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NCERT ECONOMY

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NCERT CONDENSED / SUMMARISED CLASS 12 ECONOMY Part 1

INDIAN MACRO ECONOMICS

Chapter 1 - Introduction to Macroeconomics and its Concepts

Chapter 2 - National Income and Related Aggregates

Chapter 3 - Money

Chapter 4 - Banking



Chapter 1 - Introduction to Macroeconomics and its Concepts

Introduction And Structure Of MacroEconomics:

1. **Macroeconomics** is the part of economic theory that studies the economy as a whole, such as national income, aggregate employment, general price level, aggregate consumption, aggregate investment, etc. Its main instruments are aggregate demand and aggregate supply. It is also called the 'Income Theory' or 'Employment Theory'.
2. **Structure of macro economy:** As we know, Macroeconomics is concerned with economic problems at the level of an economy as a whole. Structure of Macroeconomics implies study of different sectors of the economy.

An economy may be divided into different sectors depending on the nature of study.

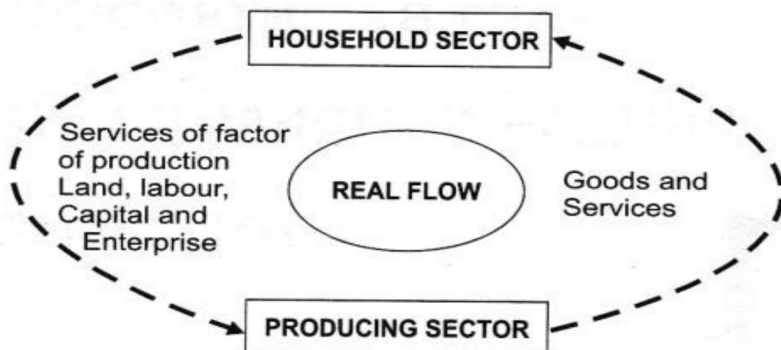
- **Producer sector** engaged in the production of goods and services.
 - **Household sector** engaged in the consumption of goods and services.
Note: Households are taken as the owners of factors of production.
 - The government sector engaged in activities like taxation and subsidies
 - Rest of the world sector engaged in exports and imports.
 - Financial sector (or financial system) engaged in the activity of borrowing and lending.
3. **Circular flow of income.**
 - It refers to flow of money, income or the flow of goods and services across different sectors of the economy in a circular form.
 - There are two types of Circular flow:
 - **Real/Product/Physical Flow**
 - **Money/Monetary/Nominal Flow**

Real flow

- **Real flow of income implies the flow of factor services from the household sector to the producing sector and corresponding flow of goods and services from the producing sector to the household sector.**



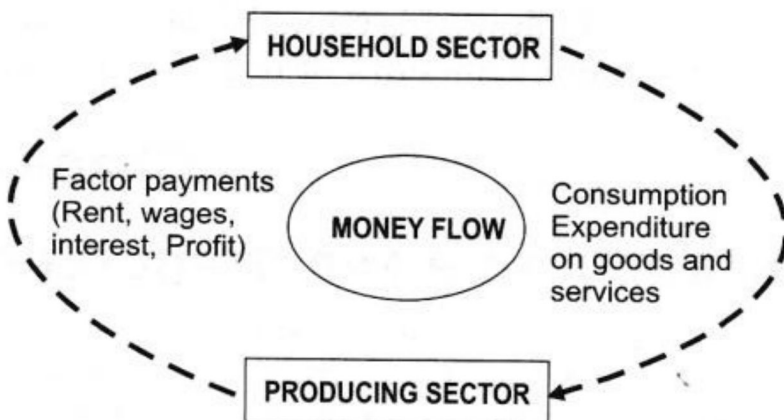
- Let us consider a simple economy consisting only of 2 sectors:
 - Producer Sector.
 - Household Sector.



- These two sectors are dependent on each other in the following ways:
 - Producers supply goods and services to the households.
 - Household (as the owners of factors of production) supplies factors of production (or factor services) to the producers.
 - This interdependence can be explained with the help of the diagram given here.

Money Flow

- Money flow refers to the flow of factor income, as rent, interest, profit and wages from the producing sector to the household sector as monetary rewards for their factor services as shown in the flowchart.**



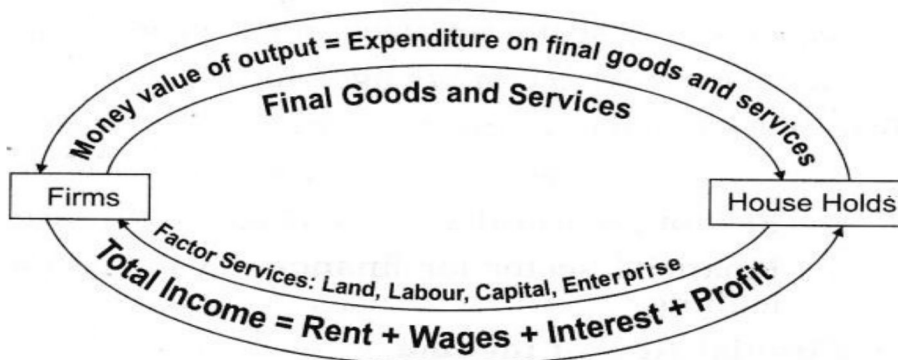
- The households spend their incomes on the goods and services produced by the producing sector. Accordingly, money flows back to the producing sector as household expenditure as shown in the flowchart.



Circular Flow Of Income In Two Sector Model:

The following assumptions with regard to a simple economy with only two sector of economics activity are:

- There are only two sectors in the economy; that is, household and firms.
- Household supply factor services to firms.
- Firms hire factor services from Households.



- Households spend their entire income on consumption.
- Firms sell all that is produced to the households.
- There is no government or foreign trade.

Such an economy described above has two types of markets.

- Market for goods and services that is product market.
- Market for factors of production, factor market.

As a result we can derive the following, in the case of our simple economy:

- Total production of goods and services by firms = Total consumption of goods and services by Household Sector.
- Factor Payments by Firms = Factor Incomes of Household Sector.
- Consumption expenditure of Household sector = Income of Firm.
- Hence, Real flows of production and consumption of Firms and households = Money flows of income and expenditure of Firms and Households.

Phases of Circular Flow:

There are three types of phases of Circular flow.

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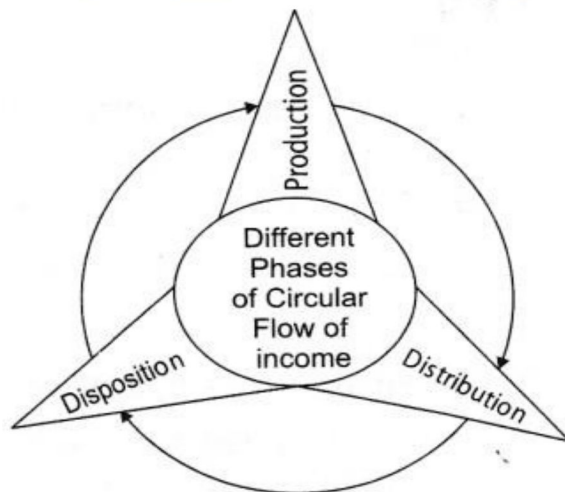
- It deals with the production of goods and services by the producer sector.
- If we study it in term of the quantity of goods and services produced, it is a Real Flow. But, it is a Money flow, if we study it in terms of the market value of the goods produced.

2. Distribution Phase:

- It means the flow of income in the form of rent, interest, profit and wages, paid by producer sector to the household sector. It is a Money Flow.

3. Disposition Phase:

- Disposition means expenditure made. This phase deals with expenditure on the purchase of goods and services by households and other sectors.
- This is a Money Flow from other sectors to the producer sector.



Some Basic Concepts Of Macroeconomics

1. Factor Income

- Income earned by factor of production by rendering their productive services in the production process is known as Factor Income.
- It is a **bilateral [Two-Sided] Concept**.
- It is included in National Income as it contribute something in the flow of goods and services. Examples: Rent, interest, wages and profit.

2. Transfer Income

- Income received without rendering any productive services is known as transfer income.
- It is a unilateral [one-sided] concept.



- It is not included in National Income as it does not contribute anything in the flow of goods and services.
- Examples: Old Age Pension, Scholarship, Unemployment allowance.

There are two types of transfers:

- **Current Transfers**
 - Transfers made from the income of the payer and added to the income of the recipient (who receive) for consumption expenditure are called current transfers.
 - It is recurring or regular in nature.
 - For example, scholarships, gifts, old age pension, etc.
- **Capital Transfers**
 - Capital transfers are defined as transfers in cash and in kind for the purpose of investment to recipients, made out of the wealth or saving of the donor.
 - It is non-recurring or irregular in nature.
 - For example, investment grant, capital gains tax, war damages, etc.

3. Stock

- Any economic variable which is calculated at a particular point of time is known as stock.
- It is static in nature, i.e., it do not change.
- There is no time dimension in stock variables.
- For example, Distance, Amount of Money, Money Supply, Water in Tank, etc

4. Flow

- Any economic variable which is calculated during a period of time is known as flow.
- It is dynamic in nature, i.e., it can be changed.
- There is time dimension in flow variables.
- For example, Speed, Spending of Money, Water in River, Exports, Imports, etc.

5. Economic territory or Domestic Territory:

- According to the United Nations, economic territory is the geographical territory administered by a government within which persons, goods and capital circulate freely.
- The above definition is based on the criterion "freedom of circulation of persons, goods and capital". Clearly, those parts of the political frontiers (or boundaries) of a country where the



- government of that country does not enjoy the above “freedom” are not to be included in economic territory of that country.
- One example is embassies. Government of India does not enjoy the above freedom in the foreign embassies located within India. So, these are not treated as a part of economic territory of India. They are treated as part of the economic territories of their respective countries. For example the
- U.S. embassy in India is a part of economic territory of the U.S.A. Similarly, the Indian embassy in Washington is a part of economic territory of India.
- International organizations like UNO, WHO, etc. located within the geographical boundaries of a country.
- In layman terms, the domestic territory of a nation is understood to be the territory lying within the political frontiers (or boundaries) of a country. But in national income accounting, the term domestic territory is used in a wider sense. Based on ‘freedom’ criterion, the scope of economic territory is defined to cover:
 - Ships and aircrafts owned and operated by normal residents between two or more countries. For example, Indian Ships moving between china and India
 - regularly are part of domestic territory of India. Similarly, planes operated by Air India between Russia and Japan are part of the domestic territory of India. Similarly, planes operated by Malaysian Airlines between India and Japan are a part of the domestic territory of Malaysia.
 - Fishing vessels, oil and natural gas rigs and floating platforms operated by the residents of a country in the international waters where they have exclusive rights of operation. For example, fishing boats operated by Indian fishermen in international waters of Indian Ocean will be considered a part of domestic territory of India.
 - Embassies, consulates and military establishments of a country located abroad. For example, Indian Embassy in Russia is a part of the domestic territory of India. ‘Consulate’ is an office or building used by consul (an officer commissioned by the government to reside in a foreign country to promote the interest of the country to which he belongs).

