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INTRODUCTORY MACROECONOMICS

NCERT GIST

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INDEX

Sl.No.	TOPIC	PAGE NO
1	National Income Accounting	1
2	Money And Banking	6
3	Government Budget and The Economy	9
4	Open Economy Macroeconomics	13

1 NATIONAL INCOME ACCOUNTING

Some Basic Concepts of Macroeconomics

- The economic wealth, or well-being, of a country thus does not necessarily depend on the mere possession of resources; the point is how these resources are used in generating a flow of production and how, as a consequence, income and wealth are generated from that process.
- In our modern economic setting this flow of production arises out of production of commodities – goods and services by millions of enterprises large and small. These enterprises range from giant corporations employing a large number of people to single entrepreneur enterprises.
- Each producer of commodities intends to sell her output. So, from the smallest items like pins or buttons to the largest ones like aeroplanes, automobiles, giant machinery or any saleable service like that of the doctor, the lawyer or the financial consultant–the goods and services produced are to be sold to the consumers.
- A consumer good or final good is any commodity that is produced or consumed by the consumer to satisfy current wants or needs. Consumer goods are ultimately consumed, rather than used in the production of another good.
- The final goods, we can distinguish between consumption goods and capital goods. Goods like food and clothing, and services like recreation that are consumed when purchased by their ultimate consumers are called consumption goods or consumer goods
- Unlike the final goods that we have considered above, they are the crucial backbone of any production process, in aiding and enabling the production to take place. These goods form a part of capital, one of the crucial factors of production in which a productive enterprise has invested, and they continue to enable the production process to go on for continuous cycles of production. These are capital goods and they gradually undergo wear and tear, and thus are repaired or gradually replaced over time.
- The total production taking place in the economy a large number of products don't end up in final consumption and are not capital goods either. Such goods may be used by other producers as material inputs. Examples are steel sheets used for making automobiles and copper used for making utensils. These are intermediate goods, mostly used as raw material or inputs for production of other commodities. These are not final goods.

Methods of Calculating National Income

- Three methods that are used to measure national income.
  1. Production or value-added method
  2. Income method or factor earning method
  3. Expenditure method

     Output = Income = Expenditure

1. Product Method: -

- Product method measures the output of the country. It is also called inventory method. Under this method, the gross value of output from different sectors like agriculture, industry, trade and commerce, etc., is obtained for the entire economy during a year.

- The value obtained is actually the GNP at market prices. Care must be taken to avoid double counting.
- The value of the final product is derived by the summation of all the values added in the productive process. To avoid double counting, either the value of the final output should be taken into the estimate of GNP or the sum of values added should be taken.
- In India, the gross value of the farm output is obtained as follows:
  I. Total production of 64 agriculture commodities is estimated. The output of each crop is measured by multiplying the area sown by the average yield per hectare.
  II. The total output of each commodity is valued at market prices.
  III. The aggregate value of total output of these 64 commodities is taken to measure the gross value of agricultural output.
  IV. The net value of the agricultural output is measured by making deductions for the cost of seed, manures and fertilisers, market charges, repairs and depreciation from the gross value.

2. Income Method (Factor Earning Method):-

- This method approaches national income from the distribution side. Under this method, national income is calculated by adding up all the incomes generated in the course of producing national product.

  Steps involved

  1. The enterprises are classified into various industrial groups.
  2. Factor incomes are grouped under labour income, capital income and mixed income.
     i) Labour income - Wages and salaries, fringe benefits, employer's contribution to social security.
     ii) Capital income – Profit, interest, dividend and royalty
     iii) Mixed income – Farming, sole proprietorship and other professions.
  3. National income is calculated as domestic factor income plus net factor incomes from abroad.

In short,

$$Y = w + r + i + \pi + (R - P)$$

w = wages, r = rent, i = interest, π = profits,

R = Exports and P = Imports

This method is adopted for estimating the contributions of the remaining sectors, viz., small enterprises, banking and insurance, commerce and transport, professions, liberal arts and domestic service, public authorities, house property and foreign sector transaction.

3. The Expenditure Method (Outlay method)

- The total expenditure incurred by the society in a particular year is added together. To calculate the expenditure of a society, it includes personal consumption expenditure, net domestic investment, government expenditure on consumption as well as capital goods and net exports.

  Symbolically,

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

C - Private consumption expenditure

I - Private Investment Expenditure

G - Government expenditure

X-M = Net exports

Factor Cost, Basic Prices and Market Prices:

- In India, the most highlighted measure of national income has been the GDP at factor cost. The Central Statistics Office (CSO) of the Government of India has been reporting the GDP at factor cost and at market prices.

