


MACRO-ECONOMIC ANALYSIS



READING MATERIAL SEMESTER-II



**DEPARTMENT OF ECONOMICS
GOVERNMENT COLLEGE (A)
RAJAHMUNDRY**

	Government College (Autonomous) Rajahmundry	Program & Semester I B.A/B.Sc. (II Sem)			
Course Code ECO136	TITLE OF THE COURSE MACRO ECONOMIC ANALYSIS				
Teaching	Hours Allocated: 60 (Theory)	L	T	P	C
Pre-requisites:		5	1	-	4

Course Objectives:

- To understand the causes and effects of inflation and unemployment
- B describe the macro economy using aggregates demand and aggregate supply
- Using employment and national income statistics students will be able to describe and analyse economy in quantitative items.

Course Outcomes:

On Completion of the course, the students will be able to-	
CO1	Difference between Micro and Macro Economics, importance of macro Economics and Macro Economic variables Define and explain the process of calculating national income, identify its components, demonstrate circular flow of income, analyse the various identities with government and international trade
CO2	Demonstrate the meaning and functions of money, illustrate various versions of quantity theory of money Explain the meaning of consumption function, relationship between APC and MPC, consumption and income, concept of multiplier and accelerator, MEC and rate of interest
CO3	Illustrate the meaning of inflation, identify different kinds of inflation, causes and effects of inflation on different sectors of the economy, describe different measures to control it.
CO4	Analyse different phases of trade cycles, demonstrate various phases of trade cycles, understand the impact of cyclical fluctuations on the growth of business, and lay policies to control trade cycles.
CO5	Identify types of banks, explain the meaning and functions of commercial banks, illustrate how bank create credit, and suggest the instruments to control it

Course with focus on employability / entrepreneurship / Skill Development modules

Skill Development		Employability		Entrepreneurship	
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Syllabus:

UNIT - 1: National Income

Macroeconomics - Definition, Scope and Importance - Difference between Micro economic and Macro economic Analyses – Circular Flow of Income -National Income: Definitions, Concepts, Measurement of National Income - Difficulties - Importance - Concept of Green Accounting.

UNIT -2: Theory of Employment

Classical Theory of Employment - Say's Law of Markets - Criticism -Keynesian Theory of Employment - Consumption Function - Keynes' Psychological Law of Consumption - Average and Marginal Propensity to Consume - Factors determining Consumption Function –Brief Review of Relative, Life Cycle and Permanent Income Hypotheses - Investment Function: Marginal Efficiency of Capital -Multiplier and Accelerator - Keynesian Theory of Employment - Applicability to Developing countries.

UNIT – 3: Money and Banking

Definitions of Money - Concepts of Money, Liquidity and Finance - Money Illusion - Gresham's Law - RBI classification of Money - Theories of Money: Fisher and Cambridge (Marshall, Pigou, Robertson and Keynes equations) - Banking - Definition and types of Banking - Commercial Banks - Functions -Recent Trends in Banking - Mergers and Acquisitions - Central Bank - Functions - Control of Credit by Central Bank – NBFCs Factors contributing to their Growth and their Role.

UNIT – 4: Inflation and Trade Cycles I

Inflation: Concepts of Inflation, deflation, reflation and stagflation - Phillip's Curve - Measurement of Inflation - CPI and WPI -Types of Inflation - Causes and Consequences of Inflation -Measures to Control Inflation. Trade Cycles: Phases of a Trade Cycle -Causes and Measures to control Trade Cycles.

UNIT -5: Finance and Insurance

Financial Assets and Financial Instruments - Financial Markets - Functions of Money Market - Functions of Capital Market - Stock Market - Exchanges – Indices: Sensex and Nifty - Concept of Insurance -Types and Importance of Insurance

Text books:

1. M.L.Seth, Macroeconomics, Lakshmi Narayan Agarwal, 2006.
2. Telugu Academy, Publications
3. Macroeconomics, Spectrum Publishing House, Hyderabad, 2016

Reference books:

1. Dillard. D., The Economics of John Maynard Keynes, Cross by Lockwood and sons, London.
2. M. C. Vaish - Macroeconomic Theory, Vikas Publishing House, New Delhi.
3. S. B Guptha - Monetary Economics, S. Chand & Co, Delhi.

Web Links:

1. <http://www2.harpercollege.edu/mhealy/eco212i/macroweb.htm>
2. <https://nptel.ac.in/courses/109/104/109104073/>



CO-PO Mapping:

(1: Slight [Low]; 2: Moderate[Medium]; 3: Substantial[High], '-' : No Correlation)

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3
CO1	3	3	3	2	2	2	2	3	3	3			
CO2	3	3	3	2	2	2	1	3	3	2			
CO3	3	3	3	1	1	2	2	3	3	3			
CO4	3	3	3	2	2	2	2	3	3	2			
CO5	3	3	3	3	3	3	3	3	2	3			

GOVERNMENT COLLEGE (AUTONOMOUS), RAJAHMAHENDRAVARAM
I– B.A/ B.Sc ECONOMICS (CBCS PATTERN)
Paper-II (Core Paper)
MACRO ECONOMIC ANALYSIS
SECOND SEMESTER END EXAMINATIONS

Time: 2 1/2 Hrs

Max. Marks: 50

Model Question Paper – 2022-2023

SECTION - A

Answer the following questions.

(3x10= 30)

1. a) Explain the concepts of National Income.

(or)

b) Critically examine the Keynes theory of employment

2. a) Explain the Marginal Efficiency of Capital.

(or)

b) Describe the main functions of Reserve Bank of India (RBI)

3 a) Define Trade cycles and explain different phases to trade cycles.

(or)

b) Explain the meaning and functions of Money market?

SECTION-B

Answer any FOUR of the following

(4x5=20)

4) Difference between micro and macro economics

5) J.B. Say's law of market.

6) Consumption function.

7) Gresham's law

8) Functions of Commercial Banks.

9) Philips curve.

10) Causes of inflation.

11) Capital market and Stock market.

GOVERNMENT COLLEGE (AUTONOMOUS), RAJAHMAHENDRAVARAM

I– B.A/ B.Sc ECONOMICS (CBCS PATTERN)

MACRO ECONOMIC ANALYSIS

SECOND SEMESTER END EXAMINATIONS

Time: 2 ½ Hrs

Max. Marks: 50

BLUE PRINT

Module	Essays (10 marks)	Short Answers (5 marks)	Total Questions
Module-I	1	1	3
Module-II	2	2	3
Module-III	1	2	3
Module-IV	1	2	3
Module-V	1	1	2
Total Marks	60	40	100

Macroeconomics - Definition, Scope and Importance

Macroeconomics is a branch of economics that deals with the study of the behavior and performance of the entire economy as a whole, rather than individual markets or industries. It examines how the aggregate economy functions, including topics such as inflation, unemployment, economic growth, national income, monetary and fiscal policy, and international trade.

Macroeconomic analysis focuses on measuring and understanding the interactions between different economic factors, such as consumer spending, business investment, government spending, and exports and imports. This field of study seeks to explain how changes in these factors affect the economy as a whole, and how policymakers can use various tools and policies to stabilize and improve economic performance.

Scope of Macroeconomics:

Macroeconomics is an essential field of study for economists. The scope of macroeconomics is immense. Government, financial bodies, and researchers analyze a nation's general national issues and economic well-being. It mainly covers the major fundamentals of macroeconomic theories and policies. The Macroeconomic theories involve economic growth and development, national income, money, international trade, employment, and general price level. In contrast, macroeconomic policies cover fiscal and monetary policies. The study of problems like unemployment in India, the general price level, or the disequilibrium in the balance of payment (BOP) is a part of the macroeconomic study.

The scope of macroeconomics covers numerous subject matters. Some of these are as follows:

- 1. Study of national income:** Macroeconomics analyzes the measurement, distribution, and determination of national income and output of an economy.

- 2. Employment and unemployment:** Macroeconomics studies the labor market, including the level of employment and unemployment, and the factors that influence them.
- 3. Inflation and deflation:** Macroeconomics examines the causes and consequences of inflation and deflation and how they affect the economy as a whole.
- 4. Economic growth and development:** Macroeconomics focuses on the long-term growth and development of an economy, including the factors that contribute to economic growth and the policies that can be used to promote it.
- 5. Monetary and fiscal policy:** Macroeconomics studies the role of monetary and fiscal policies in stabilizing the economy and achieving macroeconomic objectives such as low inflation, full employment, and stable economic growth.
- 6. International trade and finance:** Macroeconomics examines the effects of international trade and finance on the domestic economy, including the balance of payments, exchange rates, and trade policies.
- 7. Business cycles and economic fluctuations:** Macroeconomics studies the causes and consequences of business cycles and economic fluctuations, including recessions, booms, and crises.

Importance of macro Economics

Understanding the economy: Macroeconomics helps us to understand the overall performance of the economy, including factors such as inflation, unemployment, economic growth, and international trade.

- 1. Policy-making:** Macroeconomics provides insights into how economic policies, such as monetary and fiscal policies, affect the economy as a whole. Policymakers can use this knowledge to design and implement policies that promote economic growth, stability, and sustainability.

- 2. Business decision-making:** Macroeconomic indicators, such as GDP, inflation, and interest rates, can have a significant impact on the decisions of businesses. By understanding the macroeconomic environment, businesses can make better decisions about investment, production, and pricing.
- 3. International trade and finance:** Macroeconomics is important for understanding the global economy and the interactions between different economies. This knowledge is critical for policymakers, businesses, and investors who are involved in international trade and finance.
- 4. Social welfare:** Macroeconomic policies can have a significant impact on the overall well-being of society, including issues such as poverty, income inequality, and access to healthcare and education. By promoting economic growth and stability, macroeconomic policies can help to improve the standard of living for people around the world.

Difference between Micro Economics and Macro Economics

Micro Economics	Macro Economics
Focus on individual markets, firms, and consumers	Focus on the performance and behavior of the economy as a whole
Analysis of individual variables such as price, demand, supply, costs, and profits	Analysis of variables such as GDP, inflation, unemployment, and economic growth
Bottom-up approach to analyze the behavior of individual economic agents	Top-down approach to analyze the economy as a whole and the interrelationships between different variables
Implications for individual firms and consumers	Implications for government policies and the overall performance of the economy
Examples include determination of prices in a market, behavior of individual firms, and decisions of consumers	Examples include study of economic growth, inflation, and unemployment rates, and effects of government policies such as monetary and fiscal policy

Circular Flow of Income

The circular flow of income is a model that shows the flow of goods, services, and money between households, firms, and the government in an economy. The model illustrates how economic agents are interdependent and how they interact with one another.

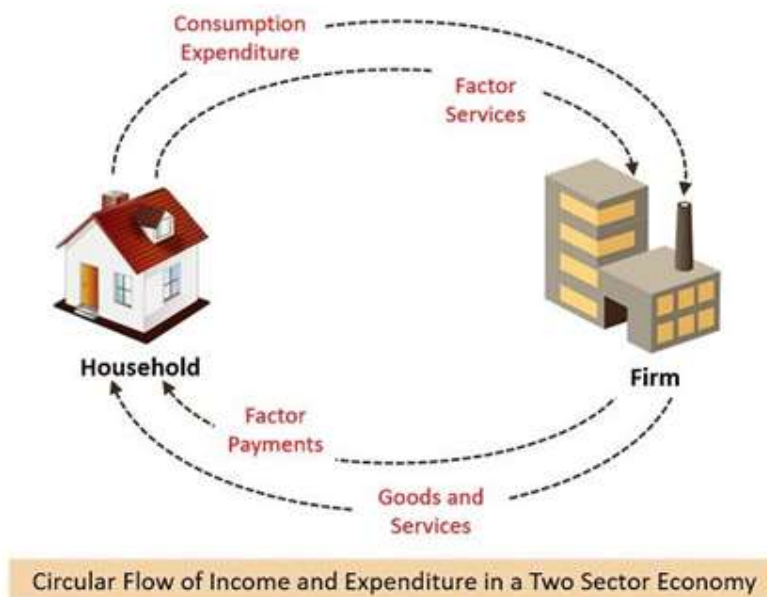
The circular flow of income can be represented in a simplified way as follows:

- ✓ **Households** provide labor and other factors of production to firms in exchange for wages, salaries, and other forms of income.
- ✓ **Firms** use these inputs to produce goods and services, which they sell to households and the government.
- ✓ **Government** collects taxes from households and firms, and uses the revenue to provide public goods and services such as roads, schools, and healthcare.
- ✓ Households and firms also engage in financial transactions, such as borrowing and lending money and investing in stocks and bonds.
- ✓ The income received by households and the revenue earned by firms are spent on goods and services produced by other firms, thereby creating a circular flow of income.

