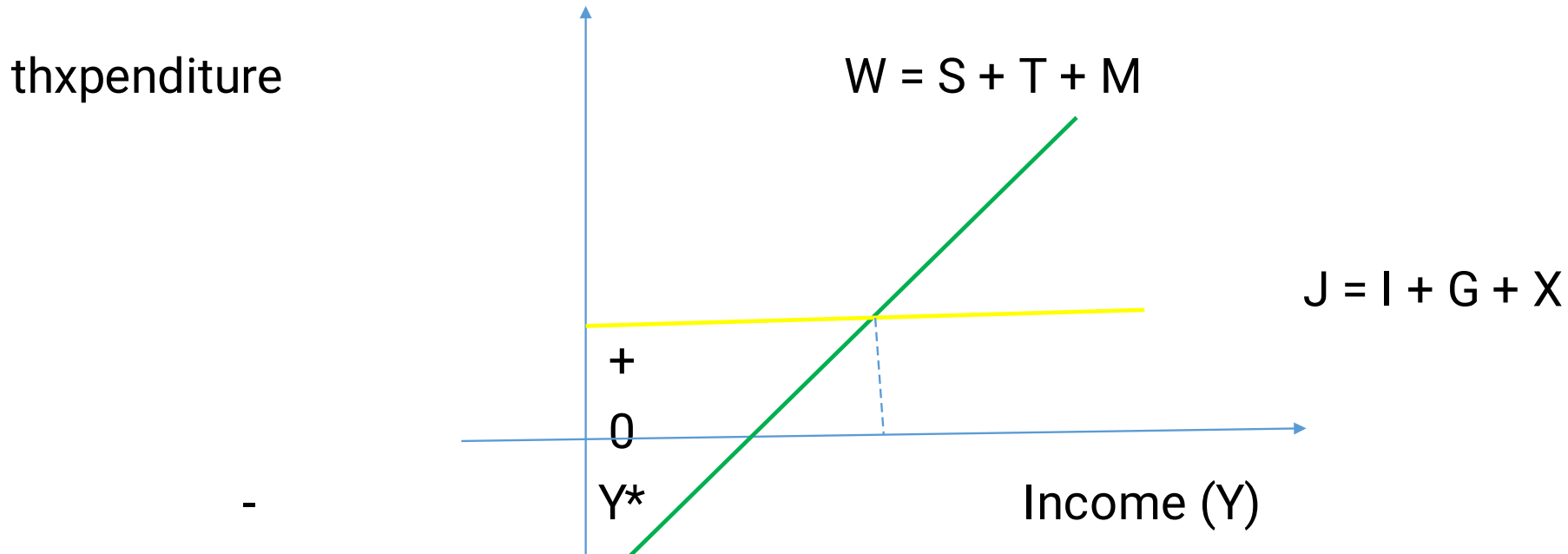
$Y^*$  is equilibrium income and K is the multiplier.

$$K = \Delta(C + I + G + X + F_0) / \Delta Y$$

# Withdrawals-Injections model

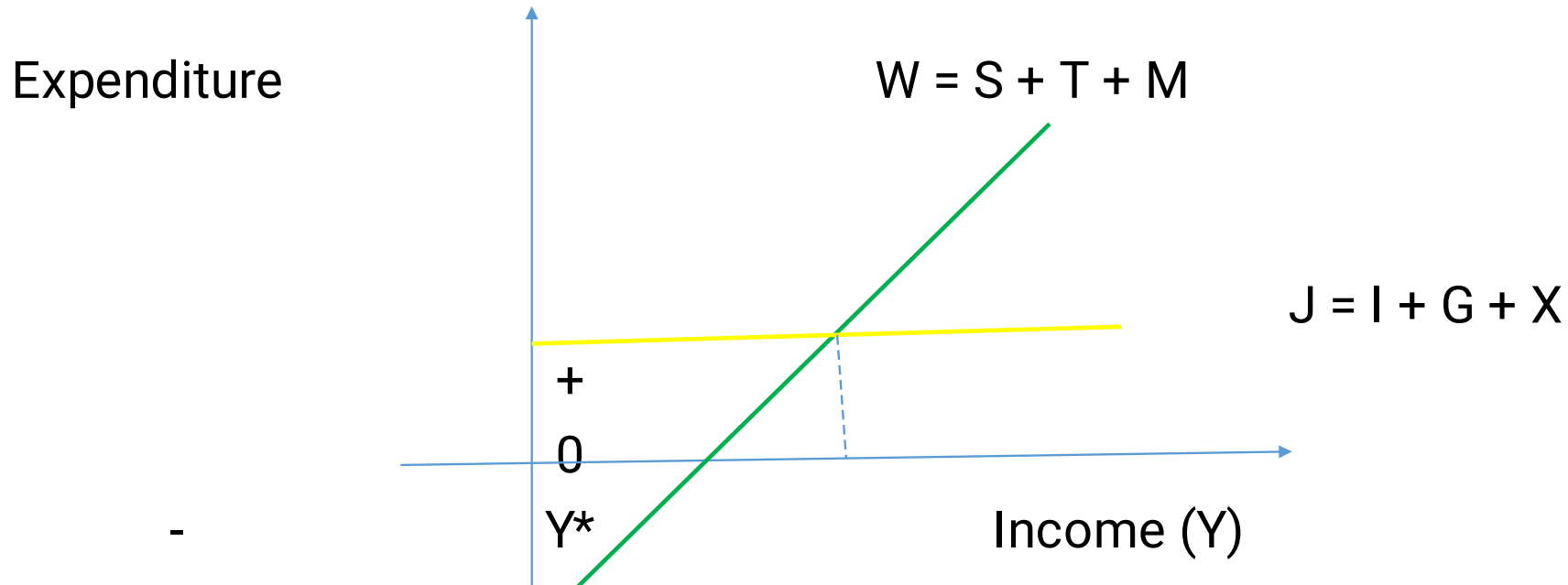
## Graphical or 45° diagram approach

Equilibrium national income is determined where withdrawals are equal to injections. Along the 45° line withdrawals are equal to injections. Marginal propensity to withdrawals is the amount withdrawals dependent on income ( $\Delta W/\Delta Y$ ) and average propensity to withdrawal is the proportion of income that is withdrawn ( $W/Y$ ).



# Withdrawals-Injections model

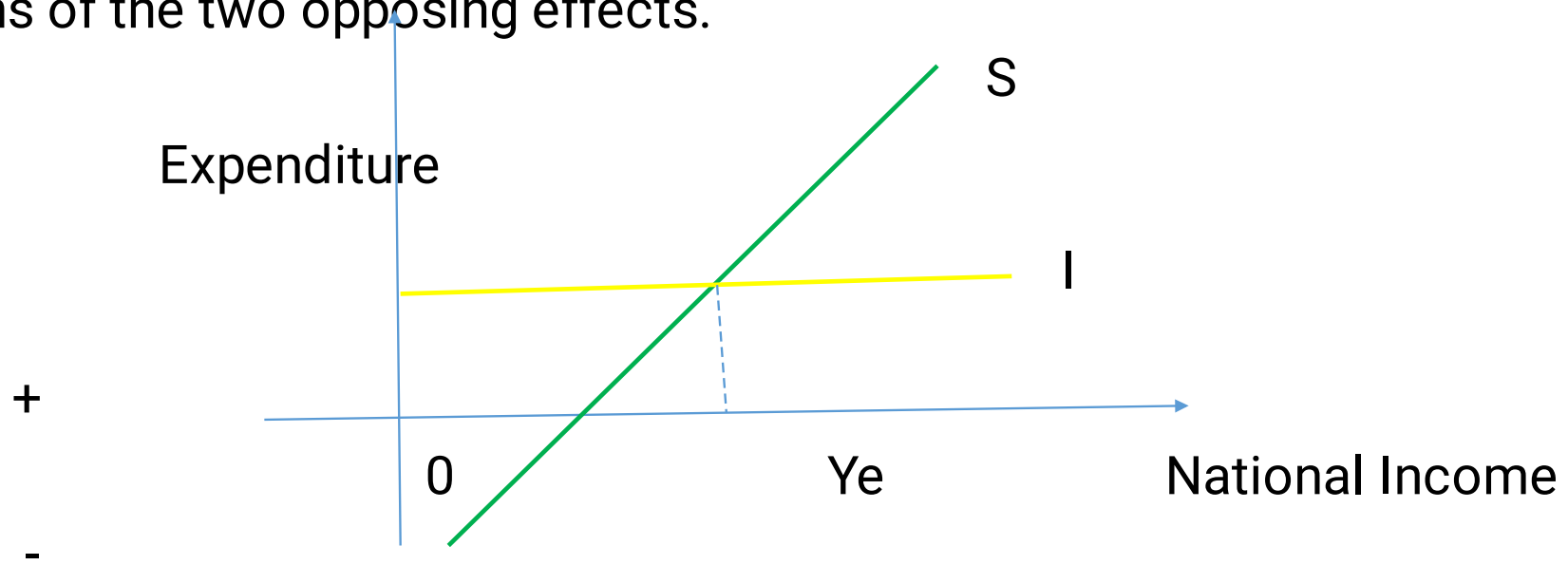
Equilibrium national income is determined where withdrawals are equal to injections. Along the 45° line withdrawals are equal to injections. Marginal propensity to withdrawals is the amount withdrawals dependent on income ( $\Delta W/\Delta Y$ ) and average propensity to withdrawal is the proportion of income that is withdrawn ( $W/Y$ ).





# Savings-Investment model

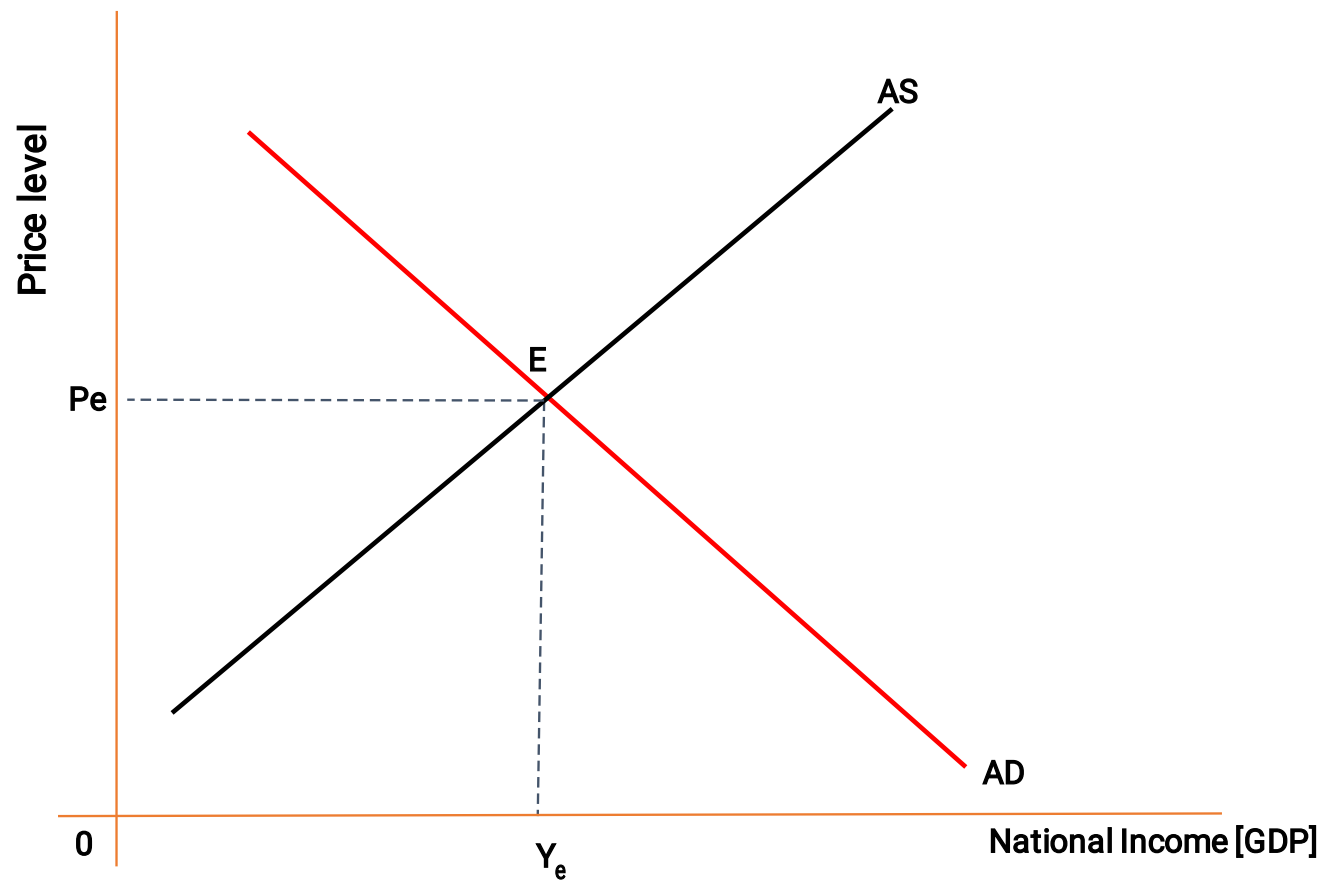
- It is an extension of the W-I approach. Equilibrium national income is determined where savings are equal to investment. An increase in savings can lead to an increase in national income, if savings are channeled to investment which increases the productive capacity of an economy. It can also lead to a decrease in national income since an increase in saving comes at the expense of consumption. This is called a paradox of thrift, that is any increase in savings does not necessarily lead to an increase in national income, it depends on the strengths of the two opposing effects.



# Aggregate demand-aggregate supply

- Equilibrium national income is determined where aggregate demand is equal to aggregate supply. Aggregate demand is the total demand of output at different price levels and it slopes downwards.
- Aggregate supply is total supply of output at different price levels in the economy. The aggregate supply can be relative elastic (classical), perfect inelastic (keynesian) and perfect elastic (extreme keynesian).
- The diagram below shows the equilibrium.