- In its revision in January 2015 the CSO replaced GDP at factor cost with the GVA at basic prices, and the GDP at market prices, which is now called only GDP, is now the most highlighted measure.
- The distinction between factor cost, basic prices and market prices is based on the distinction between net production taxes and net product taxes.
- Production taxes and subsidies are paid or received in relation to production and are independent of the volume of production such as land revenues, stamp and registration fee. Product taxes and subsidies, on the other hand, are paid or received per unit or product, e.g., excise tax, service tax, export and import duties etc.
- Factor cost includes only the payment to factors of production, it does not include any tax. In order to arrive at the market prices, we have to add to the factor cost the total indirect taxes fewer total subsidies. The basic prices lie in between the production taxes but not product taxes. Therefore, in order to arrive at market prices, we have to add product taxes to the basic prices.
- As stated above, now the CSO releases GVA at basic prices. Thus, it includes the net production taxes but not net product taxes. In order to arrive at the GDP (at market prices) we need to add net product taxes to GVA at basic prices. Thus,

  GVA at factor costs + Net production taxes = GVA at basic prices

  GVA at basic prices + Net product taxes = GVA at market prices

Some Macroeconomic Identities

Gross Domestic Product (GDP)

- GDP is the total market value of final goods and services produced within the country during a year. This is calculated at market prices and is known as GDP at market prices.
- GDP by expenditure method at market prices = C + I + G + (X – M)

  C – Consumption goods;

  I – Investment goods;

  G – Government purchases;

  X – Exports;

  M – Imports

  (X – M) is net export which can be positive or negative.

Net Domestic Product (NDP)

- NDP is the value of net output of the economy during the year. Some of the country's capital equipment wears out or becomes outdated each year during the production process.

  Net Domestic Product = GDP - Depreciation.

Gross National Product (GNP)

- GNP is the total measure of the flow of final goods and services at market value resulting from current production in a country during a year, including net income from abroad.
- GNP includes five types of final goods and services :
  1. Value of final consumer goods and services produced in a year to satisfy the immediate wants of the people which is referred to as consumption (C)
  2. Gross private domestic investment in capital goods consisting of fixed capital formation, residential construction and inventories of finished and unfinished goods which is called as gross investment (I)

3. Goods and services produced or purchased by the government which is denoted by (G)
4. Net exports of goods and services, i.e., the difference between value of exports and imports of goods and services, known as (X-M) ; Net factor incomes from abroad which refers to the difference between factor incomes (wage, interest, profits) received from abroad by normal residents of India and factor incomes paid to the foreign residents for factor services rendered by them in the domestic territory in India (R-P);
5. GNP at market prices means the gross value of final goods and services produced annually in a country plus net factor income from abroad(C + I + G + (X-M) + (R-P)).

GNP at Market Prices = GDP at Market Prices + Net Factor income from Abroad

Net National Product at Market price

- Net National Product refers to the value of the net output of the economy during the year. NNP is obtained by deducting the value of depreciation, or replacement allowance of the capital assets from the GNP.
  NNP = GNP – depreciation allowance

NNP at Factor cost

- NNP refers to the market value of output. Whereas NNP at factor cost is the total of income payment made to factors of production. Thus, from the money value of NNP at market price, we deduct the amount of indirect taxes and add subsidies to arrive at the net national income at factor cost.
  NNP at factor cost = NNP at Market prices – Indirect taxes + Subsidies.

Personal Income

- Personal income is the total income received by the individuals of a country from all sources before payment of direct taxes in a year. Personal income is never equal to the national income, because the former includes the transfer payments whereas they are not included in national income. Personal income is derived from national income by deducting undistributed corporate profit, and employees' contributions to social security schemes and adding transfer payment.
  NNP = GNP – depreciation allowance.
- Personal Income = National Income – (Social Security Contribution and undistributed corporate profits) +Transfer payments

Disposable Income

- Disposable Income is also known as Disposable personal income. It is the individual's income after the payment of income tax. This is the amount available for households for consumption.

Per Capita Income

- The average income of a person of a country in a particular year is called Per Capita Income. Per capita income is obtained by dividing national income by population.
  Per Capita income =National Income/Population

Real Income

- Nominal income is national income expressed in terms of a general price level of a particular year in other words, real income is the buying power of nominal income.
- National income is the final value of goods and services produced and expressed in terms of money at current prices. But it does not indicate the real state of the economy. The real income is derived as follows:
  Disposable Income = Personal income – Direct Tax.