The circular flow of income model illustrates how the economy works as a whole, and how changes in one part of the economy can affect other parts. For example, if there is an increase in consumer spending, this can lead to increased demand for goods and services, which in turn can lead to increased production and employment. Similarly, changes in government policies, such as changes in tax rates or government spending, can have a ripple effect throughout the economy.

Circular Flow of Income in a Two-Sector Economy

It is defined as the flow of payments and receipts for goods, services, and factor services between the households and the firm sectors of the economy.

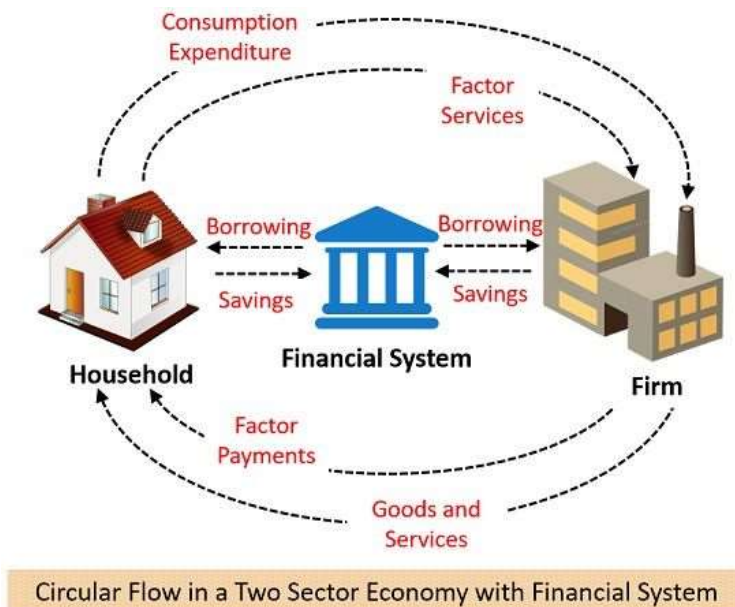


- The upper loop of the diagram shows the flow of factor services from households to firms and the corresponding flow of factor payments from firms to households.
- The bottom loop shows the flow of goods and services from firms to households and the corresponding flow of consumption expenditure from households to firms.
- The entire amount of money, which is paid by firms as factor payments, is paid back by the factor owners to the firms.

Circular Flow of Income in a 2-Sector Economy with Financial System

Firms and households often save a part of their income, which results in leakage from the circular flow of income. The amount is saved in the financial institutions like banks. Further, the firms also borrow money from the financial system for making an investment, which results in the injection of money into the circular flow.

Hence, financial institutions perform the role of intermediaries amidst savers and investors. So, without referring to the financial system, the understanding of the economic activities will not be complete. The figure given below indicates the circular flow of income in a two-sector economy, with the financial system:

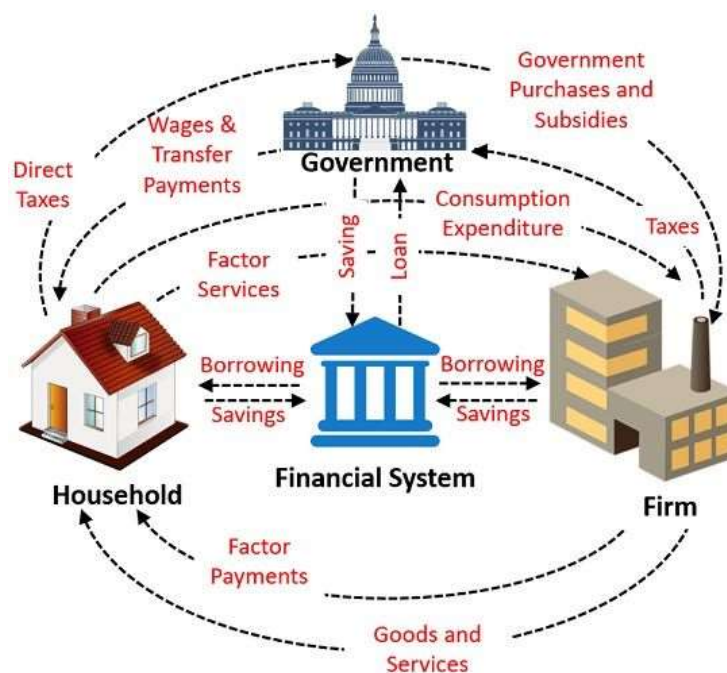


Circular Flow of Income in Three Sector Economy

In a three-sector economy, there are three major sectors: Households, Firms, and Government.

The figure depicted below highlights the circular flow of income in a three-sector economy.

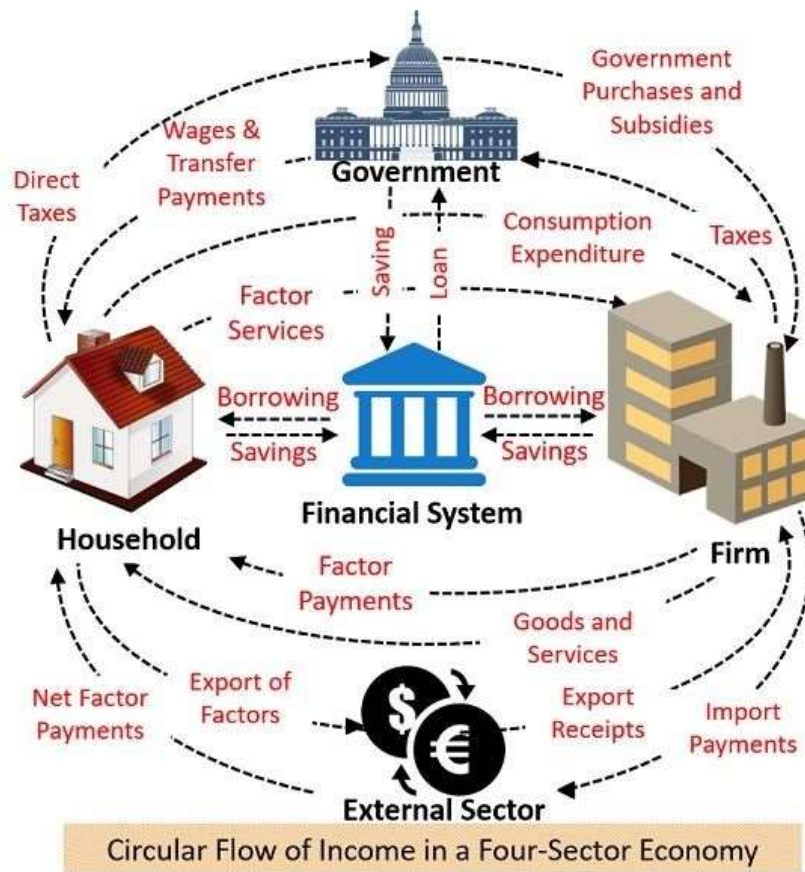
The government earns revenue in the form of taxes, from households and firms. Transfer payments are made by the Government to the household sector and provide subsidies to the business sector. Savings of the government moves to the financial market and raises loan from the financial system.



Circular Flow of Income in a Three-Sector Economy

Circular Flow of Income in Four Sector Economy

Four Sector Economy, as the name suggests is broadly classified into four major groups, i.e. households, firms, government and external sector. It represents an open economy, wherein imports and exports with the other countries of the world take place.



- The firm receives payment from the external sector for the exports, while the payment is made to the external sector for the imports.
- Factor services are provided by the household sector to the external or foreign sector, for which it receives net factor payments.

Hence, the circular flow of income focuses on the movement of money among different sectors which are operating in an economy

National Income

National Income refers to the **money value** of all the goods and services produced in a country during a financial year. In other words, the final **outcome of all the economic activities** of the nation during a period of one year, valued in terms of **money** is called as a National income. National income is an important measure of a country's economic activity and can be used to compare the economic performance of different countries over time. It is calculated by adding up all the income earned by households and firms within a country, including income from domestic production and international trade. National income can be measured in several ways, such as Gross Domestic Product (GDP), Gross National Product (GNP), and Net National Income (NNI).

National Income Concepts:

- 1. Gross Domestic Product (GDP):** GDP is the most commonly used measure of a country's economic activity. It measures the total value of all final goods and services produced within a country's borders in a given period of time, usually a year. GDP is calculated by adding up the value of all goods and services produced in each sector of the economy, including agriculture, manufacturing, construction, and services. GDP can be calculated using either the expenditure approach, which adds up consumption, investment, government spending, and net exports, or the income approach, which adds up all the income earned by households and firms within the country.
- 2. Gross National Product (GNP):** GNP measures the total value of all goods and services produced by a country's citizens and businesses, regardless of their location. This means that GNP includes income earned by citizens and businesses located both domestically and

abroad. For example, if a U.S. company operates a factory in Mexico, the income it earns from that factory would be included in U.S. GNP.

- 3. Net National Product (NNP):** NNP is a measure of a country's economic activity that takes into account the depreciation of capital goods. It is calculated by subtracting depreciation from GNP. Depreciation is the decrease in value of capital goods over time due to wear and tear, and it represents the amount of investment that must be made to maintain the existing stock of capital goods.
- 4. National Income (NI):** NI measures the total income earned by a country's citizens and businesses in a given period of time. It includes all income earned from labor and capital, including wages, salaries, profits, rents, and interest. NI is calculated by subtracting indirect taxes and depreciation from GNP.
- 5. Personal Income (PI):** PI measures the income received by households in a given period of time. It includes all income earned by households, including wages, salaries, and transfer payments such as Social Security and welfare. PI is calculated by subtracting direct taxes from NI.
- 6. Disposable Income (DI):** DI measures the income that households have available to spend or save after paying taxes. It is equal to personal income minus taxes. DI is an important measure of households' ability to consume and save, and it is often used to analyze consumer behavior and economic trends.

Measurement of National Income

1. Expenditure Method:

This method measures national income by adding up the total expenditures made by households, businesses, government, and foreign entities on goods and services produced within a country during a specific time period. This method is commonly used to calculate GDP and includes consumption, investment, government spending, and net exports. The expenditure method to measure national income can be understood by the equation given below

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

Where Y = GDP at MP,

C = Private Sector's Expenditure on final consumer goods,

G = Govt's expenditure on final consumer goods,

I = Investment or Capital Formation,

X = Exports,

I = Imports,

X-M = Net Exports

2. Value-Added method: This method measures national income by adding up the value added at each stage of production. This method is commonly used to calculate Gross Value Added (GVA) and is based on the difference between the value of goods and services produced and the cost of the inputs used in production. Estimated by adding the value added by all the firms.

$$\text{Value-added} = \text{Value of Output} - \text{Value of (non-factor) inputs}$$

3. Income Method: This method measures national income by adding up all the incomes earned by households, businesses, and the government within a country during a specific time period. This method is commonly used to calculate Gross National Income (GNI) and includes wages, salaries, profits, rents, and interest.

The Income Method of calculating national income is based on the total income earned by the factors of production in a given period, such as a year. The formula for calculating national income using the Income Method is:

$$\text{National Income (NI)} = \text{Compensation of Employees} + \text{Rent} + \text{Interest} + \text{Profits} + \text{Taxes on Production and Imports} - \text{Subsidies}$$

Where:

Compensation of Employees: This includes all wages, salaries, bonuses, and other forms of payment received by employees for their labor in a given period. It also includes employer contributions to social security, pension plans, and other employee benefits.

Rent: This includes all payments received by property owners for the use of their land, buildings, and other assets in a given period.

Interest: This includes all payments received by lenders for the use of their funds in a given period. It also includes interest earned on government bonds and other financial assets.

Profits: This includes all income earned by business owners and investors from the operation of their businesses, including corporate profits, dividends, and capital gains.

Taxes on Production and Imports: This includes all taxes levied on the production and sale of goods and services, such as sales taxes, excise taxes, and value-added taxes.