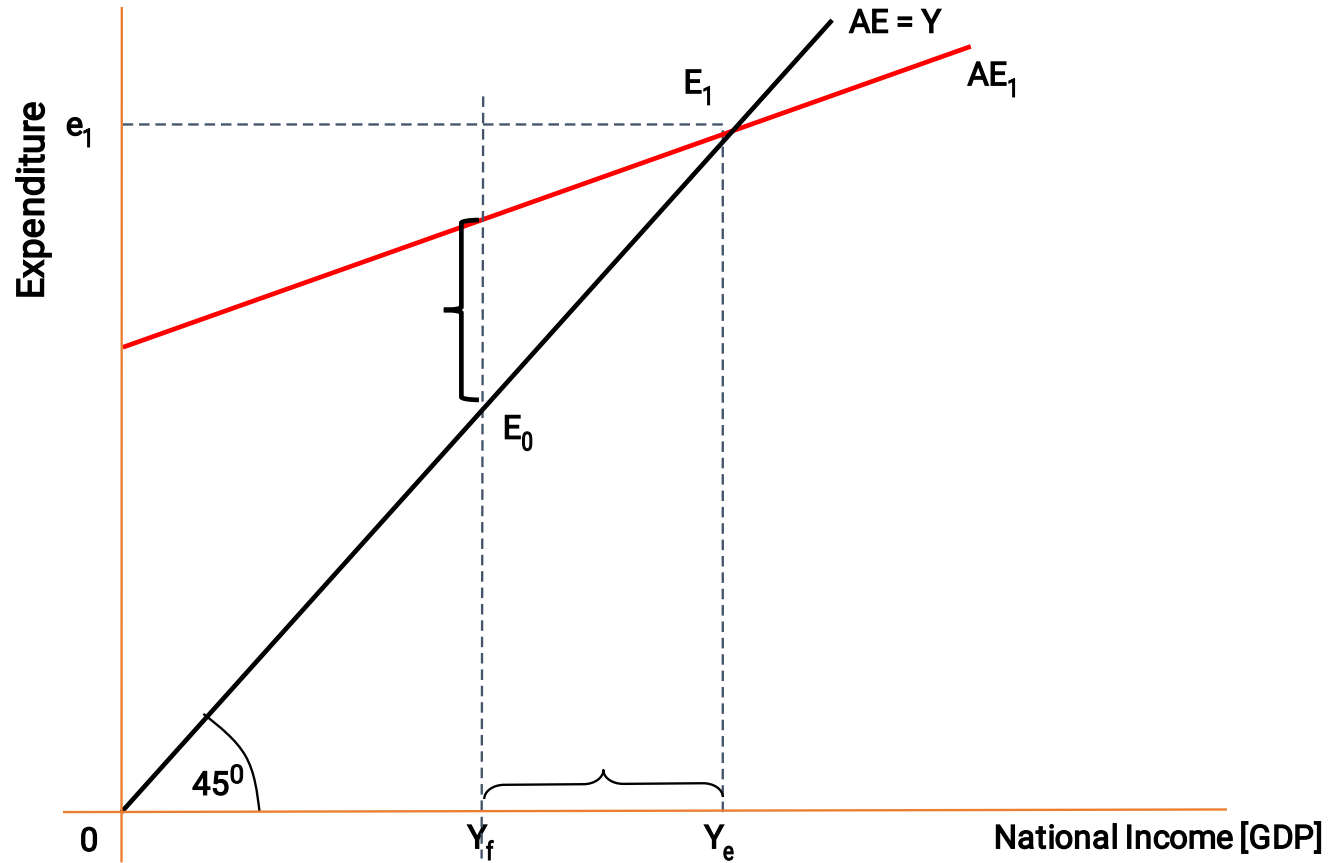
# AD-AS



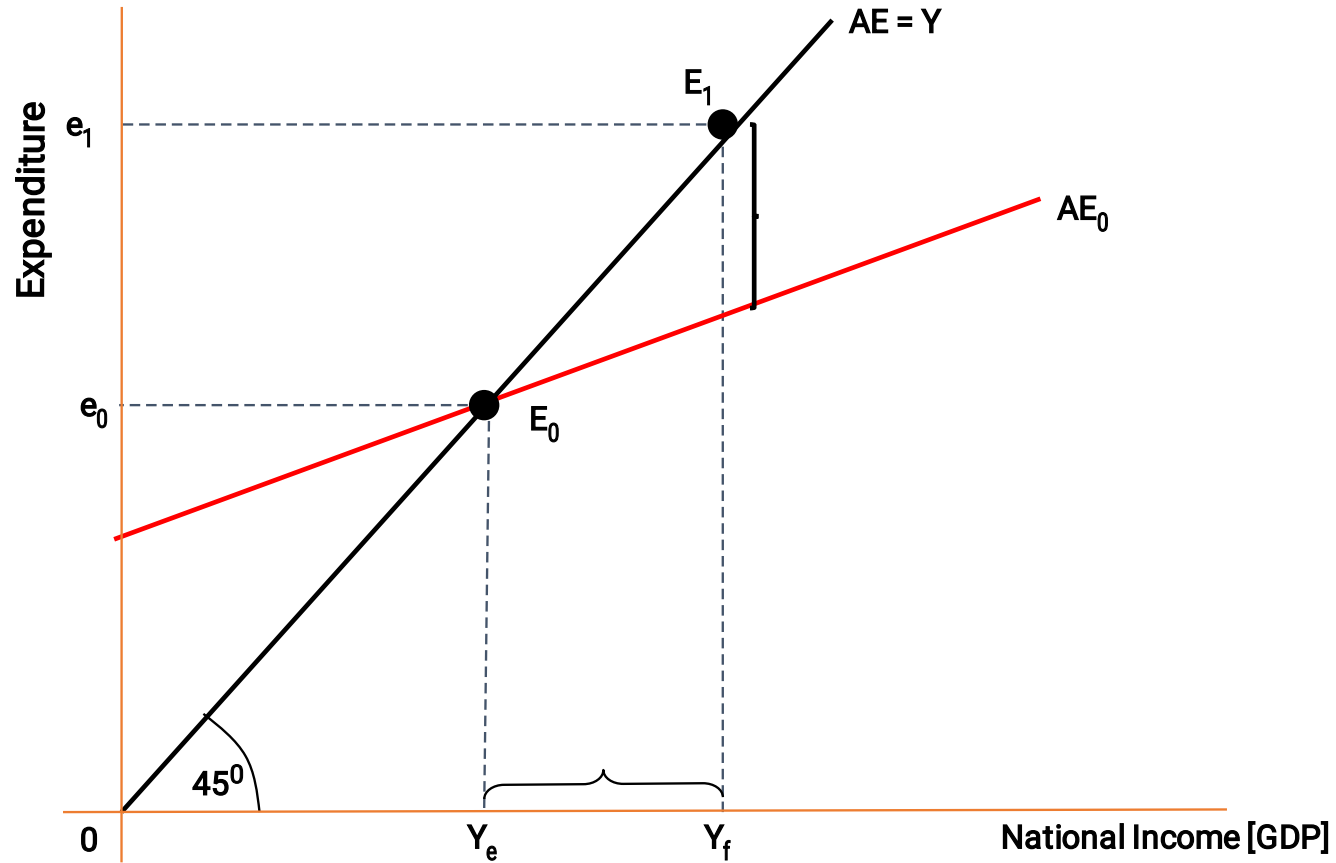
# Inflationary and deflationary gaps.

- Full employment is where all economic resources are fully utilised, while equilibrium national income is where aggregate expenditure is equal to national income.
- Inflationary gap occurs when aggregate expenditure exceeds the potential output of the economy of full employment national income. Resources will not be enough to meet all demand leading to increase in the price level. Therefore to solve inflationary gap government has to use a contractionary fiscal and monetary policies.
- Deflationary gap occurs when aggregate expenditure is below potential output or full employment national income. Resources will be full utilised, since demand will be low leading a fall in the price level.
- Therefore government should use expansionary fiscal and monetary policies.
- The diagrams below shows the two gaps.

## Inflationary gap



## Deflationary gap



# Accelerator theory of investment

It relate induced investment to changes as in national income. Investment is an injection, therefore changes in investment accelerate changes in national income. Investment depends on the rate of change in national income and changes in national income will cause a greater proportionate change in investment. The term accelerator is used because a relative rise in national income can cause much larger percentage change in investment.

When there is no change in national income and hence no change in consumption, the only investment needed is a relatively small amount of replacement investment for machines that are worn out or has become obsolete. When income and consumption increases, firms' need for new investment increases in order to increase productive capacity and this is called induced investment. When no further increase in national income and consumption is realised, changes in investment will be just replacement investment.

The theory suggests that when national income or aggregate expenditure changes, firms have three options on how to respond; Use up stocks in their warehouses, Use spare capacity and Buy capital goods (induced investment)

Induced investment depends on changes in national income using the equation;  $I = a\Delta Y$  where  $I$  is Investment,  $a$  accelerator coefficient and  $\Delta Y$  is change in income. The theory assumes that firms are likely to take the third option and this will lead to multiple changes in national income, therefore the accelerator effect.

# Criticism Accelerator theory of investment

It provides the basis how the government can influence investment in a country through the manipulation of national income or aggregate expenditure and how government can influence national income by changing or manipulating investment.

It also provides a basis of looking at the importance of investment in economic development.

However, the implications of the theory are extremely difficult to predict because an increase in consumption does not always result in a greater percentage in capital goods. This is because of the following reasons.

Many firms have spare capacity and or carry stocks, which enable them to meet extra demand due to changes in national income and consumption) without having to invest.

The willingness of firms to invest depends on their confidence in the future demand. They can not rush out and spend large amounts of money on machinery, that will last for many years, if it is quite clear that changes in national income or aggregate expenditure is temporary or likely to fall in the near future.

It is not possible even if firms decide to invest, that they will buy all the capital goods they want, if the capital industry firms are operating close or at full capacity.

Investment plans or capital expenditure are strategic and are made in advance, only made they are difficult to change. Investment in the short-run tend to be inelastic or supply elasticity tend to be inelastic in the short-run.

Even if firms decide to invest more producers of capital goods may not have the capacity to meet a sudden increase in demand for capital goods.

Machines as a rule, do not wear out suddenly, a firm could just delay replacing machines and keep the old ones for a bit longer time if it is uncertain about its future level of demand.

Advances in technology and capital to output ratio may change with fewer machine being needed to produce a given output.



# Fiscal Policy

- It where government deliberately change tax rates and levels of government spending to influence economic activity.
- It deliberate move by government to change government expenditure and income to achieve desired economic and social objectives.
- It involves the use of government spending and tax policies to influence the economy to a desired spending in order to achieve a specific goal set by the government.
- It is used to describe regulation of the economy through government spending and taxation.
- It is used to fine tune the economy from-term perspective.

- The annual budget is the most important statement of fiscal policy. In this statement, the Finance Minister outlines the government's spending and taxation plans for the year ahead. The fiscal policy gives a clear indication of government macroeconomic priorities. There are three types of budgets:
- **Budget deficit** – it is a situation where government spending exceeds projected revenue from taxation. It is done to stimulate the economy by increasing aggregate demand and create more jobs and income.
- **Budget surplus** – it is where government revenue from taxation exceeds projected expenditure by government on social protection, health care, education etc. it is done to deflate the economy by cutting back aggregate demand in response to high rate of inflation in the economy.
- **Balanced budget** – it is where projected revenue and government spending are equal.

# Expansionary Vs Contractionary Policy

- Government can increase aggregate demand using an expansionary fiscal policy.
- It can increase its spending and or cut tax rates, leading an increase to the government's budget deficit or an decrease its budget surplus.
- This is favourable as it have a bigger multiplier effect, for example a rise in government spending especially on welfare payments is most likely to benefit the poor who have high marginal propensity to consume.
- Government can use contractionary fiscal policy
- It where government cut its spending and an increase in taxes to leading to a decrease in government's budget deficit or increase in its budget surplus.
- This done in order to reduce aggregate demand.

# Automatic stabilisers

- Government can allow automatic stabilisers to influence economic activity.
- These are forms of government spending and taxation which change, without any deliberate government action, to offset fluctuations.
- For example unemployment benefits rise automatically if unemployment rise, tax revenue from income tax and indirect taxes fall automatically as incomes and expenditure decline.
- Fiscal policy may be employed to effect aggregate supply by changing incentives to individuals and firms to improve competitiveness of their economies.

# Effectiveness of Fiscal policy

- Fiscal policy effectiveness is important so that government can accurately estimate the impact that changes in government spending and taxation will have on the economy.
- The value of the multiplier and awareness of the possible side-effects of the policy measures are important.
- Underestimation of the multiplier may lead to too much injections which may generate inflation and balance of payments problems.
- Fiscal policy may have undesirable side effects, for example a rise in tax to reduce aggregate demand but this may have disincentive effects and reduce aggregate supply.

# Effectiveness of Fiscal policy conti....

- Some instruments of fiscal policy have significant time lags that is changes in direct taxes and government spending take a longer to implement and to work their way through the economy.
- It can be difficult to raise taxation and lower government spending because of political unpopularity of such measures and because some government spending are long term in mature like construction projects.
- **Expansionary policy can lead to Crowding-out effect.**
- When the government borrowing from local credit market tends to reduce the amount of funds available and thereby drives up interest rates. Higher interest rates, in turn, tend to reduce or “crowd out” aggregate investment expenditures and consumer expenditures that are sensitive to interest rates.

# Taxation

- Is a source of government revenue. It can be ad valorem tax, where it is levied as a % of the value of the transaction or unit tax where it is levied per unit consumed.
- **Types**
- **Indirect tax** – tax levied on transactions or levied indirect on income. It is paid by individuals and companies and its burden can be shifted. For example sales tax, excise tax, value added tax (VAT), customs duty.
- **Direct tax** – tax levied on income or direct on income. It is paid by individuals and companies and its burden cannot be shifted. For example pay as you earn (PAYE), corporate tax, capital gains tax etc.

# Tax Regimes/Systems

- **Progressive taxes** – is a tax system that takes a greater percentage of income or wealth from higher income earners and wealthier groups, than it does from lower income earners and poorer groups.
- **Regressive taxes** – is a taxes system which takes a greater percentage of income form lower income earners and poorer groups than it does from high income earners and wealthier groups.
- **Proportional taxes** – is a tax system that takes the same percentage of income from everyone. All taxpayers pay the same percentage on their income or wealthier.



# Qualities or Characteristics of a Good tax.

- **Equity** - tax should be fair vertical equity occurs when the tax is based on people's ability to pay. Horizontal equity is achieved when people in the same financial circumstances pay the same amount of tax.
- **Certainty** - taxpayers should know how much tax they have to pay, when it must be paid and how much must be paid and they should be able to assess their tax liability.
- **Convenience** - Taxes should be convenient for tax- payers to pay and for the government to collect taxes should be easy to pay and the timing of payment should also be appropriate.

# Qualities or Characteristics of a Good tax.

- **Economy** - The cost of tax collection and administration should be small in relation to the total revenue for both the government and the taxpayers
- **Flexibility** - A tax should be capable of being changed to meet changing economic conditions and changing government objectives. The revenue from some taxes, for example income tax and VAT changes automatically with changes in national income. The rates of some taxes can also be adjust relatively quickly and easily.
- **Efficiency** - A tax should not reduce economic efficiency and should ideally increase it.

# Effects of taxation

- DISTRIBUTION OF INCOME
- ON CONSUMPTION
- ON INCENTIVES
- ON THE GENERAL PRICE LEVEL

# ON DISTRIBUTION OF INCOME

- Progressive taxes make income more evenly distributed and regressive taxes make income less evenly distributed, whereas proportional taxes leave the distribution of income unchanged.
- Income tax, a direct tax, is a progressive tax and its imposition reduces the inequality of incomes.
- most indirect taxes are regressive. The goods which are subject to heavy indirect taxation are widely consumed and have inelastic demand.
- lower income groups tend to spend a greater proportion of their incomes on some of these commodities the effect of the taxes can be regressive.

# ON consumption

- Direct and indirect taxes will affect both the total and the pattern of consumer spending.
- Direct taxes reduce disposable income, but the effect on consumption will depend upon the propensity to consume and the level of saving. If there is very little saving, direct taxes will reduce consumption.
- If however: taxpayers are enjoying a relatively high standard of living which enables them to save, an increase in indirect taxes may have relatively little effect on consumption.
- People may resist any cut in their current living standards by reducing saving rather than spending.
- Indirect taxes will also reduce the total demand for goods and services.
- The higher prices will reduce people's purchasing power:
- However again the effect will depend on the propensity to consume and the existing levels of saving.

# ON INCENTIVES

- Direct taxes, particularly income tax and corporation tax are criticised by some for reducing the incentives to work, save, invest and take risks.
- It is argued that high and progressive rates of income tax will discourage some people from entering or staying in the labour force, some from working extra hours and some from taking promotion and extra responsibility and some from declaring the income they earn.
- There is obviously some level of taxation at which disincentive effects will come into operation, but it is very difficult to determine that level. Indeed at certain levels, a rise in tax rates may increase the number of hours people will work.
- This is because people become accustomed to a certain standard of living and might react to higher" taxes by working longer hours to maintain the same disposable in- come.
- In this case the income effect will outweigh the substitution effect. High and progressive taxation on saving will also reduce the incentive to save. This is reinforced by the double taxation which takes place on some saving.
- This occurs because the income from which savings are made is taxed and then the savings are themselves taxed. However some forms of savings are tax free and there are a number of influences on savings.