- As the entire disposable income is not spent on consumption,
  Disposal income = consumption + saving.
  Per Capita income = National Income/Population
  National Income at constant price = National Income at current price ÷ P1 / P0
  P1 – Price index during current year;
  P0 – Price index during base year

GDP deflator

- **Real GDP** is calculated in a way such that the goods and services are evaluated at some constant set of prices (or constant prices). Since these prices remain fixed, if the Real GDP changes we can be sure that it is the volume of production which is undergoing changes.
- **Nominal GDP,** on the other hand, is simply the value of GDP at the current prevailing prices.
- GDP deflator is an index of price changes of goods and services included in GDP. It is a price index which is calculated by dividing the nominal GDP in a given year by the real GDP for the same year and multiplying it by 100.
  GDP deflator =Nominal GDP/Real GDP*100

Consumer Price Index (CPI)

- It is a price index which represents the average price of a basket of goods over time. CPI calculates the average price paid by the consumer to the shopkeepers.
- Education, communication, transportation, recreation, apparel, foods and beverages, housing and medical care are the 8 groups for which the CPI is measured.

Wholesale Price Index (WPI)

- It is an indicator of price changes in the wholesale market. WPI calculates the price paid by the manufacturers and wholesalers in the market. WPI measure the changes in commodity price at selected stages before goods reach to the retail level.

2 MONEY AND BANKING

INTRODUTION:

- Money is the commonly accepted medium of exchange.
- In an economy which consists of only one individual there cannot be any exchange of commodities and hence there is no role for money.
- Even if there is more than one individual but these individuals do not take part in market transactions.
- However, as soon as there is more than one economic agent who engage themselves in transactions through the market, money becomes an important instrument for facilitating these exchanges.
- Economic exchanges without the mediation of money are referred to as barter exchanges. However, they presume the rather improbable double coincidence of wants.

Demand for Money and Supply of Money

Demand for Money: -

- The demand for money tells us what makes people desire a certain amount of money. Since money is required to conduct transactions, the value of transactions will determine the money people will want to keep: the larger is the quantum of transactions to be made, the larger is the quantity of money demanded.
- When interest rates go up, people become less interested in holding money since holding money amounts to holding less of interest-earning deposits, and thus less interest received. Therefore, at higher interest rates, money demanded comes down.

Supply of Money: -

- In a modern economy, money comprises cash and bank deposits. Depending on what types of bank deposits are being included, there are many measures of money.
- These are created by a system comprising two types of institutions: central bank of the economy and the commercial banking system.

1. Central bank

- Central Bank is a very important institution in a modern economy. Almost every country has one central bank. India got its central bank in 1935. Its name is the 'Reserve Bank of India'.
- Central bank has several important functions. It issues the currency of the country. It controls money supply of the country through various methods, like bank rate, open market operations and variations in reserve ratios. It acts as a banker to the government.
- It is the custodian of the foreign exchange reserves of the economy. It also acts as a bank to the banking system, which is discussed in detail later. From the point of view of money supply, we need to focus on its function of issuing currency.
- This currency issued by the central bank can be held by the public or by the commercial banks, and is called the 'high-powered money' or 'reserve money' or 'monetary base' as it acts as a basis for credit creation.

2. Commercial Banks

- Commercial banks are the other type of institutions which are a part of the money-creating system of the economy. In the following section we look at the commercial banking system in detail.
- They accept deposits from the public and lend out part of these funds to those who want to borrow. The interest rate paid by the banks to depositors is lower than the rate charged from the borrowers. This difference between these two types of interest rates, called the 'spread' is the profit appropriated by the bank.
- Commercial banks mediate between individuals or firms with excess funds and lend to those who need funds.
- People with excess funds can keep their funds in the form of deposits in banks and those who need funds, borrow funds in form of home loans, crop loans, etc. People prefer to keep money in banks because banks offer to pay some interest on any deposits made.

Money Creation by Banking System

- Banks can lend simply because they do not expect all the depositors to withdraw what they have deposited at the same time. When the banks lend to any person, a new deposit is opened in that person's name. Thus, money supply increases to old deposits plus new deposit (plus currency.)
- Let us take an example. Assume that there is only one bank in the country. Let us construct a fictional balance sheet for this bank. Balance sheet is a record of assets and liabilities of any firm.
- **Assets** are things a firm owns or what a firm can claim from others.
- Similarly, commercial banks like State Bank of India (SBI) keep their deposits with RBI and these are called Reserves.

Assets = Reserves + Loans

- **Liabilities** for any firm are its debts or what it owes to others. For a bank, the main liability is the deposits which people keep with it.

Liabilities = Deposits

- The accounting rule states that both sides of the account must balance. Hence if assets are greater than liabilities, they are recorded on the right-hand side as Net Worth.