Subsidies: This includes all government payments made to businesses and individuals to support their economic activities, such as agricultural subsidies and grants for research and development.

Difficulties in national income calculation

Calculating national income accurately can be challenging due to several difficulties, including:

- 1. Non-market activities:** National income accounts only consider activities that take place in the formal market economy. However, there are many non-market activities, such as household work, that are not included in the accounts. This can result in an underestimation of the true size of the economy and its output.
- 2. Informal sector activities:** Many economic activities take place in the informal sector, such as street vending, that are not captured in official statistics. This can lead to an underestimation of the true size of the economy and its output.
- 3. Quality of data:** National income accounts rely on data collected through surveys, administrative records, and other sources. However, the quality of these data can vary, and some data may be incomplete or inaccurate, leading to errors in the calculations.
- 4. Transfer payments:** Transfer payments, such as government welfare payments, are not included in national income accounts because they do not represent income earned through production. However, these payments can have a significant impact on the well-being of individuals and households, and their exclusion can result in an incomplete picture of the distribution of income in the economy.
- 5. Dual economy:** In some countries, there may be a significant difference between the formal and informal sectors of the economy, with different levels of productivity and income. This can make it difficult to accurately estimate national income, especially if the informal sector is not well documented.
- 6. International transactions:** International trade and investment can complicate the calculation of national income, as they involve transactions between different countries. Accurately accounting for these transactions requires a thorough understanding of international trade and finance.

Green Accounting

Green accounting is a revolutionary approach to national accounting that seeks to provide a more complete view of the economy. Traditional national accounting systems have often overlooked the impact of economic activities on the environment, leading to a distorted view of economic growth and development. But green accounting is changing the game by including the economic value of natural resources and the costs of environmental damage in national accounts.

Through green accounting, policymakers can gain a clearer understanding of the true cost of economic activities, including their impact on the environment and society. This approach recognizes that natural resources, such as clean air and water, are essential components of the economy, and that their depletion can have serious consequences for future generations. By accounting for the depletion of natural resources and the costs of environmental damage, policymakers can make more informed decisions about sustainable development and environmental policy.

There are several approaches to green accounting, each with its own unique advantages. Physical flow accounts, for example, track the flow of natural resources through the economy, providing a detailed picture of resource depletion over time. Monetary accounts, on the other hand, assign monetary values to environmental resources and services, such as the value of clean water or the value of forests for carbon sequestration. Hybrid accounts, which combine physical and monetary accounts, provide an even more comprehensive view of the environmental impacts of economic activities.

By recognizing the economic value of natural resources and the costs of environmental damage, policymakers can make more informed decisions about economic growth and development. This can help to create a more equitable and sustainable future for all.

Classical Theory of Employment

Introduction:

John Maynard Keynes in his General Theory of Employment, Interest and Money published in 1936, made a frontal attack on the classical postulates. He developed a new economics which brought about a revolution in economic thought and policy.

The General Theory was written against the background of classical thought. By the “classicists” Keynes meant “the followers of Ricardo, those, that is to say, who adopted and perfected the theory of Ricardian economics.” They included, in particular, J.S. Mill, Marshall and Pigou.

Keynes repudiated traditional and orthodox economics which had been built up over a century and which dominated economic thought and policy before and during the Great Depression. Since the Keynesian Economics is based on the criticism of classical economics, it is necessary to know the latter as embodied in the theory of employment.

The Classical theory of Employment.

The classical economists believed in the existence of full employment in the economy. To them, full employment was a normal situation and any deviation from this regarded as something abnormal. According to Pigou, the tendency of the economic system is to automatically provide full employment in the labour market when the demand and supply of labour are equal.

Unemployment results from the rigidity in the wage structure and interference in the working of free market system in the form of trade union legislation, minimum wage legislation etc. Full employment exists “when everybody who at the running rate of wages wishes to be employed.”

Those who are not prepared to work at the existing wage rate are not unemployed because they are voluntarily unemployed. Thus full employment is a situation where there is no possibility of involuntary unemployment in the sense that people are prepared to work at the current wage rate but they do not find work.

The basis of the classical theory is Say's Law of Markets which was carried forward by classical economists like Marshall and Pigou. They explained the determination of output and employment divided into individual markets for labour, goods and money. Each market involves a built-in equilibrium mechanism to ensure full employment in the economy.

Assumptions

The classical theory of output and employment is based on the following assumptions:

- There is the existence of full employment without inflation.
- There is a laissez-faire capitalist economy without government interference.
- It is a closed economy without foreign trade.
- There is perfect competition in labour and product markets.
- Labour is homogeneous.
- Total output of the economy is divided between consumption and investment expenditures.
- The quantity of money is given and money is only the medium of exchange.
- Wages and prices are perfectly flexible.
- There is perfect information on the part of all market participants.
- Money wages and real wages are directly related and proportional.
- Savings are automatically invested and equality between the two is brought about by the rate of interest
- Capital stock and technical knowledge are given.
- The law of diminishing returns operates in production.
- It assumes long run.

Explanations of the theory

The determination of output and employment in the classical theory occurs in labour, goods and money markets in the economy.

Say's Law of Markets:

Say's law of markets is the core of the classical theory of employment. An early 19th century French Economist, J.B. Say, enunciated the proposition that "supply creates its

own demand.” Therefore, there cannot be general overproduction and the problem of unemployment in the economy.

If there is general overproduction in the economy, then some labourers may be asked to leave their jobs. The problem of unemployment arises in the economy in the short run. In the long run, the economy will automatically tend toward full employment when the demand and supply of goods become equal.

When a producer produces goods and pays wages to workers, the workers, in turn, buy those goods in the market. Thus, the very act of supplying (producing) goods implies a demand for them. It is in this way that supply creates its own demand.

Determination of Output and Employment:

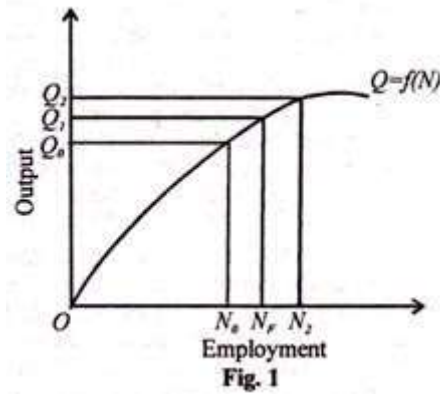
In the classical theory, output and employment are determined by the production function and the demand for labour and the supply of labour in the economy. Given the capital stock, technical knowledge and other factors, a precise relation exists between total output and amount of employment, i.e., number of workers. This is shown in the form of the following production function: $Q=f(K, T, N)$

where total output (Q) is a function (f) of capital stock (K), technical knowledge (T), and the number of workers (N)

Given K and T, the production function becomes $Q = f(N)$ which shows that output is a function of the number of workers. Output is an increasing function of the number of workers, output increases as the employment of labour rises. But after a point when more workers are employed, diminishing marginal returns to labour start.

This is shown in Fig. 1 where the curve $Q = f(N)$ is the production function and the total output OQ_1 corresponds to the full employment level N_F . But when more workers N_fN_2 are

employed beyond the full employment level of output OQ_1 , the increase in output Q_1Q_2 is less than the increase in employment N_1N_2 .

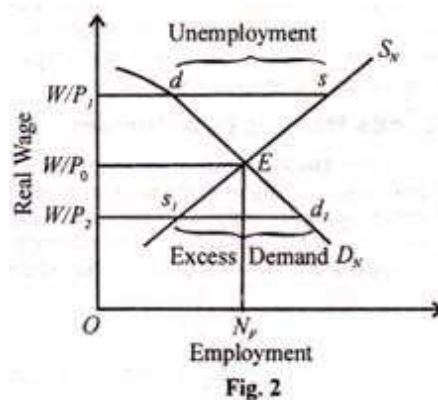


Labour Market Equilibrium:

In the labour market, the demand for labour and the supply of labour determine the level of output and employment. The classical economists regard the demand for labour as the function of the real wage rate: $D_N = f(W/P)$

Where D_N = demand for labour, W = wage rate and P = price level. Dividing wage rate (W) by price level (P), we get the real wage rate (W/P).

The demand for labour is a decreasing function of the real wage rate, as shown by the downward sloping D_N curve in Fig. 2. It is by reducing the real wage rate that more workers can be employed.



The supply of labour also depends on the real wage rate: $S_N = f(W/P)$, where S_N is the supply of labour. But it is an increasing function of the real wage rate, as shown by the upward sloping S_N curve in Fig. 2. It is by increasing the real wage rate that more workers can be employed.

When the D_N and S_N curves intersect at point E, the full employment level N_F is determined at the equilibrium real wage rate W/P_0 . If the wage rate rises from WP_0 to WP_1 the supply of labour will be more than its demand by ds .

Now at W/P_1 wage rate, ds workers will be involuntary unemployed because the demand for labour (W/P_1-d) is less than their supply (W/P_1-s). With competition among workers for work, they will be willing to accept a lower wage rate. Consequently, the wage rate will fall from W/P_1 to W/P_0 .

The supply of labour will fall and the demand for labour will rise and the equilibrium point E will be restored along with the full employment level N_F . On the contrary, if the wage rate falls from W/P_0 to WP_2 the demand for labour (W/P_2-d_1) will be more than its supply (W/P_2-s_1). Competition by employers for workers will raise the wage rate from W/P_2 to W/P_0 and the equilibrium point E will be restored along with the full employment level N_F .

Wage Price Flexibility:

The classical economists believed that there was always full employment in the economy. In case of unemployment, a general cut in money wages would take the economy to the full employment level. This argument is based on the assumption that there is a direct and proportional relation between money wages and real wages.

When money wages are reduced, they lead to reduction in cost of production and consequently to the lower prices of products. When prices fall, demand for products will increase and sales will be pushed up. Increased sales will necessitate the employment of more labour and ultimately full employment will be attained.

Pigou explains the entire proposition in the equation: $N = qY/W$. In this equation, N is the number of workers employed, q is the fraction of income earned as wages, Y is the national income and W is the money wage rate. N can be increased by a reduction in W . Thus the key

to full employment is a reduction in money wage. When prices fall with the reduction of money wage, real wage is also reduced in the same proportion.

As explained above, the demand for labour is a decreasing function of the real wage rate. If W is the money wage rate, P is the price of the product, and MP_N is the marginal product of labour, we have $W = P \times MP_N$ or $W/P = MP_N$

Since MP_N declines as employment increases, it follows that the level of employment increases as the real wage (W/P) declines. This is explained in Figure 3. In Panel (A), S_N is the supply curve of labour and D_N is the demand curve for labour. The intersection of the two curves at E shows the level of full employment N_F and the real wage W/P_0 .

If the real wage rises to W/P_1 , supply exceeds the demand for labour by sd and N_1N_2 workers are unemployed. It is only when the wage is reduced to W/P_0 that unemployment disappears and the level of full employment is attained.

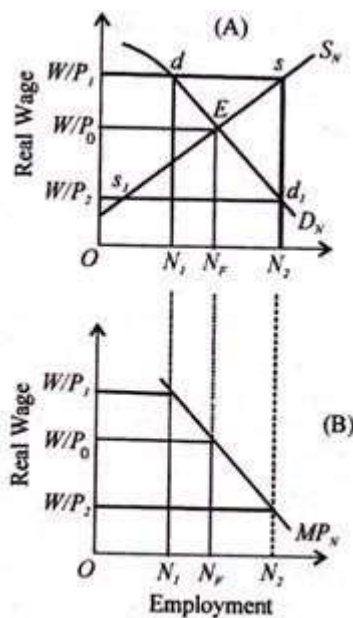


Fig. 3

This is shown in Panel (B), where MP_N is the marginal product of labour curve which slopes downward as more labour is employed. Since every worker is paid wages equal to his marginal product, therefore the full employment level N_F is reached when the wage rate falls from W/P_1 to W/P_0 . Contrariwise, with the fall in the wage from W/P_0 to W/P_2 , the demand

for labour increases more than its supply by s_1d_1 , the workers demand higher wage. This leads to the rise in the wage from W/P_2 to W/P_0 and the full employment level N_F is attained.

Goods Market Equilibrium:

The goods market is in equilibrium when saving equals investment. At that point of time, total demand equals total supply and the economy is in a state of full employment. According to the classicists, what is not spent is automatically invested.

