



BEACONHOUSE
DEFENCE CAMPUS

Cambridge Assessment
International Education



AS LEVEL
MICROECONOMICS

SIR UMER
ADEEL

BSS, LGS,
SICAS

ECONOMICS A LEVEL NOTES

0322-5516009

1 Economics

ECONOMICS is the study of how society provides for itself by making the most efficient use of scarce resources so that both private and social welfare may be improved.

- Economics provides a framework for studying how individuals, households, firms, governments and global organizations behave and take a wide range of decisions.

1.1 Microeconomics and Macroeconomics

Economics can be broadly divided into two branches:

- Microeconomics
- Macroeconomics

MICROECONOMICS refers to the body of economic principles and concepts that explains the behaviour of individuals and firms in different situations. The issues covered in microeconomics can include scarcity and opportunity costs, pricing of goods and services, utility, budget line and indifference curves, costs, revenues and profits of firms.

MACROECONOMICS refers to the economic issues that relate to the whole economy. These issues can include economic growth, unemployment, inflation, national income, and living standards.

Many economic issues and problems cannot be satisfactorily classified as micro or macro and encompass both branches of economics. For example, an increase in taxation on petrol may reduce the demand for petrol. There is both an effect on income of individuals (micro) and the revenues of government (macro).

1.2 Normative and Positive statements

Economists cannot always be certain that what they say is completely accurate or how the advice they provide will affect an economy.

POSITIVE STATEMENT is based on empirical or actual evidence.

- Statements about economics that can be proven to be true or false.
- These can be supported or refuted by evidence.
- For example, following is a positive statement: 'the inflation rate in 2009 was 2.5%.'
- Statements about the future can also be positive statements. For example, 'The service sector will grow by 30% in size over the next five years.'
- Statement is capable of being proved or disproved even though economists may have to wait for five years to know whether it was actually true or false.

NORMATIVE STATEMENTS involve value judgments and are ones that are subjective about what should happen.

UMER ADEEL

O/A Level Economics

0322-5516009

LGS / BSS / SICAS

- These statements cannot be supported or refuted.
 - They are opinions about how economies and markets should work.
 - For example, the following statements are normative:
 - 'The government should cut fuel tax to reduce the rate of inflation.'
 - 'Public sector workers should reduce their demands for higher wages.'
 - These are often drawn from the economist's personal views, political beliefs and ethics.
 - Normative statements tend to contain words like 'should' and 'ought'. Although sometimes positive statements also contain these words.
-

1.3 Production and Consumption

PRODUCTION is the process of creating goods and services in an economy. Goods and services have the (capacity to satisfy wants).

CONSUMPTION is the process by which consumers satisfy their wants.

- Some goods, such as sweets, are quickly used up.
 - **Consumer durables**, such as refrigerators and mobile phones, satisfy wants over a longer period.
-

1.4 The time dimension

SHORT RUN is a time period when a firm can only change some and not all factor inputs. At least one of the factors of production is fixed.

LONG RUN is the time period when all factors of production are variable. Firm may improve the quantity and quality of its capital by building a new factory to increase its output. This leads to greater efficiency in the long run.

VERY LONG RUN is a time period when all key inputs into production are variable. These key inputs can include technology, government regulations, and social considerations.

2 Basic economic problem

The **FUNDAMENTAL ECONOMIC PROBLEM** is scarce resources relative to unlimited wants. All economies face the problem of scarcity.

2.1 Limited resources

RESOURCES are inputs available for the production of goods and services. There are four types of **FACTORS OF PRODUCTION**, i.e. the resources that are combined to produce goods and services. These include land, labour, capital and enterprise.

(i) Land

LAND includes the surface of the earth and all natural resources such as lakes, rivers, forests, mineral deposits and the climate. Some of the major issues with respect to land include:

- The reward for owning land is the income and rent that is generated.
- Land is scarce and it cannot be increased in quantity.
- Natural resources can be both renewable and non-renewable. **RENEWABLE RESOURCES** such as forest and fish can be replaced by natural process whereas **NON-RENEWABLE RESOURCES** such as mineral deposits, oil and gas cannot be replaced once consumed.
 - There is a concern at the rate at which these resources are being depleted. Higher levels of consumption today means that we enjoy high levels of living standards today but this will leave fewer resources for future generations with the concern that the high living standards may not be sustainable in the long run.
 - Another concern resulting from the rate of consumption is that it is leading to higher levels of pollution that may lead to poor living standards in the future.
- Quantity of land can *increase* due to discovery of mineral reserves; or improvement of water-logged and eroded land. It can *decrease* due to depletion of resources, water-logging and erosion.
- Quality of land can be increased through use of better technology, use of pesticides and fertilizer, and training of farmers. This will lead to increase in productivity of land.

(ii) Labour

LABOUR includes all mental and physical effort of humans to produce goods and services. Some of the issues related to labour are listed below:

- Wages and salaries are paid to labour.
- Labour can be both skilled and unskilled. Skilled labour is more productive but demands higher wages, whereas unskilled labour is cheaper but less productive.
- Quantity of labour increases because of increase in population size, net immigration, increased woman participation in the labour force, and higher retirement age.
- Quality of labour can increase through training and education, better leadership style that motivates the employees, and use of machinery. These steps lead to increase in productivity of labour.

- Another important issue in recent years that has emerged is that of female participation in labour force. Most of the nations are evidencing an increase in female labour force participation. This leads to an overall increase in supply of labour in the market.

(iii) Capital

CAPITAL includes all man-made aides to production such as robots, machines, software and spades. Capital goods increase the (productivity) of and (quality) of production from land and labour. Issues with respect to capital include:

- The reward for capital is the rate of return and interest that is earned.
- Capital goods improve the productivity levels in the economy.
- Working or circulating capital is stocks of raw materials, semi-manufactured and finished goods which are waiting to be sold.
- Fixed capital is the stock of factories, offices, plant and machinery. It is used to transform working capital into finished products.
- There is a threat that a rapid change in technology may make existing capital obsolete.
- Developing economies do not have enough resources to invest in capital. They then have to import capital from developed economies.
- Quantity of capital increases when net investment is positive (gross investment is greater than capital consumption) and through imports.
- Quality of capital can be improved through investment in R&D to improve the state of technology.

(iv) Enterprise (Entrepreneurship)

ENTERPRISE performs two functions in an economy: (i) entrepreneurs organize other three factors of production to produce goods and services; and (ii) entrepreneurs take risk associated with investment and production. Enterprise involves following issues:

- Profits belong to entrepreneurs.
- Firms can be large or small. Smaller firms have fewer resources and are usually run by single individuals (sole proprietorship). Larger firms have more resources, engage specialist managers, use division of labour, and sell shares to shareholders (public limited companies).
- Quantity of enterprise can be increased through training and education of workers, and through investor-friendly government policies.
- Quality of enterprise improves through use of training and education, and experience.

Contribution of enterprise to the economy

Market is performing an increasing role in almost all economies. This has provided opportunities for the development of an enterprise culture whereby people who are prepared to take risks may achieve substantial business success. For example, Mian Nishat (Pakistan), Rata Tata (India), and Richard Branson (UK) have built up large business empires. Enterprise brings following benefits to the economy:

- Enterprise starts new firms and increase investment in the economy.
- It creates new jobs hence lowering unemployment in the economy.

- Enterprise leads to innovation as a lot of new and hi-tech products are introduced by new small firms.
- Successful firms can become large multinationals.
- Profitable firms will give more taxes to the government that can be used to build infrastructure and improve economic efficiency.
- New firms provide competition to existing firms that leads to more choice for consumers, lower prices and better quality products due to competition.
- New firms can also lead to rise in exports and lower imports leading to improvement in balance of payments.
- New firms improve social cohesion by allowing poor or middle class individuals to earn higher rewards by investing in successful businesses.

Use of factors of production in different sectors in the economy

All factors of production are required to produce goods and services, however, their relative importance and use depend on the sector and the production methods.

ECONOMIC STRUCTURE refers to the way in which an economy is organized in terms of sectors. The following sectors are recognized:

1. Primary sector: **PRIMARY SECTOR** consists of agriculture, fishing and activities such as mining and oil extraction. It requires more land and labour. However, in recent years, there is an increase in use of capital such as tractors and tube wells.
2. Secondary sector: **SECONDARY SECTOR** consists of a range of manufacturing activities such as food processing, textiles, clothing, iron and steel production. It also consists of construction. It requires more capital where machines are used to produce more goods and services. Again within it, labour-intensive production techniques use relatively more labour and capital-intensive production techniques (such as flow production) require relatively more capital.
3. Tertiary sector: **TERTIARY SECTOR** consists of services such as retailing, transports, logistics, banking, insurance and education. It again needs all four factors of production but is usually more labour-intensive. It also requires a lot of enterprise.
4. Quaternary sector: **QUATERNARY SECTOR** is a term used to denote the knowledge-based part of the economy, especially the provision of information. Typical examples include scientific research and product development, and computing. It uses a lot of technology and also requires skilled labour.

The economic structure changes with the level of development of an economy. In developing countries, the largest contribution to GDP comes from primary sector which is also the largest employer. In developed countries, the tertiary sector tends to be the largest employer and also contributes more toward the GDP.

Factor endowment

FACTOR ENDOWMENT refers to the availability of factors of production in an economy. For instance, Saudi Arabia has abundant oil reserves; Pakistan has good climate and land suitable for

agriculture; Japan has a lot of capital; etc. Whereas all factors of production will be available to all economies, however, economies will differ in terms of the abundance or shortage of factors. For instance, poor and developing economies have abundant labour while facing shortage of capital; developed economies have abundant capital and face labour shortages. Saudia is rich in oil; Pakistan has good climate and land for agriculture; China has a lot of skilled and cheap labour etc. This leads to following issues:

- Abundant factor is cheaper and the short factor is more expensive. Therefore we find that labour in developing economies (where it is abundant) is cheaper than labour in developed economies (where it is short). On the other hand capital is cheaper in developed countries than in developing countries.
- Economies tend to specialize in those products that use more of their abundant resources. Therefore, developing economies are expected to specialize in labour-intensive techniques, and developed economies are expected to specialize in capital-intensive techniques.

2.2 Unlimited wants

Consumer desires can be divided into needs and wants.

(i) Needs

NEEDS are those desires that must be satisfied for an individual to live. It can include both physical needs (such as food, shelter and clothing) and psychological needs (such as the need to be loved and cared). Needs are limited.

(ii) Wants

WANTS are desires that are less essential but can improve the quality of life. They can include cars, holidays, cinema, TV and like that.

- Wants are unlimited and are continuously expanding and changing. If one want is satisfied, a new want will emerge.
- Individuals desire better food, luxurious housing, better working conditions, etc. Firms want more profits and expansion of business. Society may want improved infrastructure, low inflation, high economic growth, and better living standards.
- Wants can evolve with our age, our experiences, our environment and social circle, and through our observation. Every individual has a scale of preference that determines his needs and wants. This scale of preference depends on an individual's culture, his upbringing, and his life experiences.
- Wants are also sometimes called luxuries. A luxury for one individual may be considered a need for another.
- Some wants expand as we grow up, marry and raise a family.

2.3 Scarcity and Choice

SCARCITY is the fundamental economic problem of having seemingly unlimited wants in a world of limited resources so that all wants cannot be satisfied. Economy and the decision

makers hence have to make a choice. CHOICE underpins the concept that resources are scarce so choices have to be made by consumers, firms and government. Society has to make following choices:

- What should be produced?
- How it should be produced?
- For whom it should be produced?

Whenever a decision maker faces shortage and makes a choice it gives rise to opportunity cost.

2.4 Opportunity cost

OPPORTUNITY COST is defined as the benefit foregone on the next best alternative. Opportunity cost only arises on scarce resources such as land, machines, building and labour. Abundant resources such as sunlight and sea water do not lead to a problem of scarcity and have no opportunity costs. All decision makers in the economy will have to face opportunity costs. Some of the examples are given below.

- Consumers have limited income and cannot purchase all the goods that they want. If a consumer decides to buy a TV, then, that consumer is foregoing the benefits that he could have received if he had purchased another good such as a washing machine.
 - Similarly, if consumer decides to spend his income, his opportunity cost will be the interest lost on savings.
- Firms have limited income and finance and cannot produce all products that are demanded. If the firm decided to produce product A, then, the profit they could have earned from producing product B is the opportunity cost of producing A.
- Governments have limited tax revenues and cannot spend on all activities required in an economy. If they spend money on defence, then, they are foregoing the benefits they could have received from investing in health and education.
 - Similarly, if government decides to increase its expenditure by taxing the population, the opportunity cost will be fall in consumption and in savings resulting from lower disposable income.
- Workers have limited time available to them but find many job opportunities. When a worker decides to work in a certain occupation, then, the salary lost from working in another occupation is his opportunity cost.
 - Similarly, when workers decide to spend more time on work, the opportunity cost is the time they could have spent on leisure activities.
- Others such as charities and international organizations face similar problems.
- Opportunity cost is even present between the choice of present and future. If a society decides to spend on capital goods, the opportunity cost is fewer consumer goods that reduce short term living standards.

Opportunity cost thus represents the true cost of taking a decision and economists include the opportunity cost in cost of taking a decision. NOTE: Scarcity can be shown as the area outside PPC. Opportunity cost can be explained using PPC and a movement on the curve.

2.5 Economic goods and Free goods

ECONOMIC GOODS are those goods which have a cost in terms of the real resources used. These goods are scarce and give rise to opportunity cost.

FREE GOODS are those goods that do not require any factor of production to be produced.

- There is no price for free goods.
- There are very few examples of free goods, including air, wild berries etc.
- As the population of planet has increased, the number of free goods has decreased.
- Free goods have no opportunity cost.

2.6 Economic questions

The problem of scarcity leads to choice that means an economy has to decide: i) what to produce?; ii) how to produce it?; and iii) from whom to produce?

(i) What to produce?

Since an economy cannot produce all the goods and services that it wants because of scarce resource, it will have to decide what should be produced. The economy generally would like to produce those goods and services that maximize satisfaction and economic welfare.

Free markets make this decision based on price mechanism, i.e. the interaction of demand and supply forces. Prices give signals in the market. A higher price indicates a higher demand and firms produce those goods and services whereas a lower price leads to lower production of the good.

Planned economies take the decision based on social benefits and social costs. The decision is taken by a central planning authority and tries to maximize social welfare.

(ii) How to produce?

Resources available to an economy are scarce in relation to unlimited wants. The economy therefore has to decide how best to use its resources to maximize the outcome. Economies have many different production methods to choose from. They can use labour-intensive or capital-intensive techniques. Free markets base the decision using demand and supply forces. Other things remaining same, an economy will use the production method which uses more of its abundant resource and less of its scarce resource. In planned economies this decision is also taken by a central planning authority.

It must be noted that this question must not be addressed on purely economic terms. We also need to consider other issues when deciding this question. For instance, use of slavery or forced labour can increase production in an economy but there is a moral objection to this arrangement. Use of GM crops can improve agricultural yields but can lead to damage of ecosystem.

(iii) For whom to produce?

The question here is that how many of each person's wants are to be satisfied. There are many groups in the economy such as rich and poor; young and old; urban and rural and like that and each group has unique demand so that an economy cannot satisfy all the wants of all the groups. Decisions have to be taken concerning how many of each person's wants are to be satisfied.

- Whether everyone is going to have a more or less equal share of what is produced?
- Whether some will have more than others?

In free markets this decision is taken through the price mechanism where demand and supply of each group will result in change in prices. Firms produce those goods where prices are higher and they can make more profits. In planned economies this decision is taken by the central authority that judges what is best for the economy.

Some economies deliberately attempt to create a more equal distribution of wealth and income. This can be done by taxing the rich and paying benefits to the poor. In other economies, no such attempts to redistribute income and wealth are made. In answering this question, more aspects of decision making are again important.

3 Production possibility curve

PRODUCTION POSSIBILITY CURVE (PPC) shows the maximum combination of goods and services that an economy is capable of producing by fully and efficiently utilizing its given resources and the state of technology.