# ON THE GENERAL PRICE LEVEL

- Direct taxes fall on income and do not have a direct influence on the general price level, However they could reduce inflationary pressure by lowering aggregate demand.
- Conversely they could result in cost-push inflation by stimulating workers to press for wage rises to maintain their real incomes.
- A rise in indirect taxes will raise the general price level as measured by RPI, RPIX and HICP but not RPIY.
- Whether this results in inflation (i.e., a sustained rise in the price level) will depend on how people and firms react to the initial rise in price.

# Topics to be covered

- **1. Money and the Price Level**
- a. Money: its functions and characteristics
- money supply, Broad and narrow money supply , Credit creation theory, Central Bank and money supply, The demand for money
- Interest rate determination - Liquidity preference theory and loanable funds theory.
- b. Monetary Policy
- c. Inflation: definition of inflation, degrees of inflation and measurement, types and consequences of inflation, policies to cure inflation.
- **2. Unemployment**
- Phillip's curve: relationship between inflation and unemployment.
- Types/causes, effects and solutions.



# Money and the Price level

- Money: characteristics and functions.
- Money supply: credit creation and quantity theory of money.
- Money demand: Keynesian three motives.
- Interest rate determination: Loanable Funds Theory and Liquidity Preference Theory.
- Inflation: types/causes, effects and solutions.

# Money

- Money is often defined in terms of the three **functions** or **services** that it provides.
- Money serves as a **medium of exchange**, as a **store of value**, and as a **unit of account**.
- Money is what money does.
- It is any asset that is used as a medium of exchange.

# Functions of Money

- **Medium of exchange**
- Money's most important function is as a medium of exchange to facilitate transactions.
- Without money, all transactions would have to be conducted by **barter**, which involves direct exchange of one good or service for another.
- The difficulty with a **barter system** is that in order to obtain a particular good or service from a supplier, one has to possess a good or service of equal value, which the supplier also desires.
- In other words, in a barter system, exchange can take place only if there is a double coincidence of wants between two transacting parties.
- The likelihood of a double coincidence of wants, however, is small and makes the exchange of goods and services rather difficult.
- Money effectively eliminates the double coincidence of wants problem by serving as a medium of exchange that is accepted in all transactions, by all parties, regardless of whether they desire each others' goods and services.

# Functions of money conti...

- **Store of value.**
- In order to be a medium of exchange, money must hold its value over time; that is, it must be a store of value.
- If money could not be stored for some period of time and still remain valuable in exchange, it would not solve the double coincidence of wants problem and therefore would not be adopted as a medium of exchange.
- As a store of value, money is not unique; many other stores of value exist, such as land, works of art, and even baseball cards and stamps.
- Money may not even be the best store of value because it depreciates with inflation.
- However, money is more **liquid** than most other stores of value because as a medium of exchange, it is readily accepted everywhere.
- Money is an easily transported store of value that is available in a number of convenient denominations.

# Functions of Money conti...

- **Unit of account.**
- Money also functions as a unit of account, providing a common measure of the value of goods and services being exchanged.
- Knowing the value or price of a good, in terms of money, enables both the supplier and the purchaser of the good to make decisions about how much of the good to supply and how much of the good to purchase.
- **Standard of deferred payments.**
- Business is conducted on the basis of credit, money is to serve as a means of deferred/delayed payment.
- When goods and services are supplied on credit, the buyer has immediate use of them but does not have to make an immediate payment.
- money make it easier to borrow and lend as it is a convenient way of measuring debt and repaying debt.

# Money Supply

- The total stock of money circulating in an economy or total amount of money in an economy. It involves the currency, printed notes, money in the deposit accounts and in the form of other liquid assets.
- **Narrow money** - money which is used as a medium of exchange and consists notes and coins in circulation and cash held in banks and balances held by banks at the central bank.
- **Broad money**- consists of narrow money and other assets that function as a store of value
- **Hot money** – money that is invested in pursuit of higher interest rates from one bank/country to another.
- **Liquidity** – the easiness to convert an asset into cash or purchasing power. It also means cash.

# Money Aggregates

## M1

- includes all currency (notes and coins) in circulation, all checkable deposits held at banks (bank money), and all traveller's checks held by commercial banks.

## M2

- includes all of M1 plus savings and time deposits under 30 days held by commercial and merchant banks.

## M3

- includes all of M2 plus large denomination, long-term(over 30 days) time deposits, for example, certificates of deposit (CDs).

## M4

- include M3 plus savings and fixed deposits with other Banking institutions.

# Credit creation by commercial banks

- In a modern banking system the central bank determines the amount of reserves held by banks.
- **Reserves** consists of reserve requirement and excess reserves.
- **Statutory reserves** or **reserves requirement** is the amount or percentage of deposits that must be kept by all financial institutions with the central bank.
- **Reserve ratio** is the ratio of cash to deposits a bank keep at the central bank as reserves against cash withdrawals.
- **Excess reserves** are any amount kept by the bank at the central bank in excess of reserve requirements.
- Assuming that all bank are equal in size and in their volume of business, their operations lead to creation of money in the economy.
- Bank receive funds from depositors and, in return, provide these depositors with interest payments.
- The balance sheet summarizes the bank's assets and liabilities. Assets are valuable items that the bank owns and consist of the bank's reserves and loans.



# Credit creation by commercial banks conti...

- A balance sheet for a typical bank is given in Table below.
- Reserve ratio is 10%

**TABLE 1 The Balance Sheet of A Typical Bank**

Assets		Liabilities	
Reserves	\$100,000	Deposits	\$1,000,000
Loans	900,000		

# Credit creation by commercial banks

## conti ...

- Banks use deposits received to make loans to borrowers, thereby serving as intermediaries in the borrowing and lending process.
- When banks receive deposits, they do not keep all of these deposits on hand because they know that depositors will not demand all of these deposits at once. Instead, banks keep only a fraction of the deposits that they receive.
- The deposits that banks keep on hand are known as the banks' reserves, and withdra, they are paid out of the banks' reserves.
- Deposits that banks are not required to set aside as reserves can be lent to borrowers, in the form of loans.
- Banks earn profits by borrowing funds from depositors at zero or low rates of interest and using these funds to make loans at higher rates of interest.
- Liabilities are valuable items that the bank owes to others and consist of the bank's deposit liabilities to its depositors.

# Credit creation by commercial banks conti...

- In table above, the bank's assets (reserves and loans) total \$1 million, liabilities (deposits) total \$1 million. A banking firm's assets must always equal its liabilities.
- **How banks create money?**
- Consider what happens when the same bank receives a \$100,000 deposit from one of its depositors.
- The bank is required to set aside 10% of this deposit, or \$10,000, as reserves.
- It then lends out its excess reserves, in this case, the remaining \$90,000 of the initial deposit.
- Suppose, for the sake of simplicity, that all borrowers redeposit their loans into the same bank.
- The bank thus receives \$90,000 in new deposits of which it sets \$9,000 aside as reserves and lends out all of its excess reserves.
- Suppose again that all borrowers redeposit their loans in the same bank, then the bank sets aside a portion of these deposits, and that the bank then lends out the remainder, which is again re-deposited in the bank and so on and so on.

# Credit creation by commercial banks conti...

- This repeated chain of events is summarized in following Table .
- This multiple deposit expansion process will continue, at the end resulting in the bank's deposits would increase by \$1 million, loans increasing by \$900,000, and its reserves would increase by \$100,000, all due to the initial deposit of \$100,000.
- **Money multiplier** - The amount by which bank deposits expand in response to an increase in **excess reserves** is found through the use of the **money multiplier**, which is given by the formula.

$$\text{money multiplier} = \frac{1}{\text{reserve requirement}}$$

# Credit creation by commercial banks conti...

**TABLE 2 Multiple Expansion of Deposits**

Round	New deposits	New reserves	New loans
1	\$100,000	\$10,000	\$90,000
2	90,000	9,000	81,000
3	81,000	8,100	72,900
4	72,900	7,290	65,610
5	65,610	6,561	59,049
.	.	.	.
.	.	.	.
.	<u>+</u>	<u>+</u>	<u>+</u>
	\$1,000,000	\$100,000	\$900,000

# Credit creation by commercial banks conti...

- In the example of deposit expansion found in Table above, the reserve requirement is 10%; so, the money multiplier in this case is  $(1/.10) = 10$ .
- The excess reserves resulting from the initial deposit of \$100,000 are \$90,000.
- Multiplying \$90,000 by the money multiplier, 10, yields \$900,000, which is the amount of additional deposits created by the banking system as the result of the initial \$100,000 deposit.
- In reality, loan recipients do not deposit all of their loan funds into a bank.
- More typically, they hold a fraction of their loan funds as currency.
- If some loan funds are held as currency, then there is a leakage of money out of the banking system.
- In this case, the money multiplier will still be greater than 1, but it will be less than the inverse of the reserve requirement.

# Central Bank and the supply of money.

- The CB's liabilities consist of all CB notes in circulation plus all private bank deposits held at the CB as reserves,
- On the asset side, the CB owns a large amount of government debt in the form of **government bonds**.
- These bonds have been issued by the Government to pay for current and past government deficits. CB's balance sheet shows CB's total liabilities are equal to its total assets.

TABLE 3 The Balance Sheet of the FED (\$ values are in millions)

Assets		Liabilities	
Government bonds	\$300	Federal Reserve notes	\$250
		Reserves of private	50
		banks	

# Central banking and the supply of money conti....

- CB's control over the money supply comes from its ability to change the composition of its balance sheet.
- For example, purchasing additional government bonds on the open market from bondholders or private banks in an **open market operation**
- In exchange for these government bonds, the CB increases the reserves of private banks by the amount of the purchase.
- Banks, in turn, lend out their excess reserves and initiate the multiple deposit expansion process discussed above.
- Thus, CB buys government bonds on the open market, it increases the supply of money by increasing bank reserves and inducing an expansion in the amount of deposits.
- Similarly, when the CB sells some of its stock of government bonds to bondholders or private banks, the CB compensates itself for the sale by reducing the reserves of private banks.



# Central banking and the supply of money conti...

- The sale of government bonds by the CB reduces the supply of money by reducing the reserves available to private banks and thereby decreasing the amount of deposit expansion that is possible.
- The CB can also control the supply of money by its choice of the **reserve requirement**.
- Recall that the money multiplier is the reciprocal of the reserve requirement.
- If the CB increases the reserve requirement, the money multiplier decreases, implying that deposit creation and the money supply are reduced.
- If the CB decreases the reserve requirement, the money multiplier increases, causing both the creation of deposits and the money supply to expand further.

# Quantity Theory of Money (QTM)

- It explain how changes in the value of money can be explained by changes in money supply. It assumes people's spending habits and output of goods and services are fairly stable therefore demand for money are also stable.it predicts that changes in price level are proportionate to changes in quantity of money. And this is expressed in the following formula.

$$MV = PT$$

- M is the level of money supply, V is the velocity of money ( number of times money changes hands in transactions), P is the general price level (inflation) and T is the number of real transactions or sometimes replaced by Q which is output of goods and services.
- It assumes V is constant, the is full employment and T is fixed, role of money is limited in effecting expenditure, income, employment and relative price.
- Therefore changes in M direct affect P. this implies inflation is a monetary phenomenon, so solutions to inflation is to reduce money supply.

# Criticism of QTM

- Only sees money as medium of exchange. That is to facilitate transactions. However money can be used as a store of wealth.
- Velocity is not fixed because of the use of cheques and plastic money like ATM card, credit cards etc that affect money velocity.
- Only defines money in its narrow terms.
- Neutrality of money has failed in real world.

# Questions

1(a) Explain how a rise in money supply causes an increase in national income. [10]

(b) Why might the government of your country seek to control the rate of growth of money supply? [15]

2(b) How effective is the role played by the central bank in the economic development of your country? [13]

3(a) How does the Liquidity Preference Theory explain the determination of the rate of interest in an economy? [12]

(b) To what extent are rates of interest determined by economic theory in your country? [13]

4(b) Discuss the effects of a substantial increase in money supply in an economy. [13]

# The Demand for Money

- It is affected by several factors, including the **level of income, interest rates, and inflation (prices)** as well as **uncertainty about the future (expectations)**.
- The way in which these factors affect money demand is usually explained in terms of the three motives for demanding money:
  - Transactions,
  - Precautionary, and
  - Speculative motives.

# Transactions motive

- It is the demand for money which arises from the fact that most transactions involve an exchange of money.
- Refers to holding of money for day to day transactions.
- Households keep money to spend on day to day needs.
- It depends on;
- **Price level** – higher the price level the higher the amount needed and held for the transaction purposes and vice versa.
- **Availability of Credit** – the more and easier is credit the less the amount held for transactions.
- **Level of Income** – the total number of transactions made in an economy tends to increase over time as income rises, hence, as income or GDP rises, the **transactions demand** for money also rises.

# Precautionary motive

- Refers to holding of money for events which can not be foreseen.
- People often demand money as a precaution against an uncertain future and unexpected expenses, such as medical or car repair bills, which often require immediate payment.
- Households need money in cases of emergencies or to take advantage of some unexpected changes in demand.
- It depends on price level, income levels etc.

# Speculative motive

- Refers to holding of money in excess of the amount needed for transactions and precautionary purposes.
- Money is treated like any other asset.
- People prefer to hold less liquid and less risk assets than money, because they earn interest
- The demand for an asset depends on both its rate of return and its opportunity cost.
- Money holdings provide no rate of return and often depreciate in value due to inflation.
- The opportunity cost of holding money is the interest rate that can be earned by lending or investing one's money holdings.
- It arises in situations where holding money is perceived to be less risky than the alternative of lending the money or investing it in some other asset.