Thus saving must equal investment. If there is any divergence between the two, the equality is maintained through the mechanism of the rate of interest. To them, both saving and investment are the functions of the interest rate.

$$S=f(r) \dots(1)$$

$$I=f(r) \dots(2)$$

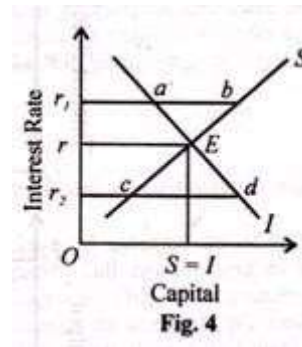
$$S = I$$

Where S = saving, I = investment, and r = interest rate.

To the classicists, interest is a reward for saving. The higher the rate of interest, the higher the saving, and lower the investment. On the contrary, the lower the rate of interest, the higher the demand for investment funds, and lowers the saving. If at any given period, investment exceeds saving, ($I > S$) the rate of interest will rise.

Saving will increase and investment will decline till the two are equal at the full employment level. This is because saving is regarded as an increasing function of the interest rate and investment as a decreasing function of the rate of interest.

Assuming interest rates are perfectly elastic, the mechanism of the equality between saving and investment is shown in Figure 4 where S is the saving curve and I is the investment curve. Both intersect at E which is the full employment level where at O_r interest rate $S = I$. If the interest rate rises to O_{r_1} saving is more than investment by ha which will lead to unemployment in the economy.



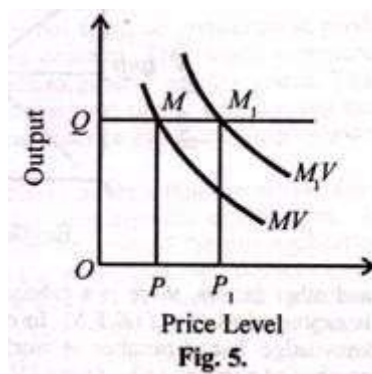
Money Market Equilibrium:

The money market equilibrium in the classical theory is based on the Quantity Theory of Money which states that the general price level (P) in the economy depends on the supply of money (M). The equation is $MV = PT$, where M = supply of money, V = velocity of circulation of M, P = Price level, and T = volume of transaction or total output.

The equation tells that the total money supply MV equals the total value of output PT in the economy. Assuming V and T to be constant, a change in the supply of money (M) causes a proportional change in the price level (P). Thus the price level is a function of the money supply: $P = f(M)$.

The relation between quantity of money, total output and price level is depicted in Figure 5 where the price level is taken on the horizontal axis and the total output on the vertical axis. MV is the money supply curve which is a rectangular hyperbola.

This is because the equation $MV = PT$ holds on all points of this curve. Given the output level OQ, there would be only one price level OP consistent with the quantity of money, as shown by point M on the MV curve. If the quantity of money increases, the MV curve will shift to the right as M_1V curve.



Source: Internet

As a result, the price level would rise from OP to OP_1 given the same level of output OQ . This rise in the price level is exactly proportional to the rise in the quantity of money, i.e., $PP_1 = MM_1$ when the full employment level of output remains OQ .

Keynesian Theory of Employment

As per Keynes theory of employment, effective demand signifies the money spent on the consumption of goods and services and on investment.

The total expenditure is equal to the national income, which is equivalent to the national output.

Therefore, effective demand is equal to total expenditure as well as national income and national output.

The theory of Keynes was against the belief of classical economists that the market forces in capitalist economy adjust themselves to attain equilibrium. He has criticized classical theory of employment in his book. *General Theory of Employment, Interest and Money*. Keynes not only criticized classical economists, but also advocated his own theory of employment.

The Keynes theory of employment was based on the view of the short run. In the short run, he assumed that the factors of production, such as capital goods, supply of labor, technology, and efficiency of labor, remain unchanged while determining the level of employment. Therefore, according to Keynes, level of employment is dependent on national income and output.

In addition, Keynes advocated that if there is an increase in national income, there would be an increase in level of employment and vice versa. Therefore, Keynes theory of employment is also known as theory of employment determination and theory of income determination.

Principle of Effective Demand:

The main point related to starting point of Keynes theory of employment is the principle of effective demand. Keynes propounded that the level of employment in the short run is dependent on the aggregate effective demand of products and services.

According to him, an increase in the aggregate effective demand would increase the level of employment and vice-versa. Total employment of a country can be determined with the help of total demand of the country. A decline in total effective demand would lead to unemployment.

As per Keynes theory of employment, effective demand signifies the money spent on the consumption of goods and services and on investment. The total expenditure is equal to the national income, which is equivalent to the national output. Therefore, effective demand is equal to total expenditure as well as national income and national output.

Determination of Effective Demand:

Keynes has used two key terms, namely, aggregate demand price and aggregate supply price, for determining effective demand. Aggregate demand price and aggregate supply price together contribute to determine effective demand, which further helps in estimating the level of employment of an economy at a particular period of time.

In an economy, the employment level depends on the number of workers that are employed, so that maximum profit can be drawn. Therefore, the employment level of an economy is dependent on the decisions of organizations related to hiring of employee and placing them.

The level of employment can be determined with the help of aggregate supply price and aggregate demand price. Let us study these two concepts in detail.

Aggregate Supply Price:

Aggregate supply price refers to the total amount of money that all organizations in an economy should receive from the sale of output produced by employing a specific number of workers. In simpler words, aggregate supply price is the cost of production of products and services at a particular level of employment.

It is the total amount of money paid by organizations to the different factors of production involved in the production of output. Therefore, organizations would not employ the factors of production until they can recover the cost of production incurred for employing them.

A certain minimum amount of price is required for inducing employers to offer a specific amount of employment. According to Dillard, "This minimum price or proceeds, which will just induce employment on a given scale, is called the aggregate supply price of that amount of employment."

If an organization does not get an adequate price so that cost of production is covered, then it employs less number of workers. Therefore, the aggregate supply price varies according to different number of workers employed. So, aggregate supply price schedule Id Tut can be prepared as per the total number of workers employed.

Aggregate supply price schedule is a schedule of minimum price required to induce the different quantities of employment. Thus, higher the price required to induce the different quantities of employment, greater the level of employment would be. Therefore, the slope of the aggregate supply curve is upward to the right.

Aggregate Demand Price:

Aggregate demand price is different from demand for products of individual organizations and industries. The demand for individual organizations or industries refers to a schedule of quantity purchased at different levels of price of a single product.

On the hand, aggregate demand price is the total amount of money that an organization expects to receive from the sale of output produced by a specific number of workers. In other words, the aggregate demand price signifies the expected sale receipts received by the organization by employing a specific number of workers.

Aggregate demand price schedule refers to the schedule of expected earnings by selling the product at different level of employment. The higher the level of employment, greater the level of output would be.

Consequently, the increase in the employment level would increase the aggregate demand price. Thus, the slope of aggregate demand curve would be upward to the right. However, the individual demand curve slopes downward.

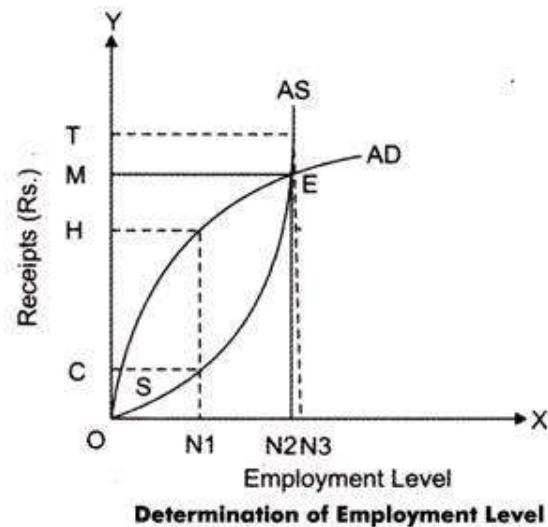
The basic difference between the aggregate supply price and aggregate demand price should be analyzed carefully as both of them seem to be same. In aggregate supply price, organizations should receive money from the sale of output produced by employing a specific number of workers.

However, in aggregate demand price, organizations expect to receive from the sale of output produced by a specific number of workers. Therefore, in aggregate supply price, the amount of money is the necessary amount that should be received by the organization, while in aggregate demand price the amount of money may or may not be received.

Determination of Equilibrium Level of Employment:

The aggregate demand price and aggregate supply price help in determining the equilibrium level of employment.

The aggregate demand (AD) and aggregate supply (AS) curve are used for determining the equilibrium level of employment, as shown in below Figure



In above, AD represents the aggregate demand curve, while AS represents the aggregate supply curve. It can be interpreted from Figure-3 that although the aggregate demand and aggregate supply curve are moving in the same direction, but they are not alike. There are different aggregate demand price and aggregate supply price for different levels of employment.

For example, in above figure, at AS curve, the organization would employ ON_1 number of workers, when they receive OC amount of sales receipts. Similarly, in case of AD curve, the organization would employ ON_1 number of workers with the expectation that they would produce OH amount of sales receipt for them.

The aggregate demand price exceeds the aggregate supply price or vice versa at some levels of employment. For example, at ON_1 employment level, the aggregate demand price (OH) is greater than the aggregate supply price (OC). However, at certain level of employment, the aggregate demand price and aggregate supply price become equal.

At this point, aggregate demand and aggregate supply curve intersect each other. This point of intersection is termed as the equilibrium level of employment. In Above figure point E represents the equilibrium level of employment because at this point, the aggregate demand curve and aggregate supply curve intersect each other.

In Above figure initially, there is a slow movement in the AS curve, but after a certain point of time it shows a sharp rise. This implies that when a number of workers increases initially, the cost incurred for production also increases but at a slow rate. However, when the amount of sales receipt increases, the organization starts employing more and more workers. In Above figure the ON_1 numbers of workers are employed, when OT amount of sales receipts are received by the organization.

On the other hand, the AD curve shows a rapid increase initially, but after some time it gets flattened. This means that the expected sales receipts increase with an increase in the number of workers. As a result, the expectations of the organization to earn more profit increases. As a result, the organization start employing more workers. However, after a certain level, the increase in employment level would not show an increase in the amount of sales receipts.

In Above figure before reaching the employment level of ON_2 , the employment level keeps on increasing as the organizations want to higher more and more workers to get the maximum profit. However, when the employment level crosses the ON_{21} level, the AD curve is below the AS curve, which shows that the aggregate supply price exceeds the aggregate demand price. As a result, the organization would start incurring losses; therefore, would reduce the employment rate.

Thus, the economy would be in equilibrium when the aggregate supply price and aggregate demand price become equal. In other words, equilibrium can be achieved when the amount of sales receipt necessary and the amount of sales receipt expected to be received by the organization at a specified level of employment are equal.

Keynesian Consumption Function

The concept of consumption function plays an important role in Keynes' theory of income and employment. According to Keynes, of all the factors it is the current level of income that determines the consumption of an individual and also of society. Keynes laid stress on the absolute size of current income as a determinant of consumption, for which his theory of consumption is also known as absolute income theory of consumption.

The Keynes' consumption function can be expressed in the following form:

$$C = a + bY_d$$

where C = consumption expenditure

Y_d = The real income

a = The constant parameter which reflects autonomous consumption, i.e. the amount of consumption expenditure at zero level of income

b = The constant parameter which reflects the marginal propensity to consume (MPC) which measures the increase in consumption spending in response to per unit increase in disposable income. Mathematically: $b = MPC = \Delta C / \Delta Y$.

The Keynesian concept of consumption function stems from the fundamental psychological law of consumption which states that there is a common tendency for people to spend more on consumption when income increases, but not to the same extent as the rise in income because a part of the income is also saved. The fundamental psychological law of consumption is based on three propositions with respect to consumption behaviour.

1. When the total income increases, the consumption expenditure of the community will also increase, but less proportionately. In economic terms, this means that Marginal Propensity to Consume is less than one but greater than Zero (i.e. $1 > MPC > 0$).
2. An increment of income will be divided in some ratio between saving and consumption.
3. An increase in income will, thus, lead to an increase in both consumption and savings.

Keynes' Psychological Law of Consumption

The Keynesian concept of consumption function stems from the fundamental psychological law of consumption which states that there is a common tendency for people to spend more on consumption when income increases, but not to the same extent as the rise in income because a part of the income is also saved. The community, as a rule, consumes as well as saves a larger amount with a rise in income.