6. Citizenship



- Citizenship is basically a legal concept based on the place of birth of the person or some legal provisions allowing a person to become a citizen.
- It means, Indian citizenship can arise in two ways:
- When a person is born in India, he acquires automatic citizenship of India.
- A person born outside India applies for citizenship and Indian Law allows him to become Indian Citizen.

7. Normal Resident/Resident

- A Normal resident, whether a person or an institution, is one whose centre of economic interest lies in the economic territory of the country in which he lives.
- The centre of economic interest implies in two things:
 - The resident lives or is located within the economic territory for more than one year and
 - The resident carries out the basic economic activities of earnings, spending and accumulation from that location
- There is a difference between the terms normal resident (resident) and citizen (or national).
 - A person becomes a national of a country because he was born in the country or on the basis of some other legal criterion.
 - A person is treated resident of a country on the basis of economic criterion.
 - It is not necessary that a resident must also be the national of that country. Even foreigners can be the residents if they pass the above stated economic criterion.
 - For example, a large number of Indian nationals have settled in U.S.A., England, Australia, etc. as residents (and not as nationals) of these countries. For India, they are Non-resident Indians (NRI) but continue to remain Indian nationals.
- Following are not included under the category of Normal residents:
 - Foreign visitors in the country for such purposes as recreation, holidays, medical treatment, study tours, conferences, sports events, business etc. (they are supposed to stay in the host country for less than one year. In case they continue to stay for one year or more in the host country, they will be treated as normal residents of the host country).



- Crew members of foreign vessels, commercial travelers and seasonal workers in, the country (Foreign workers who work part of the year in the country in response to the varying seasonal demand for labour and return to their households and border workers who regularly cross the frontier each day or somewhat less regularly, (i.e. each week) to work in the neighboring country are the normal residents of their own countries. Example: Nepal.
- Officials, diplomats and members of the armed forces of a foreign country.
- **International bodies like World Bank, World Health Organization or International Monetary Fund** are not considered residents of the country in which these organizations operate but are treated as residents of international territory. However, the staffs of these bodies are treated as normal residents of the country in which the international body operates. For example, international body like World Health Organization located in India is not normal resident of India but Americans working in its office for more than a year will be treated as normal residents of India.
- Foreigners who are the employees of non-resident enterprises and who have come to the country for purposes of installing machinery or equipment purchased from their employers. (They are supposed to stay for less than one year. In case they continue to stay for one year or more, they will be treated as normal residents of the host country).

8. Final Goods

- These are the goods that are used for:
 - Personal Consumption (like bread purchased by consumer household), or (if) Investment Or Capital Formation (like building, machinery purchased by a firm)
- In other words, final goods are those, which require no further processing and are available in an economy for consumption purpose or investment. These give direct satisfaction to a consumer.
- According to production boundary, if a good crosses the imaginary line around the production unit and reaches to final consumer or investment made by a producer within the imaginary line of production unit is known as the final good.



9. Intermediate Goods

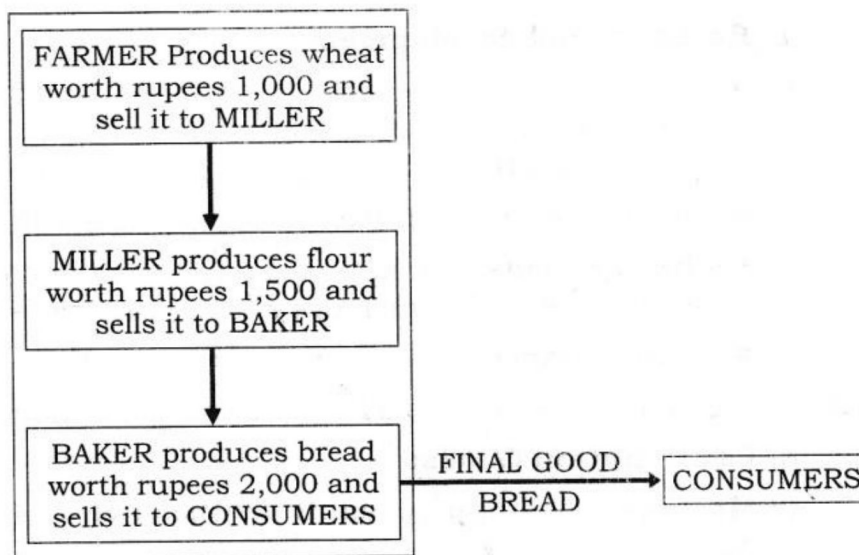
- These are the goods that are used for:
 - Further processing (like sugar used for making sweets); or
 - Resale in the same year (If car purchased by car dealer for resale).
- In other words, intermediate goods are the ones, which require further processing and are not available in an economy for the purpose of consumption. These goods give indirect satisfaction to a consumer.
- According to the production boundary, if a good does not cross the imaginary line around the production unit and reaches to other firm within the production boundary, is known as intermediate good.

10. Point to Remember for Final Goods and Intermediate Goods

- **Basis of Classification:** If a good is used for:
 - **(i, Personal consumption; or (ii) Investment**
 - Then it is a final good, whereas, if a good is used for:
 - Further processing; or Resale in the same year, then it is known as intermediate good.
 - Thus, the basis of classification between these two goods is not the commodity itself, but the use made of it.
 - For example, bread used by a consumer household is a final goods, but the same used by a bakery for making a sandwich is a intermediate goods.
- **Production Boundary**
 - Production boundary plays a vital role to differentiate between intermediate and final goods. The production boundary is the imaginary line around the production unit.
 - According to the production boundary, if a good crosses the imaginary line around the production unit and reaches to final consumer or investment made by a producer within the imaginary line of production unit, it is known as final good.
 - As against it, if a good does not cross the imaginary line around the production unit and reaches to other firm within the production boundary, it is known as intermediate good.



- In the given diagram, there are 3 production units. The thick border drawn around these three units is the Production Boundary.
- Within this limit, wheat and flour are intermediate goods.
- Bread is final good as it lies outside the purview of production boundary.



11. Important Points about

Intermediate Goods: As far as intermediate consumption of general government is concerned, it's purchased goods ranges from ordinary writing paper, pencils and pens to sophisticated fighter aircrafts. The goods and services purchased include both durable goods and non-durable goods and services. The intermediate consumption of the general government includes the following items:

- Value of all Non-durable Goods and Services** such as petrol, electricity, lubricants, stationery, soaps, towels etc. including repair and maintenance of capital stock: Non-durable goods and services are those which have an expected life time of use of less than one year. Repair and maintenance of capital stock mean expenditure incurred for maintaining fixed assets and keep them in good working order. This includes the expenditure on new parts of the fixed assets. The life of the new parts may be around one year or slightly more and the value should be relatively small. For example, replacement of the tyres of a truck is an intermediate consumption, but not the replacement of its engine.



- b) Expenditure on Military Equipment missiles, rockets, bombs, warships, submarines, military aircrafts, tanks, missile carriers and rocket-launchers etc. whose function is to release weapons. Military vehicles and light weapons.
- c) Value of goods received from foreign governments in form of gifts or as transfers. Examples of these transfers in kind are food, clothing, medicines, vegetable oils, butter, toys sent by the government of one country to the other in times of natural calamities or as a token of goodwill and friendship between two countries.
- d) However, the goods received for distribution to consumer households without renovation or alternation should not be included in intermediate consumption as these goods go into the final consumption of consumer households.
- e) As we know, intermediate goods are purchased by one production unit from another production unit within the production boundary.
- f) However, it's not necessary that all purchases by one production unit from other production units are intermediate purchases. For example, purchases of building, machinery, etc. are not intermediate purchases (if they are not meant for resale in the same year). Rather, these purchases are meant for investment and are termed as final product.
- g) Research and development
 - Commodities consumed. In research and exploratory activities (like oil exploration in different parts of India by the Oil and Natural Gas Commission) or improving the technology of a particular production process.
 - Commodities used in basic scientific research.
 - Advertisements, market research and public relationship meant for improving the goodwill of the business enterprises.
 - Business expenses of the employees on tours and entertainment.

12. Final goods can be classified into two groups: Consumption Goods and Capital Goods.

a) Consumption Goods:

- Meaning: Consumption goods are those which satisfy the wants of the consumers directly. For example, cars, television sets, bread, furniture, air-conditioners, etc.
- Categories of Consumption Goods:
 - **Durable goods:** These goods have an expected life time of several years and of relatively high value. They are motor



cars, refrigerators, television sets, washing machines, air-conditioners, kitchen equipments, computers, communication equipments etc.

- **Semi-durable goods:** These goods have an expected life time of use of one year or slightly more. They are not of relatively great value. Examples are clothing, furniture, electrical appliances like fans, electric irons, hot plates and crockery.
- **Non-durable goods:** Goods which can not be used again and again, i.e., they lose their identity in a single act of consumption are known as non-durable goods. These are foodgrains, milk and milk products, edible oils, beverages, vegetables, tobacco and other food articles.
- **Services:** Services are non-material goods which satisfy the human wants directly. They cannot be seen or touched, i.e., they are intangible in nature. These are medical care, transport and communications, education, domestic services rendered by hired servants, etc.

b) Capital Goods:

- Capital goods are defined as all goods produced for use in future productive processes. For example, all the durable goods like cars, trucks, refrigerators, buildings, aircrafts, air-fields and submarines used to produce goods and are ready for sale in the market are a part of capital goods.
- Stocks of raw materials, semi-finished and finished goods lying with the producers at the end of an accounting year are also a part of capital goods.
- Some more examples of capital goods are machinery, equipment, roads and bridges.
- These goods require repair or replacement over time as their value depreciate over a period of time.

13. Differentiate between final goods and intermediate goods on the basis of end used Classification of goods and services with example.