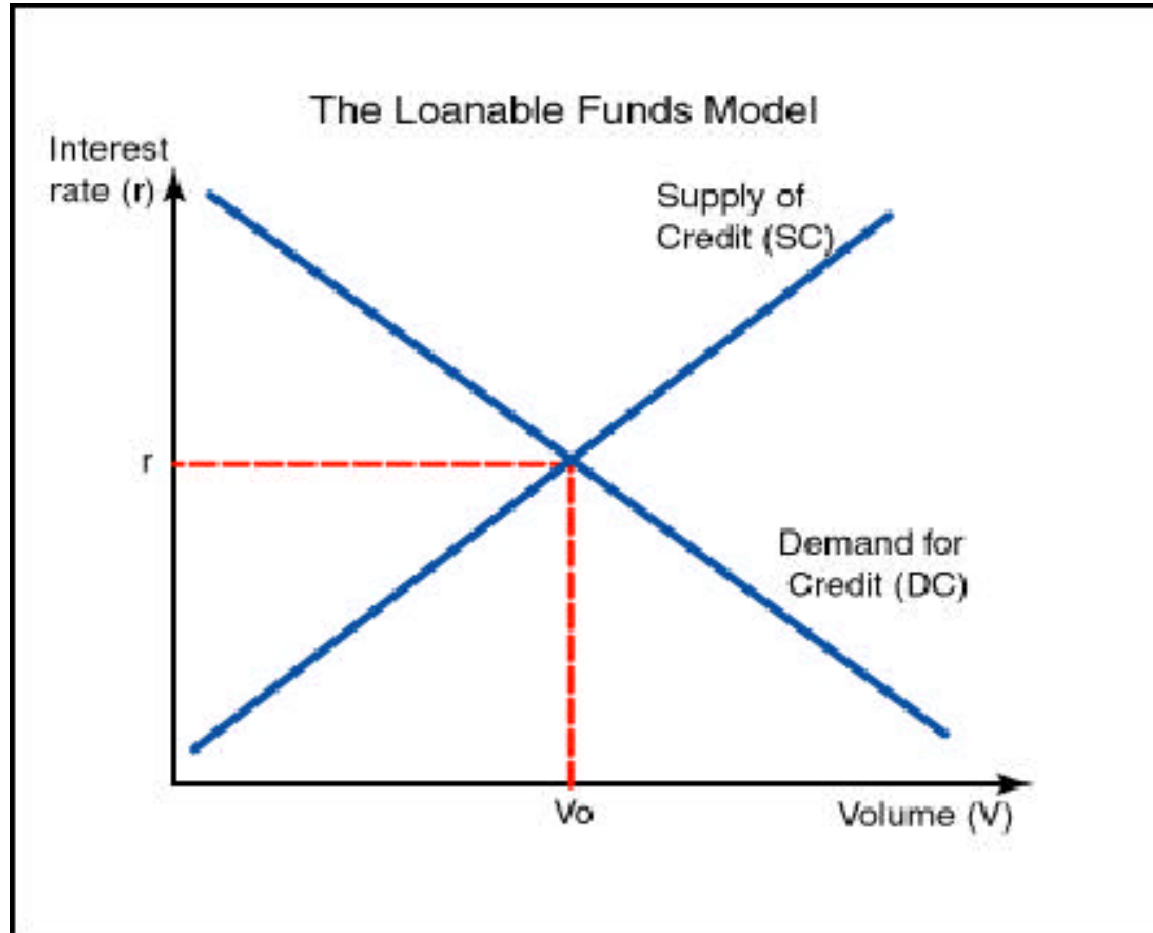
# Loanable Funds Theory of Interest

- It is the Classical theory of interest rate determination.
- It states that rate of interest is determined by the interaction of demand and supply of loanable funds in the capital market.
- It advocates that both savings and investments are responsible for the determination of the rates of interest in the long run.
- The standard demand-supply theory as applied to the market for loanable funds (credit), treating the rate of interest as the price (per unit time) of such funds.
- **Assumptions:**
  1. The market for loanable funds is characterised by perfect mobility of funds throughout the market.
  2. Perfect competition in the market, so that each borrower and lender is a 'price-taker' one rate of interest.
  3. The single pure rate of interest (the equilibrium) which prevails in the market at any time.

# Loanable Funds Theory of Interest conti....

- The demand for loanable funds is derived from households wanting to buy final goods and services, firms wanting to invest and government seeking to fund a budget deficit.
- Government demand for loanable funds is not very sensitive to change in the rate of interest than household and firms.
- An increase in rate of interest will lower households' and firm's demand for loanable funds
- The demand curve for loanable funds slopes downwards
- The supply of loanable funds comes from savings. A higher rate of interest will increase the return from savings, so the supply curve is upward sloping.
- An increase in the supply of savings will lower the rate of interest and cause an extension in demand for loanable funds.
- It advocates that both savings and investments are responsible for the determination of the rates of interest in the long run.
- The determination of the interest depends on the availability of loan amounts which is based on the net increase in currency deposits, the amount of savings made, willingness to enhance cash balances and opportunities for the formation of fresh capitals.

# Loanable Funds Theory of Interest conti...



# Criticism of Loanable Funds Theory

1. It mis-specifies supply and demand of loanable funds. Savings are invested directly into physical assets by firms as well as households. Some cash balances are spent directly. Again not all investment is financed by borrowed funds; part of it is financed by owned funds. Funds are also borrowed for several purpose other than investment and hoarding is also for consumption spending, purchases of old financial and non-financial assets.
2. It ignores other factors that affect the determination of rate of interest like real income, prices, demand and supply of money and, in turn, is affected by them.
3. It is unrealistic as it assumes that all borrowing and lending is done through perfectly homogeneous bonds in one fully-integrated market. This is not true of even the most well developed financial markets, where a wide variety of loan contracts and instruments are used in several imperfectly-competitive and segmented markets.

# The Liquidity Preference Theory

- It is the Keynesian theory of interest determination.
- It says that interest rate is a purely monetary phenomenon, determined by the demand and supply of money in the money market.
- Interest rate is the payment for parting with liquidity/money at the same time the cost of holding money.
- The supply of money is determined by the monetary authorities and is fixed in the short-run.
- The demand for money has three motives, which are transactions motive, precautionary motive and speculative motive.
- The transactions motive is the desire to hold money to make everyday purchases and to meet everyday payments.

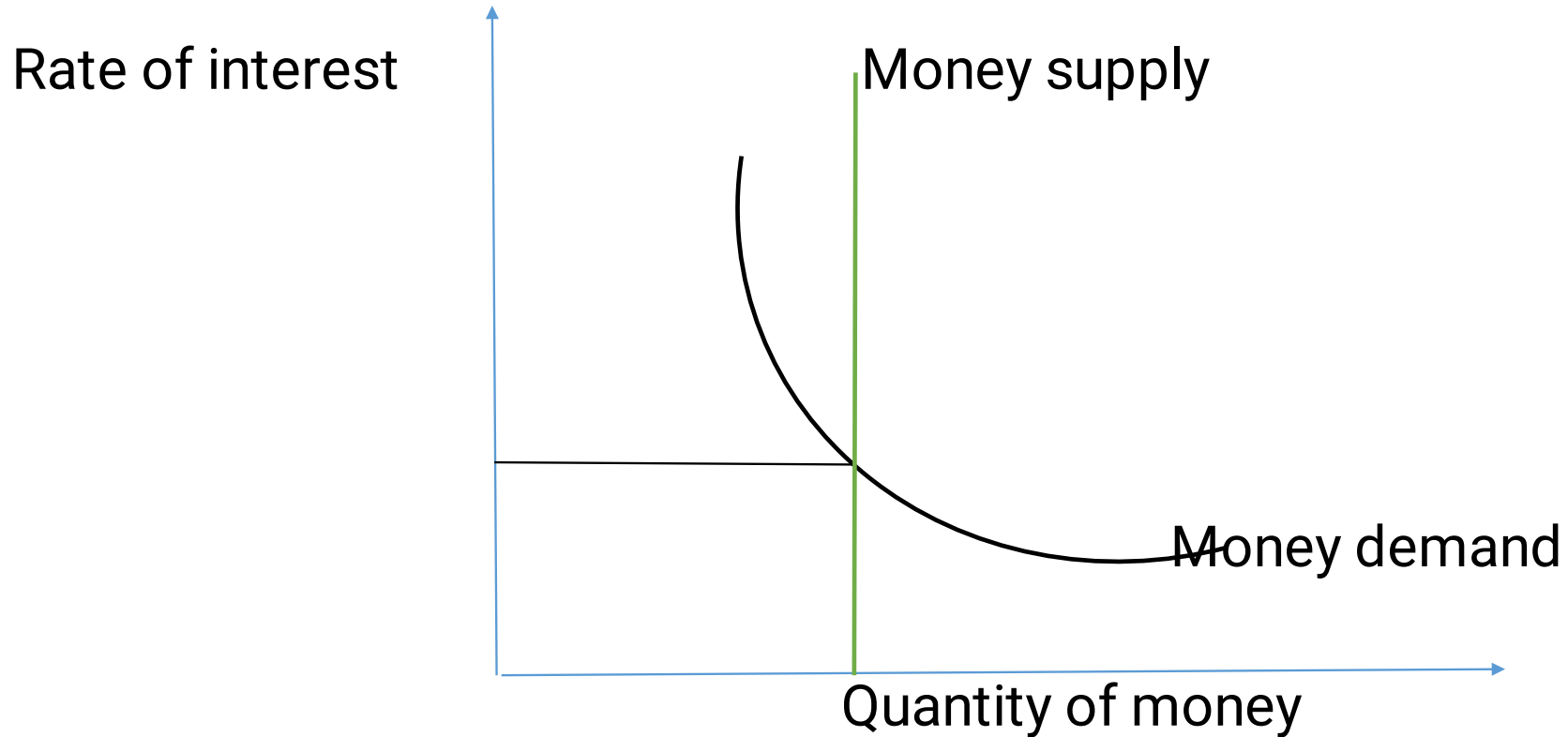
# The Liquidity Preference Theory conti...

- The precautionary motive the desire to hold money to meet unexpected expenses and take advantage of unforeseen bargains.
- The transactions and precautionary motives (active balances) are interest inelastic, that is does not respond to changes in interest rate.
- The speculative motive is the desire to hold money for investment purposes.
- The speculative motive (idle balances) is the desire to hold money for investment purposes.
- Households and firms hold money when they believe that the returns from holding financial assets (government bonds) is low and vice versa.
- The prices of government bonds (loans to government) and interest rates move in opposite directions.

# The Liquidity Preference Theory conti...

- Households and firms are likely to hold money when the price of bonds is high and expected to fall, since they don't forgo much interest and make capital loss.
- The speculative motive is interest elastic.
- The demand for money curve combine the transactions, precautionary and speculative motives.
- An increase in the money supply will cause a fall in the rate of interest, because households and firms have higher money balances than they want to hold.
- As a result they will use some money to buy financial assets.
- A rise in demand for government bonds will cause the price of bonds to rise and so the rate of interest will fall.

# The Liquidity Preference conti...





# Criticism of LPT

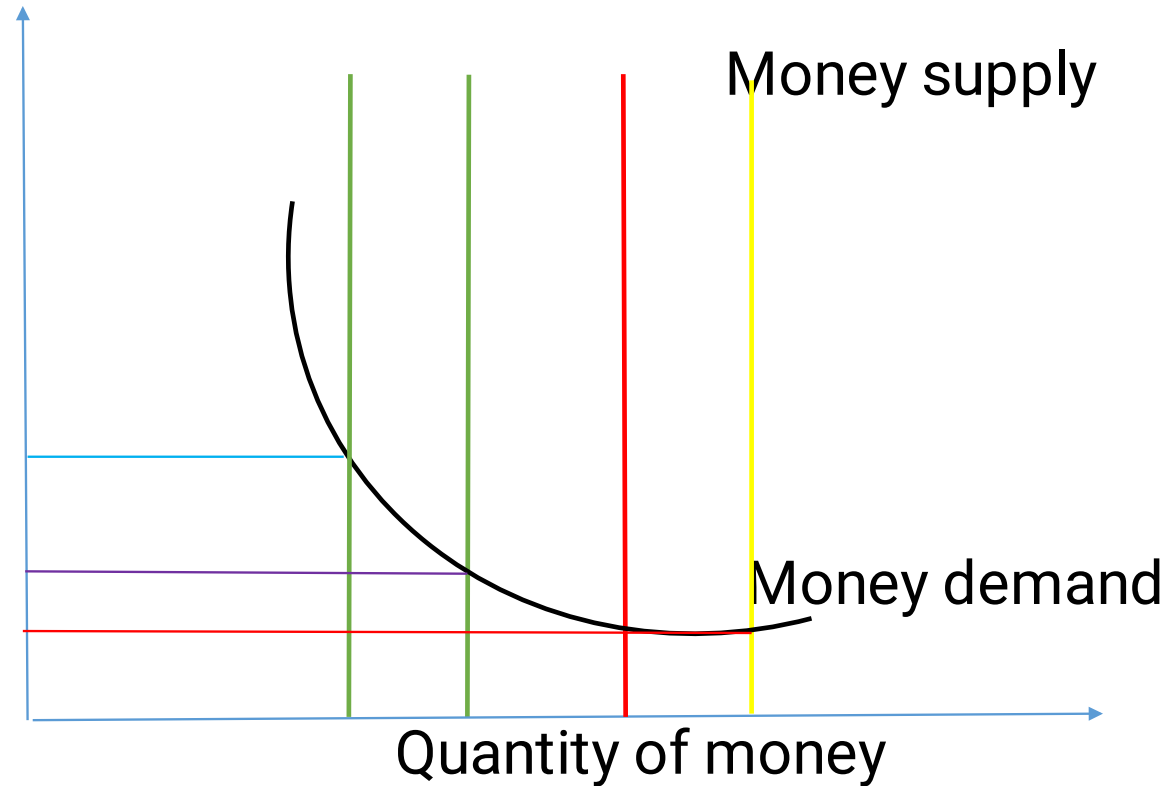
1. The rate of interest is not a purely monetary phenomenon, there real forces like productivity of capital and thriftiness which also play an important role in the determination of the rate of interest.
2. Liquidity preference is not the only factor governing the rate of interest. There are several other factors which influence the rate of interest by affecting the demand for and supply of investable funds.
3. This theory does not explain the existence of different rate of interest prevailing in the market at the same time.
4. It ignores saving or waiting as a source or means of investible funds. To part with liquidity without there being any saving is meaningless.
5. The Keynesian theory explains interest in the short run only. It gives no clue to the rates of interest in the long run.

# The Liquidity Trap

- It is expected that an increase in money supply will cause the rate of interest to fall.
- However this would not be possible and this is called the liquidity trap.
- It a situation where it is not possible to drive down rate of interest by increasing the money supply.
- It occur when the rate of interest is very low and the price of bonds very high.
- In this case speculators would expect the price of bonds to fall in the future, so an increase in money supply, speculators will hold all the extra money and no bonds.
- This is shown below.

# The Liquidity Trap conti...

- Rate of interest



# Inflation

- Refers to a situation in the economy where there is a general and sustained increase in prices.
- Is a situation in which the general price level is persistently moving upwards.
- It can be defined as a persistent relatively large increases in the general price level.
- **Hyperinflation**, runaway inflation, galloping are terms used to describe extreme form of inflation, where prices rise at very high rate, eg Zimbabwe 11 200 000 % in 2007.
- **Suppressed inflation** occurs where demand exceeds supply, but the effect on prices is minimised by use of price controls and rationing.
- **Creeping inflation** is a low level of inflation.
- **Deflation** is the process of a decline in the general price level.
- Inflation is the percentage change in the value of the Consumer Price Index (CPI) on a year-on year basis.
- It effectively measures the change in the prices of a basket of goods and services in a year from a consumer point of view.

# Measuring inflation rate

- Identify consumer basket of goods and services. It consist of different items individuals, family and businesses buy, for example average family of four.
- Calculate the weighted average of prices of items in the consumer basket based on the total amout spent (prices multiplied by quantities) for each period.
- Find inflation rate by calculating the percentage change in total amount spent from one period to another.
- Alterntively use index numbers.
- After calculating total amount spent in each period, choose the base year, calculate index for each per by dividing current year total spending by base year total spending multiplied by 100.
- Calculate inflation rate for each period by finding the percentage change in index from one period to another.