Net Worth = Assets – Liabilities

Determinants of Money Supply

1. Currency Deposit Ratio (CDR)- It is the ratio of money held by the public in currency to that they hold in bank deposits.
2. Reserve deposit Ratio (RDR)- Reserve Money consists of two things (a) vault cash in banks and (b) deposits of commercial banks with RBI.
3. Cash Reserve Ratio (CRR)- It is the fraction of the deposits the banks must keep with RBI.
4. Statutory Liquidity Ratio (SLR)- It is the fraction of the total demand and time deposits of the commercial banks in the form of specified liquid assets.

Policy Tools to Control Money Supply

- Reserve Bank is the only institution which can issue currency.
- When commercial banks need more funds in order to be able to create more credit, they may go to market for such funds or go to the Central Bank. Central bank provides them funds through various instruments.

- This role of RBI, that of being ready to lend to banks at all times is another important function of the central bank, and due to this central bank is said to be the lender of last resort.
- An important tool by which the RBI also influences money supply is **Open Market Operations.**
- Open Market Operations refers to buying and selling of bonds issued by the Government in the open market.
- This purchase and sale are entrusted to the Central bank on behalf of the Government.
- When RBI buys a Government bond in the open market, it pays for it by giving a cheque. This cheque increases the total amount of reserves in the economy and thus increases the money supply.
- Selling of a bond by RBI (to private individuals or institutions) leads to reduction in quantity of reserves and hence the money supply.
- There are two types of open market operations: outright and repo.
- **Outright open market operations** - are permanent in nature: when the central bank buys these securities (thus injecting money into the system), it is without any promise to sell them later. Similarly, when the central bank sells these securities (thus withdrawing money from the system), it is without any promise to buy them later.
- As a result, the injection/absorption of the money is of permanent nature.
- However, there is another type of operation in which when the central bank buys the security, this agreement of purchase also has specification about date and price of resale of this security. This type of agreement is called a **repurchase agreement or repo.**
- The interest rate at which the money is lent in this way is called the repo rate.
- Similarly, instead of outright sale of securities the central bank may sell the securities through an agreement which has a specification about the date and price at which it will be repurchased.
- This type of agreement is called a reverse repurchase agreement or reverse repo. The rate at which the money is withdrawn in this manner is called the reverse repo rate.
- The Reserve Bank of India conducts repo and reverse repo operations at various maturities: overnight, 7-day, 14- day, etc. This type of operations has now become the main tool of monetary policy of the Reserve Bank of India.
- The RBI can influence money supply by changing the rate at which it gives loans to the commercial banks. This rate is called the Bank Rate in India.
- By increasing the bank rate, loans taken by commercial banks become more expensive; this reduces the reserves held by the commercial bank and hence decreases money supply. A fall in the bank rate can increase the money supply.

3 GOVERNMENT BUDGET AND THE ECONOMY

- Apart from the private sector, there is the government which plays a very important role. An economy in which there is both the private sector and the Government is known as a mixed economy.
- There are many ways in which the government influences economic life. In this chapter, we will limit ourselves to the functions which are carried on through the government budget.

Government Budget Meaning and Its Components:

- There is a constitutional requirement in India (Article 112) to present before the Parliament a statement of estimated receipts and expenditures of the government in respect of every financial year which runs from 1 April to 31 March. This **'Annual Financial Statement'** constitutes the main budget document of the government.
- Although the budget document relates to the receipts and expenditure of the government for a particular financial year, the impact of it will be there in subsequent years.
- There is a need therefore to have two accounts- those that relate to the current financial year only are included in the revenue account (also called revenue budget) and those that concern the assets and liabilities of the government into the capital account (also called capital budget).

Objectives of Government Budget:

- The government plays a very important role in increasing the welfare of the people. In order to do that the government intervenes in the economy in the following ways.
- Allocation Function of Government Budget Government provides certain goods and services which cannot be provided by the market mechanism i.e. by exchange between individual consumers and producers. Examples of such goods are national defence, roads, government administration etc. which are referred to as public goods.
- To understand why public goods, need to be provided by the government, we must understand the difference between private goods such as clothes, cars, food items etc. and public goods.
- There are two major differences. One, the benefits of public goods are available to all and are not only restricted to one particular consumer. For example, if a person eats a chocolate or wears a shirt, these will not be available to others.
- It is said that this person's consumption stands in rival relationship to the consumption of others. However, if we consider a public park or measures to reduce air pollution, the benefits will be available to all. One person's consumption of a good does not reduce the amount available for consumption for others and so several people can enjoy the benefits, that is, the consumption of many people is not 'rivalrous'.
- Two, in case of private goods anyone who does not pay for the goods can be excluded from enjoying its benefits.
- If you do not buy a ticket, you will not be allowed to watch a movie at a local cinema hall. However, in case of public goods, there is no feasible way of excluding anyone from enjoying the benefits of the good. That is why public goods are called non-excludable.
- Even if some users do not pay, it is difficult and sometimes impossible to collect fees for the public good. These non-paying users are known as 'free-riders'.