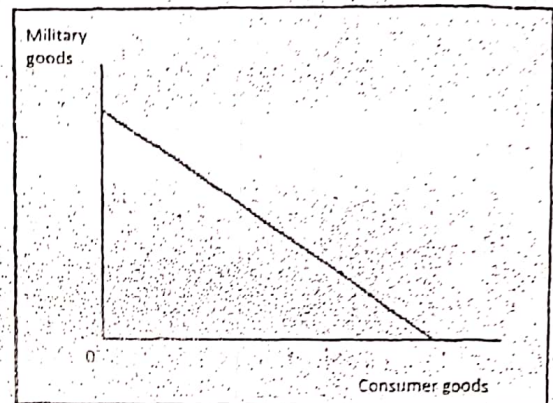
- The production possibility in an economy is limited by the resources available and state of technological knowledge; However, they may change over time leading to changes in PPC.

3.1 Shape of PPC

Shape of PPC depends on whether we assume constant opportunity costs or increasing opportunity costs.

Constant opportunity costs and Linear PPC

If we assume that opportunity cost remains same, then the shape of PPC will be linear (downward sloping). This is not very realistic and assumes that resources are perfectly mobile for both goods.



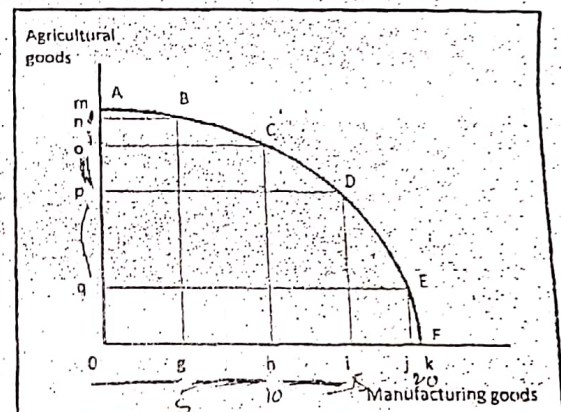
FACTOR MOBILITY refers to ease by which factors of production can be moved around. If factors can be easily moved around different industries or

regions, they are called mobile. If it is difficult to move factors around different regions or industries, they are called immobile.

Increasing opportunity costs and Concave PPC

Since resources are not perfectly mobile, i.e. resources are specialized in their nature and cannot be equally efficient in production of all goods, it is more realistic to assume that opportunity costs rise as resources are shifted from production of one good to another. This results in a concave shape of PPC that slopes downwards.

For example, assume that an economy produces two types of goods – agricultural goods and manufacturing goods. As the economy moves from point A to point B, initially only the least fertile land is reallocated to production of manufacturing goods. This means that there is very low loss of agricultural output (low opportunity cost). As economy produces more manufacturing goods, it will have to reallocate more fertile land which will mean that the decrease in agricultural production will increase leading to an increase in opportunity cost.



The following table illustrates the production possibilities available to the economy with its limited resources.

Explanation

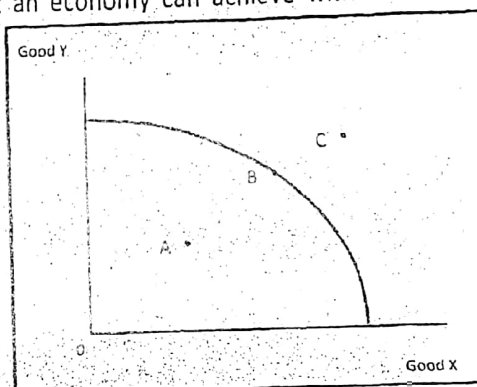
- At point A on the curve, economy produces only agricultural goods ('om') and no manufacturing goods. The opportunity cost is therefore 'ok' of manufacturing goods.
- ✓ At point B on the curve, economy produces 'on' of agricultural goods and 'og' of manufacturing goods. To produce 'og' manufacturing goods, the opportunity cost to the economy is 'mn' of agricultural goods that is foregone.
- At point C on the curve, economy produces 'oo' of agricultural goods and 'oh' of manufacturing goods. To increase production of manufacturing goods from g to h, the loss in agricultural output is 'no' which is the opportunity cost.
- ✓ At point F on the curve, the economy only produces manufacturing goods and the opportunity cost is 'om' of agricultural goods.

The table shows that the opportunity cost keeps on increasing as we move from point A on the curve to point F.

3.2 Analysing economic performance using PPC

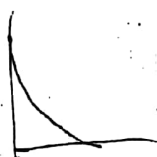
PPC can show the maximum level of output that an economy can achieve with its existing resources and the level of technical knowledge.

Points inside PPC (e.g. point A) are achievable; but are either **inefficient**; or there is **unemployment** of scarce resources. To overcome these problems, the economy should move toward PPC by increasing aggregate demand (AD) to increase employment; or promoting competition to create efficiency.



All points on PPC (e.g. point B) are achievable and show **full employment** and **productive efficiency** of scarce resource. Economic efficiency means that economy is maximizing its satisfaction with scarce resources; however, all wants cannot be met because of scarcity of resources. Firms are producing goods at their lowest cost.

Movement on the PPC shows the **opportunity cost**. PPC is hence called product transformation curve. This helps an economy take a decision about how to allocate resources, i.e. which combination of goods and services should be produced.



PPC shows the boundary between what can and cannot be produced. Hence it is also called production possibility frontier. All points on or inside PPC are achievable, and all points above PPC are not achievable.

Points outside PPC (e.g. point C) show scarcity. These are not achievable with current resources or state of technology. Economy can achieve points above PPC by increasing quantity or quality of its factors of production, improving the state of technology, reallocating resources from consumer goods to capital goods or engaging in free trade.

PPC helps policy-makers to realize that resources need to be shifted from one use to another. This is called **reallocation of resources**. **REALLOCATION OF RESOURCES** refers to deliberate movement of resources from production of one product to another. Economy has to incur substantial training costs to reallocate resources from production of one product to the production of another product. Training is required to provide skills to workers that are required to produce different types of goods and services.

Shifts in PPC shows economic growth.

Explaining Microeconomic and Macroeconomic concepts on PPC

Microeconomic concepts that can be explained = Scarcity and Opportunity cost

Macroeconomic concepts that can be explained = Unemployment and Economic growth

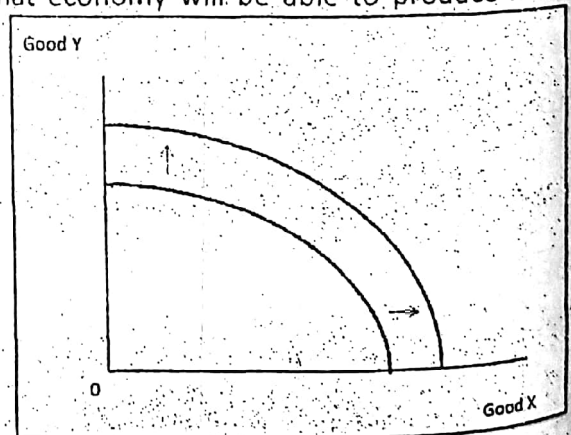
3.3 Shifts in PPC

Shifts in PPC take place due to a change in quantity or quality of factors of production, a change in the state of technology, and allowing free trade.

Economic growth

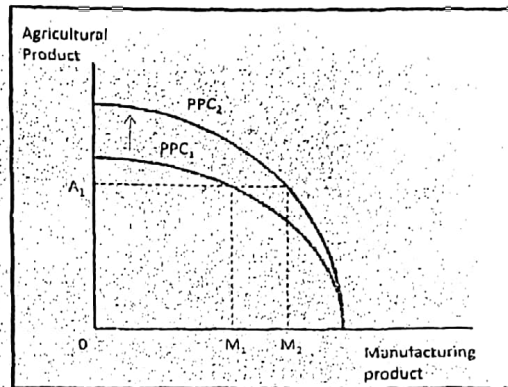
ECONOMIC GROWTH refers to an increase in the productive potential of the economy and is shown as a shift outwards of the PPC. It takes place due to increase in quantity of factors of production, improvement in quality of factors of production, an improvement in technology, and a reallocation of resources toward producing more capital goods.

- Increase in quantity of resources means that economy will be able to produce more goods and services leading to an outside shift in PPC.
- Improvement in quality of resources or in the state of technology improves **productivity** of the factors of production. **PRODUCTIVITY** measures the ratio of output to input and can be measured by labour productivity or capital productivity. An increase in productivity means that economy can produce more goods with the same resources.



Exact impact on the shift in PPC depends on how the changes are likely to affect the two goods under consideration.

- If the change in resources or improvement in technology is likely to affect both goods in PPC, then, PPC will shift outward parallelly as shown in the figure above.
- If the change in resources or improvement in technology is likely to affect just one good, then, PPC will pivot outward as shown in the figure below. For example an improvement in agricultural technology that is not applicable to manufacturing products leads to a pivot in the curve. Maximum amount of agricultural production has increased but the maximum amount of manufacturing production remains the same.



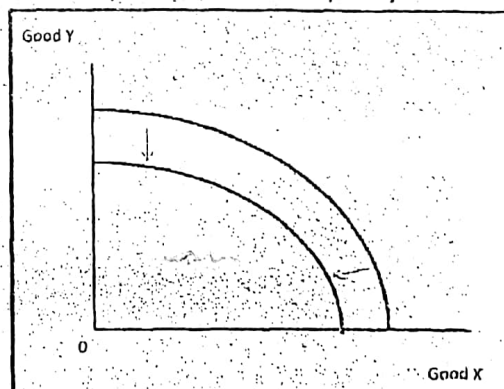
Apart from maximum production level of manufacturing (which does not change), at all other levels of agricultural production, manufacturing has increased as shown in the figure. With the same agricultural production A_1 , manufacturing production increases from M_1 to M_2 . This happens because increase in agricultural productivity means that fewer resources will be required in agriculture. These additional resources can be shifted to production of manufacturing products thus increasing their production.

An improvement in quality of agricultural production can also lead to increase in manufacturing production. Agriculture is an input (raw material) for manufacturing. An improvement in quality of raw material can lead to increase in efficiency of manufacturing industry leading to an increase in its maximum output.

Inward shift in PPC

It takes place due to fall in quantity of factors of production, deterioration in quality of factors of production, and negative net investments.

- Fall in quantity of resources means that economy will be able to produce fewer goods and services leading to an inside shift in PPC.
- Deterioration in quality of resources reduces productivity of the factors of production meaning that economy can produce fewer goods with the same resources.



Exact impact on the shift in PPC depends on how the changes are likely to affect the two goods under consideration.

- If the change in resources is likely to affect both goods in PPC, then, PPC will shift inward parallelly as shown in the figure above.
- If the change in resources affects just one good, then, PPC will pivot inward.

Combination of two factors

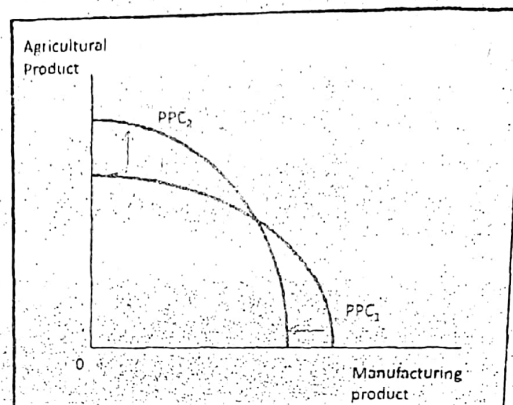
Each factor has to be considered in isolation and then an overall impact needs to be considered.

An increase in one resource and a decrease in another resource

Increase in resource shifts PPC outward. Decrease in another resource shifts it inward. Exact effect cannot be predicted. It depends on the strength of each impact. If the impact of increase in a resource is greater than the impact of a fall in resource, PPC will shift outward and vice versa.

Increase in agricultural productivity and a fall in manufacturing productivity

Increase in agricultural productivity means that there is an increase in maximum agricultural production. A fall in manufacturing productivity means that there will be a fall in maximum manufacturing production. The net impact is shown in the figure.

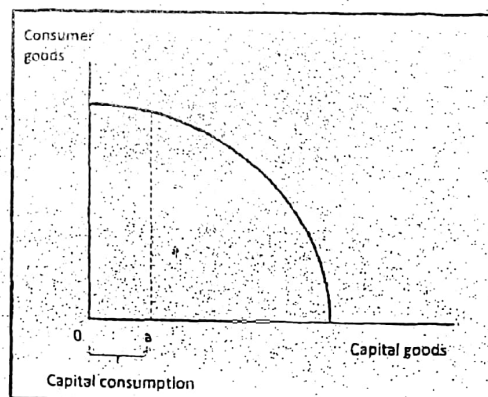


3.4 Capital goods or consumer goods

One choice facing an economy is how much to spend on consumer goods and on capital goods. The impact is elaborated in following points:

- **Spending on consumer goods** mean that individuals will be able to enjoy a higher standard of living in the short run. However, this means less investment in capital goods which may lead to fewer goods consumed in the future.
- **Spending on capital goods** increases the capital stock of the economy that leads to increase in productive capacity of the economy. The exact impact on the economy depends on the size of investment and capital consumption.

CAPITAL CONSUMPTION is a term used to describe the amount of capital that is used up (worn out) during the process of production. This



is also called **depreciation** and is assumed to be area 'oa' in the figure.

INVESTMENT is the creation of capital goods in the process of production and can also be defined as any production that is not for current consumption. **GROSS INVESTMENT** is the total quantity of capital goods produced in the economy. **NET INVESTMENT** is gross investment minus capital consumption.

$$\text{Net Investment} = \text{Gross Investment} - \text{Capital consumption}$$

If investment is greater than capital consumption (positive net investment), there will be an increase in capital stock of the economy leading to an outward shift in PPC. Investment in capital stock will mean that fewer consumer goods are manufactured leading to a decrease in living standards in SR. However, this leads to outward shift in PPC which means more goods can be consumed in the future leading to increase in living standards in LR. Therefore, there is trade-off and the economy has to decide the optimal level of investment.

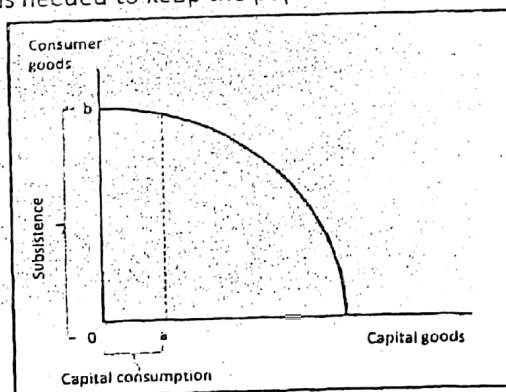
If investment is equal to capital consumption, it will just maintain the capital stock in the economy and this is the minimum investment required to maintain productive capacity and PPC.

If investment is less than capital consumption (negative net investment), it will mean that the capital stock in the economy will fall over time. Individuals will be able to enjoy a higher living standard in the SR but there will be a fall in living standard over time as PPC shifts inward. Less investment will also mean that quality of an economy's capital goods remains underdeveloped and full benefit of technology will not be enjoyed.

3.5 Choices for developing economies (very poor developing economies)

DEVELOPING COUNTRY is characterized by low standards of living. These countries need to grow capital stock if they want to grow and improve their living standards. However, these countries have very few resources that are hardly sufficient to maintain **SUBSISTENCE LEVEL OF CONSUMPTION**, i.e. the level of consumption that is needed to keep the population alive.

- Problem of these developing countries is that almost all of their resources are devoted to subsistence.
- They are not even able to invest equal to capital consumption resulting in an inward shift in PPC in the LR leading to food shortages in LR.
- If they divert resources to production of capital equipment, it will reduce production of consumer goods leading to problem of survival again but in the SR.



resources
quantity
low

The figure explains this concept. If gross investment is equal to oa (capital consumption), there would be problem of subsistence. If gross investment is less than oa , it will be difficult to sustain current levels of consumption.

Solution to this problem is that economies can try to attract foreign direct investment, aid or foreign debt.

These will enable economies to increase their capital stock without having to divert their own limited resources away from consumption. However, it can result in following problems:

- Foreign debt will increase indebtedness and this will mean that these economies will have to pay a higher proportion of their income in debt payments. If foreign debt is invested in inefficient projects (which commonly happens in less developed countries) this will mean that there will be an additional burden on the economy.
- Foreign direct investment will add to capital stock and improve economy's balance of payment. However, foreign firms will take away profits back to their countries in the future and may also exploit workers and environment.
- Aid is not so forthcoming and is usually insufficient.

Developed economies therefore face a major challenge in terms of resource allocation.