# Types/Causes of Inflation

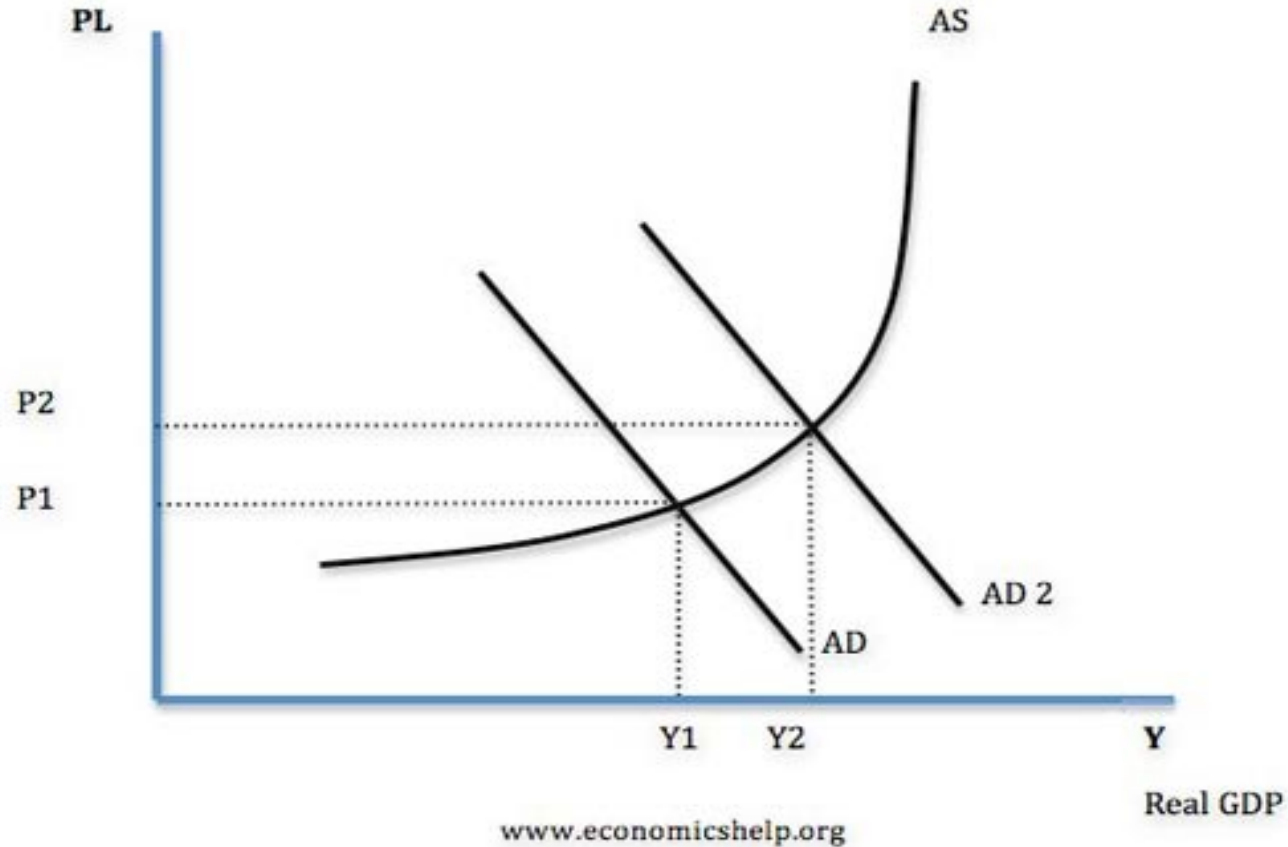
## Demand pull inflation

- It is caused by continuing rises in aggregate demand.
- It results from the existence of excess demand over supply or when aggregate demand exceeds aggregate supply at full employment, so that the general price level is pulled up.
- It is called demand pull because an increase in demand pulls prices upwards if the economy does not have spare capacity to meet these increased needs.
- Firms respond to a rise in demand partly by raising prices and partly by increasing output, and this depends on the availability of spare capacity.
- **Keynesian view** - States that an increase in  $C$ ,  $I$ ,  $G$  &  $(X-M)$  cause prices to increase, as long as the economy is currently at full employment.

# Demand-pull Inflation conti....

- **Monetarist view** - States that it result when money chases too few goods and services in the economy and the Quantity Theory of Money link inflation to changes in money supply.
- It is based on the interpretation of the equation  $MV = PT$ , where M is money supply, V is the number of times money changes hands (velocity), P is the price level and T is the output or transaction in the economy.
- It assumes V and T are constant, as they are not affected by changes in the money supply, it follows that a change in money supply causes an equal percentage change in the price level.

# Demand-pull inflation conti...





# Cost(supply)-push inflation

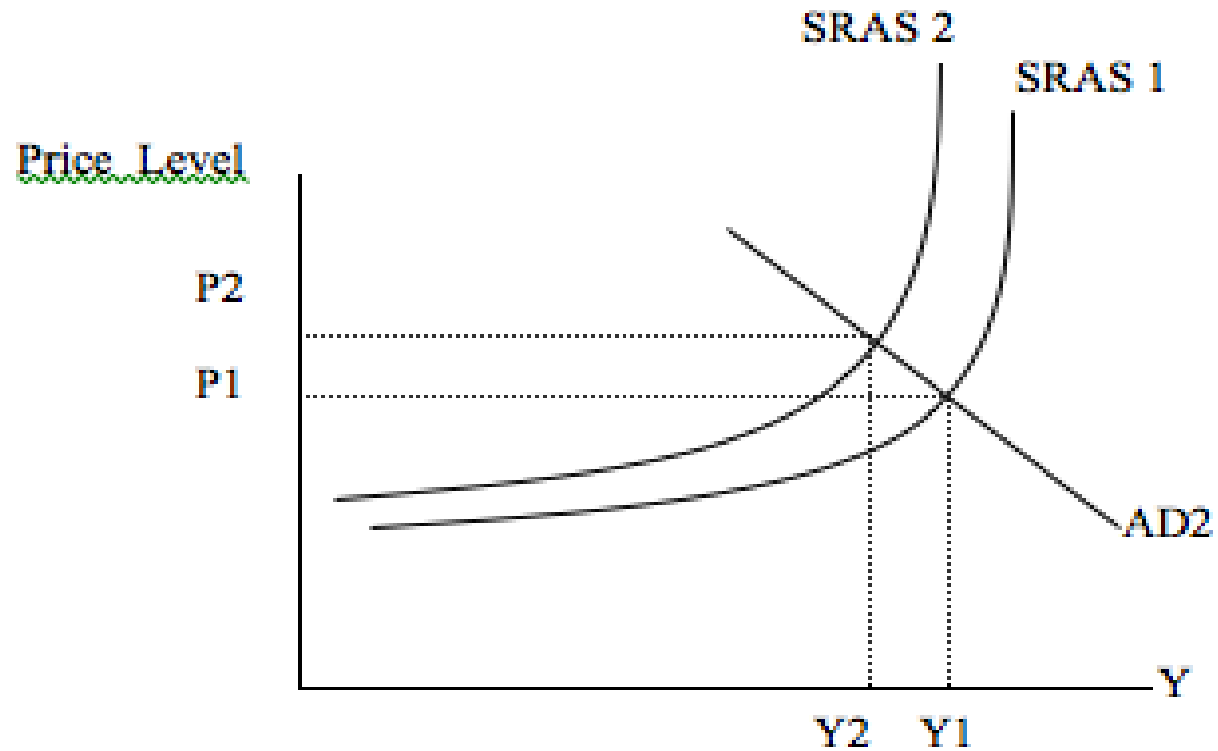
- It is inflation associated with continuing rises in costs of production, hence continuing leftward (upward) shifts in the aggregate supply curve.
- It describes a situation where the process of rising prices is initiated and sustained by rising costs which push up prices
- It is caused by an increase in the cost of production (prices of factor inputs) such as wages, interest, raw materials, fuel prices and exchange rate changes.
- The increase in costs of production lead firms to react by increasing the prices of final products.
- Causes include:
  - Supply shock (sudden decline in supply)
  - Wage-push inflation, where trade unions push up wages independently of the demand for labour.

# Types/Causes of Inflation conti....

- Wage-push inflation, where trade unions push up wages independently of the demand for labour.
- Profit-push inflation, where firms use their monopoly power to make bigger profits by pushing up prices independently of consumer demand.
- Import-price-push inflation, where import prices rise independently of the level of aggregate demand. An example is when OPEC quadrupled the price of oil in 1973 - 74.

# Inflation conti...

Cost Push Inflation



# Structural (demand shift) Inflation

- **Structural (demand-shift) inflation:**
- When the pattern of demand (or supply) changes in the economy, certain industries will experience increased demand and others decreased demand.
- If prices and wage rates are inflexible downwards in the contracting industries, and prices and wage rates rise in the expanding industries, the overall price and wage level will rise.
- The problem will be made worse, the less elastic is supply, to these shifts.
- Thus a more rapid structural change in the economy can lead to both increased structural employment and increased structural inflation.

# Effects of Inflation

- The costs of inflation may be relatively mild/low if inflation is kept to single figures. They can be very serious, however, if inflation gets out of hand.
- If inflation develops into 'hyperinflation', with prices rising by several hundred per cent or even thousands per cent per year, the whole basis of the market economy will be undermined.
- Firms constantly raise prices in an attempt to cover their soaring (increasing) costs. Workers demand huge pay, increases in an attempt to stay ahead of the rocketing cost of living. Thus prices and wages chase each other in an ever-rising inflationary spiral.
- People will no longer want to save money, instead they will spend it as quickly as possible before its value falls any further.
- People may even resort to barter trade in an attempt to avoid using money altogether.

Question: Explain effects of inflation on money ability to perform its function. [10]

# Effects of Inflation

- **Higher revenues and profits.**
- A low stable rate of inflation of between 1% and 3% allows businesses to raise their prices, revenues and profits, whilst at the same time workers can expect to see an increase in their pay. This can give psychological boost and might lead to rising investment and productivity.
- **Tax revenue.**
- The government gains from inflation through what is called 'fiscal drag effects'. For example many indirect taxes are ad valorem in nature, e.g. VAT at 20% - so as prices rise, so does the amount of tax revenue flowing into the Treasury.
- **Reduce the real value of debt.**
- Low stable inflation is also a way of helping to reduce the real value of outstanding debts. There are many home owners with huge mortgages who might benefit from a period of inflation to bring down the real burden of their mortgage loans. The government too might welcome a period of higher inflation given the huge level of public sector debt.

# Effects of Inflation conti.....

- **Avoiding deflation.**
- Inflation help an economy to avoid some of the dangers of a deflationary recession.
- **It reduces savings.**
- When inflation is high, people may lose confidence in money as the real value of savings.
- It is seen as a tax of holding money, therefore it encourages spending and borrowing, which increases the velocity of money and thereby reinforcing the inflationary environment.
- Therefore, savers will lose out if interest rates are lower than inflation, leading to negative real interest rates.
- **Wage-Price spiral.**
- Price increases lead to higher wage demands as people try to maintain their real living standards.
- **Shoe-Leather costs and Menu costs. Find out!!!!**

# Effects of Inflation conti.....

- **Redistributions of Income.**
- Inflation tends to hurt people in jobs with poor bargaining positions in the labour market, those with fixed income (bond interest) and fixed pension, to those who can use their economic power to gain large pay, rent or profit increases.
- For example people in low paid jobs with little or no trade union protection may see the real value of their pay fall.
- Inflation also favour borrowers at the expense of lender as inflation erodes the real value of existing debts.
- It redistributes wealth to those with assets (property) that rise in value particularly rapidly during periods of inflation, and away from those with types of savings that pay rates of interest below the rate of inflation and hence whose value is eroded by inflation.



# Effects of Inflation conti.....

- **Uncertainty**
- Inflation can disrupt business planning. Budgeting becomes difficult because of the uncertainty created by rising inflation of both prices and costs and this may reduce planned investment spending.
- It cause uncertainty among the business community. It make it difficult for firms to predict their costs and revenues, they by discouraged them from investing.
- Uncertainty discourages investment and savings as firms and individuals would not sure what would happen to their money in the future.
- This will reduce the rate of economic growth. On the other hand, policies to reduce the rate of inflation may themselves reduce the rate of economic growth, especially in the short run.
- For example contractionary fiscal policy (reduction in government spending and an increases in taxes) reduces inflation at the same time decreasing aggregate demand.
- This may then provide the government with a policy dilemma.

# Effects of Inflation conti.....

- **Reduce competitiveness and leads to unemployment**
- Inflation is a possible cause of higher unemployment (closure of companies) if one country experiences a much higher rate of inflation than another, leading to a loss of international competitiveness (expensive exports).
- **Balance of payments imbalances.**
- Inflation is likely to worsen the balance of payments deficit. If a country suffers from relatively high inflation, its exports will become expensive world markets.
- At the same time, imports will become relatively cheaper than home-produced goods. Thus exports will fall and imports will rise.
- As a result, the balance of payments will deteriorate and/or the exchange rate fall. Both of these effects can cause problems.

# Effects of Inflation conti.....

- **Waste of resource.**
- Extra resources are likely to be used (wasted) to cope with the effects of inflation.
- Accountants and other financial experts may have to be employed by companies to help them cope with the uncertainties caused by inflation.
- Government will have to employ macroeconomists and engage financial institutions like likely IMF and World bank to assist in dealing with inflation.

# Policies to solve Inflation

- These policies can be directed towards the control of either aggregate demand or aggregate supply, and hence are referred to as demand-side and supply-side policies respectively.
- **Demand-side policies:**
  - Contractionary (fiscal and monetary policies.)
- **Supply-side policies:**
  - Expansionary (fiscal and monetary policies.)
- **Price and wages controls**

# Demand-side policies to solve Inflation

- These are policies meant to reduce inflation by reducing aggregate demand.
- There are two types of demand-side policy: **fiscal policy** and **monetary policy**
- **Fiscal policy**
  - involves changing government spending and/or taxation.
  - Contractionary (deflationary) policy: Decreasing aggregate demand by
    - decreasing the government expenditure (salaries, consumption and production subsidies etc) or
    - increasing taxes (income tax & corporate tax), hence decreasing consumer expenditure and producers spending on inputs.

# Fiscal policy conti....

- This decrease in aggregate demand will close the inflationary gap or reduce inflation.
- However it;
  - ✓ Reduces purchasing power, further reduces economic growth.
  - ✓ Reduces savings and investment.
  - ✓ Reduces producer income leading to low production.
  - ✓ Act as a disincentives to work.

# Monetary policy

- It involves changing money supply and manipulating interest rates in the economy.
- Contractionary policy reduces aggregate demand by;
  - reducing money supply, making less money available for spending and increasing interest rates, making borrowing more expensive.
- However;
  - ✓ Low interest rates discourages savings.
  - ✓ Sale of government bonds may find no takers and is based on government's ability to pay back.
  - ✓ High reserve requirement reduce credit creation leading to low economic activities or economic growth.

# Moral suasion

- Is a practise where the central bank persuade the private sector to behaviour in a particular way that will help to achieve its desire goals.
- It makes its policies known and tries to put some pressure and threats on non compliance.
- However,
- ✓ Its success is based on mutual understanding and policy consistence of the central bank.



# Supply-side policies to solve Inflation

- These are policies aim to reduce the rate of increase in costs to affect aggregate supply.
- **Expansionary (reflationary) fiscal policy** increase aggregate supply by;
  - increasing government spending (incentives &/subsidies to workers producers) and
  - decreasing taxes (income tax & corporate tax) to increase productivity, hence increasing production. This will increase output to close the inflationary gap.