- Consumers will not voluntarily pay for what they can get for free and for which there is no exclusive title to the property being enjoyed. The link between the producer and consumer which occurs through the payment process is broken and the government must step in to provide for such goods.
- There is, however, a difference between public provision and public production. Public provision means that they are financed through the budget and can be used without any direct payment.
- Public goods may be produced by the government or the private sector. When goods are produced directly by the government it is called public production.

Redistribution Function of Government Budget:

- The total national income of the country goes to either the private sector, that is, firms and households (known as private income) or the government (known as public income).
- Out of private income, what finally reaches the households is known as personal income and the amount that can be spent is the personal disposable income.
- The government sector affects the personal disposable income of households by making transfers and collecting taxes.
- It is through this that the government can change the distribution of income and bring about a distribution that is considered 'fair' by society. This is the redistribution function.

Stabilisation Function of Government Budget:

- The government may need to correct fluctuations in income and employment.
- The overall level of employment and prices in the economy depends upon the level of aggregate demand which depends on the spending decisions of millions of private economic agents apart from the government.
- These decisions, in turn, depend on many factors such as income and credit availability. In any period, the level of demand may not be sufficient for full utilisation of labour and other resources of the economy. Since wages and prices do not fall below a level, employment cannot be brought back to the earlier level automatically.
- The government needs to intervene to raise the aggregate demand. On the other hand, there may be times when demand exceeds available output under conditions of high employment and thus may give rise to inflation. In such situations, restrictive conditions may be needed to reduce demand. The intervention of the government whether to expand demand or reduce it constitutes the stabilisation function.

Classification of Receipts

Revenue Receipts: -

- Revenue receipts are those receipts that do not lead to a claim on the government. They are therefore termed non-redeemable. They are divided into tax and non-tax revenues.
- Tax revenues, an important component of revenue receipts, have for long been divided into direct taxes (personal income tax) and firms (corporation tax), and indirect taxes like excise taxes (duties levied on goods produced within the country), customs duties (taxes imposed on goods imported into and exported out of India) and service tax.
- Other direct taxes like wealth tax, gift tax and estate duty (now abolished) have never brought in large amount of revenue and thus have been referred to as 'paper taxes.
- The redistribution objective is sought to be achieved through progressive income taxation, in which higher the income, higher is the tax rate. Firms are taxed on a proportional basis, where the tax rate is a particular proportion of profits.

- With respect to excise taxes, necessities of life are exempted or taxed at low rates, comforts and semi-luxuries are moderately taxed, and luxuries, tobacco and petroleum products are taxed heavily.
- Non-tax revenue of the central government mainly consists of interest receipts on account of loans by the central government, dividends and profits on investments made by the government, fees and other receipts for services rendered by the government.
- Cash grants-in-aid from foreign countries and international organisations are also included. The estimates of revenue receipts take into account the effects of tax proposals made in the Finance Bill.

Capital Receipts: -

- The government also receives money by way of loans or from the sale of its assets. Loans will have to be returned to the agencies from which they have been borrowed. Thus, they create liability.
- Sale of government assets, like sale of shares in Public Sector Undertakings (PSUs) which is referred to as PSU disinvestment, reduce the total amount of financial assets of the government. All those receipts of the government which create liability or reduce financial assets are termed as capital receipts.
- When government takes fresh loans, it will mean that in future these loans will have to be returned and interest will have to be paid on these loans.
- Similarly, when government sells an asset, then it means that in future its earnings from that asset, will disappear. Thus, these receipts can be debt creating or non-debt creating.

Classification of Expenditure:

Revenue Expenditure: -

- Revenue Expenditure is expenditure incurred for purposes other than the creation of physical or financial assets of the central government.
- It relates to those expenses incurred for the normal functioning of the government departments and various services, interest payments on debt incurred by the government, and grants given to state governments and other parties.
- Budget documents classify total expenditure into plan and non-plan expenditure.
- According to this classification, plan revenue expenditure relates to central Plans (the Five-Year Plans) and central assistance for State and Union Territory plans. Non-plan expenditure, the more important component of revenue expenditure, covers a vast range of general, economic and social services of the government.
- The main items of non-plan expenditure are interest payments, defence services, subsidies, salaries and pensions. Interest payments on market loans, external loans and from various reserve funds constitute the single largest component of non-plan revenue expenditure.
- Defence expenditure, is committed expenditure in the sense that given the national security concerns, there exists little scope for drastic reduction. Subsidies are an important policy instrument which aim at increasing welfare.
- Apart from providing implicit subsidies through under-pricing of public goods and services like education and health, the government also extends subsidies explicitly on items such as exports, interest on loans, food and fertilisers.