4 Money

MONEY is anything that is generally accepted as a means of payment. It includes national currency such as dollars (US), pounds (UK), euros (EU) and rupees (Pakistan). Apart from notes and coins, it also includes cheques, credit cards and debit cards. Coins or notes themselves have little intrinsic value. Their value comes from the fact that sellers have complete confidence in money and are willing to exchange goods and services in return for money. Money can also be in the form of a valuable commodity such as gold or platinum.

- **NEAR MONEY** are non-cash assets that can be quickly turned into cash such as government securities, foreign currencies, savings accounts, and certificates of deposits. These assets contribute to the liquidity of the banks by providing a supply of cash if this is needed to meet liabilities to depositors. **LIQUIDITY** is the extent to which there is an adequate supply of assets that can be turned into cash. **LIABILITIES** are debt obligations.

4.1 Characteristics of money

It must be noted that money does not need to have an intrinsic value, i.e. coins and money may have no or little value of themselves. Value of money comes from the confidence of buyers and sellers on money and its ability to be used for exchange of goods and services. For something to be characterized as money, it must have following characteristics.

- It must be **DURABLE**, i.e. it must retain the same shape, form, and substance over an extended period of time. Durability also includes social and institutional durability.
 - It must not easily decompose, deteriorate, degrade, or otherwise change form.
 - Durability is critical to money to perform function of medium of exchange and store of value. People are willing to accept an item in payment for a good if they have confidence that the item can be traded at a later time for some other good. An item works as a medium of exchange because it stores value from one transaction to the next.
 - Refined materials such as gold, silver, copper or nickel have historically been used as money because they are extremely durable.
 - Organic products such as lettuce, ice cream or raw meat are not used as money because they are perishable.
 - Social and institutional durability is important for modern economies. Durability of modern money, e.g. paper currency and bank accounts, depends on the durability of social institutions such as banks and government. Ability of paper currency to act as money depends on the institutional stability of the government.
- It must be **DIVISIBLE**, i.e. it can be divided into smaller denominations that can be used in exchange for goods of varying values.
 - For an item to function as medium of exchange, it must be divisible so that it can be used to purchase a wide range of different goods such as cars and bubble gums.

• Durable
• Store of value
• Divisible

- Metals (gold, silver etc.) have been widely used as money because they can be divided into smaller units.
- Livestock on the other hand has limited use as money as it cannot be easily divided into such small denominations to buy sweets.
- Paper currency and bank account balances are easily divisible to match the value of every good and service in the economy. For example, \$1 can be converted into 100 cents.
- It must be **PORTABLE**, i.e. it can be easily moved from location to another location to complete exchanges. If it is difficult to carry money, then, trade will become difficult.
 - Metals can be easily transported and have historically been used as money. However, paper currency replaced metals because it was lighter and easier to carry.
 - Items that are physically heavy relative to their value in exchange are not easily portable. These may include things like maple syrup, economics textbook and a radio.
- It **CANNOT EASILY BE COPIED**.
 - An item will lose its function of medium of exchange if it can easily be copied and is available to everyone. It will lose its value if it is easily copied.
 - Government prevents unrestricted duplication of money. Government controls the total amount of money in circulation. Paper money can only be printed by the central bank and hence holds its value. Counterfeits threaten this characteristic but government takes steps such as redesigning paper currency, adding water marks, microscopic printing, and magnetic strips to make counterfeiting difficult.
- It must be **ACCEPTABLE** to both buyers and sellers. Unless money is acceptable trade will not take place and the buyers and sellers will have to resort to barter trade. This will make trade slower, time consuming and cumbersome.
- It must be **RECONGNIZABLE**, i.e. people can easily see the item.
- It must be **UNIFORM**, i.e. all versions of the same denomination of money must have same purchasing power. For example, a \$1 bill printed in 1998 would still be able to buy goods worth \$1.
- It must be **SCARCE**, i.e. it is in limited quantity. If it is easily available, it will lose its value.
- There must be **STABILITY IN VALUE** of money, i.e. it must retain its value. One of the most serious defects of modern money is that it may be affected by inflation.

4.2 Functions of money

From economists' point of view, money has four necessary functions:

- Medium of exchange
- Unit of account
- Store of value
- Standard of deferred payment

(i) Medium of exchange

Money is a medium that buyers use for purchases and that sellers are willing to accept in exchange for purchases. For example, notes can be used to purchase a bottle of Pepsi.

The essential characteristic for anything to act as a medium of exchange is scarcity. Money must also be durable and acceptable to sellers. Otherwise, they will have to resort to barter trade. It should be portable and divisible, otherwise it will be difficult to carry money or to buy goods of lower denomination.

This function of money removes the need for double coincidence of wants and therefore facilitates trade.

It also separates the transactions in time and place because sellers and buyers of a commodity are not required to perform the transactions at the same time and place.

It gives freedom of choice as consumers can buy a bundle of goods and services. It increases competition and widens the market.

It facilitates exchange and helps improve economic efficiency by allowing specialization and division of labour.

(ii) Unit of account

Money is used as a unit by which prices are established in dollars and cents. This function applies to both current and projected transactions.

- Money can be used to price goods and services, e.g. a bottle of mineral water. It eliminates the need of quoting the price of goods in terms of other goods as in barter, e.g. quoting price of sweets in terms of chocolates.
- Money can be used to put establish exchange rates, e.g. \$1.5/£1.
- It is also a means of establishing relationship between various units of a currency, e.g. \$1 is equal to 100 cents.
- This function facilitates accounting. Value of money can be recorded and summed, e.g. accounting transactions are recorded in monetary values.
- The function is also relevant for future transactions, for instance when money is borrowed, the lender can add interest payment to tell the borrower how much he will have to pay in the future.

(iii) Store of value/wealth

Money can be held or stored for a period of time before it is used. It can be accumulated to provide a source of wealth.

- To act as a unit of account, the good chosen must be something that is durable and can be easily stored. Also the holder of asset must have confidence that the asset will retain its value over time.
- Money as a store of value is used to meet unforeseen emergencies and to pay debts.
- Individuals' wealth can be stored in a range of assets and not just money. Other assets in which wealth can be stored can include bonds, houses, land, diamonds, gold and like that. The benefits of these assets can be that they generate income, and that their value may rise in terms of money. However, they have drawbacks such as high storage costs,

depreciation in some of these assets, and illiquidity of some of these assets so that they cannot easily be converted into money.

- Money is one way of storing wealth. For example, coins and notes, bank deposits, bonds, stocks and other forms of holding money can be used as the basis for storage over time. Their advantage is security, convenience and liquidity. However, the drawback is that value of money may fall due to inflation.

(iv) Standard for deferred payment

Payments to be made in the future can be denominated in money terms in just the same way as can a payment to be made today. Money is acting as a unit of account here with an added dimension of time. If money can perform all of the first three functions, it will also act as a standard of deferred payment. And a failure in above functions can lead to a failure in the function as a standard of deferred payment.

- Money has simplified both the taking and repayment of loans unlike in barter where the repayment of loan that was taken in shape of a horse or a commodity was difficult.
- It simplifies credit transactions that allows credit to be introduced in the economy. Money facilitates borrowing by consumers to buy houses and like that, and by firms to invest. It helps in selling of shares and debentures that can be used to buy capital leading to shifts in PPC.
- If value of money increases over time (such as in deflation), the creditors gain and debtors lose. If value of money fall over time (such as in inflation), the borrowers gain and debtors lose. The uncertainty over fall in rise in value of currency can be overcome by linking the value of debt to a price index which measure inflation. Such index-linked contracts help protect the purchasing power of money.

(Inflation and the functions of money)

Inflation is the general and sustained increase in price levels over time. Inflation adversely affects the functions of money. However, the affect depends on the severity of the rate of inflation.

- ✓ Low rates of inflation will not have a major impact on the **medium of exchange**. It is only when there is hyperinflation that people start losing confidence in money and may resort to barter. However, even in hyperinflation such as in Zimbabwe, money was still used.
- ✓ The **unit of account** is affected by inflation as it become more difficult to compare values over time. A nominal rise in GDP can be due to a rise in output levels or a rise in price levels. To find the real change in GDP, we need to make adjustments to nominal figures.
- ✓ Inflation also affects the **store of value** function. Fall in value of money due to inflation should discourage savings as these would be devalued. People may try to find alternative means of storing their wealth such as gold, foreign currency, land and index-linked financial assets. This is especially true when the real rates of interest (interest less rate of inflation) becomes negative. However, some studies show that inflation may

actually result in a rise in savings as people believed they would need higher real reserves in the future.

- Inflation also affects the standard of deferred payment function. Businesses may be unwilling to give credit over long periods of time if they fear a decline in value of money. However, people will be more willing to borrow money as the real value of debt falls due to inflation.
- Inflation may also affect demand for currency. High rates of inflation will make the currency less acceptable internationally causing a fall in its demand and a fall in its value.

Conclusion

It is important that money performs its functions for smooth working of all economies. If any of the functions breaks down, people will lose confidence in money leading to economic collapse. Government economic policies therefore try to ensure that functions of money do not break down. Otherwise it may lead to collapse of the economic system.

4.3 Barter

In the absence of money, transactions take place by use of barter. BARTER is the direct exchange of one good or service for another. For instance, a buyer may buy wheat by giving cows in return.

Drawbacks of barter

Barter has several drawbacks that are listed below.

- There must be double coincidence of wants. Both buyers and sellers must have the need for the goods and services that they want to exchange. In the absence of double coincidence of wants, trade will not take place. Therefore, the goods must be acceptable to both parties otherwise trade will not take place.
- Goods that are being used in barter may not be portable hence it will be difficult to carry them resulting in reduction in trade and economic activity.
- Some of the goods (e.g. car) may not be divisible and hence will not be able to buy goods of lower denomination.
- There is a lack of a common unit of value making trade difficult as it difficult to find what the market price for exchanging goods is.
- Future payments or contractual payments would be very difficult to make under barter system.
- Storing goods will be difficult as some goods may not be durable (e.g. ice), and for others individuals will incur heavy storage costs and their value may also decline over time.
- Perishable goods will need to be traded quickly otherwise they will lose their value and rot.
- Barter trade is therefore slow, cumbersome, time consuming and very impractical.

- Barter also forces individuals to become self-sufficient. This means that there is lack of specialization and hence results in lack of productivity and efficiency.

Benefits of money

If buyers and sellers have complete confidence in money, then, it will have following benefits.

- ⑥ It will facilitate trade because there is no need for double coincidence of wants.
- ⑥ Individuals, firms and nations can specialize in producing certain goods and services because trade is now easy.
- ⑥ This leads to improvement in productivity levels, higher output, and lower cost of production.
- ⑥ Higher output levels leads to higher employment levels, higher income levels and better living standards.
- ⑥ Money also facilitates international trade and the economies get subsequent benefits of trade.
- ⑥ Money can be used for making future payments therefore credit can be easily introduced in the economy that leads to higher demand, higher output and more employment opportunities.

Drawbacks of money

However, money has its drawbacks too.

- ✓ The major drawback of money is the potential inflation that may result if government prints too much money. High inflation levels may result in a loss of confidence in money leading to a failure of the system.
- ✓ Another major problem with money is counterfeiting. Government needs to take steps against counterfeit notes and introduce measures that restrict counterfeiting. In the absence of such steps, value of money will fall and people will lose confidence in money.

It can therefore be concluded that introduction of money in a barter economy will facilitate trade, improve efficiency and increase international trade. This leads to improvement in living standards as well.

counterfeit
counterfeiting

5 Specialization and Division of Labour

LABOUR refers to people in the working age who are both willing and able to work. LABOUR FORCE is defined as the total number of workers who are available for work. Labour force refers to both employed and unemployed and includes all males and females who can contribute to production of goods and services (normally aged 16 years and above).

5.1 Specialization

SPECIALIZATION is the process by which individuals, firms and economies concentrate on producing those goods and services where they have an advantage over others.

- Specialization allows individuals, firms and nations to become more efficient by concentrating on a particular activity. This leads to surpluses that are sold to others to earn money.
- No one is self-sufficient as people, firms and economies concentrate on producing a limited range of goods and services. It therefore becomes necessary to exchange or trade goods and services. Money earned from trade is used to buy the goods and services that they need and which are produced by other people. Money is therefore essential for specialization and trade to take place.

Different levels of specialization

- **Specialization by occupation** where individual people acquire particular skills and concentrate on these (e.g. teachers and doctors specialize in their occupations). This allows them to concentrate on jobs for which they are most suited.
- **Specialization in the workplace** - division of labour
- **Specialization by firms** where firms and factories may specialize in particular products. One firm may specialize in one industry, e.g. food, and another firm in another industry, e.g. automobiles. Within one company, individual factories may produce particular components which are then assembled at another factory.
- **Specialization by region** where a particular region in a country specializes in the production of certain types of goods or services. For example, Sialkot in Pakistan is famous for its sports industry. Multan in Pakistan concentrates on agricultural production, especially of mangoes and cotton.
- **Specialization by country** where countries focus on producing those goods and services in which they have a (comparative advantage). This depends on the factor endowment, e.g. Saudi Arabia has abundant oil reserves and therefore specialize in oil; Pakistan has abundant arable land with suitable climate for agriculture and therefore specializes in agriculture and agri-based industries.

Benefits of specialization

- At an individual level, the benefit is that individual can specialize in one task that improves his efficiency.
- At a firm level, the benefit is that firms can practice division of labour and can get the associated benefits as discussed below.

- At regional and national level, the benefits of specialization are discussed in international trade along with the theory of comparative advantage. Regional and national specialization allows rise in world output and a rise in world living standards. National specialization also allows trade to take place that results in outward shift in PPC.

Risks of specialization

- Specialization means that no one is self-sufficient. Therefore it increase the inter-dependence of people and nations on each other. This is especially risky for nations if political conflicts result in reduction in trade and national output giving rise to unemployment.
- At an individual level, the risk is that the specialist skills of an individual may become redundant to changing technologies. Individuals therefore need to be flexible and multi-skilled and to be able to move between occupations if they want to successfully counter the rapid pace of technological change.
- At regional and national level, the risk is of over-specialization, where a change in consumer tastes can mean that the goods and services produced by a region or country are no longer demanded in the same quantity. This results in a loss of output and GDP, a rise in unemployment, a fall in living standards, a fall in balance of payments, and a fall in exchange rate of the country's currency.

Specialization depends on following factors

- People's ability to exchange what they make for what they need using money as a medium of exchange.
- The extent of the market – If a market is very large then mass production can take place and division of labour can be introduced. On the other hand, niche markets serve a small market and do not allow division of labour to take place.
- Need good transport facilities for the distribution of goods – Developments in air and sea transport have made it possible to distribute goods in an international market.

5.2 Division of labour

DIVISION OF LABOUR refers to specialization by individuals where production process is divided into small tasks and one worker is specialized to perform one task only. Adam Smith, in his famous book 'The Wealth of Nations', described how division of labour amongst pin workers increased their productivity levels manifold.

- Firms break up the production process into a number of smaller tasks.
- The product is made on an assembly line and the product moves rather than the workers.
- Each worker performs a particular task and the finished article at the end of the assembly line is the combined effort of many workers.

- This leads to more training for workers making them more productive; to less movement of workers hence saving time; to use of more tools and machines that improve productivity of workers and like that.

Benefits of division of labour

- Specialization enables workers to gain skills in a narrow range of tasks thus making workers more productive.
- Division of labour makes it cost-effective to provide workers with specialist tools that can be shared by the workers and improve their productivity.
- It enables the greater use of machinery, technology and the use of robotics.
- It reduces the need for labour leading to lower variable costs.
- Time is saved because a worker is not constantly changing tasks, moving around from place to place and using different machinery and tools.
- Workers can specialize in those tasks to which they are best suited.
- It leads to deskilling (tasks are often simple that need lower skills) and therefore firms can pay lower wages.
- It allows manufacturer to take advantage of economies of scale.
- Higher productivity leads to lower cost of production that makes a firm's output more competitive and firm can also lower prices.
- Without specialization, economies and workers will need to become self-sufficient in order to survive. This limits their choice and deteriorates standard of living.
- It increases overall productivity in the economy resulting in an outward shift in the PPC.