S.No.	Products	Final Goods		Intermediate Goods
		Consumption Goods	Capital Goods	
1.	Car	If purchased by a consumer household.	If purchased by taxi-driver as a taxi.	If purchased by a government for military use. or If purchased by a car dealer for resale.
2.	Refrigerator	If purchased by a consumer household.	If purchased by a shopkeeper for selling cold drinks.	If purchased by a government for military purpose.
3.	Aeroplanes, Helicopter and Sub-marines		If purchased by air and sea transport companies.	If purchased by a government for military purpose.
4.	Paper, Pens, Pencils, Wheat, Sugar	If used by a consumer household.	If lying unsold with a trader at the end of a year.	If used by producing enterprises (including the government). or If purchased by producing enterprises (including government) for resale.
5.	Services of Doctors, Lawyers, Teachers	If used by a consumer household.		If used by the enterprises and government for the production of goods and services.

Important Terms:

- **Circular flow of income:** It refers to flow of money income or the flow of goods and services across different sectors of the economy in a circular form.
- **Money flow (nominal flow):** Money flow refers to the flow of factor income, as rent, interest, profit and wages from the producing sector to the household sector as monetary rewards for their factor services.
- **Real flow or physical flow:** Real flow of income implies the flow of factor services from the household sector to the producing sector and corresponding flow of goods and services from the producing sector to the household sector.
- **Factor income:** Income earned by factor of production by rendering their productive services in the production process is known as Factor Income.
- **Transfer income:** Income received without rendering any productive services is known as Transfer Income.
- **Current transfers:** Transfers made from the current income of the payer and added to the current income of the recipient



(who receive) for consumption expenditure are called current transfers.

- **Capital transfers:** Capital transfers are defined as transfers in cash and in kind for the purpose of investment to recipient made out of the wealth or saving of a donor.
- **Final goods:** These are those which are used for:
 - **Personal consumption** (like bread purchased by consumer household), or
 - **Investment or capital formation** (like building, machinery purchased by a firm)
- **Intermediate goods:** These are those, which are used for:
 - Further processing (like sugar used for making sweets), or
 - Resale in the same year (If car purchased by a car dealer for resale).
- **Consumption goods:** Consumption goods are those goods which satisfy the wants of consumers directly.
- **Capital goods:** Capital goods are defined as all goods produced for use in future productive processes.

Chapter 2 - National Income and Related Aggregates

Gross And Net:

- Gross means the value of product including depreciation. Net means the value of product excluding depreciation.
- The difference between these two terms is depreciation.
- Where depreciation is the expected decrease in the value of fixed capital assets due to its general use.
- It is the result of production process.
 - $\text{Gross} = \text{Net} + \text{Depreciation}$ $\text{Net} = \text{Gross} - \text{Depreciation}$
- Note: Other names of depreciation are:
 - Consumption of fixed capital
 - Capital consumption allowance
 - Current replacement cost.

National Income and Domestic Income:

- National Income refers to net money value of all the final goods and services produced by the normal residents of a country during an accounting year.



- Domestic Income refers to a total factor incomes earned by the factor of production within the domestic territory of a country during an accounting year.
- The difference between these two incomes is Net Factor Income from abroad (NFIA), which is included in National Income (NY) and excluded from Domestic Income (DY).
- Where NFIA is the difference between income earned by normal residents from rest of the world and similar payments made to Non residents within the domestic territory. $NFIA = \text{Income earned by Residents from rest of the world (ROW)} - \text{Payments to}$
 - Non-Residents within Domestic territory.
$$NY = DY + NFIA$$

$$DY = NY - NFIA$$

Note:

- Case I:** Income paid to abroad is given, then to make NFIA inverse the sign. For this put income from abroad 0.

Example, Income paid to abroad = 100

$NFIA = \text{Income from Abroad} - \text{Income paid to abroad}$

$= 0 - 100 = -100$ and vice versa.

Case II: Income from abroad is given, then $NFIA = \text{Income from abroad}$. For this put income paid to abroad 0.

Example, Income from abroad = 100

- $NFIA = \text{Income from Abroad} - \text{Income paid to abroad} = 100 - 0 = 100$ and vice versa
- Case III:** If income from abroad and income paid to abroad both are given, then NFIA is the difference between them, Example, Income from abroad = 100
Income paid to abroad = 120
- $NFIA = \text{Income from Abroad} - \text{Income paid to abroad} = 100 - 120 = (-) 20$ and vice versa
- Case IV:** Net factor income to abroad be given, then to make NFIA inverse the sign.
 - Net factor income paid to abroad (NFPA) = income to abroad - income from abroad. Example,
 - Net Factor Income to abroad (NFPA = 100). In this NFPA is positive, which means that income to abroad is greater than income from abroad, which makes,
 $NFIA = (-)100$



- Net Factor Income to abroad [NFPA = (-)100]. In this NFPA is negative, which means that income to abroad is less than income from abroad, which makes, NFIA = (+) 100

Factor Cost and Market Price:

1. Factor Cost (FC):

- It refers to amount paid to factors of production for their contribution in the production process.

2. Market Price (MP):

- It refers to the price at which product is actually sold in the market. The difference between these two is Net Indirect Taxes (NIT) which is included in MP and excluded from FC. Where NIT is the difference between indirect taxes and subsidies.

• NIT = IT - Subsidies

- Where, Indirect Taxes are the taxes which are levied by the government on production and sale of commodity. Sales tax, excise duty, custom duty, etc. are some of the indirect taxes, and subsidies are the cash grants given by the government to the enterprises to encourage production of certain commodities, to promote exports or to sell goods at prices lower than the free market Price. In India, LPG cylinder is sold at subsidized rates.

$$MP = FC + NIT \text{ (Indirect Taxes - Subsidies)}$$

$$FC = MP - NIT \text{ (Indirect Taxes - Subsidies)}$$

Note:

Case I: Subsidy is given, then to make NIT inverse the sign. For this put Indirect tax = 0. Example, Subsidy = 100

$NIT = \text{Indirect Tax} - \text{subsidies} = 0 - 100 = (-) 100$ and vice versa

Case II: IT is given, then $NIT = IT$ (For this put subsidy 0)
Example, $IT = 100$

$NIT = \text{Indirect Tax} - \text{subsidies} = 100 - 0 = 100$ and vice versa

Case III: If IT and subsidy both are given, then NIT is the difference. Example, $IT = 100$



Subsidy = 80

NIT = Indirect Tax - subsidies = 100-80 = 20

Case IV: If sales tax and excise duty are given, then by adding both, we get indirect taxes. Example, Sales tax = Rs. 1000

Excise duty = Rs.1000 Subsidy = Rs.500

NIT = Indirect Tax(sales tax + excise duty)-subsidies = (1000 + 1000) - 500 = 1500

Case V: If Net subsidy is given, then to convert it into Net Indirect tax, we have to inverse the sign, Net Subsidy = Subsidy - Indirect Tax

Example,

Net Subsidy = 100. In this, Net subsidy is positive, which means that indirect tax is less than subsidy which makes,

NIT = (-) 100

Net Subsidy = (-) 100. In this Net subsidy is negative which means that Indirect tax is greater than subsidy which makes,

NIT = 100

Case VI: If Net subsidy and Indirect tax both are given, then we have to ignore Indirect Tax and inverse the sign of Net subsidy.

Example, Net Subsidy = 100

Indirect Tax = 20 Net Indirect Tax = (-) 100 Numeribals
Illustration on Basic Concept

Aggregate Of National Income

1. **Gross Domestic Product at Market Price (GDP_{MP}):** GDP_{MP} is defined as the gross market value of the final goods and services produced within the domestic territory of a country during an accounting year by all production units.
 - 'Gross' in GDP_{MP} signifies that depreciation is included, i.e., no provision has been made for depreciation.
 - 'Domestic' in GDP_{MP} signifies that it includes all the final goods and services produced by all the production units



located within the economic territory (irrespective of the fact whether produced by residents or non-residents).

- **'Market Price'** in GDP_{MP} signifies that indirect taxes are included and subsidies are excluded, i.e., it shows that Net Indirect Taxes (NIT) have been included.
 - **'Product'** in GDP_{MP} signifies that only final goods and services have to be included and intermediate goods should not be included to avoid the double counting.
2. **Gross Domestic Product at Factor Cost (GDP_{FC}):** GDP_{FC} is defined as the gross factor value of the final goods and services produced within the domestic territory of a country during an accounting year by all production units excluding Net Indirect Tax.

$$GDP_{FC} = GDP_{MP} - \text{Net Indirect Taxes}$$

3. **Net Domestic Product at Market Price (NDP_{MP}).**

NDP_{MP} is defined as the net market value of all the final goods and services produced within the domestic territory of a country by its normal residents and non-residents during an accounting year.

$$NDP_{MP} = GDP_{MP} - \text{Depreciation}$$

4. **Net Domestic Product at Factor Cost (NDP_{FC}).**

NDP_{FC} refers to a total factor income earned by the factor of production within the domestic territory of a country during an accounting year

$$NDP_{FC} = GDP_{MP} - \text{Depreciation} - \text{Net Indirect Taxes}$$

NDP_{FC} is also known as Domestic Income or Domestic factor income.

5. **Gross National Product at Market Price (GNP_{MP}).**

GNP_{MP} refers to market value of all the final goods and services produced by the normal residents of a country during an accounting year.

$GNP_{MP} = GNP_{MP} + \text{Net factor income from abroad}$ It must be noted that GNP_{MP} can be less than GNP_{MP} when NFIA is negative. However, GNP_{MP} will be more than GNP_{MP} when NFIA is positive.

6. **Gross National Product at Factor Cost (GDP_{FC}) or Gross National Income GNP_{FC}** refers to gross factor value of all the final goods and services produced by the normal residents of a country during an accounting year.

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$$\text{GDP}_{\text{FC}} = \text{GNP}_{\text{MP}} - \text{Net Indirect Taxes}$$

7. Net National Product at Market Price (NNP_{MP}).

NNP_{MP} refers to net market value of all the final goods and services produced by the normal residents of a country during an accounting year.

$$\text{NNP}_{\text{MP}} = \text{GNP}_{\text{MP}} - \text{Depreciation}$$

8. Net National Product at Factor Cost (NNP_{FC}).

NNP_{FC} refers to net money value of all the final goods and services produced by the normal residents of a country during an accounting year.

$\text{NNP}_{\text{FC}} = \text{GNP}_{\text{MP}} - \text{Depreciation} - \text{Net Indirect Taxes}$ It must be noted that NNP_{FC} is also known as National Income.

Real, Nominal Aggregates, Activities Excluded From GDP And Does GDP Measures Social Welfare:

1. National Income at Constant Price:

- If national income is calculated on the basis of base year price index, then it is known as National income at constant price.
- It is also called Real National Income as it fluctuates due to the fluctuation in the flow of goods and services and price remains constant.