Capital Expenditure: -

- There are expenditures of the government which result in creation of physical or financial assets or reduction in financial liabilities.
- This includes expenditure on the acquisition of land, building, machinery, equipment, investment in shares, and loans and advances by the central government to state and union territory governments, PSUs and other parties.

- Capital expenditure is also categorised as plan and non-plan in the budget documents. Plan capital expenditure, like its revenue counterpart, relates to central plan and central assistance for state and union territory plans.
- Non-plan capital expenditure covers various general, social and economic services provided by the government.
- The budget is not merely a statement of receipts and expenditures. Since Independence, with the launching of the Five-Year Plans, it has also become a significant national policy statement.
- The budget, it has been argued, reflects and shapes, and is, in turn, shaped by the country's economic life. Along with the budget, three policy statements are mandated by the Fiscal Responsibility and Budget Management Act, 2003 (FRBMA).
- The Medium-term Fiscal Policy Statement sets a three-year rolling target for specific fiscal indicators and examines whether revenue expenditure can be financed through revenue receipts on a sustainable basis and how productively capital receipts including market borrowings are being utilised.
- The Fiscal Policy Strategy Statement sets the priorities of the government in the fiscal area, examining current policies and justifying any deviation in important fiscal measures.
- The Macroeconomic Framework Statement assesses the prospects of the economy with respect to the GDP growth rate, fiscal balance of the central government and external balance.

Balanced, Surplus and Deficit Budget:

- The government may spend an amount equal to the revenue it collects. This is known as a balanced budget. If it needs to incur higher expenditure, it will have to raise the amount through taxes in order to keep the budget balanced.
- When tax collection exceeds the required expenditure, the budget is said to be in surplus. However, the most common feature is the situation when expenditure exceeds revenue. This is when the government runs a budget deficit.

Measures of Government Deficit:

- When a government spends more than it collects by way of revenue, it incurs a budget deficit. There are various measures that capture government deficit and they have their own implications for the economy.
  - **Revenue Deficit :** The revenue deficit refers to the excess of government's revenue expenditure over revenue receipts.
  - **Revenue deficit** = Revenue expenditure – Revenue receipts
  - **Fiscal Deficit :** Fiscal deficit is the difference between the government's total expenditure and its total receipts excluding borrowing
  - Gross fiscal deficit = Total expenditure – (Revenue receipts + Non-debt creating capital receipts)
  - **Primary Deficit :** We must note that the borrowing requirement of the government includes interest obligations on accumulated debt.
  - The goal of measuring primary deficit is to focus on present fiscal imbalances.
  - To obtain an estimate of borrowing on account of current expenditures exceeding revenues, we need to calculate what has been called the primary deficit. It is simply the fiscal deficit minus the interest payments
  - Gross primary deficit = Gross fiscal deficit – Net interest liabilities

4 OPEN ECONOMY MACROECONOMICS

- An open economy is one which interacts with other countries through various channels. So far, we had not considered this aspect and just limited to a closed economy in which there are no linkages with the rest of the world in order to simplify our analysis and explain the basic macroeconomic mechanisms. In reality, most modern economies are open. There are three ways in which these linkages are established.
  1. **Output Market:** An economy can trade in goods and services with other countries. This widens choice in the sense that consumers and producers can choose between domestic and foreign goods.
  2. **Financial Market:** Most often an economy can buy financial assets from other countries. This gives investors the opportunity to choose between domestic and foreign assets.
  3. **Labour Market:** Firms can choose where to locate production and workers to choose where to work. There are various immigration laws which restrict the movement of labour between countries.
     - Foreign trade, therefore, influences Indian aggregate demand in two ways. First, when Indians buy foreign goods, this spending escapes as a leakage from the circular flow of income decreasing aggregate demand. Second, our exports to foreigners enter as an injection into the circular flow, increasing aggregate demand for goods produced within the domestic economy.
     - When goods move across national borders, money must be used for the transactions. At the international level there is no single currency that is issued by a single bank. Foreign economic agents will accept a national currency only if they are convinced that the amount of goods, they can buy with a certain amount of that currency will not change frequently.
     - In other words, the currency will maintain a stable purchasing power. Without this confidence, a currency will not be used as an international medium of exchange and unit of account since there is no international authority with the power to force the use of a particular currency in international transactions.
     - The international monetary system has been set up to handle the issues and ensure stability in international transactions.
     - With the increase in the volume of transactions, gold ceased to be the asset into which national currencies could be converted.
     - Although some national currencies have international acceptability, what is important in transactions between two countries is the currency in which the trade occurs. For instance, if an Indian want to buy a good made in America, she would need dollars to complete the transaction.
     - If the price of the good is ten dollars, she would need to know how much it would cost her in Indian rupees. That is, she will need to know the price of dollar in terms of rupees. The price of one currency in terms of another currency is known as the foreign exchange rate or simply the exchange rate.