Limitations

- Work can become tedious and monotonous leading to boredom, mistakes, industrial unrest, loss of output and poor quality.
- It requires deskilling that again makes work less interesting leading to demotivation.
- As size of factories become larger, workers become distant from managers leading to demotivation and less control.
- There is greater unemployment as it is a capital-intensive process.
- Size of market sets limit on division of labour. Firms in small markets may not be able to specialize and instead produce a variety of goods to satisfy the market.
- Over-specialization can be dangerous if the demand for the product starts to fall. This will lead to higher unemployment in the area.
- Production processes in division of labour are closely linked with one another. A breakdown in part of the chain of production can halt the production process. For instance, 18 Toyota production plants in Japan were brought to a halt for two weeks in 1997 when the factory of the sole supplier of brake parts to Toyota in Japan was destroyed in a fire.
- Specialization will need exchange which efficiently takes place only in the presence of money.
- Division of labour leads to standardized products and a lack of variety because each product has passed through exactly the same process.

- There is a greater risk of unemployment if demand for some goods decline. The unemployed workers will find it difficult to find jobs in other industries due to lack of skills.

Conditions for division of labour

Division of labour is most suitable in following conditions:

- Production is in very large quantities (mass production) such as in the case of consumer durables like cars, televisions etc.
- There is standardization of goods where all products are alike or where parts are made that can be used in several different products.
- There must be a medium of exchange such as money otherwise specialization will mean that workers will have surpluses that they cannot sell, such as a baker will have a lot of bread that he finds difficult to sell.
- There must also be good transport facilities that aid in transportation of goods from one region to another.

6 Economic systems (different allocative mechanisms)

Basic economic problem

The basic economic problem is that of scarcity which stems from the fact that an economy has limited resources and unlimited wants. This means that all of the wants cannot be satisfied which leads to the problem of scarcity.

- Scarcity can also be shown on the production possibility curve (PPC). The boundary of PPC shows the opportunity cost of producing products. At any one point, an economy cannot produce more of both goods if it operating on PPC. All of the area above PPC hence represents scarcity in the economy.
- Scarcity means that the economy has to make choices and the governments have to ask themselves following questions – what is produced, how they are produced, and for whom are the goods produced. The answers to these questions depend on what economic system a government decides to operate.

ECONOMIC SYSTEM can hence be described as the means or the allocative mechanism by which its people, businesses and government make choices. Within an economic system there will be various actors including:

- Individuals – They are consumers and producers. They may own factors of production that they supply for production purposes.
- Groups – Firms, trade unions, political parties, families and charities.
- Government – Government might range from local authority to a national or international parliament. It establishes and influences the relationships between groups, for instance, through the passing of the law.

Economists have recognized three distinct types of economic systems.

- Market economy
- Command or planned economy
- Mixed economy

6.1 The market economy (free market economy/capitalism/Laissez-Faire system)

FREE MARKET is an economic system in which resource allocation decisions are taken by households and firms through the use of price mechanism with no or minimal interference from the government.

- In a purely free market economy, there is no government intervention. However, in reality governments have some intervention to check the operations of the market and to ensure availability of essential goods and services such as defence.
- This is not a very realistic model and there are very few, if any, examples of market economy that could be found. The closest economy to a free market will be that of USA and Hong Kong.

Characteristics of a market economy

Following are some of the key characteristics of a market economy.

- **Ownership:** Nearly all of the country's factors of production are owned privately by individuals or groups of individuals. They then rent them out to the firms so that they can produce the goods and services. Government has a very limited role such as upholding property rights of these private individuals through the legal system.
- **Objectives:** Everyone in this system is motivated by pure self-interest. Consumers maximize their welfare. Firms maximize profits. Private individuals, who own the factors of production, aim to maximize rents, wages, interest and profit.
- **Free enterprise:** There is freedom of choice in both production and consumption. Firms can sell anything they want and try to respond effectively to consumer demand. Consumers are allowed to buy anything that is sold by the producers. Workers can take on any job they want.
- **The level of competition:** The level of competition is expected to be very high. It is assumed that nearly every market is a perfectly competitive one, with numerous buyers and sellers and no barriers to entry or exit. Firms are competing desperately for customers and the consumers are competing with each other for the goods on offer.
- **Allocative mechanism is the price mechanism:** MARKET MECHANISM is the process where decisions on price and quantity are made on the basis of demand and supply alone. Price mechanism allocates the economy's resources through free interplay of demand and supply forces. Price acts as a signal and an incentive for producers to act in the required way so as to maximize their gain, which, in turn, optimizes the allocation of resources in the whole economy. Higher prices indicate higher demand levels or shortages and producers shift resources to produce such goods. Lower prices indicate lower demand levels or excess supply and producers shift resources to other goods.
- **Decentralized decision making.** There is no single body which allocates resources within the economy. Allocation of resources is the result of countless decisions by individual economic agents. This is as advocated by Adam Smith when he referred to an invisible hand (self-interest) that results in socially desirable allocation of resources.

Answering the three economic questions

What is produced?

In a free market, consumers, producers and the owners of the factors of production interact with each other to allocate economy's scarce resources. Everyone is motivated by pure self-interest. Consumers are trying to maximize their utility; firms are trying to maximize profits; and owners of factors of production are trying to maximize their returns.

Price mechanism decides what is produced. There is consumer sovereignty. A firm will only produce a good if the consumer is willing to buy it. Therefore, it is the consumers who dictate what should be produced. And the consumer willingness is represented in the form of price mechanism. Question of morality does not come into play in this system. If consumers want more coffee, this will shift the demand curve for coffee to the right leading to a rise in prices. This signals to producers to produce more coffee. This will also affect the factor market. Higher

demand for coffee results in shortage of coffee workers leading to a rise in their wages. These higher wages attract more workers from other sectors of the economy into coffee production. Thus, there is an increase in resources used in the production of that good where demand has increased.

How it is produced?

The firms will select that method of production which reduces their cost of production and maximizes profits. Competing firms will try to put technical and economic efficiency into practice. **Economic efficiency** refers to the least cost of producing goods that are desired by the consumers. Price mechanism and market forces play an important role in ideal mix of factors of production. The costs of factors of production will depend on the availability of factors of production. Abundant resource tends to be cheaper than the scarce resource. In countries where labour is expensive and capital is cheap such as in developed countries like USA and Japan, firms use more capital-intensive processes. In countries where capital is expensive and labour is cheap such as in developing countries like Pakistan and Bangladesh, firms use more labour-intensive methods.

For whom is it produced?

Producers must ensure allocative efficiency in deciding 'for whom to produce'. Consumer's 'money votes' decide what is produced. Those with more money will be able to consume more of the goods produced. The process is therefore biased in favour of those goods that are demanded by the rich. Free market system tends to create an unfair distribution of income. The wealthy consume a disproportionately large share of what is produced.

Role of government in a free market economy

In a pure free market, government does not directly interfere with market forces. However, in reality, government may have to intervene and maintain a limited presence. It may have following roles to play.

- Government provides public goods that are not produced by private sector. These may include defence, judiciary and the police force.
- Government raises money through taxes to pay for its expenditure.
- Government issues money and maintains its value.
- Government needs to ensure an adequate legal framework for the allocation and enforcement of property rights. There also needs to be laws about contracts of purchase and sale. It must be illegal to destroy other people's property wilfully.
- Government must have powers to break up monopolies, prevent practices that restrict free trade, and control the activities of trade union.

The government therefore has a strategic role to play in a market economy but it should intervene as little as possible.

Advantages of a Free market economy

Free market economy offers following benefits.

- **Efficiency.** There are many incentives in the free market that promotes efficiency.

- Firms try to become more efficient because of higher competition and profit motive. They try to reduce their costs to remain competitive and to increase their profits. Firms will continuously look for improving their processes and reduce waste to make their goods more competitive. This leads to efficiency in the economy.
- Workers will try to become more efficient and productive as higher productivity levels will usually be rewarded with higher salaries or bonuses.
- **Consumer sovereignty.** Firms will produce those goods that are demanded by the customers. It therefore makes consumers more powerful and they influence the resource allocation decisions if their demand changes.
- **Choice.** There is more competition in the market and firms will produce products that are demanded by consumers. It therefore leads to a large choice of goods and services that are produced in a free market. Workers also have more choice in terms of the occupation in which they intend to work.
- **Innovation.** High levels of competition and profit motive will force firms to become innovative and introduce new products in the market. Government (with its limited interference) protects the intellectual property rights of firms through patents. This gives a further incentive to firms to introduce better quality products and earn more profits.
- **Higher economic growth rates.** Countries whose economic system has been nearer to the free market model have grown much faster than those with a command economy.
- **Other benefits include the following:**
 - Higher production leading to rise in GDP, greater taxes, higher income levels, and improved living standards.
 - Lower unemployment results from greater economic activity.
 - Lower poverty levels are a result of rising incomes and lower unemployment.
 - More development can take place due to greater tax revenue generated by the higher profits that governments can invest in building infrastructure.
 - Lower prices can result due to higher competition and more efficiency resulting in lower cost of production.
- **No shortages or surpluses:** Price mechanism clears the market that results in no shortages or surpluses.

Disadvantages of a free market economy

Free market economy is not without its drawbacks. Following are the key drawbacks:

- **Underprovision of public and merit goods, and goods with positive externalities.**
 - **Public goods** (e.g. defence and street lighting) cannot be provided privately because of their twin characteristics of non-excludability and non-rivalry. This leads to the problem of free riding and the private sector cannot produce these goods. Government must therefore intervene to provide such goods.
 - **Merit goods**, like health and education, tend to be under provided in a free market because of lack of information.

- **Overproduction of demerit goods and goods with negative externalities.**
 - Demerit goods, like cigarettes, tend to be overproduced in a free market due to lack of information.
 - Free markets ignore externalities and therefore produce more negative externalities such as pollution.
- **Private sector monopolies.** Free markets can sometime fail to provide sufficient competition and lead to establishment of private sector monopolies that reduces output, increases prices, and is less efficient and innovative.
- **Unequal distribution of income and wealth.** Free markets can lead to unequal distribution of income and wealth where a few individuals end up owning and earning most of the wealth and income of an economy. This inequality tends to increase over time as rich keep getting richer and poor keep getting poorer. This can lead to civil unrest and may eventually lead to political upheavals.
- **Resource allocation in favour of the rich.** Free markets work on the principle of economic democracy where each dollar has one vote (unlike political democracy which gives each person one vote). Since rich own more dollars, they also get more votes. Therefore, an economy produces more of the goods that are demanded by the rich and less of those goods that are demanded by the poor.

Conclusion

Many economists consider free markets to be the most efficient system. In the long run, assuming that there is competition in the market, free market must achieve efficiency that results in best utilization of the limited factors of production. This should reduce the problem of scarcity in the economy. However, since scarcity arises from lack of resources, even free markets cannot overcome the problem. Economists generally consider this to be better than other systems because of its efficiency. It must be kept in mind though that free markets may also lead to market failure leading to government action to correct the failure.

6.2 Planned economy (Command economy, Communism, Socialism)

In a **COMMAND OR CENTRALLY PLANNED ECONOMY** resource allocation decisions are taken by the government by keeping in mind all (social) costs and benefits of a decision. The firms are owned by the state and they do not operate for maximizing profits. Resources are allocated by the government through a planning process. In a pure planned economy, every item is allocated through rationing from education and health to clothes and food.

- Planned economies get their inspiration from the works of Karl Marx who criticized free markets and predicted class conflicts between the wealthy and the poor. He also criticized use of capital as it led to higher unemployment and reduced earning opportunities for individuals. He also criticized the system as concentrating production in the hands of large monopolistic industrial and commercial organizations. His criticisms are found to be excessive by many economists. However, his prediction of concentration of production systems has largely proved true.

- In a command economy, central government and other state bodies take responsibility of the following:
 - allocation of resources,
 - determination of production targets for all sectors of the economy,
 - distribution of income and determination of wages,
 - ownership of most productive resources and property, and
 - planning the long-term growth of the economy.
- However, it is very difficult for all enterprise to be publicly owned. Therefore, there is a limited opportunity for the private ownership of small businesses such as shops, restaurants and personal services such as hairdressing and cleaning.
- Planned economy is also an extreme of economic systems and is not found in its true form today. Most of the economies are mixed today. The closest economy to a planned economy is North Korea.
- Democratic countries pursue similar but less extreme principles in the name of socialism.

Characteristics of a planned economy

- **Ownership:** Nearly all of the country's factors of production are owned publicly by the government (or the state). The only factor over which the government does not have total control is labour, but they certainly have indirect control over the workers.
- **Free enterprise:** There is no choice and the central authority directs and decides which types of goods and services are produced. There is therefore producer sovereignty.
- **Objectives:** There is no profit motive and the state-owned enterprises work to provide a benefit to the society. Consumers, workers and the government are all assumed to be working for the 'common good', i.e. collective social welfare.
- **The level of competition:** There is very little competition as all the factors of production are owned by the state. However, there may be a black market that develops as a result of shortages. And there can be competition amongst the black market firms.
- **Allocative mechanism:** There is no price mechanism. The authorities set the prices. They set prices at low levels to make sure that everyone can afford the goods. This however may lead to long queues or creation of a black market. Government will therefore use some rationing mechanism such as setting quotas and rations for families and individuals.
- **The planning system:** Government plans how all the resources should be used. They decide what is produced and what quantities, how goods are made (how much labour is used and which method of production is used) and how the goods are divided between different groups in the economy. Government directly set the output levels and price levels. Government considers all (social) costs and benefits when taking a decision and therefore tries to minimize negative externalities such as pollution.
- There is equality of income and wealth. Income is very evenly distributed.
- **Considers all (social) costs and benefits.** Government considers all costs to the society before taking a decision. This should lead to a socially optimal decision.

Answering the three economic questions**What will be produced?**

The planners (or the government) decide what will be produced. The problem is that the planners may find it difficult to know what consumers want. This may lead to over- or under-production of goods and services.

How will it be produced?

The planners direct the resources into producing 'units'. All firms are state-owned enterprises and there is no free enterprise. Planners therefore decide the methods of production.

For whom to produce?

The planner tries to be fair in distributing output of the economy. Wages are determined by the planners. Prices of the goods are set by the planners. Government is, effectively, determining how much each consumer can consume.

Advantages of a command economy

Command economies have several advantages that are explained below.

- **Produce public goods, merit goods and goods with positive externalities.**
 - Public goods have the twin characteristics of non-excludability and non-rivalry. These are under-produced in a free market. Merit goods such as health and education are also under-produced in a free market.
 - Strong government will make sure that public and merit goods are consumed at the right levels and are provided by the government.
- **Equal distribution of income.** Strong government will try to make sure that nobody falls through the safety net. It will be a fairer economy, even though it is likely to be less successful overall.
- **Control over negative externalities and demerit goods.** Government can ban demerit goods. It can also try to use production methods that are environmentally superior. In theory, they should have been able to monitor pollution levels closely, given that they had control of production, but this simply did not happen. Command economies of the 80s had notoriously poor records on the environment.
- **No duplication of effort and reduces wasteful expenditure.** Since there is no competition, a planned economy is able to avoid duplication of production. It also saves on advertisement expenditure which is considered by many as a wasteful expenditure.
- **Profits of the public enterprises** are available to all citizens in the economy and hence create more even distribution of income and wealth.

Disadvantages

Apart from having advantages, planned economies have suffered a lot due to their disadvantages. These are explained below.

- **Inefficiency.** Planners are less likely to make the correct decisions across the whole economy on what is to be produced, how it is to be produced and for whom to produce for. There are no profit motive hence there is no incentive to innovate and reduce costs.

Equality in income creates a disincentive to work and hence workers tend to become less productive. This leads to increase in production costs making local firms less competitive internationally. It results in reduction in exports and a deterioration of the balance of payments.

- **Less choice.** The planner will be more concerned with making sure there are enough essential goods to go around rather than allocating resources efficiently between all goods. There will be fewer goods available to citizens hence reducing their choice.
- **Less innovation.** There is no incentive for the planner to be innovative. As long as they produce the essentials the planners will be happy.
- **Low economic growth rates.** Since the Second World War, the command economies have had the worst record in terms of economic growth.
- **Red-tapism, bureaucracy and slow decision making.** Since all decisions are taken by central planning authority, it slows down the decision making process and leads to delays.
- **Producer sovereignty.** State-owned enterprises and the central planning gain more importance. Consumer demand is at times not considered. This leads to a reduction in consumer power.
- **Shortage.** Lack of a proper allocative mechanism and low prices lead to shortages in the market even for the most essential goods. This leads to excessive queuing and development of a black market for goods and services.
- **Poor quality.** State production can be of poor quality as there is no incentive to innovate and improve quality.