Keynes' psychological law of consumption is based on the following propositions:

- i. When the total income of a community increases, the consumption expenditure of the community will also increase, but less proportionately.
- ii. It follows from this that an increase in income is always bifurcated into spending and saving.
- iii. An increase in income will, thus, lead to an increase in both consumption and savings. This means that with an increase in income in the community, we cannot normally expect a reduction in total consumption or a reduction in total savings. A rising income will often be accompanied by increased savings and a falling income by decreased savings. The rate of increase or decrease in savings will be greater in the initial stages of increase or decrease of income than in the later stages.

The gist of Keynes' law is that consumption mainly depends on income and that income recipients always do not tend to spend all of the increased income on consumption. This is the fundamental maxim upon which Keynes' concept of consumption function is based.

Keynes' law is limited by the following assumptions:

1. Constancy of Psychological and Institutional Factors: Propensity to consume will remain stable owing to the constancy of the existing psychological and institutional complexities influencing consumption expenditure.
2. Normal Economic Conditions: General economic conditions are normal and there are no abnormal and extraordinary circumstances such a war, civil revolution, recession, inflation, etc.
3. Laissez-faire Policy:

It is assumed that there exists a free capitalist economy, in which there is no government restriction on consumption when income increases.

Implications of the Psychological Law of Consumption: A more detailed analysis of Keynes' law shows that it has the following important implications:

1. Highlighting the crucial importance of investment in an economy: A vital point in the law is the tendency of people not to spend on consumption the full amount of an increase in their income. There is thus a "gap" between aggregate income and

aggregate consumption. Assuming the consumption function to be stable during a short-run period, the “gap” will widen with an increase in income. This gives rise to the problem of investment. Investment should be increased to fill the gap between income and consumption. Keynes, therefore, stresses that investment is the crucial and initiating determinant of levels of income and employment.

2. Refuting Say’s Law: It refutes Say’s Law of market by indicating the demand deficiency and possibility of overproduction.

3. Explanation to the Business Cycle: An explanation of the turning points of a business cycle is also provided by this law. The upper turning point from a boom is caused by a collapse of the marginal efficiency of capital owing to the fact that consumption expenditure does not keep pace with increase in income during the prosperity phase. Similarly, the law explains the revival of the marginal efficiency of capital and the turning point of recovery from a depression, on the basis of the fact that when income is reduced consumption expenditure does not decrease in the same proportion.

Average Propensity to Consume (APC):

Average propensity to consume refers to the ratio of consumption expenditure to the corresponding level of income.

$$APC = \text{Consumption (C)} / \text{Income (Y)}$$

If consumption expenditure is Rs 70 crores at national income of Rs 100 crores,

Then: $APC = C/Y = 70/100 = 0.70$, i.e. 70% of the income is spent on consumption.

Marginal Propensity to Consume (MPC):

Marginal propensity to consume refers to the ratio of change in consumption expenditure to change in total income. MPC explains what proportion of change in income is spent on consumption.

$$MPC = \text{Change in Consumption } (\Delta C) / \text{Change in Income } (\Delta Y)$$

If consumption expenditure increases from Rs 70 crores to Rs 110 crores with an increase in income from Rs 100 crores to Rs 200 crores, then:

$MPC = \Delta C / \Delta Y = 110 - 70 / 200 - 100 = 40 / 100 = 0.40$ i.e., 40% of the incremental income is spent on consumption.

Comparison between APC and MPC:

Basis	APC	MPC
Meaning	It is the ratio of consumption expenditure (C) to the corresponding level of income (Y) at a point of time.	It is the ratio of change in consumption expenditure (ΔC) to change in income (ΔY) over a period of time.
Value more than one	APC can be more than one as long as consumption is more than national income, i.e. till the break-even point.	MPC cannot be more than one as change in consumption cannot be more than change in income.
Response to change in income	When income increases, APC falls but at a rate less than that of MPC.	When income increases, MPC also falls but at a rate more than that of APC.
Formula	$APC = C/Y$	$MPC = \Delta C / \Delta Y$

Determinants of the Consumption Function

Keynes mentions two principal factors which influence the consumption function and determine its slope and position.

They are (i) the subjective factors, and (ii) the objective factors.

The subjective factors are endogenous or internal to the economic system. They include psychological characteristics of human nature, social practices and institutions and social arrangements. They “are unlikely to undergo a material change over a short period of time except in abnormal or revolutionary circumstances.” They, therefore, determine the slope and position of the C curve which is fairly stable in the short-run.

The objective factors are exogenous or external to the economic system. They may, therefore, undergo rapid changes and may cause marked shifts in the consumption function (i.e., the C curve).

The subjective and objective factors are discussed below:

Subjective Factors:

Keynes’s subjective factors basically underlie and determine the form (i.e., slope and position) of the consumption function. The subjective factors are the psychological characteristics of human nature, social practices and institutions, especially the behaviour patterns of business concerns with respect to wage and dividend payments and retained earnings, and social arrangements affecting the distribution of income. There are two motives of subjective factors: individual and business.

1. Individual Motives: First, there are eight motives “which lead individuals to refrain from spending out of their incomes.”

They are:

- (i) The desire to build reserves for unforeseen contingencies;
- (ii) The desire to provide for anticipated future needs, i.e., old age, sickness, etc.;
- (iii) The desire to enjoy and enlarged future income by way of interest and appreciation;
- (iv) The desire to enjoy a gradually increasing expenditure in order to improve the standard of living;
- (v) The desire to enjoy a sense of independence and power to do things;
- (vi) The desire to secure a “masse de manoeuvre” to carry out speculative or business projects;
- (vii) The desire to bequeath a fortune;
- (viii) The desire to satisfy a pure miserly instinct.

2. Business Motives: The subjective factors are also influenced by the behaviour of business corporations and governments. Keynes lists four motives for accumulation on their part:

(i) Enterprise, the desire to do big things and to expand;

(ii) Liquidity, the desire to meet emergencies and difficulties successfully;

(iii) Income raises the desire to secure large income and to show successful management;

(iv) Financial prudence, the desire to provide adequate financial resources against depreciation and obsolescence, and to discharge debt. These factors remain constant during the short-run and keep the consumption function stable.

Objective Factors: The following objective factors are given by Keynes.

1. Changes in the Wage Level: If the wage rate rises, the consumption function shifts upward. The workers having a high propensity to consume spend more out of their increased income and this tends to shift the C curve upward. If, however, the rise in the wage rate is accompanied by a more than proportionate rise in the price level, the real wage rate will fall and it will tend to shift the C curve downward. A cut in the wage rate will also reduce the consumption function of the community due to a fall in income, employment and output. This will shift the curve downward.

2. Windfall Gains or Losses: Unexpected changes in the stock market leading to gains or losses tend to shift the consumption function upward or downward. For instance, the phenomenal windfall gains due to the stock-market boom in the American economy after 1925 led to a rise in the consumption spending of the stock-holders by roughly in proportion to the increased income and as a result the consumption function shifted upward. Similarly, unexpected losses in the stock market lead to the downward shifting of the C curve.

3. Changes in the Fiscal Policy: Changes in fiscal policy in the form of taxation and public expenditure affect the consumption function. Heavy commodity taxation adversely affects the consumption function by reducing the disposable income of the people. This is what actually happened during the Second World War when the consumption function shifted downward due to heavy indirect taxation, rationing and price controls. On the other hand, the policy of progressive taxation along with that of public expenditure on welfare programmes tends to shift the consumption function upward by altering the distribution of income.

4. Changes in Expectations: Changes in future expectations also affect the propensity to consume. If a war is expected in the near future, people start hoarding durable and

semi-durable commodities in anticipation of future scarcity and rising prices. As a result, people buy much in excess of their current needs and the consumption function shifts upward. On the contrary, if it is expected that prices are likely to fall in the future, people would buy only those things which are very essential. It will lead to a fall in consumption demand and to a downward shift of the consumption function.

5. Changes in the Rate of Interest: Substantial changes in the market rate of interest may influence the consumption function indirectly. There are several ways in which the rate of interest may affect the consumption function. A rise in rate of interest will lead to a fall in the price of bonds, thereby tending to discourage the propensity to consume of the bond-holders. It may also have the effect of substituting one type of assets for another. People may be encouraged to save rather than invest in bonds. In case they are buying durable consumer goods like refrigerators, scooters, etc. on hire-purchase system they will tend to postpone their purchases when the rate of interest rises. They will have to pay more in installments and thus their consumption function will shift downward. Keynes wrote, „Over a long period, substantial changes in the rate of interest probably tend to modify social habits considerably. Besides, these five factors, Keynes also listed changes in accounting practice with respect to depreciation. This factor has been rejected by Hansen who opines that “it is not a factor which can be thought to change violently in the short-run and it was a mistake for Keynes to include it here.” However, we add some of the other objective factors listed by Keynes’s followers.

6. Financial Policies of Corporations: Financial policies of corporations with regard to income retention, dividend payments and reinvestments tend to affect the consumption function in several ways. If corporations keep more money in the form of reserves, dividend payments to shareholders will be less, this will have the effect of reducing the income of the shareholders and the consumption function will shift downward.

7. Holding of Liquid Assets: The amount of liquid assets in the form of cash balances, savings and government bonds in the hands of consumers also influence the consumption function. If people hold larger liquid assets they will have a tendency to spend more out of their current income and the propensity to consume will move upward, and vice versa. Pigou was of the view that with a cut in money wage, prices fall and the real value of such assets increases. This tends to shift the consumption function upward. This is called the “Pigou Effect.”

8. The Distribution of Income: The distribution of income in the community also determines the shape of the consumption function. If there are large disparities in income distribution between the rich and the poor, the consumption function is low because the rich have a low propensity to consume and the poor with a very low

income are unable to spend more on consumption. If through progressive taxation and other fiscal measures, the inequalities of income and wealth are reduced, the consumption function will shift upward because with the increase in the income of the poor their consumption expenditure will increase more than the reduction in the expenditure of the rich. "Moreover, if the distribution of income is significantly altered for political or humanitarian reasons, consumer habits themselves may undergo such changes as to cause the position or shape of the entire consumption function to vary perceptibly."

9. Attitude toward Saving: The consumption function is also influenced by people's attitude toward saving. If they value future consumption more than present consumption, they will tend to save more and the consumption function will shift downward. This tendency may be reinforced by the state through compulsory life insurance, provident fund and other social insurance schemes to keep the consumption function low. In a high-saving economy, the consumption function is low.

CONSUMPTION FUNCTION AND HYPOTHESIS

In most of the world economies, consumer expenditure covers 50 % to 70 % of spending. Thus, it is not surprising that consumer expenditure and the consumption function have been some of the most studied topics in macroeconomics. To understand the nature of the consumption expenditure, we should first understand the fundamental theories about consumption because modern research about the topic has mainly been based on these theories. The fundamental theories of consumption are; absolute income hypothesis (Keynes, 1936), relative income hypothesis (Duesenberry, 1948), permanent income hypothesis (Friedman, 1957) and life cycle hypothesis (Modigliani, 1986)

ABSOLUTE INCOME HYPOTHESIS: (J.M.KEYNES)

Keynes' consumption function has come to be known as the 'absolute income hypothesis' or theory. His statement of the relationship between income and consumption was based on the 'fundamental psychological law'.

He said that consumption is a stable function of current income (to be more specific, current disposable income—income after tax payment).

Because of the operation of the 'psychological law', his consumption function is such that $0 < MPC < 1$ and $MPC < APC$. Thus, a non-proportional relationship (i.e., $APC > MPC$) between consumption and income exists in the Keynesian absolute income hypothesis. His consumption function may be rewritten here with the form

$$C = a + bY, \text{ where } a > 0 \text{ and } 0 < b < 1.$$

It may be added that all the characteristics of Keynes' consumption function are based not on any empirical observation, but on 'fundamental psychological law', i.e., experience and intuition.

Propositions of the Law

Proposition 1

When the aggregate income increases, consumption expenditure increases but by a somewhat smaller amount

After the fulfillment of intense wants there is less and less pressure to raise consumption in proportion to the increase in income.

$$\Delta C < \Delta Y$$

$$\frac{\Delta C}{\Delta Y} < \frac{\Delta Y}{\Delta Y}$$

$$MPC < 1$$

MPC is positive but less than unity ($0 < MPC < 1$) in normal situation. This proposition is the core of Keynes psychological law of consumption.

Proposition 2

An increase in income is divided in some proportion between consumption expenditure and saving. It means that income increases will be partially consumed and partially saved.

This proposition is corollary to the first proposition, because what is not spent is saved.

$$\Delta Y = \Delta C + \Delta S$$

Proposition 3

With the increase in income, both consumption and savings go up.

This means that increase in aggregate income will never lead to fall in consumption or saving than before. It therefore, emphasizes the short run stability of the consumption function.

Table 1. Psychological Law of Consumption

Income (Y)	Consumption (C)	Savings (S)
0	40	-40
100	120	-20
200	200	00
300	280	20
400	360	40
500	440	60
600	520	80

Table 1. verifies the three propositions.

Income rises by Rs.100 and consumption rises by Rs.80. Thus $\frac{\Delta C}{\Delta Y} < 1$ it is 0.80.

Increase in income of Rs.100 in each case is divided between consumption and saving (Rs.80 & Rs.20). With the rise in income both consumption and savings increase. Three propositions illustrated through the Fig. 1.

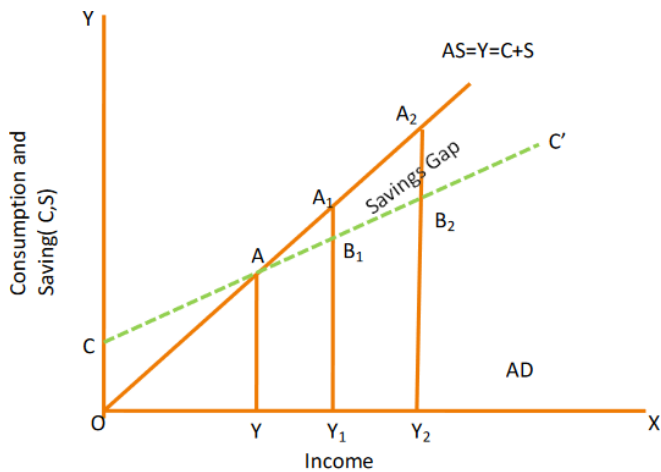


Fig 1 Propositions of Consumption Function

45° Line is the aggregate supply curve ($Y = C+S$). At zero level of income consumption is OC . At $0Y$ level of income, consumption is AY which is equal to $0Y$ savings are zero at point A on consumption curve.

When income rises from $0Y$ to $0Y_1$ consumption also increases from AY to $B_1 Y_1$ but this rise in consumption is less than the increase in income by $A_1 B_1$. When income increases to $0Y_1$ and $0Y_2$ it is divided into some proportion between $B_1 Y_1$ and $B_2 Y_2$ (consumption) and saving $A_1 B_1$ and $A_2 B_2$ respectively.

With rise in income to $0Y_1$ and $0Y_2$, consumption rises to $B_1 Y_1$ and $B_2 Y_2$. $B_2 Y_2 > B_1 Y_1 > AY$. Savings also rise. $A_2 B_2 > A_1 B_1 > zero$.

Savings gap increases as increment in consumption is less than the increment in income.

Assumptions of the Law

Constancy of the existing psychological and institutional complex

1. Keynes presumed a constant psychological and institutional complex.

In other words, consumption depends on income alone and institutional and psychological factors such as income distribution, tastes, habits, fashion, customs, rate of population growth etc. are assumed to be constant.

2. Existence of normal conditions

This law assumes the existence of normal conditions in the economy. There are no abnormal and extraordinary circumstances such as war, revolution or hyper inflation etc.

3. Prosperous Capitalist Economy based on Laissez faire

This law assumes a wealthy capitalist economy based on laissez faire that is a free economy in which there is no government interference. People can consume goods according to their needs & desires.

Implications of the Law

RELATIVE INCOME HYPOTHESIS: (J.S. Duesenberry)

Studies in consumption then were directed to resolve the apparent conflict and inconsistencies between Keynes' absolute income hypothesis and observations made by Simon Kuznets. Former hypothesis says that in the short run $MPC < APC$, while Kuznets' observations say that $MPC = APC$ in the long run.

One of the earliest attempts to offer a resolution of the conflict between short run and long run consumption functions was the 'relative income hypothesis' J.S. Duesenberry in 1949. Duesenberry believed that the basic consumption function was long run and proportional. This means that average fraction of income consumed does not change in the long run, but there may be variation between consumption and income within short run cycles.

Duesenberry's RIH is based on two hypotheses –

a) First is the relative income hypothesis ,and

b) Second is the past peak income hypothesis.

a) Duesenberry's first hypothesis says that consumption depends not on the 'absolute' level of income but on the 'relative' income— income relative to the income of the society in which an individual lives. It is the relative position in the income distribution among families influences consumption decisions of individuals.

A households consumption is determined by the income and expenditure pattern of his neighbours. There is a tendency on the part of the people to imitate or emulate the consumption standards maintained by their neighbours. Specifically, people with relatively low incomes attempt to 'keep up with the Joneses'—they consume more and save less. This imitative or emulative nature of consumption has been described by Duesenberry as the "demonstration effect."

The outcome of this hypothesis is that the individuals' APC depends on his relative position in income distribution. Families with relatively high incomes experience lower APCs and families with relatively low incomes experience high APCs. If, on the other hand, income distribution is relatively constant (i.e., keeping each families relative position unchanged while incomes of all families rise). Duesenberry then argues that APC will not change.

Thus, in the aggregate we get a proportional relationship between aggregate income and aggregate consumption. Note $MPC = APC$. Hence the R1H says that there is no apparent conflict between the results of cross-sectional budget studies and the long run aggregate time-series data.

b) In terms of the second hypothesis short run cyclical behaviour of the Duesenberry's aggregate consumption function can be explained. Duesenberry hypothesised that the present consumption of the families is influenced not just by current incomes but also by the levels of past peak incomes, i.e., $C = f(Y_{ri}, Y_{pi})$, where Y_{ri} is the relative income and Y_{pi} is the peak income.

This hypothesis says that consumption spending of families is largely motivated by the habitual behavioural pattern. If current incomes rise, households tend to consume more but slowly. This is because of the relatively low habitual consumption patterns and people adjust their consumption standards established by the previous peak income slowly to their present rising income levels.

On other hand, if current incomes decline these households do not immediately reduce their consumption as they find it difficult to reduce their consumption established by the previous peak income. Thus, during depression consumption rises as a fraction of income and during prosperity consumption does increase slowly as a fraction of income. This hypothesis thus generates a non-proportional consumption function.

Duesenberry's explanation of short run and long run consumption function and then, finally, reconciliation between these two types of consumption function can now be demonstrated in terms of Fig. 3.39. Cyclical rise and fall in income levels produce a non-proportional consumption-income relationship, labelled as C_{SR} . In the long run as such fluctuations of income levels are get smoothened, one gets a proportional consumption-income relationship, labelled as C_{LR} .

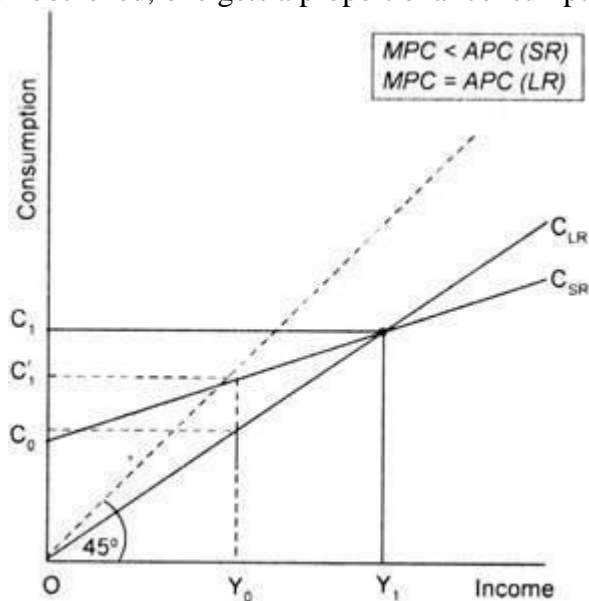


Fig. 3.39: Duesenberry's Consumption Function

As national income rises consumption grows along the long run consumption, C_{LR} . Note that at income OY_0 aggregate consumption is OC_0 . As income increases to OY_1 , consumption rises to OC_1 . This means a constant APC consequent upon a steady growth of national income.

Now, let us assume that recession occurs leading to a fall in income level to OY_0 from the previously attained peak income of OY_1 . Duesenberry's second hypothesis now comes into operation:

households will maintain the previous consumption level what they enjoyed at the past peak income level. That means, they hesitate in reducing their consumption standards along the C_{LR} . Consumption will not decline to OC_0 , but to $OC'_1 (> OC_0)$ at income OY_0 . At this income level, APC will be higher than what it was at OY_1 and the MPC will be lower.

If income rises consequent upon economic recovery, consumption rises along C_{SR} since people try to maintain their habitual or accustomed consumption standards influenced by previous peak income. Once OY_1 level of income is reached consumption would then move along C_{LR} . Thus, the short run consumption is subject to what Duesenberry called '**the ratchet effect**'. It ratchets up following an increase in income levels, but it does not fall back downward in response to income declines.

PERMANENT INCOME HYPOTHESIS: Milton Friedman

Another attempt to reconcile three sets of apparently contradictory data (cross-sectional data or budget studies data, cyclical or short run time-series data and Kuznets' long run time-series data) was made by Nobel prize winning Economist, Milton Friedman in 1957. Like Duesenberry's RIH, Friedman's hypothesis holds that the basic relationship between consumption and income is proportional.

But consumption, according to Friedman, depends neither on 'absolute' income, nor on 'relative' income but on 'permanent' income, based on expected future income. Thus, he finds a relationship between consumption and permanent income. His hypothesis is then described as the 'permanent income hypothesis' (henceforth PIH). In PIH, the relationship between permanent consumption and permanent income is shown.

Friedman divides the current measured income (i.e., income actually received) into two: permanent income (Y_p) and transitory income (Y_t). Thus, $Y = Y_p + Y_t$. Permanent income may be regarded as 'the mean income', determined by the expected or anticipated income to be received over a long period of time. On the other hand, transitory income consists of unexpected or unanticipated or windfall rise or fall in income (e.g., income received from lottery or race). Similarly, he distinguishes between permanent consumption (C_p) and transitory consumption (C_t). Transitory consumption may be regarded as the unanticipated spending (e.g., unexpected illness). Thus, measured consumption is the sum of permanent and transitory components of consumption. That is, $C = C_p + C_t$.

Friedman's basic argument is that permanent consumption depends on permanent income. The basic relationship of PIH is that permanent consumption is proportional to permanent income that exhibits a fairly constant APC. That is, $C = kY_p$ where k is constant and equal to APC and MPC.

While reaching the above conclusion, Friedman assumes that there is no correlation between Y_p and Y_t , between Y_t and C_t and between C_p and C_t . That is

$$r_{Y_t, Y_p} = r_{Y_t, C_t} = r_{C_t, C_p} = 0.$$

Since Y_t is uncorrected with Y_p , it then follows that a high (or low) permanent income is not correlated with a high (or low) transitory income. For the entire group of households from all income groups transitory incomes (both positive and negative) would cancel each other out so that average transitory income would be equal to zero. This is also true for transitory components of consumption. Thus, for all the families taken together the average transitory income and average transitory consumption are zero, that is,

$Y_t = C_t = 0$ where Y and C are the average values. Now it follows that

$$Y = Y_p \text{ and } C = C_p$$

Let us consider some families, rather than the average of all families, with above-average measured incomes. This happens because these families had enjoyed unexpected incomes thereby making transitory incomes positive and $Y_p < Y$. Similarly, for a sample of families with below-average measured income, transitory incomes become negative and $Y_p > Y$.

Now, we are in a position to resolve the apparent conflict between the cross-section and the long run time-series data to show a stable permanent relationship between permanent consumption and permanent income.

The line $C_p = kY_p$ in Fig 3.40 shows the proportional relationship between permanent consumption and permanent income. This line cuts the C_{SR} line at point L that corresponds to the average measured income of the population at which $Y_t = 0$. This average measured income produces average measured and permanent consumption, C_p .