2. National Income at Current Price:

- If National Income is calculated on the basis of current year price index, then it is known as national income at current price.
- It is also called Monetary National Income as it fluctuates due to the fluctuation in the flow of goods and services along with the price of the commodity.

3. GNP at current MP: When final goods and services included in GNP are valued at current MP, i.e., prices prevailing in the year for which GNP is being measured, it is called GNP at current MP or Nominal GNP.

4. GNP at constant MP: When final goods and services included in GNP are valued at constant prices, i.e. prices of the base year, it is called GNP at constant MP or Real GNP.

5. GNP Deflator: GNP Deflator measures the average level of the prices of all the final goods and services that are produced within the domestic territory of an economy



including NFIA. GNP deflator is measured as the ratio of nominal GNP to real GNP, multiplied by 100.

$$\text{GNP deflator} = \frac{\text{Nominal GNP}}{\text{Real GNP}} \times 100$$

6. **Green GNP:** Green GNP refers to GNP adjusted for loss of value due to,

- Environmental degradation; and
- Depletion of natural resources on account of overall production activity in the economy.

7. **Activities excluded from GDP_{MP}:** The activities are as follows:

Purely financial transactions: It may be of three types:

- Buying and selling of securities
- Government Transfer payments
- Private Transfer Payments

Buying and selling of securities:

- In financial markets potential savers and investors buy and sell financial assets such as shares and bonds.
- While someone buys a share, there is only a transfer of ownership right. It is a claim to ownership of assets.
- Trading in financial instruments does not imply production of final goods and services. As such these are not included in the GNP.

Government Transfer Payments:

- Transfer Payments are payments for which no goods and services are provided in exchange.
- Pension payments employees social security measures, etc. are examples for
- Government Transfer Payment as there is no production of final goods and services in response to transfer Payment, transfer payments are not included in GNP.

Private Transfer Payments:

- Items such as pocket money given by parents to their children, elders gifting money to the young ones are private transfer payments.



This is merely a transfer of money from one individual to another. Hence, this is not included in GNP.

- **Transfer of used goods:**

GNP refers to the value of the final goods and services produced in a given year.

Hence, goods produced in the previous time period cannot be included in the GNP. For example, Mr A sells his old bike to Mr B for rs. 30,000 on 25th April 2011 which was purchased by Mr A on 1st March 2010 for Rs. 45,000. This transaction should not be included as it has already been included in the 2010 GNP and if we again include it, then it will create the problem of double counting.

- **Non-market goods and services:**

Many final goods and services are not acquired through regular market transaction. Vegetables can be grown in the backyard instead of buying them from the super market or an electrical fault can be repaired by the house owner himself instead of hiring an electrician.

These are examples of Non-marketed goods and services that have been consumed with using organized markets as GNP includes only those transactions that occur through market activities.

- **Illegal Activities:** Activities like gambling, black-marketing etc., should be excluded because all unlawful activities are beyond the scope of NY and also because there is statistical problem of their estimation.
- **Leisure Time Activities:** Activities like painting, growing of flowers in kitchen garden, etc. is not included as their aim is not to earn money but to pass away free time in one's hobby or entertainment, again there is statistical problem of measuring their satisfaction derived in painting or any other leisure activities.

8. **Limitations of using GDP as an index of welfare of a country:**

There are many reasons behind this. These are:



- **Many goods and services contributing economic welfare are not included in GDP or Non- Monetary exchanges:**

There are many goods and services which are left out of estimation of national income on account of practical estimation difficulties e.g., services of housewives and other members, own account production, etc.

These are left on account of non-availability of data and problem in valuation.

It is generally agreed that these items contribute to economic welfare.

- So, if we depend only on GDP, we would be underestimating economic welfare.
- **Externality:**

When the activities of somebody result in benefits or harms to others with no payment received for the benefit and no payment made for the harm done, such benefits and harms are called externalities.

Activities resulting in benefits to others are positive externalities and increase welfare; and those resulting in harm to others are called negative externalities, and thus decrease welfare.

GDP does not take into account these externalities.

For example, construction of a flyover or a highway reduces transport cost and journey time of its users who have not contributed anything towards its cost.

Expenditure on construction is included in GDP but not the positive externalities flowing from it. GDP and positive externalities both increase welfare. Therefore, taking only GDP as an index of welfare understates welfare. It means that welfare is much more than it is indicated by GDP.

Similarly, GDP also does not take into account negative externalities. For examples, factories produce goods but at the same time create pollution of water and air. River Yamuna, now a drain, is a living example. The pollution harms people. The factories are not required to pay anything for harming people. Producing goods increases



welfare but creating pollution reduces welfare. Therefore, taking only GDP as an index of welfare overstates welfare. In this case, welfare is much less than indicated by GDP.

- **Change in the distribution of income (GDP) may affect welfare:**

All people do not earn the same amount of income. Some earn more and some earn less. In other words, there is unequal distribution of income.

At the same time, it is also true that in the event of rise in 'per capita real income' all are not better off equally. 'Per capita' is only an average. Income of some may rise by less and of some by more than the national average. In case of some it may even fall.

It means that the inequality in the distribution of income may increase or decrease.

If it increase it implies that rich become more rich and the poor become more poor.

Utility of a rupee of income to the poor is more than to the rich. Suppose, the income of the poor declines by one rupee and that of the rich increases by one rupee. In such a case, the decline in welfare of the poor will be more than the increase in welfare of the rich.

Therefore, if the rise in per capita real income inequality increases, it may lead to a decline in welfare (in the macro sense).

- **All products may not contribute equally to economic welfare:**

GDP includes different types of products, like food articles, houses, clothes, police services, military services, etc.

Some of these products contribute more to the welfare of the people, like food, clothes, houses, etc. Other products like police services, military services etc. may comparatively contribute less and may not directly affect the standard of living of the people.



Therefore, how much is the economic welfare would depend more on the types of goods and services produced, and not simply how much is produced.

It means that if GDP rises, the increase in welfare may not be in the same proportion.

Contribution of some products may be negative:

GDP includes all final products whether it is milk or liquor.

Milk may provide both immediate and ultimate satisfaction to consumers. On the other hand, liquor may provide some immediate satisfaction, but because of its harmful effects on health it may lead to decline in welfare.

GDP include only the monetary values of the products and not their contribution to welfare.

Therefore, economic welfare depends not only on the volume of consumption but also on the type or goods and services consumed.

Methods Of National Income And How To Determine National Income By Income Method And Its Numericals, Steps And Precaution:

There are three methods of calculating national income.

These are:

- **Income Method**
- **Expenditure Method**
- **Value Added Method/Product Method/Output Method**

National Income determination under income method:

- **"Production creates income"**. If we want to calculate National Income by Income method, then we have to add different factor incomes from the economy.
- The addition of all these factor incomes gives us the calculation near by the National Income, i.e., Net Domestic Product at FC (NDP_{fc}).
- **Components of Income Method**



I. Compensation Of Employees (COE)/Emoluments of employees:

- Amount earned by employees from their employers, whether in cash or in kind or through any other social security scheme is known as compensation of employees.
- This is broadly divided into the following three components:

1. Wages and Salaries payable in Cash:

- a) Wages and salaries receivable by the employees in respect of their work.
- b) Special allowances for working overtime.
- c) Cost of travel to and from work, and car parking.
- d) Bonuses
- e) Commissions, gratuities, tips, cost of living (i.e., dearness allowance paid in our country) honorarium, vacation, sick leave allowance etc.
- f) Pensions at the time of retirement (Deferred Wage):
Pensions at the time of retirement are related to factor services rendered by recipient prior to their retirement. It is also known as deferred wage.
- g) Any expenses incurred by the employees and thereafter reimbursed by the business enterprise should be excluded from Compensation Of Employees (COE) as such expenses are part of intermediate consumption of business enterprise.

- 2. Wages and Salaries in Kind:** Remuneration in kind consists of goods and services that are not necessary for work and can be used by employees at their own discretion, for the satisfaction of their needs or wants or those of other members of their households. It includes:
- a) Meals and drinks including those consumed when travelling for business.
 - b) Accommodation.
 - c) The services of vehicles or other durables provided for the personal use of the employees.
 - d) Goods and services produced as outputs from the employer's own process of production such as free travel for the employees of railways or airlines, or free coal for miners.
 - e) Sports, recreation or holiday facilities for employees and their families.
 - f) Creches for children of employees.
 - g) Value of the interest foregone by employers when they provide loans to employees at reduced, or even zero



rates of interest for the purposes of buying houses, furniture or other goods and services.

h) It should be kept in mind that it does not include any facilities which are necessary for work and in which employees do not have any discretion.

i) For example, uniforms or other forms of special clothing to be used for work only. Examples are uniforms for police, uniforms of drivers, uniforms for nurses in the hospital. It's so because such payments are intermediate consumption of business enterprises.

3. Employers' Contribution to Social Security Schemes:

Employers' make payments to social security schemes like life insurance, causality insurance, pension schemes etc.

For example, there is a Contributory provident Fund Scheme for employees of educational institutions and public sector undertakings. The contribution made by the employers for such schemes is a part of compensation of employees.

- The thing which has to be remembered is that, employers' contribution towards social security scheme should be included whereas employees' contribution towards Social Security Scheme should not be included as COE is that what the employer pays to employee and if anything borne by employee himself should not be included under COE.

II. Operating Surplus:

- CSO (Central Statistical Organization) has defined operating surplus as "value of gross output less the sum of intermediate consumption, compensation of employees, mixed income, depreciation and NIT."
- **Operating Surplus = GVOMP - Intermediate consumption - COE - Mixed Income - Depreciation - NIT**
- In other words, it is the sum of income from property and income from entrepreneurship. Operating surplus have the following two components:
 1. **Income from property:** It is the income which has been arisen from rent, interest and royalty. It is divided into three components:



- a) **Rent:** The income arising from ownership of land and building is known as rent. It also includes imputed rent. If a person living in his own house, then it is assumed in an economy that he is paying rent to himself. This concept is known as imputed rent.
- b) **Royalty:** Royalties are the payments made for the use of mineral deposits such as coal, oil, etc. or for the use of patents, copyrights, trademarks, etc.
- c) **Interest:** It is the amount earned for lending funds to the production units. It also includes imputed interest of funds provided by entrepreneur. But interest income includes interest on loan taken for productive services only.
- d) The following categories of interest should not be included :
- Interest on national debt or interest paid by government on nation debt should not be included as it is assumed that such interest is paid on loan taken for consumption purpose.
 - Interest paid by one firm to another firm as it is already included in the profit of the firm which pays it.
2. **Income from entrepreneurship:** It is a return of entrepreneur after paying all the other factors of production. It is of the following three types:
- a) **Distributed Profit (Dividend):** It is that part of total profit which is given to shareholders.
The thing to be noted here is that profit earned by one firm to another should not be included under this head because it is already included in the profit of the firm which pays it.
- b) **Undistributed Profit (Saving of private corporate sector or Retained Earnings):**
It is that part of total profit which is not given to shareholders and kept as a reserve for future uncertainties.
- c) **Corporation Tax (Profit Tax):** It is that part of total profit which is given by a firm to the government as Tax.
The concept of operating surplus is applicable to all producing enterprises, whether they belong to the private sector or to the government. The government enterprises also are expected to earn reasonable rate of profit on the funds invested.