# Supply-side policies to solve Inflation conti...

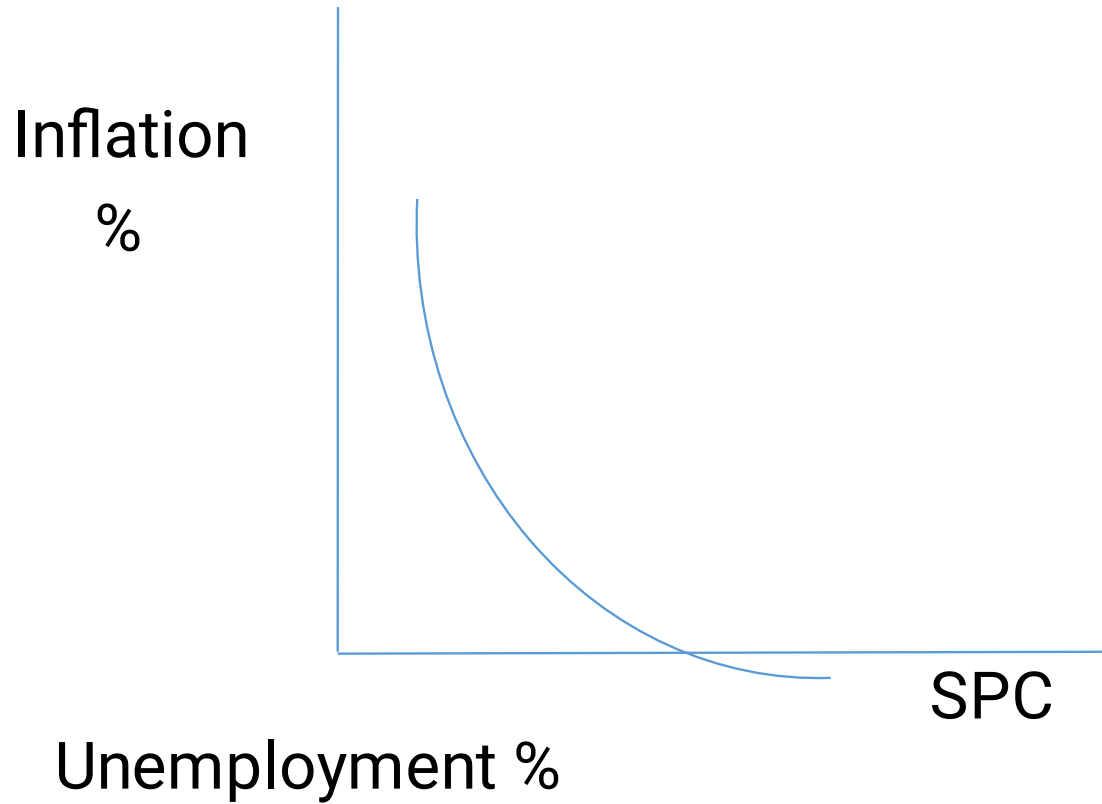
- However;
  - ✓ Government does not have the money to increasing spending and cut taxes or limited fiscal space.
  - ✓ It can be inflationary.
  - ✓ Subsidies can be abuse, because of corruption.
  - ✓ An economy can operating at full employment where there is no space capacity.
- Restraining monopoly influences on prices and incomes, through policies to restrict the activities of trade unions and restricting mergers and take overs. However, prices and wages are inflexible downwards.

# Phillip's curve

(Relationship between inflation and unemployment)

- Economists have found out that, historical unemployment tended to be low in years where nominal wages were growing rapidly and higher where nominal wages were growing slowly.
- Phillip's curve shows an inverse relationship between inflation (indicated by changes in money/nominal wages) and unemployment.
- A fall in unemployment may cause higher inflation due to the extra aggregate demand generated and the possible upward pressure on wages.
- The Phillip's curve suggests that a government can select its optimum combination of inflation and unemployment and can trade off the two/twin evils (undesirable) of macroeconomics.
- This is shown in the diagram below.

# Phillip's curve conti...



# Phillip's curve conti...

- However the policy implication of the Phillip's curve is questioned by monetary economists especially Milton Friedman.
- Whilst there may be short-run trade-off, in the long-run expansionary fiscal or monetary policies will have no impact on unemployment, but will only succeed in raising the inflation rate.
- Friedman developed the expectations-augmented Phillip's curve/ Long-run Phillip's curve, showing that an increase in aggregate demand does not succeed in reducing unemployment.
- In the short-run the economy will be able to trade-off, unemployment decreasing to 4% and inflation increasing to 5%.
- Firms will expand their output and more people are attracted into labour force as a result higher wages.

# Phillip's curve conti...

Firms and workers will not suffer money illusion in the long-run, but will take time to adjust their expectations to changes in prices and money.

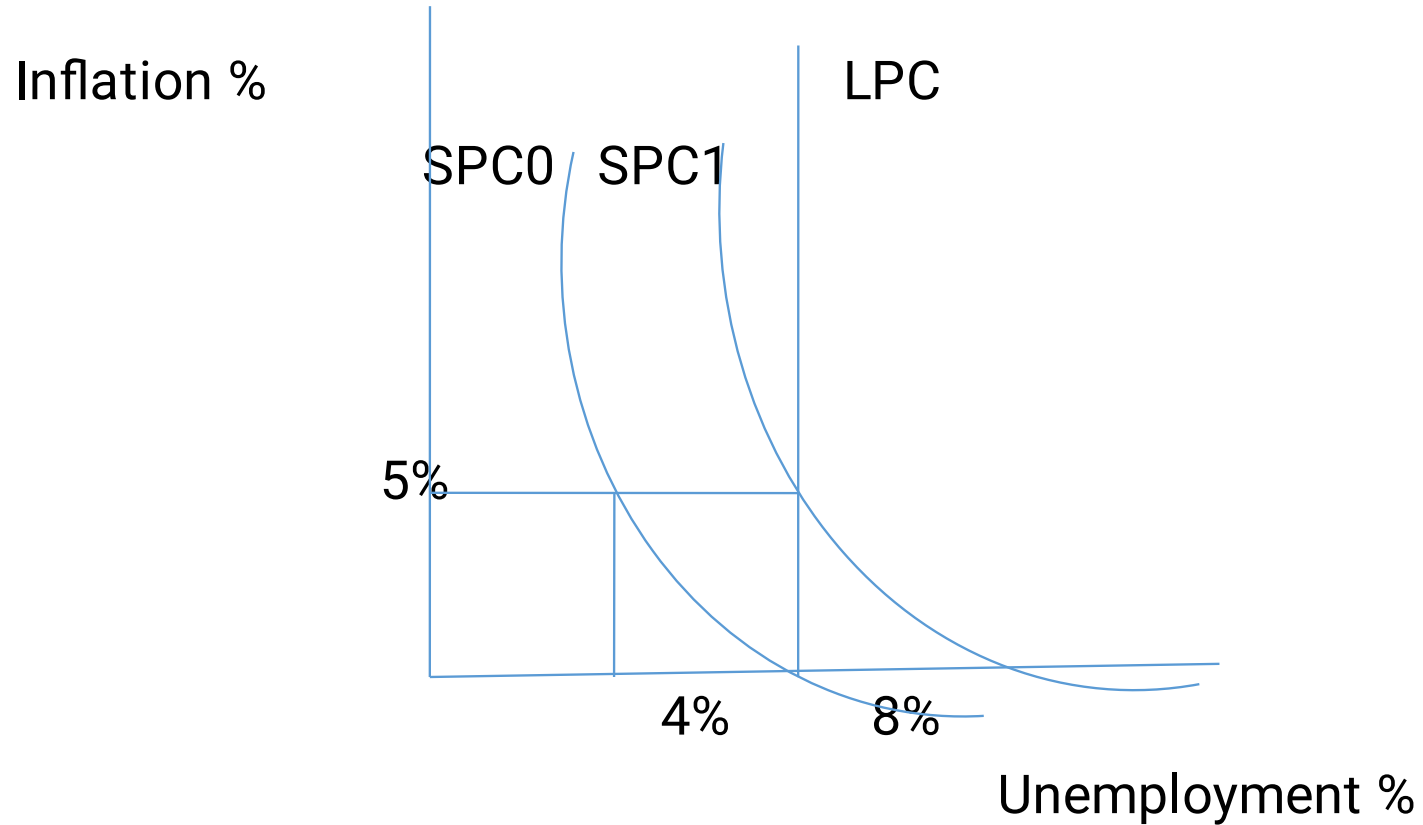
When they realise that their costs have risen and real profits are unchanged, they will cut back on their output.

Some workers, recognising that real wages have not risen, will leave the labour force.

The economy will move to a higher Short-run Phillip's curve SPC1 (shown below), with unemployment returning to 8% in the long-run but inflation of 5% has now been built into the system.

Firms and workers will presume that inflation will continue at 5% when deciding on their prices and putting in their wage claims. In this case expected inflation will be equal to actual inflation.

# Phillip's curve conti...



# Unemployment

- People are unemployed when they are able and willing to work but cannot find a job.

## **International Labour Organisation (ILO) definition.**

- Number of all people of working age in a specified period who actively seeking paid employment and available to start work.
- Number of people who are willing and able to work but are currently unemployed.

## **Claimant definition.**

- Any one between ages of 18 to 60 receiving an unemployment benefits, such as job-seekers' allowance.



# Unemployment conti...

Formula

$$\text{Unemployment rate} = \frac{\text{unemployed}}{\text{Total labour force}} \times 100$$

- Labour force consist of the unemployed and the employed.
- Working age group consist of the economically active.
- Full employment or natural rate of unemployment or non-accelerating inflation rate of unemployment (NAIRU) is the level of unemployment which exists when the aggregate demand for labour equals the aggregate supply of labour at the current wage rate and so that there is no upward pressure on the wage and the price level.

# Types/Causes of Unemployment

Frictional

Structural

Cyclical/Demand Deficiency

Technological

Seasonal

Voluntary

Residual

# Types/Causes of Unemployment conti...

## Frictional unemployment

It arises from geographically and occupationally immobility of labour.

Labour is not perfectly geographically mobile. Some people remain unemployed despite the availability of jobs in other parts of the country, where they are not willing and prepared to go and work or can not afford to travel.

Labour is also not perfectly occupationally mobile. Some people remain unemployed despite the fact that there are jobs available requiring skills and qualifications which they do not possess.

It also arises when workers are between jobs, where they do not take the first job offer, but spend time looking for a better paid job.

# Types/Causes of Unemployment cont...

## Structural Unemployment

It arises from imbalances or fundamental changes in the structure of the economy or company.

Over time the demand and supply patterns changes. Some industries expand and others contract/decline and cut down the labour requirements. A company can restructure and downsize its worker force or eliminate some departments.

It also arises when workers lose their jobs because of demand switches from their industries to more competitive foreign industries.

In many developed economies manufacturing industries move to developing countries where labour costs are lower. For example many USA companies have relocated production facilities to China where labour is cheaper.

# Types/Causes of Unemployment conti...

## **Cyclical/Demand Deficiency Unemployment**

It arises as a result of lack of or inadequate aggregate demand in the economy.

Aggregate expenditure will be insufficient to achieve full employment, resulting in a deflationary gap.

There will be no need for firms to employ more workers because of low demand for their products.

## **Technological Unemployment**

It arises from the introduction of technology or capital intensive methods of production, which replaces labourers.

Some people lose their jobs due to the introduction of labour-saving techniques, like the introduction of telephone and internet banking.

# Types/Causes of Unemployment

## **Seasonal Unemployment**

It occurs in those industries with marked seasonal patterns of demand like tourism, construction and agriculture.

They tend to flourish in certain time of the year, therefore demand for workers fluctuates according to time of the year. Workers are out of work between periods of employment, like actors and construction workers.

## **Voluntary Unemployment**

It arises when some people deliberately do not want to work. It is most common in developed countries where people inherit wealth from their parents.

It also due to low wage rates which discourages people.

# Solutions to Unemployment

## Frictional Unemployment

Improve transport infrastructure to make it easy and cheaper for people to travel. Improve communication and access to information to job seekers, such as job centres. Retraining of workers in required skills.

Cut unemployment benefits to discourage long time taken searching for better paid job.

However:

All the above needs money which government might not have. Strong family ties and high relocation costs might make people reluctant to relocate. Retraining of workers might face resistance from some workers

# **Solutions to Unemployment cont...**

## **Structural Unemployment**

Introduction labour policies that include better schooling, improvement in quality of education, on the job training, vocational training, apprenticeship and graduate trainee programmes. Government to increase its expenditure giving subsidies to industry.

However:

Government does not have fiscal space for subsidies to revive struggling industries.

## **Seasonal Unemployment**

Increase the time the industry operates, such as irrigation, crop rotation.



# Solutions to Unemployment conti...

## **Cyclical Unemployment**

Use expansionary fiscal and monetary policies to revive industries by increasing aggregate demand, such reducing taxes, increasing expenditure and money supply.

However:

Government has no fiscal space.

Expansionary policies are inflationary.

## **Voluntary Unemployment**

Increase the wage rate to attract people to work. However it increases production costs, therefore it leads to cost push inflation.

Increase inheritance tax.

# Effects of Unemployment

**Low country's output than potential level** – unemployment results in reduce output as fewer are goods and services are demanded. Labour and capital (plant size) is utilised and this lowers output. Underutilised labour for a long period loss their human skills, as they because rusty and loss out on training in new methods and miss on training and work experience.

**Burden to the fiscus or government budget** – government has to increase its spending on measures to reduce unemployment, unemployment benefits and social services.

**Low tax revenue** – government ability to raise tax revenue as many people have no source of income.

# Effects of Unemployment conti....

**Social unrest and political instability** – substantial unemployment leads to conditions of social unrest and political instability. This happens as trade unions and the unemployed conform government demanding employment. For example the Arab unrest. Opposition political parties also take advantage of the situation of high unemployment.

**Personal and psychological costs** – unemployed lose self esteem and stress. They also loss social standing or status as, they is social stigma is attached to being unemployed. Others can experience divorce, nervous breakdown, bad health and are more likely to commit suicide.

**Poverty and increase in crime rates.**

# International trade

Is the exchange of goods and services among economic agents of different countries. It involves the buying and selling of goods and services across national boundaries.

It is subjected to restrictions such as tariffs, quotas and exchange rates. Countries are involved in trade because of the following reasons

1. There is diversity of natural resources endorsement which determine the productive possibility of a country. For example economies which have naturally occurring resources such as climate can exploit these and trade on the world market.
2. Countries have differences in tastes for goods and services, which are not available in their countries.
3. There are differences in costs of production, some countries enjoy economies of scale in production. This enable countries to benefit from specialisation.
4. Countries are economically dependent on each other for raw materials and final products. The well-being of an economy affects the well-being of other economies. This is indicated by the large contribution of imports and exports in the country's GDP.
5. There is need to exchange goods and services between developed and developing countries

# Principles of International trade

## **Absolute advantage** (Adam Smith)

International trade should be based on absolute advantage, that is a country should specialise in the production of product where it has absolute advantage.

A country has absolute advantage if it can produce more output than the other country using the same resources. It assume that;

- there are two countries producing two commodities.
- production and opportunity costs are constant.
- there are no trade barriers and transport costs.
- productivity differs between the two countries so different output is produced.

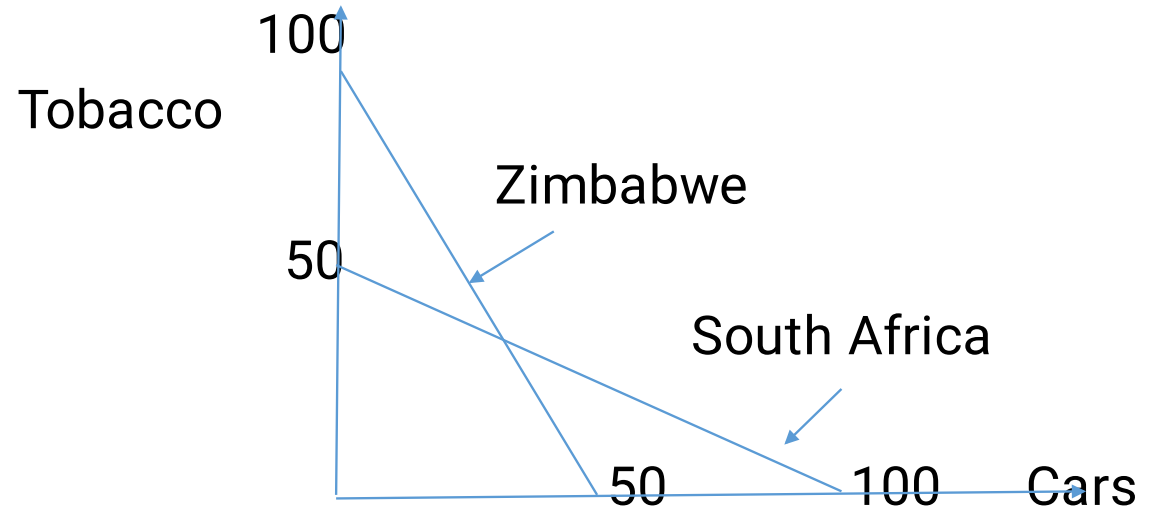
Specialisation makes trade beneficial to both countries, as it result in efficient production and more output of both goods and increased consumption.