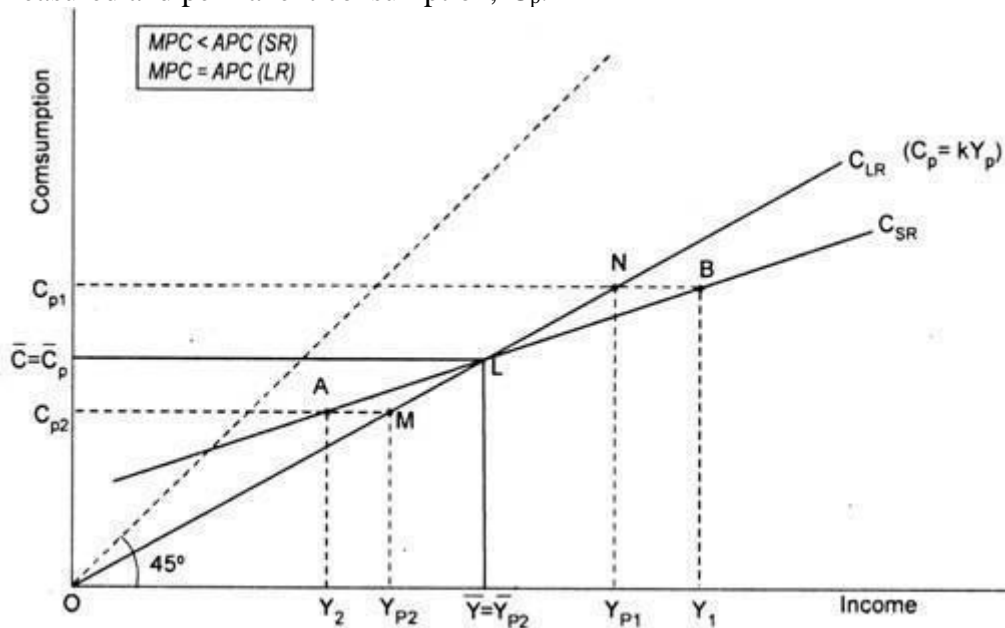


Fig. 3.40: Friedman's Consumption Function

Let us first consider a sample group of population having an average income above the population average. For this population group, transitory income is positive. The horizontal difference between the short run and long run consumption functions (points N and B and points M and A) describes the transitory income. Measured income equals permanent income at that point at which these two consumption functions intersect, i.e., point L in the figure where transitory income is zero.

For a sample group with average income above the national average measured income (Y_1) exceeds permanent income (Y_{p1}). At (C_{p1}) level of consumption (i.e., point B) average measured income for this sample group exceeds permanent income, Y_{p1} . This group thus now has a positive average transitory income.

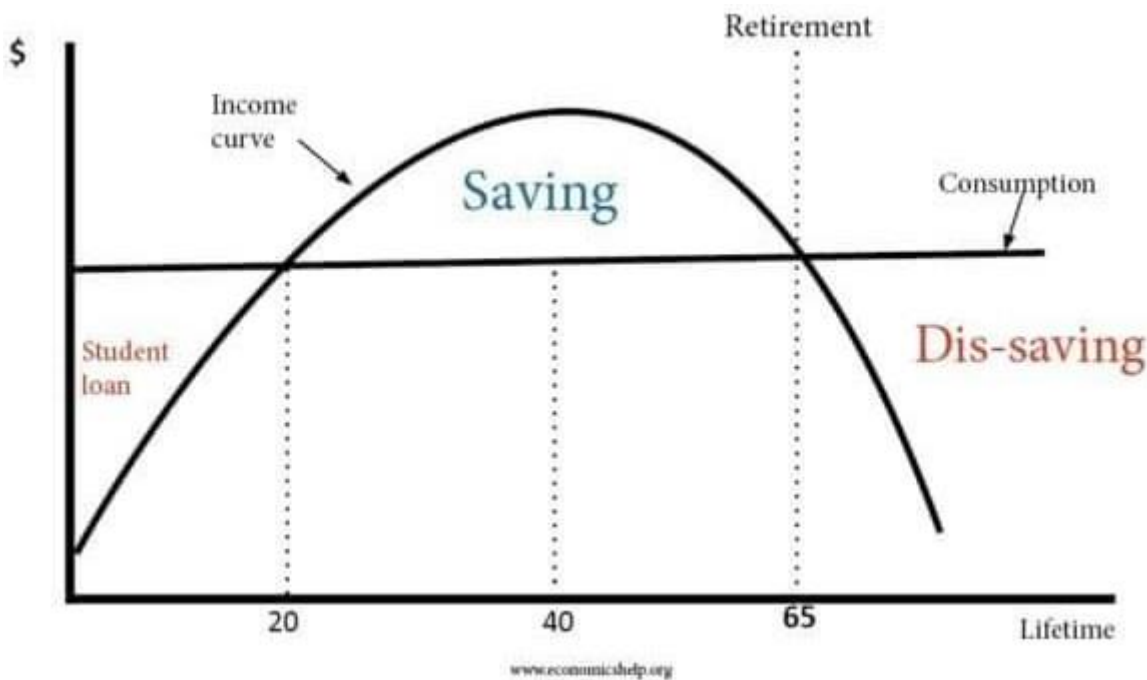
Next, we consider another sample group of population whose average measured income is less than the national average. For this sample group, transitory income component is negative. At C_{p2} level of consumption (i.e., point A lying on the C_{SR}) average measured income falls short of permanent income, Y_{p2} . Now joining points A and B we obtain a cross-section consumption function, labelled

as C_{SR} . This consumption function gives an MPC that has a value less than long run proportional consumption function, $C_p = kY_p$. Thus, in the short run, Friedman's hypothesis yields a consumption function similar to the Keynesian one, that is, $MPC < APC$.

However, over time as the economy grows transitory components reduce to zero for the society as a whole. So the measured consumption and measured income values are permanent consumption and permanent income. By joining points M, L and N we obtain a long run proportional consumption function that relates permanent consumption with the permanent income. On this line, APC is fairly constant, that is, $APC = MPC$.

LIFE CYCLE HYPOTHESIS: Modigliani

Definition: The Life-cycle hypothesis was developed by Franco Modigliani in 1957. The theory states that individuals seek to smooth consumption over the course of a lifetime – borrowing in times of low-income and saving during periods of high income.



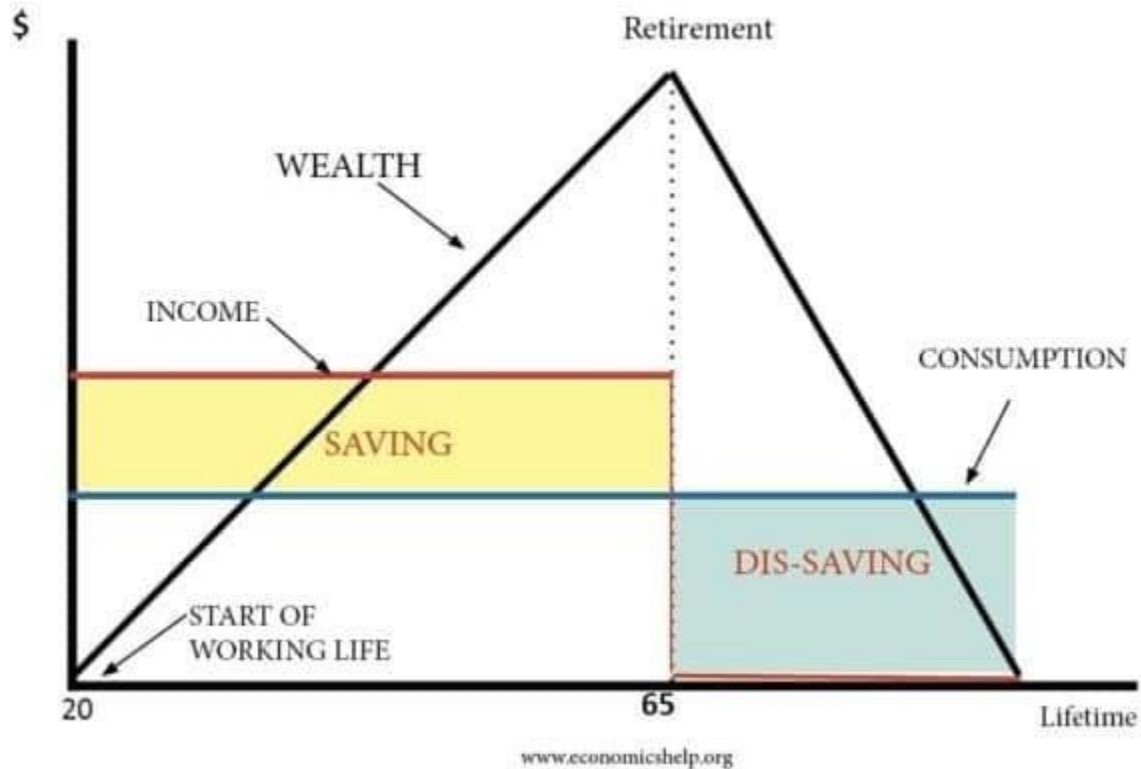
The graph

shows individuals save from the age of 20 to 65.

- As a student, it is rational to borrow to fund education.
- Then during your working life, you pay off student loans and begin saving for your retirement.
- This saving during working life enables you to maintain similar levels of income during your retirement.

It suggests wealth will build up in working age, but then fall in retirement.

Wealth in the Life-Cycle Hypothesis



The theory states consumption will be a function of wealth, expected lifetime earnings and the number of years until retirement.

Consumption will depend on

$$C = \frac{W + RY}{T}$$

- C= consumption
- W = Wealth
- R = Years until retirement. Remaining years of work
- Y = Income
- T= Remaining years of life

It suggests for the whole economy consumption will be a function of both wealth and income.

$$C = aW + bY,$$

The implication is that if we have an ageing population, with more people in retirement, then wealth/savings in the economy will be run down.

Prior to life-cycle theories, it was assumed that consumption was a function of income. For example, the Keynesian consumption function saw a more direct link between income and spending.

However, this failed to account for how consumption may vary depending on the position in life-cycle.

Marginal Efficiency of Capital (MEC)

MEC refers to the expected profitability of a capital asset. It may be defined as the highest rate of return over cost expected from the marginal or additional unit of a capital asset. MEC depends on two factors: the prospective yield of the capital asset and the supply price of the capital asset. The MEC is the ratio of these two factors. The prospective yield of a capital asset is the total net return from the asset over its life time.

The supply price of an asset is the cost of producing a brand new asset of that kind and not the supply price of an existing asset. It is referred to as the replacement cost. If the supply price of a capital asset is Rs. 20,000 and its annual yield is Rs. 2000, then the marginal efficiency of this asset is $2000/20000 \times 100 = 10$ percent. Thus the marginal efficiency of capital is the percentage of profit expected from a given investment on a capital asset.

Keynes relates the prospective yield of a capital asset to its supply price and defines MEC "as being equal to that rate of discount which would make the present value of the series of annuities given by the returns expected from the capital asset during its life equal to its supply price". This may be put in the form of an equation.

$$Sp = \frac{R_1}{(1+i)} + \frac{R_2}{(1+i)^2} + \dots + \frac{R_n}{(1+i)^n} \quad \dots(1)$$

Where Sp is the supply price or the cost of capital asset, R₁, R₂... R_n are the prospective yields or the series of expected annual returns from the capital asset in the years 1, 2, n, and i is the rate of discount. This makes the capital asset exactly equal to the present value of the expected yield from it.

Factors of Marginal Efficiency of Capital (MEC):

The various factors that bring about shifts in MEC are short run or endogenous factors and long run or exogenous factors.

The short run factors are:

1. Expected demand:

If the demand for the product is expected to be high in future, the MEC will be high and the investment will increase. On the other hand if the demand for the product is expected to decline in future the MEC will be low and investment will fall.

2. Costs and prices:

If the costs are expected to decline and if the prices are expected to increase, the expectation of the producer will go up. On the other hand if the costs are expected to go up and prices are to decline the MEC will receive a set back and the investment will be less.

3. Propensity to consume:

If the propensity to consume is more than the volume of investment will be more and vice versa.

4. Changes in income:

An increase in the level of income will stimulate investment while a decrease in the level of income will discourage investment.