But, operating surplus does not arise in the general government sector as they produce goods and services for the social welfare of the country and not for profit motive i.e., why rent, interest and profit are zero in general government sector.

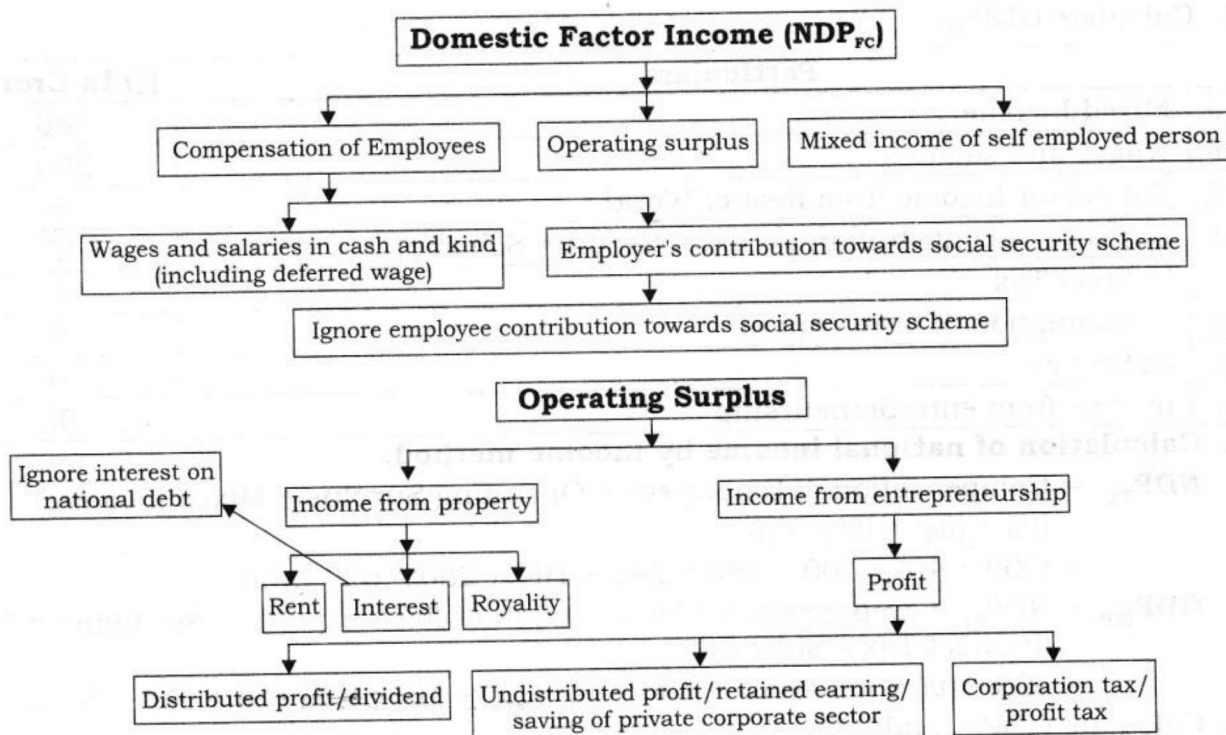
3. Mixed Income:

- a) **Income of own account workers** (like farmers, doctors, barbers, etc.) and unincorporated enterprises (like small shopkeepers, repair shops) is known as mixed income. They do not maintain proper accounts. They do not generally hire factor services from the market rather use their own resources like land, labour, funds, etc. As the result of, it becomes difficult to classify their income distinctly among rent, wages, interest and profit.

**NDPFC Compensation of employees (COE) +
Operating surplus (OS) + Mixed Income (MY)**

Method for Calculating National Income By Income Method:

- If we want to calculate National Income by Income method, we have to add different factor incomes from the economy.
- The addition of all these factor incomes gives us the calculation near by the National Income, i.e. Net Domestic Product at FC (NDPFC).



Important Note:

- Profit earned by one firm to another should not be included because it is a part of intermediate consumption.
- If Profit after tax is given and corporate tax is given, then by adding them we get profit. Profit after tax = 1000
Corporate tax = 100 Profit = 1100
- If Profit before tax and corporate tax are given, then ignore corporate tax. Profit before tax = 1000
Corporate tax = 100 Profit = 1000

Steps for calculating national income by income method:

- **Step 1:** To identify enterprises which employ primary factors (Land, Labour, Capital, enterprise).
- **Step 2:** To classify various types of factor income like:
Compensation of employees: The amount earned by employees from their employer, whether in cash or in kind or through any other social security scheme is known as compensation of employees.
Operating Surplus: It is the sum of income from property and income from entrepreneurship.
Mixed Income: Income of own account workers (like farmers, doctors, barbers, etc.) and unincorporated enterprises (like small shopkeepers, repair shops) is known as mixed income.
- **Step 3:** To estimate amount of factor payments made by each producing unit.
- **Step 4:** To add all factor incomes / payments within domestic territory to get domestic income, i.e., NDP_{FC}.

NDP_{FC} = Compensation of employees + Operating Surplus + Mixed Income
Step 5: Addition of NFIA to NDP_{FC} to get NY, i.e., NNP_{FC}.

$$\text{NNP}_{\text{FC}} = \text{NDP}_{\text{FC}} + \text{NFIA}$$

Precautions of income method.

- a) **Avoid transfers:** National income includes only factor payments, i.e., payment for the services rendered to the production units by the owners of factors. Any payment for which no service is rendered is called a transfer, not a production activity. Gifts, donations etc. are main examples. Since transfers are not a production activity it must not be included in national income.



- b) **Avoid capital gain:** Capital gain refers to the income from the sale of second hand goods and financial assets. Income from the sale of old cars, old house, bonds, debentures, etc. are some examples. These transactions are not production transactions. So, any income arising to the owners of such things is not a factor income.
- c) **Include income from self-consumed output:** When a house owner lives in his house, he does not pay any rent. But in fact he pays rent to himself. Since, rent is a payment for services rendered, even though rendered to the owner itself, it must be counted as a factor payment.
- d) **Include free services provided by the owners of the production units:** Owners work in their own unit but do not charge salary. Owners provide finance but do not charge any interest. Owners do production in their own buildings but do not charge rent. Although they do not charge, yet the services have been performed. The imputed value of these must be included in national income.

How To Determine National Income By Expenditure Method And Its Numericals, Steps And Precautions:

National income determination by Expenditure method:

- "Production creates income, income creates expenditure". If we want to calculate National Income by this method, we have to add different final expenditures from an economy.
- The addition of all those final expenditure gives us the calculation near by the National Income,
i.e. GDP_{MP} .

Components of Expenditure Method:

- **Government Final Consumption Expenditure (GFCE):** The expenditure made by a general government on current expenditure on goods and services like public health, defence, law and order, education, etc. These goods and services generate no income because it is produced by a general government without any profit motive.
- These goods and services are valued at their cost to the government as they are not sold to the citizen and have been produced for the social welfare of the citizens. So, $GFCE = \text{Intermediate consumption of government} + \text{Compensation of employees (wages and salaries in cash and in kind)}$ by



government + Direct purchases made abroad by government (purchases made by embassies and consulates located in foreign countries) + Consumption of fixed capital (depreciation) - Sale of goods and services by government.

Private Final Consumption Expenditure (PFCE):

- Private final consumption expenditure is defined as consumption expenditure by consumer households (household final consumption expenditure) and private NPISH (Non-profit Institution serving households) on all types of consumer goods.
- $PFCE = \text{Household final consumption expenditure} + \text{Private non-profit Institution serving households final consumption expenditure}$.
- The value of following items is measured for getting private final Consumption Expenditure.
- Purchases of currently produced goods and services in the domestic market by consumer households and NPISH.
- Direct purchases made abroad by resident households are added but direct purchases in domestic market by non-resident households and extra territorial bodies are deducted.
- $PFCE = \text{Purchases of currently produced goods and services in the domestic Market by consumer households and NPISH households} + \text{direct purchases made abroad by resident households} - \text{direct purchases in domestic market by non-resident households}$.
- Note: If in the examination problem household final consumption expenditure is not given, it can be calculated as under
- **Household Final Consumption Expenditure = Personal disposable income - Personal (Household) Saving**

Gross Domestic Capital Formation or Gross Investment or Investment Expenditure:

- It refers to additions to the physical stock of capital during a period of time. It includes building machinery, Housing construction, construction of factories, etc. It has been classified into the following categories.
- **Gross Domestic Fixed Capital Formation (GDFCF):** It is the expenditure incurred on purchase of fixed assets. It is of three types:



Gross Business Fixed Investment: It is the amount that the business units spend on purchase of newly produced capital goods like plant and equipments. Gross business fixed investment is the gross amount spent on newly produced fixed capital goods. When depreciation is deducted from it, we obtain Net Business fixed Investment.

Gross Business Fixed Investment = Net Business fixed Investment + Depreciation

Gross Residential Construction Investment: This is the amount spent on construction of flats and residential houses. The investment is said to be gross when depreciation is not deducted and Net when depreciation is deducted.

Gross Public Investment: This includes capital formation by government in the form of building of roads, bridges, schools, hospitals, etc. This investment is called Gross when depreciation is not deducted and Net when depreciation is subtracted.

- **Change In Stock** (Closing Stock – Opening Stock) Or Inventory Investment: It is the net change in inventories of final goods, finished goods, semi-finished goods and raw material. These are included as they represent currently produced goods, which are not included in the current sale of final output. It is a difference between closing stock and the opening stock of the year.
- **Net Acquisition Of Valuables:** These are those high value durable goods like gold, silver, antiques, etc. which are taken at market price.