Conclusion

Planned economies of Eastern Europe and USSR did not perform very well and fell well short of the growth exhibited by free market economies of USA and Europe. This was largely due to the inefficiency of the state-owned enterprises, corruption and red-tapism, and absence of incentives to become productive. At the same time, Karl Marx's fears did not materialize and the free markets did not evidence a class clash as predicted by Marx. This has led to many economists criticizing planned economies and suggesting a move towards private enterprise. Eastern European countries and Russia have also made a shift from planned toward free market economies.

6.3 Mixed economy (A more realistic model)

MIXED ECONOMY is a more realistic model where market forces and government, i.e. both private sector and public sector, are involved in resource allocation decisions.

Characteristics

- **Ownership.** There is presence of public sector and private sector. Some of the assets are owned by the government and others are privately owned.
- **Objectives.** Private sector is motivated by self-interest. Firms will try to maximize profits. Consumers will try to maximize welfare. Factor owners will maximize rent,

interest and profit. Public sector, on the other hand, is not working for profit and aims for providing a social benefit.

- **Free enterprise.** Free enterprise exists only in the private sector.
- **The level of competition.** Private sector can be quite competitive. It depends on the market structure that prevails in the various industries. Governments set up bodies whose job is to make sure that industries do not become too uncompetitive.
- **Allocative mechanism.**
 - Price mechanism operates in the private sector. Its efficiency depends on how competitive the market structures are.
 - The government run activities, like health and education, tend to be provided free at the point of use, although there are some charges even in these areas. Low priced goods provided by the government can result in shortages for which government will have to find a rationing mechanism such as setting quotas.
- **Role of government.** Government has following roles to play.
 - Regulate economic activities of the private sector. It needs to ensure that competition exists and that property laws are upheld.
 - Government provides both public goods and merit goods (education and healthcare). Government can provide them directly or contract them out to private firms (paid by the government).
 - Government may own strategic industries or sectors that have natural monopolies (e.g. postal service and electricity industries).

Real world examples

Almost all economies today are mixed economies. However, the extent of the interference of the government will vary. Some countries, such as USA, have very little government interference and tend to be close to a free market. Some economies, such as Zimbabwe, have a very large public sector and tend to be closer to planned economy. Other economies have a mixture of both private and public sectors. High government interference though comes at a cost – higher tax burden on the taxpayers.

Advantages of private sector

- **Efficiency.** Profit motive and competition will force firms to become more competitive leading to lower costs and better quality.
- **Consumer sovereignty.** Private sector firms will try to produce goods that consumers are willing to buy.
- **Choice.** Competition in private sector increases choice for consumers.
- **Innovation.** Competition and profit motive forces firms to innovate.
- **Other benefits.** Other benefits stem from the points that are listed above and can include the following:
 - Higher production
 - Lower unemployment
 - Lower poverty levels
 - More development

- Lower prices
- Improved living standards

Disadvantages of private sector

Despite its benefits, private sector suffers from following drawbacks:

- Underprovision of public and merit goods, and goods with positive externalities.
- Unequal distribution of income.
- Overproduction of demerit goods and goods with negative externalities.
- Private sector monopolies.
- Resource allocation in favour of the rich.

Advantages of public sector

Government will need to intervene in the market to correct market failure. It therefore provides following benefits:

- Government provides public goods and merit goods.
- Control over negative externalities and demerit goods: Government also regulates the amount of negative externalities by imposing taxes, or through taking legal actions.
- Government sector reduces wasteful expenditure.
- Profits of the public enterprises are available to all citizens in the economy and hence create more even distribution of income and wealth.
- Government also uses progressive taxation and a system of welfare payments to the poor that reduces the disparity between the rich and the poor.
- Government controls prices of essential goods.
- Government can control working conditions and allow for a national minimum wage.
- Government can focus on long-run growth with investment in capital goods, training and education, and infrastructure.
- Government tries to promote competition in the economy by breaking up monopolies.

Disadvantages of public sector

However, public sector entities suffer from following drawbacks:

- Inefficiency caused by the fact that there is no profit motive and decision making is slow.
- Public sector is less innovative and may even provide poor quality goods.
- Red-tapism, bureaucracy and slow decision making.
- There is producer sovereignty. State-owned enterprises and the central planning may ignore consumer tastes and wants.
- Goods provided by public sector at low cost or for free may face shortages in the market leading to development of black economy.
- Public sector may end up having poor quality.

Conclusion

Mixed economy is therefore a mixture of free market and planned economy. In this system, there are both private sector and public sector. Its advantages and drawbacks are also a

combination of the two systems. Mixed economy is the most realistic system and is the most widely used system.

6.4 Which system is best?

Both free markets and planned economies have their advantages and disadvantages. As extremes, neither of the systems work, but from the experience of the world economy over the last few decades, it appears that the free market has won the argument.

It would be misleading, though, to say that the free market is the winner without any provisions. Free markets with very limited governments would fail in other ways: poor health and education services, low state benefits and pensions and an unfair distribution of income.

Hence, all economies in the world are now mixed. But it is not clear how much should the government intervene in the free market. This is a subjective decision. Some economies such as US have low government involvement and some like Zimbabwe have high government involvement. The general consensus however is that economy will work better if there is little government intervention. Government has a significant role but too much government and too much interference in free market will lead to disincentives and loss in efficiency and productivity.

The extent to which the government should intervene is a normative question and a difficult one at that. To sum up, governments need to get the balance right. All civilized societies ought to have a minimum safety net of essential services, but if it is too big and costly, the higher taxes will make the economy less efficient and less attractive to foreign investors.

As for overcoming the problem of scarcity, the more efficient the economy, the lower will be the problem of scarcity. Hence, free markets with some government intervention tend to lead to higher efficiency and better allocation of resources than a planned economy. However, no economic system is in a position to eliminate the problem of scarcity.

6.5 Transition economies

TRANSITION ECONOMIES are the formerly planned economies such as countries in Eastern Europe that are trying to shift to the free market economy.

What went wrong with the planned economies?

(Characteristics and benefits and drawbacks of planned economies were discussed earlier)

- **Central planning was breaking down:** People's standard of living was declining and people had to wait in long queues even to get essential goods and services. One of the reasons for the mess was that the state owned enterprises began to ignore instructions from the government. This caused chaos as the output levels were not as planned, and this had knock on effects for other enterprises that relied on this output.

Planned → mixed

- **Obsolete capital stock:** Unsurprisingly, investment from abroad was non-existent. More importantly, there was little investment from within these economies. The capital stock was old, obsolete and falling apart.
- **Poor quality:** Inevitably, the quality of the goods produced was low, and yet consumers still had to queue at the shops to buy them.
- **Couldn't even control pollution:** One of the supposed advantages of the command economy was the fact that the planning authorities could keep pollution low through their control of the production process. Even on this measure these economies were failing. The old factories with their out-of-date and dirty machinery were creating an unacceptable level of air and water pollution.
- **SOEs were inefficient** that led to poor quality and higher costs of production.

All of this created anxiety among people and they wanted the system to change. This led to the fall of the Berlin Wall in 1989 that started the collapse of the communist regimes throughout the world.

Reforms that were needed to move towards free markets

(i) Price liberalization

Government had to remove price controls and allow prices to be determined by the demand and supply forces. This resulted in inflation as prices jumped in the SR. However, this could result in lower queues as goods are rationed through price mechanism. There can be gains from price liberalization if the government allows domestic prices to reflect world prices more closely.

- Since price liberalization is a difficult decision, some governments decide to delay price liberalization. Russian government delayed the decision because of the fear of effect of price rise on real wages of workers. Sensitive prices (such as on food, housing and shelter) were not fully liberalized.

(ii) Removal of subsidies

Government has to remove subsidies paid to the state-owned enterprises (SOEs). The inefficient state-owned sector was able to survive because of the subsidies and subsidies kept prices low hence keeping out competition. Removal of subsidies will lead to increase in prices.

(iii) Privatization

A move towards free markets require privatization of state-owned enterprises. Privatization of small scale SOEs (such as shops, restaurants and bars) created few problems. They were handed over to their former managers or owners. This created a visible sign of transition to market economy and was a source of employment generation.

Privatization of large scale SOEs was a problem as the government needed to ensure that firms responded to market signals and tried to reduce losses and improve profitability; there should be a process of corporate control ensuring that shareholders play an active role in appointment and removal of managers to ensure that the managers are working to maximize benefits for the shareholders; and the government had to select a transparent method of privatizing that didn't

result in corruption, increased government revenue from sales and ensured that the enterprises were handed over to efficient entrepreneurs.

(iv) Establishing markets for labour etc.

All sorts of markets (commodities and factor markets) were absent in planned economies. Market economies need markets for both commodities and factors of production to operate efficiently. Government will need to allow demand and supply to operate freely. This will create initial problems which eventually get settled as markets mature.

- Labour market was non-existent as workers were told by the government about their activities. Workers will now need to find jobs according to their skills and become a part of the market.

(v) Improve management techniques

There was a need to improve management techniques as existing managers lacked these skills. Government could either restructure SOEs and provide training, or sell SOEs to foreign multinationals so that they bring modern management techniques that improve efficiency.

(vi) Trade liberalization

Government needed to reform trade policies by removing state monopoly on trade; removing or reducing trade barriers (tariffs, quotas etc.); and allowing currency to be convertible. This would create competition for local firms leading to efficiency, lower prices and more choice for consumers.

- Certain governments however decided to protect the local industries from the pressure of foreign competition. This is because the SOEs are inefficient and may not be able to compete with foreign firms initially; large increase in imports will lead to large deficits on the current account. However, this will mean that the reform process will slow down and the firms that are using imported raw materials will be at a disadvantage. This may also hurt export from these firms.
- Central European countries have been successful in their efforts of trade liberalization. They were able to find new export markets in Europe and were able to successfully overcome drawbacks of trade liberalization.

(vii) Currency convertibility

Government needed to make their currencies convertible. Government can either use floating or fixed exchange rate systems to make the currency convertible.

(viii) Reform of financial sector

Government needed to reform following areas:

- Establishing an autonomous central bank which is free of government intervention so that it can control money supply and interest rates independently of government; and it can act as a lender of last resort to the commercial banks.
- Creating banking institutions to collect savings and channel these savings to firms (especially SOEs) for restructuring them and improving efficiency.

- Setting up a framework to supervise and regulate activities of the financial sector.
- Creating money markets in which government can sell bonds to finance budget deficits.

These reforms are very difficult and are likely to take many years to complete. Experience of financial sector reforms is mixed. Some examples are given below:

- In Hungary, government refused to bail-out banks which had made poor lending decisions; sold them to foreign investors; and adopted tough bankruptcy laws to ensure banks could recover bad loans. As a result of these policies almost 50% of the banks by 1996 were foreign-owned with very little bad debts in the financial sector.
- Czech Republic on the other hand saw that almost 50% of banks loans were unrecoverable. Policies adopted by the government led to the failure of the financial sector. Banks remained in state ownership. These banks were encouraged by the government to finance many of the privatization of SOEs creating a conflict of interest. Instead of calling in bad loans, Czech banks gave former SOEs more loans and making the firms highly indebted. The legal framework tended to favour firms in debt rather than giving power to banks to recover debt. These policies led to high levels of bad debts and the Czech government was forced to bail out banks for fear of collapse of the financial sector. It eventually began the process of privatization.

(ix) Establishing a stock market

Stock market would enable newly formed enterprises to raise finance for growth.

(x) Changing culture

Government will need to change the culture in the economy to make it efficient and effective. Economy will need to **accept failure** so that only efficient and successful firms will survive and inefficient firms (e.g. SOEs) should be allowed to go down and to be replaced by efficient firms.

(xi) Change in laws

- Government needs **taxation reforms** as formerly all profits of SOEs went to the government but now government will need to raise revenue to finance its spending. Initially, the government will face the problem of a small tax base which over time is expected to expand as firms become more efficient and employ more people.
- Government will need to change other laws especially **property laws**. Formerly, all the assets belonged to the government but with a shift to the market, asset ownership will shift to private individuals and firms. Government will need to protect their property if it wants its reforms to become successful.

Outcome of reforms

All of the transition economies experienced pain during the transition.

- Output fell dramatically,
- Inflation rose (hyperinflation in some of the countries),
- BoP deteriorated,
- devaluation of currency took place,

- SOEs were under threat from foreign competitors and some of them were forced to shut down, and
- unemployment levels rose.

Planned → Mixed

Reasons why the transition process was so difficult.

- One of the key problems was that the old command economies had no labour, capital or goods markets. Everything had been directed by the state. The creation of these markets from scratch was very difficult.
- Governments had never had to use fiscal policy and monetary policy in the way that developed economies understand. They had to set taxes in order to pay for defence, a legal system and a welfare state for those who were to inevitably suffer during the transition process, but the newly formed private enterprises were struggling in their early days, and so often could not afford the taxes, so they just didn't pay. If the government raised taxes to allow for this, even more businesses left the formal economy and joined the informal economy.
- Tax base was small and the government faced difficulties in financing its expenditure with use of money markets. In western economies, the government can sell bonds and bills to the public through the stock market. In the transition economies, the stock markets were under developed, so there was only one other way to raise money - print new notes. Of course, this caused the money supply to grow enormously, which is the main reason for the hyperinflation experienced by some of the countries.
- Workers were used to working in a state owned enterprise when all production decisions came from above. The sudden switch to private enterprise was a shock.
- The new entrepreneurs were cautious in their decisions. They did not want to make lots of goods that might not be purchased by consumers. They were not keen on investing in new machinery. So not only was the quality and quantity of their output low, but this had a knock on effect. Businesses that supplied machinery or the materials required for the production of the good would suffer too. It led to low output levels that led to low employment which led to less consumer spending power and so an even lower output.
- Transition economies also shifted to protecting property rights. The laws were often unclear or contradictory. In some countries, businessmen took advantage of the unclear property laws by signing land and factories over to themselves during the privatization process. The laws were also muddled for foreign investors. It was essential to attract foreign money if the economies were to grow again.

Pace of reforms

Countries have used different approaches to achieve the transition.

- Some economists recommend **shock therapy**, i.e. involving extensive privatization, adopting strict monetary and fiscal policies to reduce inflation, and allowing the forces of supply and demand to determine prices and exchange rates.
- Others argue for (and some countries have adopted) a **gradual approach** to transition because the pains from transition need to be softened. They argue that the consumers

and produces need time to adopt the new system and the government needs public support to adopt the policies.

Concluding comment

The overall success of the reforms depended on a lot of factors such as the extent of reforms, pace of introducing reforms, ability to attract aid to support economic reform process, ability to attract FDI from USA, EU and Japan, and the extent to which there is political stability and commitment to persist with reforms.

Some of the countries have proved that transition can be a success if the right steps are taken at the beginning. Probably the two most important fundamentals that must be in place are:

- A robust legal system along with clear rules governing the issue of property rights.
- A reformed and free capital market to attract foreign investment.

7 The price system

A **MARKET** refers to a process through which products that are fairly similar are bought and sold. The essence of market is trade – there is a buyer (prepared to purchase something such as consumers) and there is a seller (prepared to sell something such as firms)

- Markets usually have a physical existence such as stalls and shops where goods are sold. But a market may not have clearly defined physical presence. With the advent of technology and improvement in communication systems, we find that online trading and trading on telephone has increased a lot.

Following are some of the examples of markets that we will study in A-Level:

- Housing market – where buying and selling of houses take place;
- Labour market – where individuals' labour power is bought and sold;
- Stock market – where shares are bought and sold;
- Commodity market – where commodities (wheat, rice etc.) are bought and sold;
- Foreign exchange market – where currencies are bought and sold.

Within each market there can be **SUB-MARKETS**, i.e. smaller sections of the overall market, e.g. computer industry can be broken down into various type of computers depending on their memory, speed, features and whether they are desktops or laptops. We usually try to find prices for sub-markets by looking at their demand and supply conditions.