The Balance of Payments:

- The balance of payments (BoP) record the transactions in goods, services and assets between residents of a country with the rest of the world for a specified time period typically a year.
- There are two main accounts in the BoP — the current account and the capital account.

Current Account: -

- Current Account is the record of trade in goods and services and transfer payments.
- Trade in goods includes exports and imports of goods. Trade in services includes factor income and non-factor income transactions.
- Transfer payments are the receipts which the residents of a country get for 'free', without having to provide any goods or services in return.
- They consist of gifts, remittances and grants. They could be given by the government or by private citizens living abroad.
- Buying foreign goods is expenditure from our country and it becomes the income of that foreign country. Hence, the purchase of foreign goods or imports decreases the domestic demand for goods and services in our country.
- Similarly, selling of foreign goods or exports brings income to our country and adds to the aggregate domestic demand for goods and services in our country.

Balance on Current Account: -

- Current Account is in balance when receipts on current account are equal to the payments on the current account.
- A surplus current account means that the nation is a lender to other countries and a deficit current account means that the nation is a borrower from other countries.
- Balance on Current Account has two components:
    1. Balance of Trade or Trade Balance
    2. Balance on Invisibles
- Balance of Trade (BOT) is the difference between the value of exports and value of imports of goods of a country in a given period of time. Export of goods is entered as a credit item in BOT, whereas import of goods is entered as a debit item in BOT. It is also known as **Trade Balance**.
- BOT is said to be in balance when exports of goods are equal to the imports of goods. Surplus BOT or Trade surplus will arise if country exports more goods than what it imports.
- Whereas, Deficit BOT or Trade deficit will arise if a country imports more goods than what it exports. Net Invisibles is the difference between the value of exports and value of imports of invisibles of a country in a given period of time.

Capital Account: -

- Capital Account records all international transactions of assets. An asset is any one of the forms in which wealth can be held, for example: money, stocks, bonds, Government debt, etc.
- Purchase of assets is a debit item on the capital account. If an Indian buy a UK Car Company, it enters capital account transactions as a debit item (as foreign exchange is flowing out of India).
- On the other hand, sale of assets like sale of share of an Indian company to a Chinese customer is a credit item on the capital account. These items are Foreign Direct Investments (FDIs), Foreign Institutional Investments (FIIs), external borrowings and assistance.

Balance on Capital Account: -

- Capital account is in balance when capital inflows (like receipt of loans from abroad, sale of assets or shares in foreign companies) are equal to capital outflows (like repayment of loans, purchase of assets or shares in foreign countries).

- Surplus in capital account arises when capital inflows are greater than capital outflows, whereas deficit in capital account arises when capital inflows are lesser than capital outflows.

Balance of Payments Surplus and Deficit:

- The essence of international payments is that just like an individual who spends more than her income must finance the difference by selling assets or by borrowing, a country that has a deficit in its current account must finance it by selling assets or by borrowing abroad. Thus, any current account deficit must be financed by a capital account surplus, that is, a net capital inflow.

Current account + Capital account = 0

- In this case, in which a country is said to be in balance of payments equilibrium, the current account deficit is financed entirely by international lending without any reserve movements.
- Alternatively, the country could use its reserves of foreign exchange in order to balance any deficit in its balance of payments. The reserve bank sells foreign exchange when there is a deficit. This is called official reserve sale.
- The decrease (increase) in official reserves is called the overall balance of payments deficit (surplus). The basic premise is that the monetary authorities are the ultimate financiers of any deficit in the balance of payments (or the recipients of any surplus).

The Foreign Exchange Market:

Demand for Foreign Exchange: -

- People demand foreign exchange because: they want to purchase goods and services from other countries; they want to send gifts abroad; and, they want to purchase financial assets of a certain country.
- A rise in price of foreign exchange will increase the cost (in terms of rupees) of purchasing a foreign good. This reduces demand for imports and hence demand for foreign exchange also decreases, other things remaining constant.

Supply of Foreign Exchange: -

- Foreign currency flows into the home country due to the following reasons: exports by a country lead to the purchase of its domestic goods and services by the foreigners; foreigners send gifts or make transfers; and, the assets of a home country are bought by the foreigners.
- A rise in price of foreign exchange will reduce the foreigner's cost (in terms of USD) while purchasing products from India, other things remaining constant. This increases India's exports and hence supply for foreign exchange may increase (whether it actually increases depends on a number of factors, particularly elasticity of demand for exports and imports.

Determination of the Exchange Rate: -

- Different countries have different methods of determining their currency's exchange rate. It can be determined through Flexible Exchange Rate, Fixed Exchange Rate or Managed Floating Exchange Rate.

Flexible Exchange Rate: -

- This exchange rate is determined by the market forces of demand and supply. It is also known as Floating Exchange Rate.
- Currency **depreciation** is the loss of value of a country's currency with respect to one or more foreign reference currencies, typically in a floating exchange rate system.

- It is most often used for the unofficial increase of the exchange rate due to market forces, though sometimes it appears interchangeably with devaluation. Its opposite, an increase of value of a currency, is currency appreciation.
- The depreciation of a country's currency refers to a decrease in the value of that country's currency.
- For instance, if the Indian rupee depreciates relative to the dollar, the exchange rate (the Indian rupee price of euros) rises: it takes more Indian rupee to purchase 1 dollar.
- **The appreciation** of a country's currency refers to an increase in the value of that country's currency. If the Indian rupee appreciates relative to the dollar, the exchange rate falls: it takes fewer Indian rupees to purchase 1 dollar. When the Indian rupee appreciates relative to the dollar, the Indian rupee becomes less competitive. This will lead to larger imports of American goods and services, and lower exports of Indian goods and services.

Speculation: -

- Money in any country is an asset. If Indians believe that British pound is going to increase in value relative to the rupee, they will want to hold pounds.
- Thus, exchange rates also get affected when people hold foreign exchange on the expectation that they can make gains from the appreciation of the currency.

Interest Rates and the Exchange Rate: -

- In the short run, another factor that is important in determining exchange rate movements is the interest rate differential i.e. the difference between interest rates between countries. There are huge funds owned by banks, multinational corporations and wealthy individuals which move around the world in search of the highest interest rates.

Income and the Exchange Rate: -

- When income increases, consumer spending increases. Spending on imported goods is also likely to increase.
- When imports increase, the demand curve for foreign exchange shifts to the right. There is a depreciation of the domestic currency. If there is an increase in income abroad as well, domestic exports will rise and the supply curve of foreign exchange shifts outward. On balance, the domestic currency may or may not depreciate. What happens will depend on whether exports are growing faster than imports.
- In general, other things remaining equal, a country whose aggregate demand grows faster than the rest of the world's normally finds its currency depreciating because its imports grow faster than its exports. Its demand curve for foreign currency shifts faster than its supply curve.

Exchange Rates in the Long Run: -

- The purchasing Power (PPP) theory is used to make long-run predictions about exchange rates in a flexible exchange rate system.
- According to the theory, as long as there are no barriers to trade like tariffs (taxes on trade) and quotas (quantitative limits on imports), exchange rates should eventually adjust so that the same product costs the same whether measured in rupees in India, or dollars in the US, yen in Japan and so on, except for differences in transportation.
- Over the long run, therefore, exchange rates between any two national currencies adjust to reflect differences in the price levels in the two countries.

Merits and Demerits of Flexible and Fixed Exchange Rate Systems:

- The main feature of the fixed exchange rate system is that there must be credibility that the government will be able to maintain the exchange rate at the level specified.
- Often, if there is a deficit in the BoP, in a fixed exchange rate system, governments will have to intervene to take care of the gap by use of its official reserves. If people know that the amount of reserves is inadequate, they would begin to doubt the ability of the government to maintain the fixed rate. This may give rise to speculation of devaluation.
- When this belief translates into aggressive buying of one currency thereby forcing the government to devalue, it is said to constitute a speculative attack on a currency. Fixed exchange rates are prone to these kinds of attacks, as has been witnessed in the period before the collapse of the Bretton Woods System.
- The flexible exchange rate system gives the government more flexibility and they do not need to maintain large stocks of foreign exchange reserves.
- The major advantage of flexible exchange rates is that movements in the exchange rate automatically take care of the surpluses and deficits in the BoP.
- Also, countries gain independence in conducting their monetary policies, since they do not have to intervene to maintain exchange rate which are automatically taken care of by the market.

Managed Floating: -

- Without any formal international agreement, the world has moved on to what can be best described as a managed floating exchange rate system.
- It is a mixture of a flexible exchange rate system (the float part) and a fixed rate system (the managed part).
- Under this system, also called dirty floating, central banks intervene to buy and sell foreign currencies in an attempt to moderate exchange rate movements whenever they feel that such actions are appropriate. Official reserve transactions are, therefore, not equal to zero.