GDCF = Gross domestic fixed capital formation (GDFCF) + Change in Stock (Closing Stock – Opening Stock) + Net acquisition of valuables

Or

GDCF = Gross Business Fixed Investment + Gross Residential Construction + Gross Public Investment + Inventory Investment + Net Acquisition of Valuables

Net Export (Export – Import):

- It shows the difference between Domestic spending on foreign goods (i.e., imports) and foreign spending on

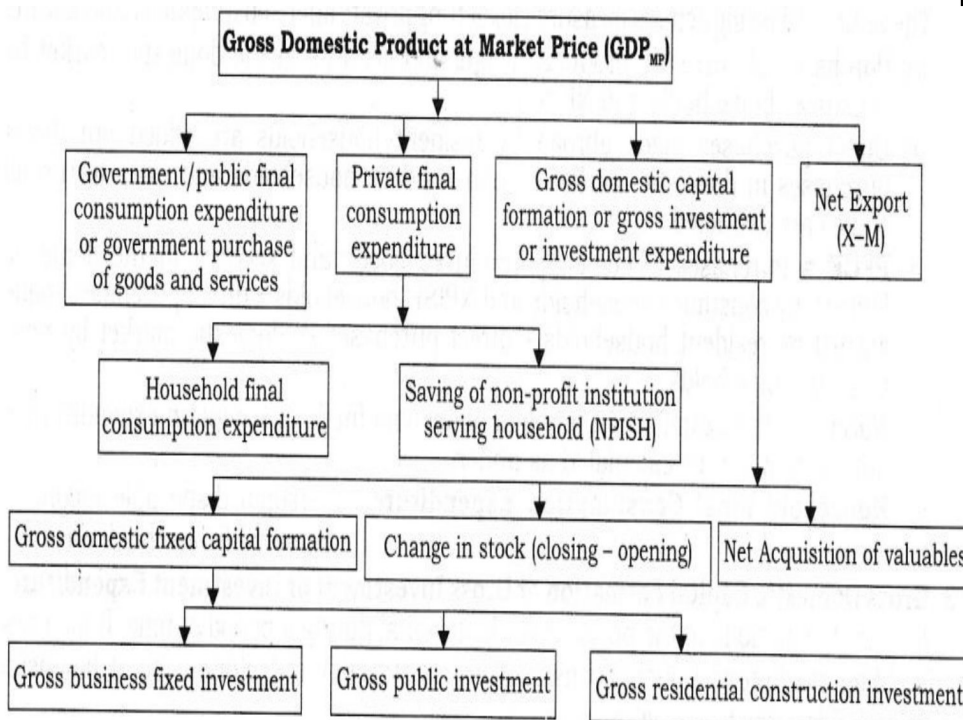


domestic goods (i.e., exports). Thus, the difference between exports and imports of a country is called Net Exports.

$$\text{Net Exports} = \text{Export} - \text{Import}$$

- $\text{GDP}_{\text{MP}} = \text{Government final consumption expenditure} + \text{Private final consumption expenditure} + \text{Gross domestic capital formation} + \text{Net export}$

Numerical Problems on Expenditure Method



Chapter 3 - Money

Barter System And Its Difficulties, Money And Functions Of Money:

- Barter system of exchange is a system in which goods are exchanged for goods.

For example, wheat may be exchanged for cloth; house for horses, etc., or a teacher may be paid wheat or rice as a payment for his/her services.

- Such exchange exists in the C-C Economy (commodity to commodity exchange economy).

Note: In C-C Economy C stands for commodity. C-C economy is the one in which commodities are exchanged for commodities. C-C exchange refers to barter system of



exchange. Hence, C-C Economy is an economy dominated by barter system of exchange.

I. Difficulties of barter system are:-Barter system as a system of exchange is faced with the following difficulties:

- **Lack of double coincidence of wants:**

Barter is possible only if goods produced by two persons are needed by each other. It is double coincidence of wants.

Double coincidence of wants means that goods in possession of two different persons must be useful and needed by each other. It is the main basis of barter system of exchange. But it is rare.

It is difficult to find such a person every time. In barter system, exchange becomes quite limited.

- **Lack of divisibility:**

In commodity exchange, difficulty of dividing the commodity arises.

For example, if a car is to be exchanged for a scooter, then car can not be divided. Similarly, animals can not be divided into smaller units.

- **Difficulty in storing wealth:**

It is very difficult to store wealth for future use.

Most of the goods like wheat, rice, cattle etc. are likely to deteriorate with the passage of time or involve heavy cost of storage.

Further, the transfer of goods from one place to another place involves huge transport cost.

Transfer of immovable commodities (such as house, farm, land, etc.) becomes almost impossible.

- **Absence of common measure of value:**

Different commodities are of different values. The value of a good or service means the amount of other goods and services it can be exchanged for in the market. There is no common measure of value under barter system.



In this situation, it is difficult to decide in what proportions are the two goods to be exchanged.

- **Lack of standard of deferred payment:**

In a barter economy future payments would have to be stated in terms of specific goods or services. This leads to following problems:

There could be disagreement regarding the quality of the goods or services to be repaid.

There would be disagreement regarding which specific commodities would be used for repayment.

II. Money:

- Money is something which is generally acceptable as a medium of exchange and can be converted into other assets without losing its time and value.

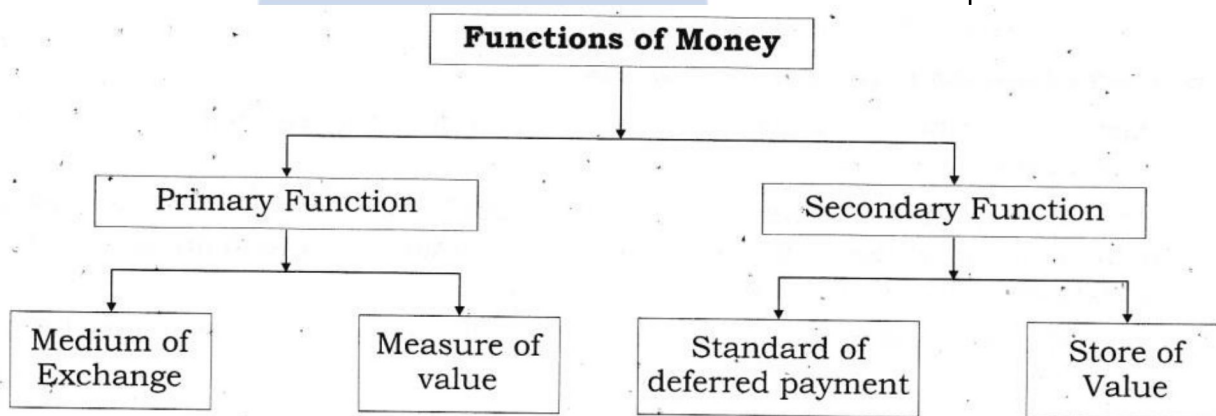
III. Functions of money:

- Functions of money can be summed up as follow:
"Money is a matter of the following four functions:

A medium, a measure, a standard, a store"

We can conclude these four functions under the following two functions:

- **Primary function**
- **Secondary function**



- a) **Primary function or Main function:** Primary function includes the most important functions of money, which it must perform in an economic system irrespective of time and place. The following two functions are included under this category.

(i) **Medium of exchange**



Money when used as a medium of exchange helps to eliminate the basic limitation of barter trade, that is, the lack of double coincidence of wants.

Individuals can exchange their goods and services for money and then can use this money to buy other goods and services according to their needs and convenience.

Thus, the process of exchange shall have two parts: a sale and a purchase.

The ease at which money is converted into other goods and services is called "liquidity of money".

(ii) Measure of value /unit of account

Another important function of money is that it serves as a common measure of value or a unit of account.

Under barter economy there was no common measure of value in which the values of different goods could be measured and compared with each other. Money has also solved this difficulty.

As Geoffrey Crowther puts it, "Money acts as a standard measure of value to which all other things can be compared." Money measures the value of economic goods.

Money works as a common denominator into which the values of all goods and services are expressed.

When we express the values of a commodity in terms of money, it is called price and by knowing prices of the various commodities, it is easy to calculate exchange ratios between them.

b) Secondary Functions

(i) Standard of deferred payments

Credit has become the life and blood of a modern capitalist economy.

In millions of transactions, instant payments are not made.



The debtors make a promise that they will make payments on some future date. In those situations money acts as a standard of deferred payments.

It has become possible because money has general acceptability, its value is stable, it is durable and homogeneous.

(ii) Store of value

Wealth can be conveniently stored in the form of money. Money can be stored without loss in value.

Savings are secured and can be used whenever there is a need.

In this way, money acts as a bridge between the present and the future.

Money means goods and services. Thus, money serves as a store of value.

It is also known as asset function of money.

IV. Characteristics or features of money:

- **Durability:** Money must be durable and not likely to deteriorate rapidly with frequent handling. Currency notes and coins are being used repeatedly and shall continue to do so for many years.
- **Medium of exchange:** Money is the thing that acts as a medium of exchange for the sale and purchase of goods and services.
- **Weight:** Money must be light in weight. Paper money is better than metal coins because it is light in weight.
- **Measure of value:** It not only serves as medium of exchange but also acts as a measure of value. The value of all the goods and services is expressed in terms of money.

V. Money has overcome the drawbacks of barter system: Barter system makes the exchange process very difficult and highly inefficient. Money has overcome the drawbacks of barter system in the following manners:

- **Medium of exchange**

Under barter system, there is lack of double coincidence of wants.

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With money as a medium exchange individuals can exchange their goods and services for money and then use this money to buy other goods and services according to their needs and conveniences.

A buyer can buy goods through money and a seller can sell goods for money.

▪ **Measure of value**

Under barter system, there was no common measure of value. Money has also solved this difficulty.

As Geoffrey Crowther puts it, "Money acts as a standard measure of value to which all other things can be compared." Money measures the value of economic goods.

Money works as a common denominator into which the values of all goods and services are expressed.

When we express the values of a commodity in terms of money, it is called price and by knowing prices of the various commodities, it is easy to calculate exchange ratios between them.

▪ **Store of value**

Under barter system it is very difficult to store wealth for future use.

Most of the goods are perishable and their storage requires huge space and transportation cost.

Wealth can be conveniently stored in the form of money.

Money can be stored without loss in value.

Money can easily be stored for future use.

VI. Standard of deferred payments

Under barter system, transactions on deferred payments are not possible.

With money, the debtors make a promise that they will make payments on some future dates. In these situations money acts as a standard of deferred payments.



It has become possible because money has general acceptability, its value is stable, it is durable and homogeneous.