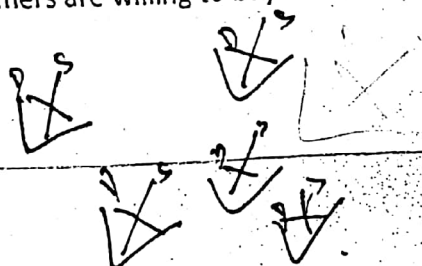
Free market

A **MARKET SYSTEM** refers to a resource allocation mechanism where resources are allocated based on price mechanism. **PRICE MECHANISM** is the means of allocating resources in a market economy. Prices in a market are determined by pure demand and supply forces without any government or external intervention.

7.1 Demand – buy side of the market

DEMAND refers to the quantities of a product that purchasers are willing and able to buy at various prices per period of time ceteris paribus (key points are explained in Appendix A).

- EFFECTIVE DEMAND** – demand is said to be effective when there is both willingness and ability to buy a product. Economists only take into account effective demand.
- The **LAW OF DEMAND** states that price and quantity demanded are inversely proportional to each other, i.e. a lower quantity will be demanded at a higher price assuming all other factors remain constant. This is because with an increase in price of good, value for money (as measured in terms of satisfaction derived per dollar spent on the product) falls. Fall in value for money leads to a decrease in demand for the product.
- DEMAND CURVE** is the diagrammatic representation of demand based on its definition and shows the relationship between the quantity demanded and the price of a product. The demand curve for goods is usually downward sloping from left to right, i.e. consumers are willing to buy more with a fall in prices.



The following **DEMAND SCHEDULE** (statistical data about quantity demanded of a product at different price levels) is for a hypothetical product. It shows that with a decrease in price of the product, quantity demanded of the product rises. The corresponding market demand curve (plot of a market demand schedule on a graph) is shown in the figure below.

Price of Good A (\$)	Quantity demanded (Q_d) per week
100	200
80	240
60	280
40	320
20	360

- **MARKET DEMAND** is the total amount demanded by the consumers in a market and is derived by horizontally summing the individual demand curves.

$$\text{Market demand} = \sum \text{individual demand}$$

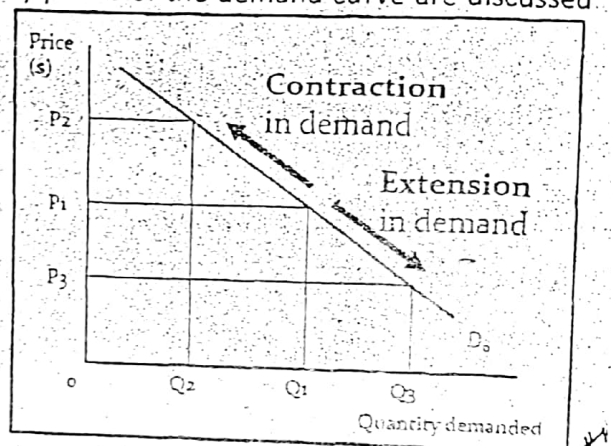
The demand curve clearly shows that there is an inverse relationship between price and quantity demanded. An increase in price leads to a fall in quantity demanded and vice versa. (Some of the key points of the demand curve are discussed in Appendix B.) The equation of a linear demand curve is:

$$Q_d = a - b(\text{Price})$$

Movement along the demand curve

Movement along the demand curve takes place due to two reasons:

- A change in price of the product itself (not of complements and substitutes)
 - An increase in price leading to a fall in quantity demanded is called **CONTRACTION IN DEMAND**.
 - A fall in price leading to an increase in quantity demanded is called **EXTENSION IN DEMAND**.
- A shift in the supply curve also leads to a movement along the demand curve.



Some special cases

1. **GIFFEN GOOD** is a good for which demand increases as the price increases and vice versa. It has an upward sloping demand curve which is contrary to the law of demand. A Giffen good is typically an inferior product that does not have easily available substitutes. The most commonly cited example of a Giffen good is that of the Irish potato. During the Irish famine of 19th century, as the price of potatoes rose, poor consumers had little money left for more nutritious but expensive food items like meat. The lack of money led them to buy more potatoes and less meat.
2. **VEBLEN GOODS** are types of material commodities for which demand is proportional to their high price. These include luxury goods such as expensive jewellery, fashion-designer handbags and luxury cars which are in demand because of their high prices. The high prices makes them desirable as status symbols. A decrease in their prices

would reduce with quantity demanded therefore they have an upward sloping demand curve.

7.2 Supply - sell side of the market

SUPPLY refers to the quantities of a product that suppliers are willing and able to sell at various prices per period of time, *ceteris paribus* (key points are explained in Appendix C).

- The **LAW OF SUPPLY** states that price and quantity supplied are directly proportional to each other, i.e. a higher quantity will be supplied at higher prices, all other things unchanged. This is because higher prices are more likely to increase profits of the firms and firms are therefore likely to produce and sell more. Another reason for upward sloping supply curve is that the firms face diminishing returns in the short run, i.e. the cost per unit of firm increases with an increase in output. Market prices will have to rise to convince producers to produce at higher price levels.
- SUPPLY CURVE** is the diagrammatic representation of the definition of supply and shows the relationship between the quantity supplied and the price of the product. The supply curve of goods is usually upward sloping, i.e. firms will be willing to increase their output with an increase in prices.

The following **SUPPLY SCHEDULE** is for a hypothetical product. It shows that with an increase in price of the product, quantity supplied of the product rises.

Price of Good A (\$)	Quantity supplied (Qs) per week
100	360
80	320
60	280
40	240
20	200

MARKET SUPPLY is an aggregation of supply curves of individual firms such that:

$$\text{Market supply} = \sum \text{individual supply}$$

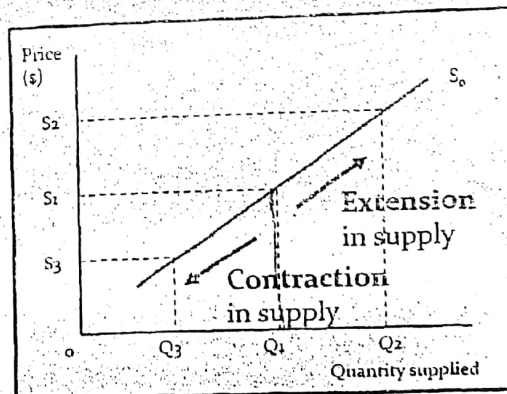
The supply curve clearly shows that there is a direct relationship between price and quantity supplied. An increase in price leads to an increase in quantity supplied and vice versa. (Some of the key points of supply curve are discussed in Appendix D.) The equation of a linear supply curve is:

$$Q_s = a + b(\text{Price})$$

Movement along the supply curve

Movement along the supply curve takes place due to two reasons:

- A change in price of the product itself
 - An increase in price leading to a rise in quantity supplied is called **EXTENSION IN SUPPLY**.
 - A fall in price leading to a fall in quantity supplied is called **CONTRACTION IN SUPPLY**.



would reduce with quantity demanded therefore they have an upward sloping demand curve.

1.2 Supply - sell side of the market

SUPPLY refers to the quantities of a product that suppliers are willing and able to sell at various prices per period of time, ceteris paribus (key points are explained in Appendix C).

- The **LAW OF SUPPLY** states that price and quantity supplied are directly proportional to each other, i.e. a higher quantity will be supplied at higher prices, all other things unchanged. This is because higher prices are more likely to increase profits of the firms and firms are therefore likely to produce and sell more. Another reason for upward sloping supply curve is that the firms face diminishing returns in the short run, i.e. the cost per unit of firm increases with an increase in output. Market prices will have to rise to convince producers to produce at higher price levels.
- SUPPLY CURVE** is the diagrammatic representation of the definition of supply and shows the relationship between the quantity supplied and the price of the product. The supply curve of goods is usually upward sloping, i.e. firms will be willing to increase their output with an increase in prices.

The following **SUPPLY SCHEDULE** is for a hypothetical product. It shows that with an increase in price of the product, quantity supplied of the product rises.

Price of good A (\$)	Quantity supplied (Qs) per week
100	360
80	320
60	280
40	240
20	200

* **MARKET SUPPLY** is an aggregation of supply curves of individual firms such that:

$$\text{Market supply} = \sum \text{individual supply}$$

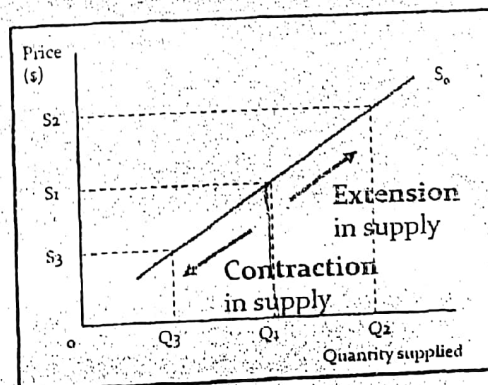
The supply curve clearly shows that there is a direct relationship between price and quantity supplied. An increase in price leads to an increase in quantity supplied and vice versa. (Some of the key points of supply curve are discussed in Appendix D.) The equation of a linear supply curve is:

$$Q_s = a + b(\text{Price})$$

Movement along the supply curve

Movement along the supply curve takes place due to two reasons:

- A change in price of the product itself
 - An increase in price leading to a rise in quantity supplied is called **EXTENSION IN SUPPLY**.
 - A fall in price leading to a fall in quantity supplied is called **CONTRACTION IN SUPPLY**.



- A shift in the demand curve also leads to a movement along the demand curve.

7.3 Market equilibrium

EQUILIBRIUM refers to a situation of balance where at least under present circumstances there is no tendency for change to occur.

Price of Good A (\$)	Q _d per week	Q _s per week
100	200	360
80	240	320
60	280	280
40	320	240
20	360	200

- In a free market system without government intervention, equilibrium price is established where quantity demanded is equal to quantity supplied. This can be shown with the help of a table and graph.

- Market equilibrium takes place where quantity demanded is equal to quantity supplied (look at the table) or where the demand curve and the supply curve intersect (look at the figure). Using the above table, equilibrium price is \$60

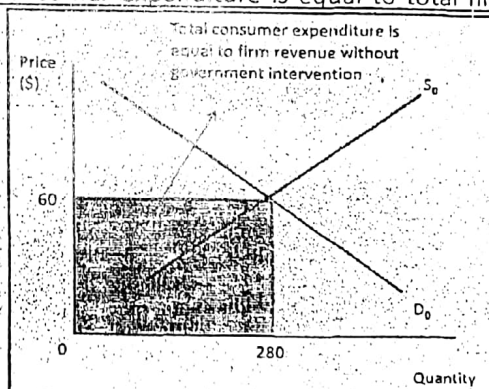
and equilibrium quantity is 280 units. **EQUILIBRIUM PRICE** is the price where demand and supply are equal, where the market clears. **EQUILIBRIUM QUANTITY** is the amount that is traded at the equilibrium price.

Total consumer expenditure is given as:

$$\text{Total consumer expenditure} = \text{Total firm revenue} = P_e \times Q_e$$

Assuming no government intervention, the total consumer expenditure is equal to total firm revenue. In the above case, total expenditure or firm revenue is equal to \$16,800 (60x280).

- It must be noted that the firm revenue is not the same as profits. Profit is calculated after deducting costs from revenues. Therefore, we need to know the cost levels first to calculate profits.
- The consumer expenditure or firm revenue is shown as the shaded region in the graph.



Reason for reaching an equilibrium

Equilibrium price is sometimes also called **MARKET CLEARING PRICE**, i.e. price where all products supplied to the market are bought or cleared from the market.

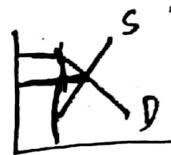
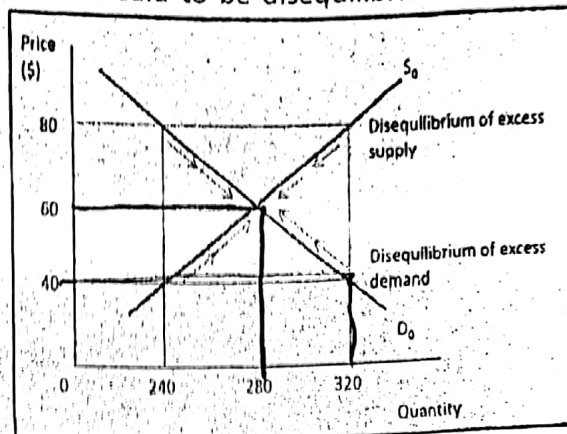
- Market prices may be different from equilibrium price that lead to either shortages or surpluses.
- 'Free market forces' will move the market price toward equilibrium.

DISEQUILIBRIUM takes place if there is an imbalance where change will happen, i.e. where demand and supply are not equal. Two situations of disequilibrium are explained below.

(i) Disequilibrium of excess supply

If market price is greater than equilibrium price, there is said to be disequilibrium of excess supply. At a higher price (such as \$80), firms will be willing to supply a higher amount (320 units) than the demand (240 units) at that price. This results in excess supply and following adjustments:

- As supply is greater than demand, firms will build up stocks. Reaction of suppliers will be to cut prices and reduce quantity supplied in the market hence moving toward the equilibrium.
- As price is cut, consumers will react by increasing demand for the product therefore moving toward the equilibrium.

(ii) Disequilibrium of excess demand

If market price is less than equilibrium price, there is said to be disequilibrium of excess demand. At a lower price (such as \$40), consumers will demand a higher amount (320 units) than what the firms are prepared to supply (240 units) at that price. This results in excess demand or shortages and following adjustments:

- As demand is greater than supply, there will be shortages in the market.
- Reaction of suppliers will be to increase prices (they see a profit opportunity) and increase quantity supplied in the market hence moving toward the equilibrium.
- As price is raised, consumers will react by (reducing demand) for the product (some consumers leave the market) therefore moving toward the equilibrium.

Nothing will be able to prevent companies from adjusting in this way, and, provided there is no change in demand and supply conditions, an equilibrium will eventually be reached. It must be noted that the adjustment is not an instantaneous process, rather it takes place through expert decision making or simple trial and error.

However, this creates an inherent limitation of the process.

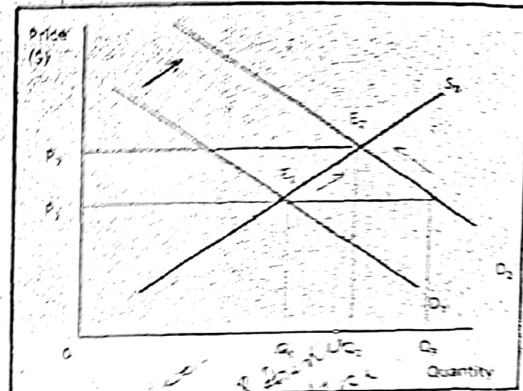
- There will be (time lags) before the adjustment is completed.
- Markets can thus remain in disequilibrium for some period of time. The market will eventually (clear) at the point of equilibrium.

Changes in equilibrium

Equilibrium can change because of a change in demand or supply conditions leading to a shift in either one or both the curves. Some of the examples are described below.

(i) An increase in demand

Demand can increase due to rise in income for normal goods or a fall in income for inferior goods; rise in price of substitutes; fall in price of complements; favourable tastes; increase in advertisements; positive news about the product and the company and like that. An increase in demand leads to a rightward shift in the demand curve leading to a rise in both price and quantity.

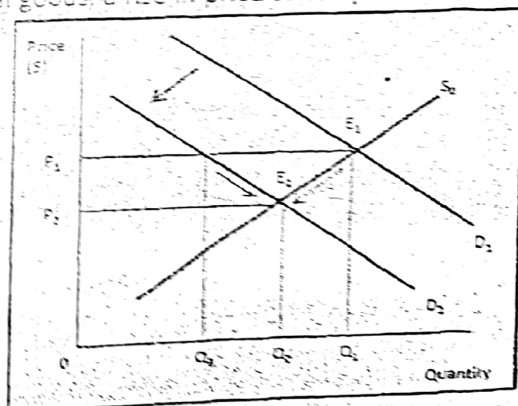


An increase in demand from D_1 to D_2 leads to following changes.