Assume two countries Zimbabwe and South Africa producing cars and tobacco using 100 workers. In Zimbabwe a worker can produce 2 tonnes of tobacco or 1 of a car in a given period, while in South Africa a worker can produce 1 of a ton of tobacco of 2 cars in a given period.

# Principles of International trade conti...

If each country use half of workers to produce each product, Zimbabwe will produce 100 tonnes of tobacco and 50 cars, whilst South Africa 50 tonnes of tobacco and 100 cars. So the total world output is 150 tonnes of tobacco and 150 cars as shown below.

	Tobacco	Cars
Zimbabwe	100	50
South Africa	50	100
Total output	150	150



Zimbabwe has absolute advantage in the production of tobacco and South Africa in the production of cars, therefore Zimbabwe should specialise in producing tobacco and South Africa in cars.

# Principles of International trade conti...

If each country specialise in the production of good where it has absolute advantage Zimbabwe will produce 200 tonnes of tobacco and 0 cars, whilst South Africa will have 0 tonnes of tobacco and 200 cars. So the total world is 200 tonnes of tobacco and 200 cars as shown below.

	Tobacco	Cars
Zimbabwe	200	0
South Africa	0	200
Total output	200	200

Therefore specialisation based on absolute advantage benefit both countries and increases world output of both goods to 200.

# Principles of International trade conti...

## Comparative Advantage (David Ricardo)

International trade is still possible even if one country has absolute advantage in both goods. According to David Ricardo international trade should be based on comparative advantage rather than absolute advantage.

Assuming same assumption as the absolute advantage, a country has comparative advantage country over another in the production of a good if it can produce it at a lower opportunity cost, that is if it has to forgo less of other goods in order to produce it. This is shown below.

	Tobacco	Cars
Zimbabwe	100	50
South Africa	200	400
Total		

Opportunity costs	Tobacco (tonnes)	Cars
Zimbabwe	1ton: $\frac{1}{2}$ cars	1car:2 tonnes
South Africa	1ton:2 cars	1 car: $\frac{1}{2}$ ton



# Principles of International trade conti...

In the table above Zimbabwe has comparative advantage in the production of tobacco and South Africa in the production of cars. Therefore Zimbabwe should specialise in producing tobacco and South Africa on cars.

## **Criticisms of the two principles.**

The assumption of two countries and two commodities is not realistic, as there are many countries producing a variety of products.

However it can be justified in that countries can be group into two: developed and developing countries and products classified into two: industrial and agricultural products or services(intangible) and goods(tangible)

The principles ignores prices of the products and make conclusions based on physical units only.

The assumptions of no transport costs and barriers of trade are unrealistic. There are many trade barriers like tariffs and quotas imposed the countries individual and as trading group.

Comparative advantages always change as new methods of production are developed and market conditions changes.

# Free Trade versus Protectionism

**Free Trade** – is the free flow of goods and services among countries to achieve gains of specialisation. It no restriction on imports and exports.

**Protectionism** – is the restriction of international by preventing consumers and sellers reaching the equilibrium price and quantity that would prevail in a market free market.

## Methods of Protectionism/Barriers to trade

**Customs duties** – these are taxes imposed on imported products. Their effect is the same as the taxes by artificially raising prices of foreign products as the enter a country. The aim is to reduce competition to local producers and increase consumption of domestic products. However customs duties are effective if import demand is elastic and there are substitutes. Again a country whose products customs duty have been imposed can retaliate by counter imposing customs duties on the first country's exports.

**Embargo** – it a complete ban of imports and or exports of specific commodities from certain countries. It placed physical limit of imports or exports to zero. It is based on economic, moral/human rights, health and political grounds among other reasons. For example Zimbabwe once imposed a ban on certain South African chicken company for health reasons (it was reported that the company was recycling the chickens it

# Barriers to trade conti...

**Quotas** – are restrictions on the maximum quantity of imports/exports at given period. They are meant to reduce imports and exports and promote consumption of domestically produced products. Quotas reduce supply of imports. However they create shortages of the good in question in the domestic market, thereby leading to an increase in the price.

**Export subsidies** – these are negative taxes, where government absorb or meet some of the costs of production faced by firms. It is meant to improve the country's export competitiveness.

**Voluntary exports restraint (VER)** – this is an agreement between or among trading countries to restrict the volume of its exports of certain goods to each other. Its effective is based on mutual trust among trading countries.

**Exchange control** – this where government manipulate the exchange rate to protect its companies from foreign completion. This is done by devaluation of the local currency to make imports relatively expensive while making exports relatively cheaper. Its effectiveness is dependent on the elasticity of exports and import demand (Marshal-Leaner condition)

It can be done by setting legal limits on the dealings in foreign currency that a country' citizens and business can make. Importers are limited in their access to currency, therefore imports will fall. However customers would duffer from high domestic prices.

# Gains from international trade/Augments for Free trade

## **Increased variety of products**

International trade increase the number of producers to choose from. Consumers in developing countries have increasing variety of products to choose from, such as Nestle, Coca-Cola, Toyota etc. most of products are not made in their own countries and benefit from increased competition in the form of lower-priced goods.

## **Increased market opportunities**

Bigger world market give domestic firms an opportunity to expand production, enabling them to enjoy economies of scale than when trade is restricted, as they can purchase raw materials and components parts more easily and cheaper.

## **Increased efficiency and quality of products**

International trade increases the level of competition to companies, so companies are compelled to perform more efficiently and produce products of high standards. It also exposes domestic producers to the best practices in business.

## **Technological transfers and diffusion**

International trade leads to interaction of firms and government making it possible to exchange ideas and technical knowledge, especially from developed to less developed countries. They get access to improved capital inputs to improve their own productivity.

# **Gains from international trade/Augments for Free trade conti...**

## **Promotes bilateral and multilateral relationship**

International trade promotes strengthen political and socio-economic relationships among countries.

## **Re-allocation of resources**

Free trade has led to a substantial re-allocation of resources in the world economy. This has seen an ongoing shift in the manufacturing activity from industrial countries to developing economies. Resources are optimal allocated on a world scale and economic welfare of consumers has risen.

# Augments for protectionism

## **To protect employment in the home economy**

Import penetration ratio is the proportion of the domestic sales of a product which is taken up by imports a higher ratio means more money is spent on imports. As the import penetration rises, domestic firms come under increasing pressure to maintain sales. The less successful will have to lay off workers and some may close down completely. This will lead to structural unemployment.

International trade leads exportation of jobs. Multinational companies relocate production facilities to economies that has cheap labour, thereby exporting jobs. Developing countries mainly export unprocessed products, which could be processed in the country.

However, there is no real economic justification in favour of import controls to protect jobs. Labour is resource it must be swiftly allocated and reallocated to its best use. Therefore flood of cheap imports should be welcomed as a benefit to the consumer rather than seen as a threat to jobs.

## **To collect BOP deficit**

Protectionism policies help to correct BOP deficit. They include raising income taxes and interest to prevent consumers purchasing imports or dampening expenditure. However these policies reduce consumer spending on the output of domestic industry, therefore leading to unemployment.

# Augments for protectionism conti...

## **To prevent dumping**

It is a process of selling goods in an overseas market at a below the cost of production. This is a form of price discrimination because home market consumers pay lower prices than overseas market. The purpose of dumping is to destroy existing competition and to prevent establishment of new firms in the overseas market in order to create a monopoly.

Dumping can be supported by government export subsidies or a company prepared to suffer losses in the short-run allowing it to destroy competition and increases profit in the long-run.

However, dumping leads to anti-competitive behaviour in the long-run and prevents realisation of comparative advantage. On the other hand low import prices are a reflection the greater efficiency of the exporting company.

## **To safeguard infant industries**

Establishing new/sunrise industries can be difficult in the early years especially if a new firm faces competition from long-established overseas company. Firm with small market share has no potential to earn economies of scale and compete in the market. Long-established firm drive small firms out of business by cutting prices in order to retain market share.

However protectionism is justified if the infant industries does not have the potential of developing to a less efficient producer in line with comparative advantage.

# Augments for protectionism conti...

## To prevent the exploitation of labour in the developing economies

It is claimed that products are because labour in the exporting countries is paid a very low wage. Firms in the importing country cannot compete with cheap imports because they have to pay higher wages. Therefore import controls are required in order to protect jobs.

However, import controls have no economic justification whatever. If labour is cheap in an economy, it reflects an economy's factor endowment. A large supply of unskilled labour will lead to low wages and low priced products. This according to principle of comparative advantage.

In addition, reducing imports from such countries is likely to worsen the problem of low wages. A fall in the demand for imports from such countries will reduce demand for labour further and make wages rates fall even lower.



# Economic integration

Is the process of forming trading blocs.

It can be defined as the joining together of economies with the purpose of stimulating trade and obtain benefits of economic cooperation.

It involves deliberate ways in which national economies agree to merge their economic affairs into a single economic organization. SADC, COMESA etc.

## **Forms of economic integration**

Preferential Trade Agreement

Free Trade Area

Customs Union

Common Market

Economic Union

# Economic integration

## Free Trade Area

Is the grouping of countries which have agreed to remove or abolish trade barriers like tariffs and quotas, on trade among themselves.

In practice barriers are abolished on just for just a selected range of product types. Each country maintain its own independent restrictions on imports from non-members.

## Customs Unions

This a grouping of countries who have agreed to remove trade barriers among members and in addition members establish common external tariffs on trade from non-members.

This tariff may be on all trade or mainly on imported product which member states are able o adequately produce.

# Economic integration conti...

## **Common Market**

It is a grouping of countries who have removed trade barriers, established common external tariff and allow free movement of factors of production especially labour among member states.

It also include developing various common policies in areas of agriculture, transport, regional and social affairs.

## **Economic Union**

It has all the characteristics of a common market and in addition members adopt common economic policies.

These include common fiscal and monetary policies, such as establishment of a common/one central bank that coordinate common monetary policies like common currency. For example European Union.

# Aims of Economic Integration

- Elimination of trade barriers on goods and services among member states.
- Establishment of a common customs tariff and common commercial policy towards non-member countries.
- Assist each other in times of crisis.
- Removal of barriers to free movement of persons, services and capital among member states.
- To promote specialization.
- To gain bargaining power in trade negotiations(lock-in effects).

# Economic Integration Questions

- 1 Explain the terms free trade area and common market. [10]
2. With the aid of examples describe;
  - (i) free trade area,
  - (ii) customs union and
  - (iii) common market. [12]
3. Explain the idea behind economic integration of countries such as COMESA. [10]
4. Comment on the benefits Zimbabwe could get by joining an economic grouping. [13]

# Desirability of Economic Integration

Desirability of economic integration is evaluated using the concepts of trade creation and diversion.

## **Trade creation**

Occurs when a less efficient producer outside the trade bloc is replaced by a more efficient producer within the trading bloc.

For example, before formation of SADC Zimbabwe was trading with India producer facing higher prices. After the formation of SADC Zimbabwe switch to a more efficient producer in South Africa facing lower prices.

## **Trade diversion**

Occurs when a more efficient producer outside trading bloc is replaced by a less efficient producer within a trading bloc.

# Desirability of Economic Integration conti...

## Possible Benefits

**Greater specialization and economies of scale** - economic integration enlarge home market, thus enabling more efficient producers to achieve much larger scale of production and produce at lower costs.

It makes it easier to operate joint industrialization programs among countries, thus increase the industrial output.

**Greater competition** – removal of trade barriers allows better application of comparative advantage principle. Regional cost differences are in market prices which enable efficient firms to expand. This means resources allocation will be determined by relative efficiencies in a trading bloc other than protectionism.

**Increased trade** – integration promotes larger scale production, more competition and industrial efficiency, thus increasing trade among countries.

# Possible benefits conti...

**More investment** – trading blocs are a means for faster rate of economic growth of all members, as it tend to pull more investment funds to the bloc. More funds are provided to develop less developed parts of the bloc. However, investment is not evenly distributed, as investors are attracted to countries which have required or necessary business environment, such better transport and communication infrastructure.

**Increased trade** – integration promotes larger scale production, more competition and industrial efficiency, thus increasing trade among countries.

**Raising expectations** – the knowledge that the business is operating in a large market, may make investors more optimistic and encourage them to undertake more investment both for the purposes of mordenisation and expansion.



# Possible costs

**Diseconomies of scale** – access to large market may cause firms to expand too far beyond their capability and start experiencing rising costs per unit.

**Unemployment** – integration can result in unemployment, as firms move from less developed parts of the bloc in search of better infrastructure.

**Administrative costs** – operating a trade bloc involve high administrative costs, such as sharing of revenue from common external tariffs. This will lead to bureaucracy.

**Reduced revenue** – integration can lead to reduced revenue from common tariffs as compared to before the integration.

# Balance of Payments

It is a record of all the transactions of a country with the rest of the world over a given period. It can also be defined as the record of financial of international transactions.

It adopts a double entry bookkeeping accounting system that consist of debit (inflows) and credit (outflows) of financial assets. If a resident of a country sells goods and services abroad, this is entered as an inflow (+), while if a resident buys goods and services from abroad this is entered as an outflow (-). It consist of current account, capital account and statistical discrepancy or errors and omissions.

## **Current account**

It is a record of all transactions arising in trade of goods and services and income accruing to residents of a country and transfers.

It consists of visible trade (exports and imports of goods) and invisible trade (exports and imports services like insurance, banking and tourism).

Income include employment income and investment income (interest, dividends and profits)

Transfers include gifts and grants.

# Balance of Payments conti...

## **Capital account**

It is a records of transactions of trade in financial assets and liabilities. It relates to ownership of financial instruments such as government bills, company shares, debentures, bank loans, short-term and long-term investment. The major components are portfolio and foreign direct investment

Portfolio investment is investment in another country in bonds or minority shareholding that does not lead total control and ownership. Foreign Direct Investment is the investment that lead to change in control and ownership of business.it includes long-term investment by establishing factories or buying existing companies in foreign countries.

## **Errors and omissions/Statistical discrepancy**

It include those items that are not recorded or errors of measurement. Sometimes it is called balancing item, representing all the unrecorded transactions and is defined to be equal to the difference between measured current account and capital account.

In practice the sum of current account and capital account and net errors and omission are always to zero by construction.

# Balance of Payments conti...

	Debit	Credit
Current account		
Visible trade: exports		xxxxx
imports	xxxxx	
Invisible trade: exports		xxxxx
imports	xxxxx	
Income: employment		
investment		
Transfers: grants, and gifts		
Balance of current account		xxxxxx
Capital account: portfolio investment		
foreign direct investment		
reserves		
Balance of capital account		xxxxxx
Net errors and omissions		<u>xxxxxx</u>
BOP surplus/deficit		xxxxxx

# Imbalances Balance of Payments

BOP account is presented as a balancing sheet therefore it must balance. Total outflow must be equal to inflow or sum of debits and credits must be zero.

The term surplus or deficit refers to the manner in which the account has been balanced. If outflows/debit items are greater than inflows/credit items, it is said to be a BOP deficit. If outflows/debit items are less than outflows/credit items it is said to be a BOP surplus.

The deficit is one of concern to government because of its negatives effects. the deficit in most cases arises from the current account, where high income level in the home country lead people to demand more imports and domestic commodities, thereby reducing exports.