VII. Legal definition of money:

- Legally, money is anything proclaimed by law as a medium of exchange.
- Paper notes and coins (together called currency) is money as a matter of law.
- Nobody can refuse its acceptance as medium of exchange.
- In other words, it is legal tender. It means people have to accept it legally for different payments. Currency is also called FIAT money because it commands 'FIAT' (order/authority) of the government.

VIII. Functional definition of money: Functional definition of money refers to money as anything that performs four basic functions,

- It serves as a medium of exchange.
- It serves as a standard unit of value.
- It serves as a means for future / contractual payments or standard of deferred payments.
- It serves as a store of value.
- According to this, definition of money includes both notes and coins as well as chequeable deposits with the banks.

IX. Narrow definition of money: Functional definition of money is a narrow definition of money. It includes only notes, coins and demand deposits as money. In other words, in its narrow definition, money includes only those things that function as money in terms of:

- Medium of exchange.
- Measure of value.
- Standard of future/Deferred payments.
- Store of value.

X. Broad definition of money:

- A broad definition of money also includes time deposits/term deposits with the banks or post offices as a component of money.
- These deposits can be converted into demand deposits on a short notice, and are "Near money assets". Money assets and near money assets together make up a definition of money.

Money Supply and Measures of Money Supply



1. **Money supply:** The volume of money held by the public at a point of time, in an economy, is referred to as the money supply. Money supply is a stock concept.
2. **Measures of money supply:** On the recommendation of the second working group on money supply, the RBI presented four measures of money supply in its 1977 issues of RBI Bulletin, namely M1, M2, M3 and M4.
3. **Measures of M1 include:**
 - a) Currency notes and coins with the public (excluding cash in hand of all commercial banks) [C]
 - b) Demand deposits of all commercial and co-operative banks excluding inter-bank deposits. (DD), Where demand deposits are those deposits which can be withdrawn by the depositor at any time by means of cheque. No interest is paid on such deposits.
 - c) Other deposits with RBI [O.D] $M1 = C + DD + OD$

Where, Other deposits are the deposits held by the RBI of all economic units except the government and banks. OD includes demand deposits of semi-government public financial institutions (like IDBI,

IFCI, etc.), foreign central banks and governments, the International Monetary Fund, the World Bank, etc.

Measures of M2:

- $M1 [C + DD + OD]$
- Post office saving deposits

Measures of M3:

- M1
- Time deposits of all commercial and co-operative banks.
- Where, Time deposits are the deposits that cannot be withdrawn before the expiry of the stipulated time for which deposits are made. Fixed deposit is an example of time deposit.

Measures of M4:

- M3



- Total deposits with the post office saving organization (excluding national savings certificates).
- High-powered money: High-powered money is money produced by the RBI and the government. It consists of two things: (a) currency held by the public and (b) Cash reserves with the banks.

Important Terms

- **Barter system:** Barter system of exchange is a system in which goods are exchanged for goods.
- **Double coincidence of wants:** It means that goods in possession of two different persons must be useful and needed by each other.
- **Money:** Money is something which is generally acceptable as a medium of exchange and can be converted into other assets without losing its time and value.
- **Legal definition of money:** Legally, money is anything proclaimed by law as a medium of exchange. Paper notes and coins (together called currency) is money as a matter of law.
- **FIAT Money:** It is defined as a money which is under the 'FIAT' (order/authority) of the government to act as a money.
- **Functional definition of money:** Functional definition of money refers to money as anything that performs four basic functions. (Medium of exchange, standard unit of value, standard of deferred payments, store of value)
- **Narrow definition of money:** Functional definition of money is a narrow definition of money. It includes only notes, coins and demand deposits as money.
- **Broad definition of money:** A broad definition of money also includes time deposits/ term deposits with the banks or post offices as a component of money.
- **Money Supply:** The stock of money held by the public at a point of time, in an economy, is referred to as the money supply. Money supply is a stock concept.
- **High-powered money:** It is money produced by the RBI and the government. It consists of two things: (i) currency held by the public and (ii) Cash reserves with the banks.
- **Demand deposits:** These are the deposits that can be withdrawn by the depositor at any time by means of cheque. No interest is paid on such deposits.



- **Time deposits:** These are the deposits that cannot be withdrawn before the expiry of the stipulated time for which deposits are made. Fixed deposit is an example of time deposit.
- **Other deposit measures of M1:** Other deposits are the deposits held by the RBI of all economics units except the government and banks. OD includes demand deposits of semi-government public financial institutions (like IDBI, IFCI, etc.), foreign central banks and governments, the International Monetary Fund, the World Bank, etc.

Chapter 4 - Banking

Commercial Bank And Credit Creation By Commercial Bank

1. **Commercial bank** is a financial institution which performs the functions of accepting deposits from the public and making loans and investments, with the motive of earning profit.
2. **Process of money creation/deposit creation/credit creation** by the commercial banking system.
 - a) Let us assume that the entire commercial banking system is one unit. Let us call this one unit simply "banks". Let us also assume that all receipts and payments in the economy are routed through the banks. One who makes payment does it by writing cheque. The one who receives payment deposits the same in his deposit account.
 - b) Suppose initially people deposit Rs.1000. The banks use this money for giving loans. But the banks cannot use the whole of deposit for this purpose. It is legally compulsory for the banks to keep a certain minimum fraction of these deposits as cash. The fraction is called the Legal Reserve Ratio (LRR). The LRR is fixed by the Central Bank. It has two components. A part of the LRR is to be kept with the Central bank and this part ratio is called the Cash Reserve Ratio. The other part is kept by the banks with themselves and is called the Statutory Liquidity Ratio.
 - c) Let us now explain the process, suppose the initial deposits in banks is Rs.1000 and the LRR is 10 percent. Further, suppose that banks keep only the minimum required, i.e., Rs.100 as cash reserve, banks are now free to lend the remainder Rs.900. Suppose they lend Rs.900. What banks do to open



deposit accounts in the names of the borrowers who are free to withdraw the amount whenever they like.

- Suppose they withdraw the whole of amount for making payments.
- d) Now, since all the transactions are routed through the banks, the money spent by the borrowers comes back into the banks into the deposit accounts of those who have received this payment. This increases demand deposit in banks by ₹900. It is 90 per cent of the initial deposit. These deposits of Rs.900 have resulted on account of loans given by the banks. In this sense the banks are responsible for money creation. With this round, increased in total deposits are now Rs.1900 (=1000 + 900).
- e) When banks receive new deposit of ₹900, they keep 10 per cent of it as cash reserves and use the remaining Rs. 810 for giving loans. The borrowers use these loans for making payments. The money comes back into the accounts of those who have received the payments. Bank deposits again rise, but by a smaller amount of Rs.810. It is 90 per cent of the last deposit creation. The total deposits now increase to Rs.2710 (=1000 + 900 + 810). The process does not end here.
- f) The deposit creation continues in the above manner. The deposits go on increasing round after round but Deposit Creation By Commercial Banks each time only 90 per cent of the last round deposits. At the same time cash reserves go on increasing, each time 90 per cent of the last cash reserve. The deposit creation comes to end when the total cash reserves become equal to the initial deposit. The total deposit creation comes to Rs.10000, ten times the initial deposit as shown in the table.

Deposit Creation By Commercial Banks			
	Deposits (₹)	Loans (₹)	Cash Reserves (LRR = 0.1) (₹)
Initial	1000	900	100
Round I	900	810	90
Round II	810	729	81
—	—	—	—
—	—	—	—
—	—	—	—
Total	10,000	9,000	1,000



It can also be explained with the help of the following formula:

$$\text{Money multiplier} = \frac{1}{\text{LRR}} = \frac{1}{0.1} = 10$$

The total money creation is thus,

$$\text{Money creation} = \text{Initial deposit} \times \frac{1}{\text{LRR}} = 10,000$$

Note, that lower the LRR, higher the money multiplier and more the money creation. If the LRR = 5% = 0.05, the money multiplier is 20 (= 1/0.05). If the LRR = 20% = 0.2, the money multiplier is 5 (= 1/0.2)

3. Banks required to keep only a fraction of deposits as cash reserves Banks are required to keep only a fraction of deposits as cash reserves because of the following two reasons:
 - a) First, the banking experience has revealed that not all depositors approach the banks for withdrawal of money at the same time and also that normally they withdraw a fraction of deposits.
 - b) Secondly, there is a constant flow of new deposits into the banks. Therefore to meet the daily demand for withdrawal of cash, it is sufficient for banks to keep only a fraction of deposits as a cash reserve.
4. When the primary cash deposit in the banking system leads to multiple expansion in the total deposits, it is known as money multiplier or credit multiplier.

Central Bank and Their Functions

- 1) Central bank is the apex institution of a country's monetary system. The design and the control of the country's monetary policy is its main responsibility. India's central bank is the Reserve Bank of India.
- 2) **Functions of Central Bank.**
 - a) **Currency Authority:**
 - (i) Central bank has the sole monopoly to issue currency notes. Commercial banks cannot issue currency notes. Currency notes issued by the central bank are the legal tender money.
 - (ii) Legal tender money is one, which every individual is bound to accept by law in exchange for goods and services and in the discharge of debts.
 - (iii) Central bank has an issue department, which is solely responsible for the issue of notes.



- (iv) However, the monopoly of central bank to issue the currency notes may be partial in certain countries.
- (v) For example, in India, one rupee notes and all types of coins are issued by the government and all other notes are issued by the Reserve Bank of India.
- b) **Banker, Agent and Advisor to the Government:** Central bank everywhere in the world acts as banker, fiscal agent and adviser to their respective government.
- (i) **As Banker:** As a banker to the government, the central bank performs same functions as performed by the commercial banks to their customers.
- It receives deposits from the government and collects cheques and drafts deposited in the government account.
 - It provides cash to the government as resumed for payment of salaries and wages to their staff and other cash disbursements.
 - It makes payments on behalf of the government.
 - It also advances short term loans to the government.
 - It supplies foreign exchange to the government for repaying external debt or making other payments.
- (ii) **As Fiscal Agent:** As a fiscal agent, it performs the following functions :
- It manages the public debt.
 - It collects taxes and other payments on behalf of the government.
 - It represents the government in the international financial institutions (such as World Bank, International Monetary Fund, etc.) and conferences.
- (iii) **As Adviser**
- Central bank also acts as the financial adviser to the government.
 - It gives advice to the government on all financial and economic matters such as deficit financing, devaluation of currency, trade policy, foreign exchange policy, etc.
- 3) **Banker's Bank and Supervisor:**
- a) **Banker's Bank:** Central bank acts as the banker to the banks in three ways: (i) custodian of the cash reserves of the commercial banks; (ii) as the lender of the last resort; and (iii) as clearing agent.
- (i) **As a custodian of the cash reserves of the commercial banks,** the central bank maintains the cash reserves of the commercial banks. Every commercial bank has to



keep a certain percent of its cash reserves with the central bank by law.