- At the initial equilibrium price (P_1), there will now be disequilibrium of excess demand as consumers will demand more goods (Q_3) at the same price. This leads to a shortage equal to $Q_3 - Q_1$.
- Suppliers react by increasing prices and increasing quantity supplied. Therefore moving towards the new equilibrium E_2 . As prices rise, some consumers leave the market leading to a fall in quantity demanded. Therefore moving towards the new equilibrium.
- Market clears where the new demand (D_2) and supply curve intersect. New equilibrium is hence established at a higher price (P_2) and a higher quantity (Q_2).

iii) A decrease in demand

Demand can fall due to a fall in income for normal goods; a rise in price of complements, a fall in price of substitutes, unfavourable tastes, poor advertisement, a poor news item about the product and like that. A fall in demand leads to a leftward shift in the demand curve leading to a fall in price and a fall in quantity traded.



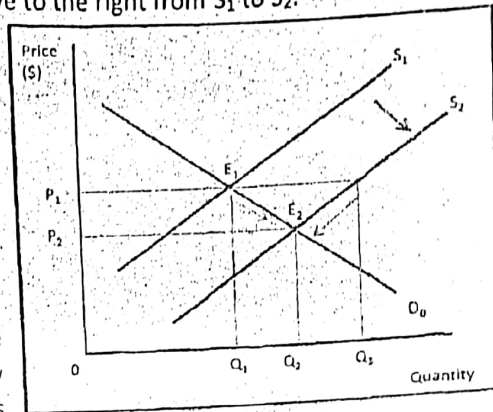
- At the initial equilibrium price (P_1), there will now be disequilibrium of excess supply as consumers will demand fewer goods (Q_3) at the same price. This leads to excess supply equal to $Q_3 - Q_1$.
- Suppliers react by decreasing prices and decreasing quantity supplied. Therefore moving towards the new equilibrium E_2 . As prices fall, some consumers enter the market leading to a rise in quantity demanded. Therefore moving towards the new equilibrium.
- Market clears where the new demand (D_2) and supply curve intersect. New equilibrium is hence established at a lower price (P_2) and a lower quantity (Q_2).

①

(iii) An increase in supply

Increase in supply takes place due to lower cost of production due to lower wages, lower price of raw materials, lower energy and transportation cost, introduction of cost-saving new technology, removal of indirect tax, provision of subsidy, and also due to entry of new firms in the market. An increase in supply shifts supply curve to the right from S_1 to S_2 .

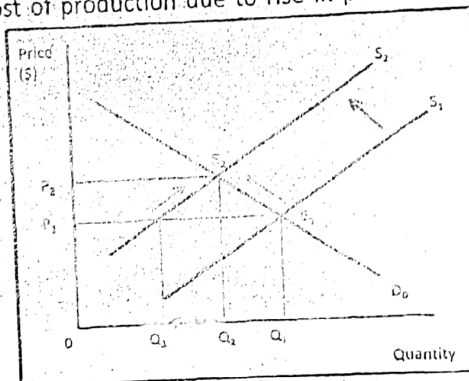
- At the initial equilibrium price (P_1), there will now be disequilibrium of excess supply as suppliers will supply more goods (Q_3) at the same price. This leads to excess supply equal to $Q_3 - Q_1$.
- Suppliers react by decreasing prices and decreasing quantity supplied. Therefore moving towards the new equilibrium E_2 . As prices fall, some consumers enter the market leading to a rise in quantity demanded. Therefore moving towards the new equilibrium E_2 .
- Market clears where the new supply (S_2) and demand curve intersect. New equilibrium is hence established at a lower price (P_2) and a higher quantity (Q_2).



(iv) A decrease in supply

Decrease in supply takes place due to a rise in cost of production due to rise in price of raw materials, a rise in wages, imposition of indirect taxes, removal of subsidy, rise in energy and transportation costs, and a fall in number of firms in the industry. A decrease in supply shifts the supply curve to the left from S_1 to S_2 .

- At the initial equilibrium price (P_1), there will now be disequilibrium of excess demand as consumers will demand more goods (Q_3) at the same price. This leads to a shortage equal to $Q_3 - Q_1$.
- Suppliers react by increasing prices and increasing quantity supplied. Therefore moving towards the new equilibrium E_2 . As prices rise, some consumers leave the market leading to a fall in quantity demanded. Therefore moving towards the new equilibrium E_2 .
- Market clears where the new supply (S_2) and demand curve intersect. New equilibrium is hence established at a higher price (P_2) and a lower quantity (Q_2).



(v) Changes in both demand and supply curves

The following table summarizes the impact of changes in both demand and supply curves simultaneously. Please refer to Appendix G for graphs showing the impact of changes in both the demand and the supply curves.

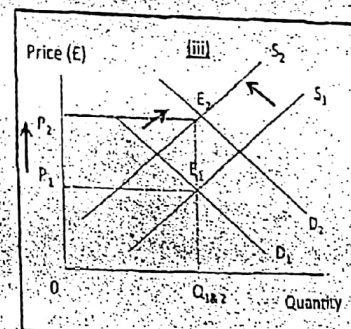
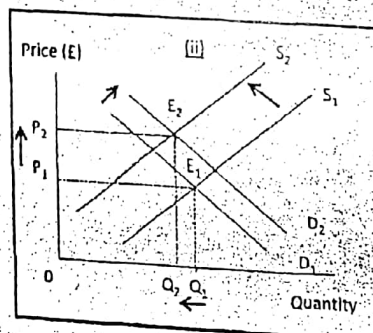
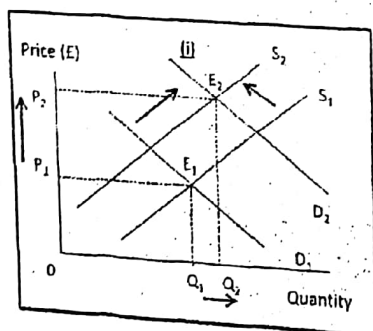
Change	Impact on Equilibrium Price	Impact on Equilibrium Quantity
(i) A change in demand		
(a) Increase in demand	Increase	Increase
(b) Decrease in demand	Decrease	Decrease
(ii) A change in supply		
(a) Increase in supply	Decrease	Increase
(b) Decrease in supply	Increase	Decrease
(iii) A change in both		
(a) Increase in demand & decrease in supply	Increase	Uncertain
(b) Decrease in demand & increase in supply	Decrease	Uncertain
(c) Increase in both demand and supply	Uncertain	Increase
(d) Decrease in both demand and supply	Uncertain	Decrease

* Uncertain means that the change in price or quantity cannot be predicted. It may increase, decrease or remain constant depending on the extent of change in demand or supply.

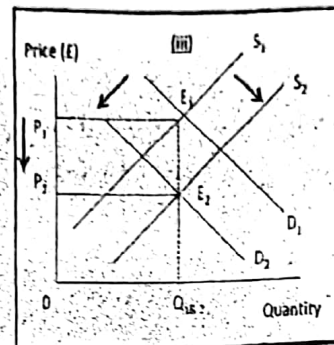
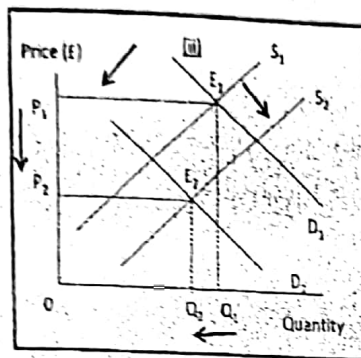
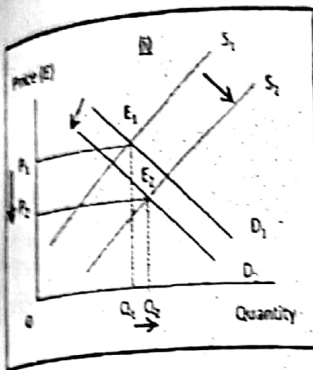
This can be explained using the following diagrams.

Increase in demand and a decrease in supply

- Prices should rise.
- Effect on equilibrium quantity is not known. It may i) increase, ii) decrease or iii) remain constant.

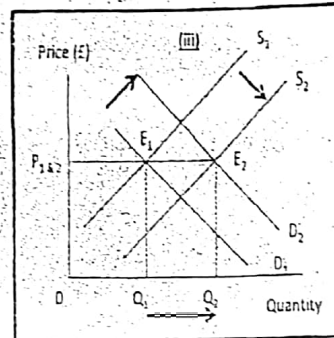
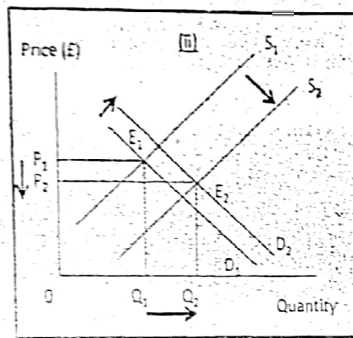
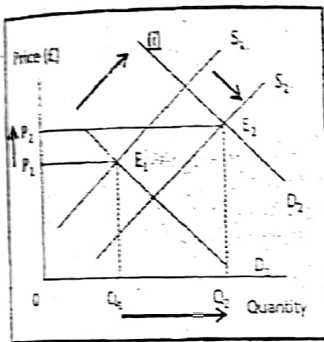
Decrease in demand and an increase in supply

- Prices should fall
- Effect on equilibrium quantity is not known. It may (i) increase, (ii) decrease, or (iii) remain unchanged.



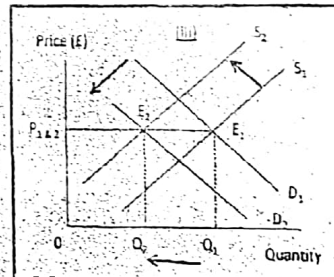
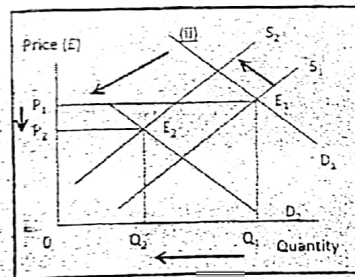
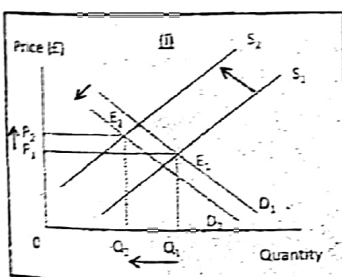
Increase in demand and an increase in supply

- Quantity should rise.
- Effect on equilibrium price is not known. It may (i) increase, (ii) decrease, or (iii) remain unchanged.



Decrease in demand and a decrease in supply

- Quantity should fall.
- Effect on equilibrium price is not known. It may (i) increase, (ii) decrease, or (iii) remain unchanged.



7.4 Shifts in demand curve

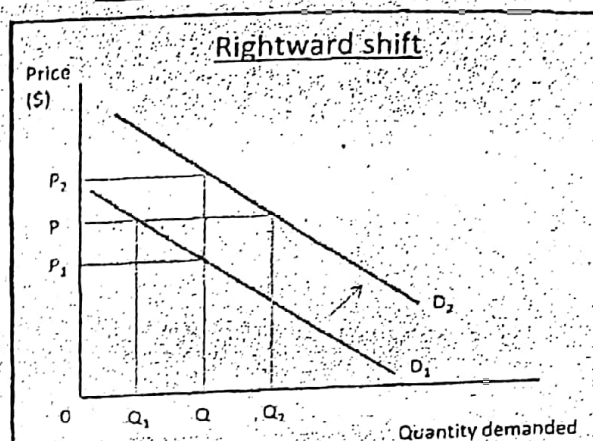
CHANGE IN DEMAND is a shift in the demand curve due to changes in factors other than the price of the particular product.

Rightward shift in demand curve

Rightward shift in demand curve takes place because of an increase in demand which can be due to more favourable tastes; fall in price of complements; rise in price of substitutes; increase in income for normal goods etc.

A rightward shift, as shown in the figure, means that demand curve shifts from D_1 to D_2 .

- At the same price (e.g. P), consumers are willing to buy more of the same good (demand increased from Q_1 to Q_2).
- For the same quantity (e.g. Q), consumers are now willing to pay a higher price (price increased from P_1 to P_2). Hence, companies can increase their prices.

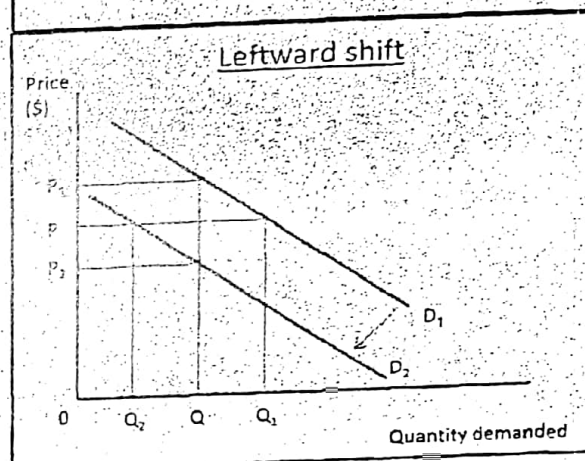


Leftward shift in demand curve

Leftward shift in demand curve takes place because of a decrease in demand which can be due to change in tastes of consumers; rise in price of complements; fall in price of substitutes; decrease in income for normal goods etc.

A leftward shift means that demand curve shifts from D_1 to D_2 .

- At the same price (e.g. P), consumers are willing to buy less of the same good (demand decreased from Q_1 to Q_2).
- For the same quantity (e.g. Q), consumers are now willing to pay a lower price (price decreased from P_1 to P_2).



Language used in demand curve

Change in price leads to a movement on the line and we say that there is a change in Quantity demanded. Change in other factors leads to a shift in the curve and we say that there is a change in demand.

Major influences affecting shift in demand curve

(i) Financial ability to pay for the product

(a) Purchasing power of income after taxation

DISPOSABLE INCOME is the income left after subtracting direct taxes and adding state benefits.

DIRECT TAX is a tax on income of people and firms and cannot be avoided. The impact of disposable income on demand depends upon whether the good is normal or inferior.

NORMAL GOODS exhibit a positive relationship between income and demand and a negative relationship between direct taxes and demand. These include cars and designer clothes.

- An increase in demand for normal goods take place due to rise in income or a fall in direct taxes and vice versa.

INFERIOR GOODS exhibit a negative relationship between income and demand and a positive relationship between direct taxes and demand, such as cheap unbranded clothing.

- An increase in demand for inferior goods take place due to fall in income or a rise in direct taxes and vice versa.

Apart from incomes and direct taxes, other factors that can influence the purchasing power are:

- large increase in unemployment leads to a fall in aggregate income;
- sustained rise in earnings from work leads to an increase in income; and
- inflation leads to a fall in purchasing power of money.

(b) Availability of loans or credit and the interest rate that must be paid on loans or credit card balances

Increase in availability of loans or credit and a decrease in interest rates lead to more borrowing in the economy which in turn increases the demand for the product (rightward shift).

- **Interest rates** affects consumption. Many people borrow to buy durable goods. A rise in interest rates would result in higher instalments or repayments for the product resulting in a fall in demand for the product and vice versa.

(ii) Attitudes towards the product

Purchase behaviour of individuals reflects their tastes and preferences for different types of products. A **favourable preference** leads to a rise in demand. It can result from:

- a good reputation for reliability and service;
- strong brand identification aided by advertisement and promotion;
- fashion appeal, status symbol, or its looks;
- favourable news item;
- individual likes and dislikes;
- peer pressure and like that.

(iii) Price, availability and attractiveness of related products

Economists classify related product into two categories – (i) substitutes; and (ii) complements.

(a) Substitutes

SUBSTITUTES are products that satisfy essentially the same need or want (an alternative good), e.g. Coke and Pepsi, tea and coffee, and air travel and road travel.

- Range of substitutability can be narrow (such as different competing brands – HP and Dell, Coke and Pepsi, Honda and Toyota) or broad (such as different product groups – different types of transport including rail, buses and cars; or different types of soft drinks such as cola drinks and fruit juices).
- An increase in price of substitute makes the product more attractive leading to an increase in the demand of the product (rightward shift), e.g. if Toyota decided to increase its prices, value for money for Toyota will fall and Honda (a substitute) will become more attractive for the customers. Demand for Honda cars, as a result of Toyota's decision to increase price of its cars, will increase.
- A decrease in price of substitutes, on the other hand, will make the product less attractive leading to a fall in its demand (leftward shift).
- An increase in quality, features, advertisement etc. of a substitute will make substitute more attractive leading to a fall in the demand of your product (leftward shift) and vice versa.