# Imbalances Balance of Payments

## Consequences of BOP imbalances

The effects depends on the size, cause and duration of the deficit and surplus.

In the short-term, a deficit will increase the living standards of a country's citizens, because they will be consuming more goods and services than a country can produce. For example Zimbabwe just before the dollarization in 2009.

If the deficit is not covered by an inflow of overseas investment, it will have to be financed by drawing on reserves of foreign currency or borrowing. Drawing on reserves can be finished and borrowing and attracting foreign investment involves outflow of interest payments, repatriation of profits and dividends of out of the country.

A surplus involves a net injection of extra demand in the economy and it is seem as a sign of economic strength. It means domestic production has improved. A country will be consuming more domestic output. A surplus may add to inflationary pressure as it involves net inflow of money and a net outflow of goods and services.

# **Solutions to Balance of Payments deficit**

## **Exchange rate manipulation/Devaluation**

It is a deliberate policy of government to lower the value of its currency. This is done with the aim of making imports expensive to domestic consumers and exports cheaper to foreigners. Devaluation leads to demand switching from foreign produced to domestic produced product, thereby correcting the BOP deficit. The effectiveness of devaluation depends on the elasticity of export and import of devaluing country. The elasticity of imports and exports must be equal to one or greater (Marshall-Leaner condition)

## **Trade restriction policies**

A country should impose trade restricting policies to limit the amount of import. Tariffs and quotas can be imposed on trade to switch expenditure from imports to domestic produced products.

## **Official borrowing**

Government can borrow from international financial institutions, such as International Monetary Fund (IMF), World Bank and other Development banks. Borrowing will lead to inflow of funds into the country, thereby correcting the BOP deficit. However official borrowing can lead to crowding out of the private sector by raising interest rates beyond the reach of private sector. It also comes with stringent terms and conditions to the country and can worsen the situation in the long-run because of interest repayments especially if a country defaults.

# **Solutions to Balance of Payments deficit**

## **Contractionary Monetary Policy**

Government can sell securities in the open market or increasing the reserve ratio to reduce banks' ability to create money by giving loans to citizens. This decreases the purchasing power thereby reducing the aggregate demand consequently lowering prices of domestic products. This will lead to an increase in the volume of exports and reduced imports demand, therefore correcting the BOP deficit.

## **Contractionary fiscal policy**

Government can increase income tax in order to reduce purchasing power of citizens and their expenditure on imports. However this policy will also reduce expenditure on domestic products leading to low aggregate demand and consequently unemployment as firms collapse.



# Terms of Trade

It refers to the rate at which a country's goods exchange for those of other countries. It measures the rate at which the goods of one country exchange for the same goods in another country.

It also refers to the rate at which a country's exports trade against its imports. Thus the value of exports a country needs to finance the purchase one unit of its imports. It is given by the formula:

$$\text{TOT} = [\text{Index of export prices} / \text{Index of import prices}] \times 100$$

The index of exports and imports are constructed from a sample of prices of more than 200 exports and imports commodities. Changes of import and exports prices influence the TOT. A rise in TOT is welcomed since it shows that any given value of exports is now exchanging for a greater value of imports. A fall is unfavourable because it indicates at any given value of exports now for smaller value of imports or have to export more to support a given value of imports. TOT is favourable when it is greater than 100. a increases in TOT result in lowering exports and imports. This increases a country BOP deficit and depreciation of exchange rate.

TOT change due to inflation, exchange rate and changes in commodity prices.

# Foreign Exchange Market

It is where currencies are traded or a market of currencies.

**Exchange rate** is the price of one currency in terms of the currency or the rate at which one currency can be exchanged for another currency. **Nominal rate** is the price of one currency in terms of another currency. **Real rate** is the rate at which domestic goods and services can be exchanged with the same foreign goods.

**Exchange rate** = Foreign prices/ Domestic prices.

**Direct quoting** is expressing the value of foreign currency in terms of local currency. For example how many units of local currency for a single unit of foreign currency. **Indirect quoting** is expressing the value of domestic currency in terms of foreign currency. For example, how many units of foreign currency for each unit of domestic currency.

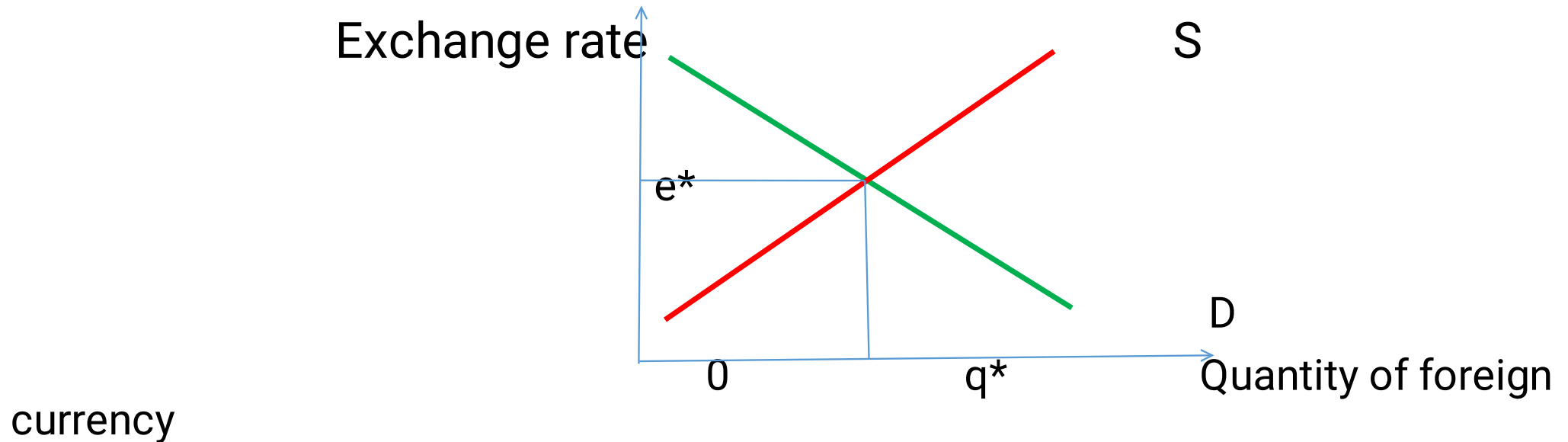
**Depreciation** is the fall in the value of a currency due to market forces and **appreciation** is the rise in the value of a currency to market forces.

**Devaluation** is a deliberate move by the government to lower the value of local currency.

**Purchasing Power Parity** says that the exchange between one currency and another is in equilibrium, their domestic purchasing power that at exchange rate is equal.

# Demand and Supply of foreign currency

Exchange rate is determined by the interaction of demand and supply of currency. The demand for foreign currency arises from importers who want to buy goods from outside the country. The supply of foreign currency arises from exporters who bring in foreign currency when they sell their goods. This is shown below.



# Exchange rate systems

Floating/flexible and managed float and fixed exchange rate system.

## **Floating/flexible**

Is where the exchange rate is set in a free competitively market through market forces without any intervention by the authorities. The exchange rate fluctuates according to market conditions.

### Advantages

It provides an automatic mechanism for keeping the balance of payment in equilibrium. If a country import more goods and services than its exports, the supply of its currency will exceed its demand, the value will fall. In the country exports will be cheaper to foreigners leading to an increase in export and a decrease in import, thus leading to an equilibrium in the BOP.

It builds confidence in the foreign market to equilibrium in the BOP. Therefore there will be no need for the country to keep reserves or to put measures to protect its currency.

It helps the country to pursue other objectives.

It increases the country's export competitiveness.

# Floating exchange rate conti...

## Disadvantages

It increases uncertainty in international trading. Traders have to watch the foreign currency price and the price of goods and services they trade in. This leads to speculation in the market in a way to reduce risks, therefore reducing long term contracts.

It subjects the country to external prices of home produced goods which constantly change leading to unstable patterns. This makes production planning very difficult because economic resources are not sufficiently mobile to cope with uncertainty.

It makes it difficult to control high inflation levels because prices of home produced goods will be rising at home (depreciation of foreign currency) while the foreign prices will not rise. Imports will be expensive and this leads to cost-push inflation. Therefore floating exchange rate cannot insulate the home economy from external forces.

# Fixed exchange rate

This is where a country fix the values of their currency in terms of some common standard. Government try to maintain the value of it currency is fixed. It does this by actively buying and selling the currency at the fixed exchange. This type of exchange rate requires that the central bank have large supplies of their own currency, gold and convertible foreign currencies in order to use in dealing with excess demand and supply at equilibrium price.

## **Advantages**

It remove the uncertainty associated with floating rate.

It make it easy to negotiate long-term contracts, granting of long term loans and undertaking long-term investment because of the reduced risk.

It impose discipline in a country to avoid inflation that result in the fluctuations of floating rate.

## **Disadvantages**

It requires large supply of local currency and foreign reserves that will be used to keep equilibrium exchange rate.

In a bid to maintain equilibrium exchange rate or BOP deficit under fixed exchange rate tend to deplete the foreign currency reserves without addressing the cause problem.

# Managed float exchange rate

This is where the central bank to influence the market. Even though the market forces determine the exchange rate the government intervene in the market to influence the market in the way to move the exchange rate in the direction of their choice. They do this by manipulating in interest rates or by entering the exchange market as buyers or sellers of foreign currency. Clean float is where the there is no central bank does not intervene and dirty float the central. G

Government does this in a way to smooth out changes of exchange rate around the desire personal equilibrium of exchange rate. This is because exchange rate when left market then to overshoot its equilibrium level and this negatively international trade.

# Economic Growth and Development

**Economic growth** is the increase in the Gross Domestic Product or Gross National Product. It occurs when an economy achieves an increase in its national income, measured by GNP, in excess of its rate of population growth. Income per capita (GNP divided by population) is a better measure. Is a sustained increase in its population and product per capita and increasing productive capacity of the economy. It is a quantitative concept.

**Actual growth** is the increase in RGDP resulting from using previously unemployed resources, reallocating of existing resources into more productive areas and using new or improved resources.

**Potential growth** is the increase in the productive capacity of the economy or the ability of the economy to produce goods and services. This occur as a result of an increase in the quantity and or quality of resources. It is shown by an outward shift in the PPF of long-run aggregate supply curve.

**Economic development** is the improvement in the quality of life or standard of living. Better quality of life comes from higher national income. It is also the process of increasing the degree of utilisation and improving the productivity of available resources of a country which leads to an increase of the economic welfare of the community by stimulating the growth of national income. It include better education, higher standards of health and nutrition, less poverty, a cleaner environment, more equality of opportunities, greater individual freedom and richer cultural life. It implies progressive changes in the socio-economic structure of a country. It is growth plus change in the structure of output and in the allocation of inputs by sectors. It encompasses social, political and cultural development of a country that is welfare of masses, reduction in income inequality, increase in employment opportunities etc.



# Factors contribution to Economic growth

## In the short-run

**Steady increase in aggregate demand.** This will encourage producers to expand output. A rise in the component of aggregate demand (C,I,G,X & M) will incentivise firms to produce more goods and services. Consumption can increase due to an increase in consumer confidence, low interest rates, and increase in wealth and income. Investment can increase if entrepreneurs become more confident, fall in interest rate availability of new capital goods like improved technology. Government expenditure can increase to stimulate a rise in output. Net exports increases if price or quality of output and incomes rises abroad.

Reallocation of resources from low productivity to high productivity activities. For example low productive agriculture to high productive manufacturing sector.

# Factors contribution to Economic growth

## In the long-run

**Investment in human capital.** An increase in the availability and improvement in education, training and health care raise the productivity of the labour force. Increase in net investment. There are two ways increasing the stock of capital. When labour force productivity is increasing and an equivalent amount of investment in capital must be made otherwise the amount of capital per worker would be falling. This is called **capital widening** and this need not necessarily lead to a rise in productivity. An increase in the amount of capital per worker is **capital deepening** and this lead to an increase in labour productivity. Construction of school, hospitals and other forms of social capital take longer to influence labour productivity. Improving machinery have to be accompanied by improvement in workers skills.

**New technology.** This include new inventories, new methods of production, improvement in the design and performance of machinery, better organisation of factors of production and efficient systems of transport and communication. Technological progress and investment are closely linked.

# Benefits of economic growth

It is an important objective for government policy, because of key to higher material standards of living. Economic growth **reduces long hours of work, low conditions, a low life expectancy** and other features of low income societies. From a government point of view, economic growth is desirable, as it brings in **increasing revenue** from a given structure of tax system. It means **more and better school, housing and other social services** can be provided without resorting to politically unpopular measures of raising tax rates, economic growth makes it easier politically to help the poor by allocating more resources to them. Therefore standards of living will improve.

Increase in real income, so that people can substitute labour with leisure. This gives them time further their education and reduce their age of retirement.

Economic growth make it possible to devote more resources to social services without having to cut private consumption through taxing heavily the private sector.

Economic growth implies better future for the economy. For example if the economy allocate more resources in the production of capital goods than consumer goods, this will mean more consumption goods in the future. This mean sacrifice of current living standard.

# Benefits of economic growth conti....

- Increase in the goods and service which become available for the country's citizen to enjoy. This raises their material living standards. More people can now eat better quality food, have improved living accommodation and may own their own car.
- It make it easier to help the poor by availing extra income that can be allocated fro their benefits to enable them to enjoy more goods and services.
- Economic growth increases business and consumers' confidence. This means planning becomes easier and encourages investment.
- Economic growth increase a country's international prestige and power. For example China's rapid growth in the early 1990s increased its status not only as a major manufacturer in the global economy but also in world politics.

# Costs of economic growth

Economic growth gives to a rise of a variety of costs. For example more production leads to waste, pollution, depletion of natural resources and destruction of the natural beauty of the environment through mining.

Modern ways of production in agriculture damage the ecosystem and wildlife through the use of chemicals that pollute water bodies. However economic growth means more resources are available which can be devoted in search of safer and cleaner methods of production.

Economic growth comes with technical productivity. Technical productivity makes machinery and production methods absolute and people redundant. Labour need to learn new skills, adopt new methods of working, accept frequent changes of occupation.

It involves opportunity cost if operating at full employment. To produce more capital goods, in order to increase the country's productive capacity, some resources will have to be moved from producing consumer goods and service. So current consumption will be reduced. However this will be only in the short run but in the long run increased investment will increase the output of consumer goods and services.

# Costs of economic growth conti...

Economic growth bring increased stress and anxiety. A growing economy undergoes structural changes. Workers have to learn new skills and may have to change their occupation and /or where they live. Some workers may find this difficult to cope with.

It brings increased working hours and pressure to come up with new ideas and improvements. For example when Japan was growing rapidly in the 1980s some workers put in very long hours and students felt under pressure to pass examinations

# Policies to promote Economic growth

## Supply-side policies

These are policies meant to increase aggregate supply. They include expansionary fiscal and monetary policies.

Expansionary Fiscal policy:

Increase in government expenditure in subsidies, investment in human capital and physical capital.

Reduction in taxes such as corporate taxes to encourage production.

Expansionary Monetary policy:

Increase in money supply by reducing required reserve ratio to increase credit creation,, printing of money etc.

Reduction in interest rates to encourage borrowing for production purposes.

# Policies to promote Economic growth

## Demand-side policies

These are policies meant to increase aggregate demand. They include expansionary fiscal and monetary policies.

### Expansionary Fiscal policy:

Increase in government expenditure in salaries,.

Reduction in taxes such as PAYE, inheritance tax, VAT etc to encourage spending.

### Expansionary Monetary policy:

Increase in money supply by reducing required reserve ratio to increase credit creation,, printing of money etc.

Reduction in interest rates to encourage borrowing for consumption purposes.