(ii) As Lender of the Last Resort.

- As banker to the banks, the central bank acts as the lender of the last resort.
- In other words, in case the commercial banks fail to meet their financial requirements from other sources, they can, as a last resort, approach to the central bank for loans and advances.
- Central bank assists such banks through discounting of approved securities and bills of exchange.

(iii) As Clearing Agent

- Since it is the custodian of the cash reserves of the commercial banks, the central bank can act as the clearinghouse for these banks.
- Since all banks have their accounts with the central bank, the central bank can easily settle the claims of various banks against each other simply by book entries of transfers from and to their accounts.
- This method of settling accounts is called Clearing House Function of the central bank.

b) Supervisor

- (i) **Central Bank supervises**, regulate and control the commercial banks.
- (ii) **Regulation** of banks may be related to their licensing, branch expansion, liquidity of assets, management, amalgamation (merging of banks) and liquidation (the winding of banks).
- (iii) Control is exercised by periodic inspection of banks and the returns filed by them.

4) Controller of Money Supply and Credit: Principal instruments of Monetary Policy or credit control of the Central Bank of a country are broadly classified as:

- a) **Quantitative Instruments or General Tools;** and
- b) **Qualitative Instruments or Selective Tools.**

Quantitative Instruments or General Tools of Monetary

Policy: These are the instruments of monetary policy that affect overall supply of money/credit in the economy. These instruments do not direct or restrict the flow of credit to some specific sectors of the economy. They are as under:



Bank Rate (Discount Rate)

- Bank rate is the rate of interest at which central bank lends to commercial banks without any collateral (security for purpose of loan). The thing, which has to be remembered, is that central bank lends to commercial banks and not to general public.
- In a situation of excess demand leading to inflation,
- Central bank raises bank rate that discourages commercial banks in borrowing from central bank as it will increase the cost of borrowing of commercial bank.
- It forces the commercial banks to increase their lending rates, which discourages borrowers from taking loans, which discourages investment.
- Again high rate of interest induces households to increase their savings by restricting expenditure on consumption.
- Thus, expenditure on investment and consumption is reduced, which will control the excess demand.
- In a situation of deficient demand leading to deflation,
- Central bank decreases bank rate that encourages commercial banks in borrowing from central bank as it will decrease the cost of borrowing of commercial bank.
- Decrease in bank rate makes commercial bank to decrease their lending rates, which encourages borrowers from taking loans, which encourages investment.
- Again low rate of interest induces households to decrease their savings by increasing expenditure on consumption.
- Thus, expenditure on investment and consumption increase, which will control the deficient demand.

Repo Rate

- Repo rate is the rate at which commercial bank borrow money from the central bank for short period by selling their financial securities to the central bank.
- These securities are pledged as a security for the loans.
- It is called Repurchase rate as this involves commercial bank selling securities to RBI to borrow the money with an agreement to repurchase them at a later date and at a predetermined price.
- So, keeping securities and borrowing is repo rate.
- In a situation of excess demand leading to inflation,



- Central bank raises repo rate that discourages commercial banks in borrowing from central bank as it will increase the cost of borrowing of commercial bank.
- It forces the commercial banks to increase their lending rates, which discourages borrowers from taking loans, which discourages investment.
- Again high rate of interest induces households to increase their savings by restricting expenditure on consumption.
- Thus, expenditure on investment and consumption is reduced, which will control the excess demand.
- In a situation of deficient demand leading to deflation,
- Central bank decreases Repo rate that encourages commercial banks in borrowing from central bank as it will decrease the cost of borrowing of commercial bank.
- Decrease in Repo rate makes commercial bank to decrease their lending rates, which encourages borrowers from taking loans, which encourages investment.
- Again low rate of interest induces households to decrease their savings by increasing expenditure on consumption.
- Thus, expenditure on investment and consumption increase, which will control the deficient demand.

Reverse Repo Rate

- It is the rate at which the Central Bank (RBI) borrows money from commercial bank.
- In a situation of excess demand leading to inflation, Reverse repo rate is increased, it encourages the commercial bank to park their funds with the central bank to earn higher return on idle cash. It decreases the lending capability of commercial banks, which controls excess demand.
- In a situation of deficient demand leading to deflation, Reverse repo rate is decreased, it discourages the commercial bank to park their funds with the central bank. It increases the lending capability of commercial banks, which controls deficient demand.

Open Market Operations (OMO)

- It consists of buying and selling of government securities and bonds in the open market by Central Bank.
- In a situation of excess demand leading to inflation, central bank sells government securities and bonds to commercial bank. With the sale of these securities, the power of



commercial bank of giving loans decreases, which will control excess demand.

- In a situation of deficient demand leading to deflation, central bank purchases
- government securities and bonds from commercial bank. With the purchase of these securities, the power of commercial bank of giving loans increases, which will control deficient demand.

Varying Reserve Requirements

- Banks are obliged to maintain reserves with the central bank, which is known as legal reserve ratio. It has two components. One is the Cash Reserve Ratio or CRR and the other is the SLR or Statutory Liquidity Ratio.

Cash Reserve Ratio:

- It refers to the minimum percentage of a bank's total deposits, which it is required to keep with the central bank. Commercial banks have to keep with the central bank a certain percentage of their deposits in the form of cash reserves as a matter of law.
- For example, if the minimum reserve ratio is 10% and total deposits of a certain bank is Rs. 100 crore, it will have to keep Rs. 10 crore with the Central Bank.
- In a situation of excess demand leading to inflation, Cash Reserve Ratio (CRR) is raised to 20 per cent, the bank will have to keep Rs.20 crore with the Central Bank, which will reduce the cash resources of commercial bank and reducing credit availability in the economy, which will control excess demand.
- In a situation of deficient demand leading to deflation, cash reserve ratio (CRR) falls to 5 per cent, the bank will have to keep Rs. 5 crore with the central bank, which will increase the cash resources of commercial bank and increasing credit availability in the economy, which will control deficient demand.

Statutory Liquidity Ratio (SLR)

- It refers to minimum percentage of net total demand and time liabilities, which commercial banks are required to maintain with themselves.



- In a situation of excess demand leading to inflation, the central bank increases statutory liquidity ratio (SLR), which will reduce the cash resources of commercial bank and reducing credit availability in the economy.
- In a situation of deficient demand leading to deflation, the central bank decreases statutory liquidity ratio (SLR), which will increase the cash resources of commercial bank and increases credit availability in the economy.

It may consist of:**Excess reserves**

- Unencumbered (are not acting as security for loans from the Central Bank) government and other approved securities (securities whose repayment is guaranteed by the government); and
- Current account balances with other banks.
- Qualitative Instruments or Selective Tools of Monetary Policy: These instruments are used to regulate the direction of credit. They are as under:

Imposing margin requirement on secured loans

- Business and traders get credit from commercial bank against the security of their goods. Bank never gives credit equal to the full value of the security. It always pays less value than the security.
- So, the difference between the value of security and value of loan is called marginal requirement.
- In a situation of excess demand leading to inflation, central bank raises marginal requirements. This discourages borrowing because it makes people gets less credit against their securities.
- In a situation of deficient demand leading to deflation, central bank decreases marginal requirements. This encourages borrowing because it makes people get more credit against their securities.

Moral Suasion

- Moral suasion implies persuasion, request, informal suggestion, advice and appeal by the central banks to commercial banks to cooperate with general monetary policy of the central bank.



- In a situation of excess demand leading to inflation, it appeals for credit contraction.
- In a situation of deficient demand leading to deflation, it appeals for credit expansion.

Selective Credit Controls (SCCs)

- In this method the central bank can give directions to the commercial banks not to give credit for certain purposes or to give more credit for particular purposes or to the priority sectors.
- In a situation of excess demand leading to inflation, the central bank introduces rationing of credit in order to prevent excessive flow of credit, particularly for speculative activities. It helps to wipe off the excess demand.
- In a situation of deficient demand leading to deflation, the central bank withdraws rationing of credit and make efforts to encourage credit.

Important Terms:

- **Commercial Bank:** Commercial bank is a financial institution which performs the functions of accepting deposits from the public and making loans and investments, with the motive of earning profit.
- **Legal Reserve Ratio:** It is the minimum ratio of deposits legally required to be kept by the commercial banks with themselves (Statutory Liquidity Ratio) and with the central bank (Cash reserve Ratio).
- **Money Multiplier or Credit Multiplier:** When the primary cash deposit in the banking system leads to multiple expansion in the total deposits, it is known as money multiplier or credit multiplier.
- **Central Bank:** The central bank is the apex institution of a country's monetary system. The design and the control of the country's monetary policy is its main responsibility.
- **Quantitative Instruments or General Tools of Monetary Policy:** These are the instruments of monetary policy that affect overall supply of money/credit in the economy.
- **Qualitative Instruments or Selective Tools of Monetary Policy:** The instruments which are used to regulate the direction of credit is known as Qualitative Instruments.



Notes

- **Bank rate:** It is the rate of interest at which central bank lends to commercial banks without any collateral (security for purpose of loan).
- **Repo rate:** It is the rate at which commercial bank borrow money from the central bank for short period by selling their financial securities to the central bank.
- **Reverse Repo rate:** It is the rate at which the central bank (RBI) borrows money from commercial bank.
- **Open Market Operation:** It consists of buying and selling of government securities and bonds in the open market by central bank.
- **Cash Reserve Ratio:** It refers to the minimum percentage of a bank's total deposits, which it is required to keep with the central bank.
- **Statutory Liquidity Ratio:** It refers to minimum percentage of net total demand and time liabilities, which commercial banks are required to maintain with themselves.
- **Marginal requirement:** Business and traders get credit from commercial bank against the security of their goods. Bank never gives credit equal to the full value of the security. It always pays less value than the security. So, the difference between the value of security and value of loan is called marginal requirement.
- **Moral suasion:** It implies persuasion, request, informal suggestion, advice and appeal by the central banks to commercial banks to cooperate with general monetary policy of the central bank.
- **Selective Credit Controls (SCCs):** In this method the central bank can give directions to the commercial banks not to give credit for certain purposes or to give more credit for particular purposes or to the priority sectors.

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