(b) Complements

COMPLEMENTS are products that enhance the satisfaction derived from use of another product (a good consumed with another), e.g. fish and rice, TVs and DVD players, and PCs and software. In some cases, main product cannot be used without a complement, e.g. razor and razor blades; and DVDs and DVD players.

- An increase in price of complement will decrease the demand for complements making your product less attractive. This will lead to a fall in demand for your product (leftward shift). A fall in price of complement will increase the demand for complement making your product more attractive. This will lead to an increase in demand for your product (rightward shift).
- An increase in attractive and availability of complement will make your product more attractive leading to an increase in demand of your product (rightward shift) and vice versa.

(iv) Other demand influencing factors – peculiar to each product

Each product will have some factors that are peculiar to that product, e.g. weather may influence demand for ice cream.

- Expectations of future are important in determining demand for houses and shares. If house prices and share prices are expected to rise, there will be a major activity in buying of houses and shares.
- Expected unemployment and interest rates also influence demand. If unemployment or interest rates are expected to increase, consumer and industrial spending may fall leading to a decrease in demand for certain products.

Three types of demand

1. **COMPOSITE DEMAND** occurs when a good is demanded for two or more uses, e.g. land may be demanded to build shops, to build houses or to build a factory. Another example is of wheat that can be used to manufacture bio-fuel and also manufacture bread. If demand for bio-fuel rises, more wheat will go into production of bio-fuel. An increase in demand for wheat in bio-fuel industry will raise its price and affect the prices of all other products made from wheat such as bread. That will mean that supply of bread will fall as less wheat is available for manufacturing bread.

2. **JOINT DEMAND** (complements) occurs when two goods are consumed together, e.g. gaming consoles and games, and razors and razor blades.

- If demand for gaming consoles rise (may be due to higher income levels), it will also result in rise in demand for games.
- Alternately, if supply of PCs rise (may be due to fall in costs because of superior production technology) leading to a fall in their price and a rise in their demand, it will result in a rise in demand for software. This relationship can also be shown through XED.

3. **DERIVED DEMAND** occurs when demand for one good occurs as a result of demand for another, e.g. labour is demanded because there is demand for the final product. Another example is of input such as steel for car manufacturing. If demand for cars rise, demand for steel will also rise which is the raw material for manufacturing cars.

4. **COMPETITIVE DEMAND** refers to demand for products that are close substitutes for one another, beef and chicken meat. A decrease in supply of beef leads to a rise in price of beef which makes chicken more attractive leading to a rise in demand and price of chicken meat. This relationship can also be shown through XED.

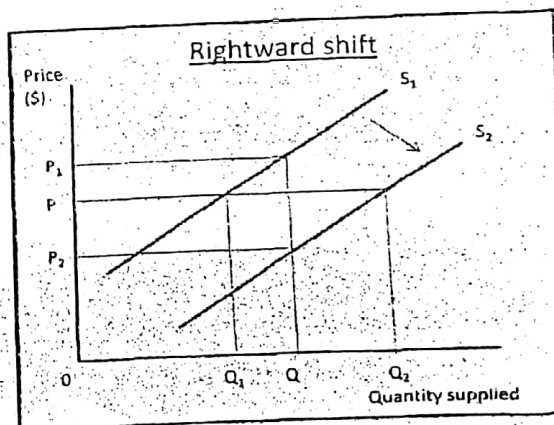
7.5 Shifts in supply curve

CHANGE IN SUPPLY takes place when there is a shift in the supply curve due to a change in factors other than the price of the particular product.

Rightward shift in supply curve

Increase in supply can take place due to lower cost of production because of availability of cheaper raw material, lower wages, increased productivity due to better production techniques and improved technology, provision of government subsidies, a reduction in indirect taxes, and entry of new firms in the market. An increase in supply shifts the supply curve to the right from S_1 to S_2 .

- At the same price (e.g. P), firms are

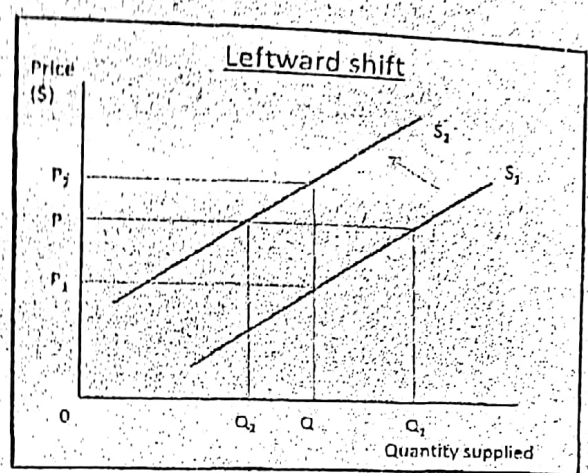


- willing to sell more of the same good (supply increased from Q_1 to Q_2).
- For the same quantity (e.g. Q), firms are willing to charge a lower price (price decreased from P_1 to P_2).

Leftward shift in supply curve

Fall in supply leads to a leftwards shift in supply curve from S_1 to S_2 . Supply can fall due to a rise in cost of production due to higher wage rates (due to national minimum wage or union negotiations), higher raw material prices (because of raw material shortages etc.), imposition of indirect taxes, some firms leaving the industry, or removal of subsidies.

- At the same price (e.g. P), firms are willing to supply less (supply decreases from Q_1 to Q_2).
- For the same quantity (e.g. Q), firms are now willing to charge a higher price (price increased from P_1 to P_2).



Language used in supply curve

Change in price leads to a movement on the line and we say that there is a change in Quantity supplied. Change in other factors leads to a shift in the curve and we say that there is a change in supply.

Major influences affecting shift in supply curve

(i) Costs of supplying a product

Companies make supply decision on the basis of the price that they can get in the market in relation to the cost of supplying the product. Shift in supply curve takes place because of a change in cost of production (other than due to law of diminishing returns). Major influences on supply include cost of raw materials and components; wage rates; worker productivity; energy costs; transport costs; equipment maintenance costs; technology and like that.

- Leftward shift (decrease in supply) takes place because of increase in cost of production which can be due to increase in wage rates (union negotiated or because of higher inflation); decrease in worker productivity (demotivation etc.); increase in prices of raw materials and components (higher world demand for or shortage of supply of raw materials); increase in cost of energy, transportation and equipment maintenance; poor technology leading to productivity losses etc.
- Rightward shift (increase in supply) takes place because of fall in cost of production which can be due to decrease in wage rates (decrease in union power, unemployment, production in low wage countries); increase in worker productivity (use of capital machinery, motivation etc.); fall in prices of raw materials and components (excess supply of raw materials); decrease in cost of energy, transportation and equipment maintenance; improvement in state of technology leading to productivity gains etc.

(ii) Government policy(a) Government legislation

Government legislation is designed to protect consumers, workers, and community. Some of the steps that government take may include:

- quality control legislation (aimed at improving quality of finished good – increases cost of production of the firm);
- pollution control (aimed at controlling emission of harmful gases and other waste products that pollute the environment – also increases cost of production);
- minimum wages (decrease poverty and remove worker exploitation – increase costs);
- maximum working hours (prevents worker exploitation – reduces productivity hence increasing costs of production).

The impact of legislation is that it increases costs of the firms. Imposition of legislation leads to leftward shift in the supply curve. Removal of legislation leads to rightward shift in the supply curve.

(b) Imposition of indirect taxes

INDIRECT TAXES are taxes imposed by the government on consumption and use of goods and services. Some common examples of indirect taxes are GST and VAT.

- An indirect tax leads to an increase in the cost as the new price of product must reflect the additional burden of tax. Therefore, an imposition of tax leads to reduction supply (leftward shift).
- Removal or decrease in indirect tax results in increase in supply (rightward shift).

(c) Government subsidies

SUBSIDY is defined as a sum of money granted by the government or a public body to assist an industry or business so that the price of a commodity or service may remain low or competitive.

- Provision of subsidy reduces costs of the firms leading to an increase in supply (rightward shift).
- Removal of subsidy leads to a leftward shift.

(iii) The size and the nature of the industry

Firms inside and outside of the industry are likely to react if they find that there are substantial profits to be made in the industry.

- Firms inside the industry are likely to increase their capacity. Firms outside are likely to enter in the industry. Ease of entry into the market will depend on the barriers to entry. If there are no or low barriers to entry, more firms are likely to enter the market if industry profitability rises. High level of barriers will make it difficult for firms to enter the market.
- An increase in size of the industry because of either (i) more firms, or (ii) bigger firms results in a rightward shift in the supply curve.
- A price war in the industry because of intense competition is likely to lead to a rightward shift in the supply curve. This happens because price wars lead to lower price levels for

any given level of output. However, price wars may force some of the smaller firms to exit the market leaving few larger firms in the industry. These larger firms are then likely to increase prices in the long run leading to a leftward shift in the LR.

- Leftward shift can take place because of decrease in size of industry (firms leaving the market because of losses or price wars); or collusion among firms (which leads to higher prices charged by the firms).

(iv) Change in price of other products

- If a competitor lowers its price, it could mean that less will be supplied by other firms who keep their price unchanged.
- If a competitor increases its price, other firms may gain and will be able to supply more.

(v) Other supply influencing factors

- **JOINT SUPPLY** takes place when two items are produced together. Increase in the price of one good will increase the supply of another jointly produced good and therefore a reduction in the latter's price. Increase in price of beef will lead to increase in supply of beef. The increase in slaughter of cows will lead to an increase in supply of leather hides. Increase in supply of leather hides lead to a fall in their prices.
- Goods and services in **COMPETITIVE SUPPLY** are alternative products that a business could make with its factors of production such as diversion of land used in supplying food to producing bio-fuels. This would result in lower supply of land for food production resulting in a rise in food prices.
- If a firm decides to increase its profit margin, it will charge a higher price for the same quantity sold leading to a leftward shift in the supply curve.

There would always be certain factors unique to each industry that affect the supply curve.

- Weather conditions affect agricultural produce. Favourable weather increase supply leading to a rightward shift and vice versa.
- Expectations of future prices influences supply in stock market and foreign exchange market. If price are expected to fall, supply of shares will increase and if prices are expected to rise, supply of shares falls.

7.6 Functions of price in a market economy

Price performs following functions in a market economy:

- Allocation of resources
- Rationing
- Transmission of preferences

Main actors in the market

Adam Smith in his book 'The wealth of Nations' emphasised the power of market to allocate resources. The 'invisible hand' of the market would allocate resources to everyone's advantage.

The main actors in the market – consumers, producers, and owners of the factors of production – try to maximize their benefit that results in allocation of resources.

- **Consumer** – In free market, there is consumer sovereignty. Consumers are trying to maximize their utility and have the option to spend their money on a wide array of goods and services available in the market.
- **The Firm** – Firms are motivated by higher profits that they can make from producing goods and services. They are therefore forced to produce goods and services that are demanded by the customers so that they maximize their sales. They also try to improve their efficiency and reduce the cost of production.
- **Owners of factors of production** – Owners are motivated by the desire to maximize their returns. They will offer their factor of production to the firm that offers the highest possible return for their services.

Functions of price

1. Allocation of resources

The price mechanism works automatically through 'the invisible hand' as suggested by Adam Smith. Prices act as a **signal** to both producers and consumers. A rise in demand results in an increase in price, signalling to producers that they should produce more of the product. A fall in demand results in a fall in prices, signalling to producers that they should produce less of the product. The price mechanism works in such a way that the outcome is a new equilibrium position with consumer's demand equal to producers' supply.

2. Price as a rationing mechanism

RATIONING is the controlled distribution of scarce resources, goods or services. Economic system has to decide how to allocate scarce resources among competing uses. There are different ways of rationing resources, some of which are listed below:

- Price as a rationing mechanism
- Queues
- Black market
- Ration cards etc.

Price as a rationing mechanism

Price can act as a rationing mechanism with or without intervention on the part of the government. Goods are not freely available as there are not enough resources to produce enough goods to satisfy all individuals. It therefore means that goods must be rationed, i.e. there must be some mechanism for deciding who gets some of the goods and who does not. In a market system, such rationing is done by price. Consumers can buy a good if they are willing and able to pay the market price.

There are many ways in which prices can ration resources.

- If a producer has limited capacity or wishes to restrict the supply of the product, then, if these producers have **high price**, the market mechanism will automatically result in rationing. High price limits demand and in turn seeks to ensure that it is in line with the

quantity that is supplied. For example, exclusive car manufacturers or designer fashion companies charge very high prices for their products. These high prices reduce demand and ensure that it is in line with the quantity that is supplied. Only those consumers who are willing and able to pay the higher price will be able to buy and consume the good. Others who were previously buying but are no longer willing or able to pay will leave the market. Price therefore will ration the supply to consumers who are willing and able to buy the higher price. (Students should use the diagram of a fall in supply to explain the process.) This is at times considered unfair because it favours the rich who can afford to pay higher prices for goods that are in short supply.

- Government can use prices as a means of rationing. For example, imposing indirect taxes on products such as tobacco increases their prices and results in lower demand.

Other rationing mechanisms

- Government can use different bases of rationing such as rationing based on age, height etc. Whatever rationing mechanism is used, it will still result in some people getting the good and some not getting the good. This means that *all rationing mechanism discriminate against some people.*
- Government can use maximum prices to ensure that discrimination is not done on pricing which may be considered unfair. However, maximum prices can lead to shortages of goods. Price will therefore fail to act as a rationing mechanism. There must then be some other means of rationing the good.
 - Rationing by queuing is often used as a means of dividing goods. For instance, when the government announced low-priced flour in Pakistan, we witnessed long queues of people waiting to get the cheaper flour. Those who are able to wait will get the chance of buying the cheaper flour. It is at times perceived as fairer than rationing by price. However, there is an opportunity cost of time that people have to stand to buy the product. The total cost to the consumer will be the maximum price plus the opportunity cost and it is likely to be higher for most consumers than the equilibrium price.
 - Black markets can also develop in response to use of maximum prices. Black marketers buy the limited stock of good and then they sell that good at higher prices to those customers who are willing and able to buy at higher prices. The actual price that customers pay may actually be greater than the equilibrium price.
- Other non-price rationing mechanisms are ration coupons and favoured customers.
 - Ration coupons are given to customers and they can only buy the good (by paying) by showing the ration coupons.
 - Favoured customer means that in the event of shortages, a seller may try to make sure that the regular customers are able to buy the product.

3. Transmission of preferences

TRANSMISSION OF PREFERENCES refer to the automatic way in which the market allows the preferences of consumers to be made known to producers.

Price mechanism allows preferences of consumers to be made known to producers. If consumers do not buy a particular product because it is not liked or it is too expensive, then this message is transmitted back to producers. Their reaction should be one of improving the product, reducing its price or both if they wish to stay in business.

Appendix A – Explanation of key terms in definition of demand

- Quantities – economists try to represent information in a quantitative way
- Product – items that are being traded. This is a very broad term and can include many thing such as goods and services; and all tradable items such as money and financial assets (shares).
- Purchasers – demand is from the purchasers' or consumers' point. These purchasers may or may not be the final consumers. These may also include intermediaries (such as producers, distributors, wholesalers and retailers) in the production-consumption chain.
- Willingness to buy – gives rise to **notional demand**, i.e. purchasers want a product because of its expected *satisfaction* or *utility* when it is consumed. **NOTIONAL DEMAND** is speculative and not always backed up by the ability to pay. Economists will not consider demand unless there is both willingness and ability to buy a product.
- Ability to buy – consumer has the purchasing power to buy a product.
- Various prices – demand for a product is judged at various price levels
- Per period of time – demand must be time related, e.g. sales per day, or sales per week, or sales per month and like that.
- CETERIS PARIBUS (other things being equal) – many factors can affect demand for a product. It can include both price and non-price factors.
 - Ceteris paribus assumption is taken to ensure that when investigating a relationship, other things are held constant.
 - This will enable an economist to judge the impact of one variable on another variable accurately.

Appendix B – Explanation of key points in demand curve

- There is an inverse relationship between price and quantity demanded. Price is the independent variable and quantity demanded is the dependent variable.
- We are assuming a causal relationship, i.e. a change in price leads to a change in quantity demanded.
- The shape of the demand can change according to the product. We have assumed a linear relationship in the example given in the text. It may not always be the case. It can be a hyperbola or any other shape depending on the behaviour or reaction of customers to price changes. For example, a couple of examples of shape of demand curve are given in the figure below: