1. Introduction to Macroeconomics.

❖ Macroeconomics:

- Economy as a whole
- Macroeconomics tries to address situations facing the economy as a whole
- If we observe the economy of a country as a whole it will appear that the output levels of all the goods and services in the economy have a tendency to move together.
- For example, if output of food grain is experiencing a growth, it is generally accompanied by a rise in the output level of industrial goods.
- Macroeconomics, as a separate branch of economics, emerged after the British economist John Maynard Keynes published his celebrated book The General Theory of Employment, Interest and Money in 1936

➢ Economic Agents

- By economic units or economic agents, we mean those individuals or institutions which take economic decisions.
- They can be consumers who decide what and how much to consume. They may be producers of goods and services who decide what and how much to produce. They may be entities like the government, corporation, banks which also take different economic decisions like how much to spend, what interest rate to charge on the credits, how much to tax, etc.

Adam Smith –

He is regarded as the founding father of modern economics (it was known as political economy at that time) his well known work "An Enquiry into the Nature and Cause of the Wealth of Nations" (1776) is regarded as the first major comprehensive book on the subject

❖ Major players in the domestic economy.

1. Private players/ Capitalist
2. State
3. Household sector.
4. External world.

1. Private players/ Capitalist

- In a capitalist country production activities are mainly carried out by capitalist enterprises.
- A typical capitalist enterprise has one or several entrepreneurs (people who exercise control over major decisions and bear a large part of the risk associated with the firm/enterprise).
- To carry out production they also need natural resources – a part consumed in the process of production (e.g. raw materials) and a part fixed (e.g plots of land). And human labour to carry out production.
- After producing output with the help of these three factors of production, namely capital, land and labour, the entrepreneur sells the product in the market. The money that is earned is called **revenue**.
- Part of the revenue is paid out as **rent** for the service rendered by land, part of it is paid to capital as **interest** and part of it goes to labour as **wages**. The rest of the revenue is the earning of the entrepreneurs and it is called **profit**.
  (land- rent, labour- wages, Capital- interest, Entrepreneurs - profit.)

- Profits are often used by the producers in the next period to buy new machinery or to build new factories, so that production can be expanded. These expenses which raise productive capacity are examples of **investment expenditure**.

2. The institution of State.

- The role of the state includes framing laws, enforcing them and delivering justice.
- The state, in many instances, undertakes production – apart from imposing taxes and spending money on building public infrastructure, running schools, colleges, providing health services etc.

3. Household sector.

- Household sector engaged in the consumption of goods and services.
- By a household we mean a single individual, or a group of individuals for whom decisions relating to consumption are jointly determined. Households also save and pay taxes.

4. External sector

- It is the fourth important sector.
- Trade with the external sector can be of two kinds

1. The domestic country may sell goods to the rest of the world. These are called exports.
2. The economy may also buy goods from the rest of the world. These are called imports.

2. Introduction to Macroeconomics.

❖ Types of Goods.

➢ Final Goods –

Final goods are those, which require no further processing and are available in an economy for consumption purpose or investment.
Ex. Biscuit, Table

➢ Intermediate Goods

Intermediate goods are the ones, which require further processing and are not available in an economy for the purpose of consumption.
Ex. Flour, wood piles

➢ Consumption 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.
Ex. Toothpaste, shoes, bedsheets, clothes etc.

➢ Capital Goods

- Capital goods are defined as all goods that help to produce other goods and services.
  Ex. machinery, equipment, roads and bridges.
  All the durable goods like cars, trucks, refrigerators, buildings, aircrafts, air-fields and submarines used to produce goods or services.
- 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.
- These goods require repair or replacement over time as their value depreciate over a period of time.

❖ Concepts of stocks and flows

➢ Stock

a) The material or Capital goods available in any firm/ economy/ nation at any point of time.
b) Any economic variable which is calculated at a particular point of time is known as stock.
c) It is static in nature, i.e., it does not change.
d) For example, the number of machineries available, number of goods available etc.

➢ Flow

a) Any economic variable which is calculated during a period of time is known as flow. The amount of inflow and outgoing.
b) It is dynamic in nature, i.e., it can be changed.
c) For example, earnings, revenue, investment, Spending of Money, Exports, Imports, etc.

Inventory - the stock of unsold finished goods, or semi-finished goods, or raw materials which a firm carries from one year to the next.

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:

(a) Real/Product/Physical Flow- flow of actual goods.
(b) Money/Monetary/Nominal Flow- flow of money.

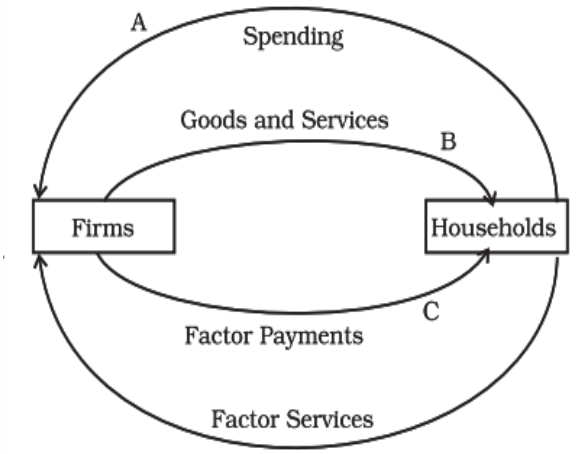

Fig. 2.1: Circular Flow of Income in a Simple Economy

Factor Income

(a) Income earned by factor of production by rendering their productive services in the production process is known as Factor Income.
(b) It is included in National Income as it contribute something in the flow of goods and services.
Examples: Rent, interest, wages and profit.
(land- rent, labour- wages, Capital- interest, Entrepreneurs - profit.)

There are fundamentally four kinds of contributions made during the production of goods and services

(a) contribution made by human labour, remuneration for which is called **wage**
(b) contribution made by capital, remuneration for which is called **interest**
(c) contribution made by entrepreneurship, remuneration of which is **profit**
(d) contribution made by fixed natural resources (called 'land'), remuneration for which is called **rent**.

Transfer Income

(a) Income received without rendering any productive services is known as transfer income.
(b) 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, remittances etc.

❖ METHODS OF CALCULATING NATIONAL INCOME.

1. The Product or Value Added Method

In product method we calculate the aggregate annual value of goods and services produced in a year.

Value added- the net contribution made by a firm is called its value added.
(Ex. Firm bought wood of 1 crore rs. and produced chairs worth 1.5 crore rs. 50 lakh rs. is value added).

Gross value added of firm, GVAi ≡ Gross value of the output produced by the firm – Value of intermediate goods used by the firm

If we deduct the value of depreciation from gross value added we obtain Net Value Added.

GDP ≡ Sum total of the gross value added of all the firms in the economy

2. Expenditure Method

An alternative way to calculate the GDP is by looking at the demand side of the products. This method is referred to as the expenditure method
GDP is Sum total of final consumption, investment, government and exports expenditures received by all the firms in the economy

GDP =C + I + G + X – M

C - final consumption
I - investment
G - government expenditure
X - M = net Exports expenditures.

3. Income Method

GDP by income method = sum total of factor incomes, which is wages, profits, interest earnings and rents

GDP= W + P + In + R

W- wages
P- profits
In- interests
R- rent.

❖ Potential GDP

- The highest market value of goods and services that can be produced in an economy over a period of time is known as potential GDP.
- Potential GDP is one of the theoretical aspects of national income accounting which assumes that an economy has achieved full employment (means everybody is working) and that aggregate demand does not exceed aggregate supply (all demands are getting fulfilled). it is at a constant rate of inflation.

➢ Determinants of potential GDP

Inflation
The inflation rate in the country in a year influences the GDP growth. Higher inflation can boost the potential GDP rate.

Recession
Recession is the slowdown in growth rate for two consecutive quarters. Recession can significantly reduce the GDP.

Factory output
The output of finished goods from factories increases its contribution to GDP. Continuous growth will be suitable for high GDP.

Capital availability. :
In an economy, capital stock is the plant, equipment, and other assets that help with production.

- Labour Force: At any given moment in time, the quantities of capital, land, etc, are typically fixed, but the quantity of labour employed varies, therefore, in the short-run, Potential GDP depends on the quantity of labour employed, which depends on demographic factors and participation rates
- Non-accelerating Inflation Rate of Unemployment: It is the specific unemployment rate at which the rate of inflation stabilises – inflation will neither increase nor decrease, it is also one of the determinants of Potential GDP
- Other determinants of Potential GDP are the level of labour efficiency, labour market efficiency, production capacity, sufficient liquidity, government fiscal support, etc

➢ Factors Inhibiting India From Realising Its Potential GDP:

Low productivity

- Low productivity indicates that resources are not maximizing their skills and competencies, resulting in higher resourcing costs for the company.
- High employment should result in potential GDP to be high but it will not be achieved due to low productivity of workers.

Decrease in Investment

- It doesn't allow projects to take off.

Lack of Infrastructure

The infrastructure growth in domestic economy may not be in predicted lines. This will hamper the final contribution to GDP output.

Fall In Private Consumption

- Private consumption is the prime component of India's GDP as it contributes a significant share of GDP (More than 55%).
- a decline in private consumption de-incentivises firms in producing more goods, thereby the economy is left with unutilised resources and labour force.

Mounting NPAs of Banks :

- NPAs (Non-Performing Assets), has tremendously reduced banks' lending capacity. This has severely affected businesses, production houses and, particularly the real estate segment.
- Such liquidity shortages reduce the productive capacity of the economy.

Unemployment

- It does not allow all workforce to participate in economy.

Informal Economic Activities

Most of the economic activities in India are informal or unorganised and the size of such unorganised sectors is considerably huge but not accounted for in GDP.

Other Factors : Weak intellectual property rights, low expenditure on R&D, contract enforcement issues, the global financial crisis, the decline in total factor productivity contribution, capital stock growth declaration, financial sector mess and constraints, reduction in disposable income levels, depletion of consumption and fixed investment, and other factors are preventing India from realizing its potential GDP.

India could boost potential output by increasing capital formation and redistributing excess capital from over-capitalized to under-capitalized entities.

❖ The output gap

The difference between the actual output of an economy and its potential output.

➢ Positive output gap-

- when demand >> supply.
- A positive output gap increases both the labour as well as the good's prices due to an increase in demand. Hence, it spurs inflation in the economy.

➢ Negative Output Gap:

- Demand<<Supply.
- When an actual output decreases than what an economy could produce at full capacity, it is a negative output gap. In the economy when there is weak demand, it is known as a negative output gap.

Production taxes and subsidies

They are paid or received in relation to production and are independent of the volume of production
Ex. 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.

Domestic and National

- National- production by citizens of nation (in India, abroad anywhere.)
- Domestic- production within territory of nation (by citizen, non- citizens anyone).
- National income = domestic income + NFIA
- net factor income from abroad = Income
- NFIA = Income earned by Indians from rest of the world – Income earned by foreigners in India.

Gross and Net.

- Gross = without excluding depreciation
- Net = Gross - depreciation of capital assets.

➢ Factor Cost, Basic Price, Market price.

1. Factor Cost (FC):
It refers to amount paid to factors of production for their contribution in the production process.

Basic price : Basic price is the amount receivable by the producer from the purchaser for a unit of a good or service produced as output minus any tax payable, plus any subsidy receivable, on that unit as a consequence of its production or sale.

Basic price = Factor cost + Net Production taxes (taxes – subsidy)

2. Market Price (MP):

- It refers to the price at which product is actually sold in the market.
- It also includes the taxes imposed by the government and the subsidies provided by the government for the producers.

Market price = Basic price + Net Product taxes (taxes – subsidy)

Market Price = Factor cost + Net indirect taxes (taxes - subsidies.)

Here indirect tax includes both production and product taxes.

So,
MP = FC + NIT (Taxes – Subsidies)
FC = MP – NIT (Taxes – Subsidies)

Current and constant price.

Current Prices- prices of current year.
Constant prices- prices of base year .

	Gross Domestic	Net Domestic (Gross-depreciation)	National (National = Domestic +NFIA) Gross	National Net
Factor Cost	GDP fc	NDP fc	GNP fc	NNP fc (**The national income**)
Basic Prices = (FC + net production taxes (taxes - subsidies))				
Market Prices = basic price + net product taxes. = FC + net production taxes + net product taxes. = Factors cost + net indirect taxes (taxes- subsidies)	GDP mp = GVA mp	NDP mp	GNP market price	NNP market price
Current prices (present year)	GDP current price	NDP current price	GNP current prices	NNP current price
Constant prices (base year prices. **Ex.** 2011-12)	GDP constant price	NDP constant price	GNP constant prices	NNP constant price

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.

❖ GVA : gross value added

- It is the measure of value of goods and services produced in any economy.
- It's output minus intermediate consumption (the raw materials consumed).
- It represents the price at producer side.
- Does not include impact of taxes subsidies.
- It it used for sector wise analysis example : automobile GVA , agriculture GVA.
- It provides better picture of economy
- A true picture of value addition done to the particular raw material.
- GVA is a means to calculate GDP.

The CSO releases GVA at basic prices.
GVA at basic prices = GVA at factor costs + Net production taxes
GVA at market prices = GVA at basic prices + Net product taxes
GVA mp = GDP mp

Operating surplus - after paying wages the remainder of value added by a firm will be distributed between rent, interest and profits (together called operating surplus).

❖ Personal Income (PI).

- Out of NI National Income, which is earned by the firms and government enterprises, a part of profit is not distributed among the factors of production. This is called Undistributed Profits (UP).
- Corporate Tax, which is imposed on the earnings made by the firms, will also have to be deducted from the NI, since it does not go to the households.
- And households may have to pay interests in case they had borrowed money which has to be deducted.
- The households receive transfer payments from government and firms (pensions, scholarship, prizes, for example) which have to be added to calculate the Personal Income of the households.
- Personal Income (PI) ≡ NI – Undistributed profits – Net interest payments made by households – Corporate tax + Transfer payments to the households from the government and firms.

➢ Personal Disposable Income

- It is the part of the personal income which belongs to the households. They may decide to consume a part of it, and save the rest. It is after paying taxes and other payments (ex. Loan installment).
- Personal Disposable Income (PDI) ≡ PI – Personal tax payments – Non-tax payments.

➢ National Disposable Income

- Net National Product at market prices + Other current transfers from the rest of the world
- Current transfers from the rest of the world include items such as gifts, aids, etc. (ex. Gift of food grains).

Real GDP - GDP at some constant set of prices (or constant prices)

Nominal GDP - GDP at the current prevailing prices

GDP Deflator : the ratio of nominal GDP to real GDP, multiplied by 100.

Green GNP : Green GNP refers to GNP adjusted for loss of value due to,
(a) Environmental degradation; and
(b) Depletion of natural resources on account of overall production activity in the economy.

Activities excluded from GDPMP:

(a) Purely financial transactions : It may be of three types:
(i) Buying and selling of securities
(ii) Government Transfer payments. Ex. Pension
(iii) Private Transfer Payments. Ex. pocket money to children

(b) Transfer of used goods: ex. Second hand items, used cars.
(c) Non-market goods and services: Home cleaning, cooking, gardening.
(d) Illegal Activities: Activities like gambling, black-marketing etc.,
(e) Leisure Time Activities: Activities like painting, growing of flowers in kitchen garden, etc.

Limitations of using GDP as an index of welfare of a country:

(a) Many goods and services contributing economic welfare are not included in GDP
ex. Non Monetary exchanges
(b) Externality:
(i) 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, it is called externalities.
(ii) 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.
(iii) 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.
- It means that welfare is much more than it is indicated by GDP.

(iv) 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.
- In this case, welfare is much less than indicated by GDP.

(c) Change in the distribution of income
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.

➢ Mixed Income:

- Income of self employed people (like farmers, doctors, barbers, etc.) and unorganised enterprises (like small shopkeepers, repair shops) is known as mixed income.
- It is difficult to classify their income distinctly among rent, wages, interest and profit.