5. Current state of expectation:

Businessmen while making expectations take into account the current state of affairs regarding costs, prices, returns etc. If they are high the MEC is bound to be high for new projects of investment.

6. Level of confidence:

During period of optimism the businessmen over estimate and boost the MEC of capital assets. During period of pessimism they under estimate and reduce the MEC of capital assets.

The long run factors which influence the MEC are as follows:

1. Population growth:

A rapidly growing population means a rapid increase in the demand for all types of goods and hence investment rises and conversely, a decline in population will decrease the demand investment.

2. Development of new areas:

When a new area is developed heavy investments in all fields such as agriculture, industries, electricity, housing etc., are to be undertaken.

3. Technological factors:

New invention or new discovery may necessitate the installation of new machineries in the industrial enterprise and encourage investment.

4. Productive capacity of the Industry:

If the existing capacity is fully utilised then any further increase in demand will be met with by making fresh investment on new capital equipment.

5. Level of current investment:

If the existing level of investment is already high there will be little scope for further investment and vice versa.

Accelerator Theory of Investment

The accelerator theory of investment is an economic theory that explains the relationship between changes in investment and changes in the level of economic output (Gross Domestic Product - GDP). It suggests that the level of investment in an economy is determined by changes in the rate of growth of GDP.

The main idea behind the accelerator theory is that firms' investment decisions are influenced by changes in the demand for their products. When the demand for goods and services produced by a firm increase, the firm may need to invest in additional capital equipment, machinery, or infrastructure to meet the rising demand and expand production capacity.

Key components of the accelerator theory of investment include:

Marginal Efficiency of Capital (MEC): This refers to the expected rate of return on investment. Firms will invest in new capital if the expected returns (profits) from that investment exceed the cost of acquiring and using the capital. As the MEC increases, firms are more likely to undertake new investment projects.

Multiplier Effect: The accelerator theory builds on the multiplier effect, which suggests that changes in investment can have a magnified impact on overall economic activity. When firms invest, it creates income and employment opportunities for others, leading to increased consumer spending, which further stimulates economic growth.

Stability and Cycles: The accelerator theory suggests that investment decisions can lead to fluctuations in economic activity. When GDP is growing rapidly, firms may invest heavily, but if the economy experiences a downturn or slowdown, firms may reduce their investment plans, contributing to economic instability.

It's essential to note that while the accelerator theory offers insights into investment behavior, it is not the sole determinant of investment decisions in the real world. Other factors, such as interest rates, government policies, business expectations, and technological advancements, also play crucial roles in influencing investment decisions. Additionally, behavioral factors and uncertainty can significantly affect investment patterns, sometimes leading to deviations from what the accelerator theory predicts.

Overall, the accelerator theory of investment provides a framework for understanding how changes in economic output can drive investment decisions and impact overall economic performance. However, like any economic theory, its real-world application may be subject to various complexities and limitations.

The Multiplier Theory

The multiplier theory, also known as the multiplier effect, is an important concept in economics that explains how changes in autonomous spending (or initial injections of demand) can lead to magnified effects on overall economic output (Gross Domestic Product - GDP). The theory helps to illustrate how changes in one sector of the economy can have broader impacts and generate additional economic activity.

The basic idea behind the multiplier theory is as follows:

Autonomous Spending: Autonomous spending refers to any initial increase or decrease in aggregate demand (total spending) in the economy. This spending is considered independent of changes in income or output and can originate from various sources, such as government spending, business investments, or exports.

Multiplier Effect: When there is an increase in autonomous spending, it sets off a chain reaction of further economic activities. The increased spending leads to an increase in income for individuals and businesses who receive the payments for goods and services provided. These individuals and businesses, in turn, spend a portion of their increased income on additional goods and services, leading to further economic activity. This cycle continues, with each round of spending generating additional rounds of spending, thereby magnifying the initial impact on GDP.

Multiplier Value: The multiplier value represents the extent to which a change in autonomous spending affects the overall GDP. It is a numerical expression of the multiplier effect. For example, if the multiplier value is 2, it means that a \$1 increase in autonomous spending will eventually lead to a \$2 increase in GDP.

The size of the multiplier effect depends on the marginal propensity to consume (MPC), which is the fraction of additional income that individuals and households spend on consumption. If the MPC is high, a larger portion of the increased income will be spent, leading to a higher multiplier effect.

The formula to calculate the multiplier effect is:

$$\text{Multiplier} = 1 / (1 - \text{MPC})$$

For instance, if the MPC is 0.8 (80%), then the multiplier would be:

$$\text{Multiplier} = 1 / (1 - 0.8) = 1 / 0.2 = 5$$

This means that an initial increase in autonomous spending of \$1 would lead to a total increase in GDP of \$5.

The multiplier theory highlights the importance of fiscal and monetary policies in influencing economic growth. For example, if the government increases its spending on infrastructure projects or provides tax cuts to households, the multiplier effect can stimulate economic activity and help boost GDP. However, it is essential to consider the context and other factors influencing the economy, as the real-world application of the multiplier effect can be influenced by various complexities and assumptions.

Keynes Theory of Employment Applicability To Developing Countries

John Maynard Keynes' theory of employment, often referred to as Keynesian economics, has significant applicability to developing countries, particularly in the context of managing economic growth, employment, and stability. Keynesian economics emerged during the Great Depression and has since been refined and adapted to various economic situations worldwide. Here are some ways in which Keynesian ideas are relevant to developing countries:

Counter-Cyclical Policies: Keynes advocated for the use of fiscal and monetary policies to stabilize the economy during economic downturns. Developing countries often face higher levels of economic volatility, with frequent fluctuations in output and employment. By using counter-cyclical policies, such as increasing government spending or reducing interest rates during downturns, governments can stimulate aggregate demand and mitigate the negative impacts of recessions.

Unemployment Reduction: Keynes' theory emphasizes the importance of aggregate demand in determining overall employment levels. In developing countries, high unemployment rates are common, particularly in the informal sector. By actively managing aggregate demand through government spending on public works projects or social welfare programs, policymakers can create job opportunities and reduce unemployment.

Public Investment: Keynes argued that public investment in infrastructure and other productive projects could have a multiplier effect on the economy, driving economic growth and job creation. Developing countries often face a lack of adequate infrastructure, which hinders economic development. By investing in infrastructure, governments can improve productivity, attract private investment, and create employment opportunities.

Inflation Management: Keynesian economics also addresses the issue of inflation. Developing countries may experience higher inflation rates due to supply-side constraints and external factors. Through demand-side management and appropriate monetary policies, governments can aim to control inflation while promoting sustainable economic growth.

Income Redistribution: Keynesian policies often involve income redistribution measures, such as progressive taxation and social welfare programs. In developing countries with high income inequality, such policies can help reduce poverty, improve

social equity, and enhance domestic demand, leading to more stable economic conditions.

Stimulating Investment: Keynesian ideas highlight the role of animal spirits and investor confidence in driving private investment. By implementing stable economic policies and providing a conducive business environment, developing countries can attract more private investment, contributing to economic growth and job creation.

However, it is essential to recognize that the successful application of Keynesian policies in developing countries may face some challenges:

Resource Constraints: Developing countries often have limited fiscal space and may face challenges in implementing expansionary fiscal policies due to high levels of debt and limited revenue collection.

External Vulnerabilities: Many developing countries are susceptible to external shocks, such as fluctuations in commodity prices or changes in international financial markets. These external factors can limit the effectiveness of domestic economic policies.

Institutional Capacity: Implementing and managing Keynesian policies effectively requires strong institutional capacity and good governance. Weak institutions and corruption may hinder the successful execution of economic policies.

Dependency on Foreign Aid: Some developing countries heavily rely on foreign aid, which may not always align with Keynesian principles, potentially leading to conflicts in policy implementation.

In conclusion, Keynesian economics provides valuable insights and policy tools that can help developing countries address their unique economic challenges. While it may not offer all the answers, incorporating Keynesian principles into economic policymaking can contribute to more stable, equitable, and growth-oriented economies in the developing world. However, careful consideration of country-specific contexts and challenges is necessary to tailor these policies effectively.

Money Illusion

Money illusion is an economic concept that refers to the tendency of people to perceive changes in nominal (absolute) prices and incomes as significant, without fully considering the impact of changes in the overall price level (inflation) or purchasing power of money. In other words, individuals often focus on the nominal values of money and prices rather than considering the real value adjusted for inflation.

The phenomenon of money illusion can lead to misunderstandings and suboptimal economic decision-making. It occurs when people fail to recognize that changes in nominal prices do not necessarily reflect changes in real purchasing power.

For example, imagine a scenario where a person receives a 5% increase in their salary during a period when the general price level (inflation) is also 5%. At first glance, it may seem like a significant raise. However, if the increase in prices has eroded the purchasing power of money by the same percentage, the individual's real income (adjusted for inflation) remains unchanged. In this case, the money illusion causes the person to perceive an increase in nominal income as an actual improvement in their financial situation, when in reality, their purchasing power remains the same.

Gresham's Law

Gresham's Law is an economic principle that states "bad money drives out good money" when both types of money are used simultaneously as a medium of exchange. This law was named after Sir Thomas Gresham, an English financier and merchant, who observed this phenomenon during the 16th century.

The key idea behind Gresham's Law is that when two types of money with different intrinsic values circulate in an economy, people will tend to hoard or save the money with higher intrinsic value and spend or circulate the money with lower intrinsic value. The reason for this behavior is that individuals will prefer to keep the money that has higher purchasing power and use the money with lower purchasing power for transactions, as it is less valuable.

As a result, the money with higher intrinsic value (good money) tends to be withdrawn from circulation and hoarded, while the money with lower intrinsic value (bad money) becomes the dominant medium of exchange in everyday transactions.

This phenomenon is commonly associated with metallic or commodity-based money systems, where the value of the money is determined by the metal (e.g., gold or silver) it contains. When governments debase the currency or reduce the precious metal content of coins, the intrinsic value of the money decreases, leading to the circulation

of lower-quality (bad) money, while the higher-quality (good) money is hoarded or exported.

Gresham's Law has historical significance, but its applicability in modern fiat currency systems (where money's value is not tied to a physical commodity) is more limited. However, it still holds relevance in certain situations, such as in the case of hyperinflation, when people tend to hoard stable foreign currencies or precious metals as a store of value, while using rapidly depreciating domestic currency for daily transactions.

Functions of Money

Medium of Exchange: Money serves as a medium of exchange, facilitating transactions by acting as an intermediary between buyers and sellers. In a barter system, where goods and services are directly exchanged for other goods and services, finding a double coincidence of wants can be challenging. Money, as a universally accepted medium of exchange, eliminates this difficulty and allows for smooth and efficient trade. It simplifies the process of buying and selling, making economic transactions more convenient for individuals and businesses.

Unit of Account: Money provides a common unit of measurement for expressing the value of goods, services, assets, and liabilities. Without money as a unit of account, the economy would lack a standard reference point for comparing prices, calculating profits, and making economic decisions. By expressing values in monetary terms, individuals and businesses can easily compare the relative worth of different goods and services, facilitating rational economic decision-making.

Store of Value: Money acts as a store of value, allowing individuals to save purchasing power for future use. When people accumulate money, they can preserve their wealth over time and postpone consumption to meet future needs. The ability of money to retain its value over time makes it an attractive asset for storing wealth, especially compared to perishable or depreciating goods.

Standard of Deferred Payment: Money is used as a standard for deferred payments, such as loans, debts, and contracts. When parties enter into agreements, they often denominate the terms in monetary units, ensuring clarity and stability in transactions over time. Money's stability as a standard of deferred payment provides confidence in financial contracts and facilitates lending and borrowing activities.

Liquidity: Money is highly liquid, meaning it can be easily converted into goods and services without loss of value. Its high liquidity ensures that individuals and businesses can quickly make payments and access funds for various purposes. The

liquidity of money contributes to the smooth functioning of financial markets and economic activities.

Legal Tender: Money is designated as legal tender by the government, which means it must be accepted as payment for all debts and transactions within the country's borders. Legal tender status ensures that money is universally accepted as a means of settling obligations and conducting business transactions.

Facilitating Specialization and Efficiency: Money plays a crucial role in promoting economic specialization and efficiency. As a medium of exchange, money enables individuals and businesses to focus on their expertise and produce goods or services they are most efficient at. Specialization increases productivity and overall economic efficiency, leading to higher levels of economic output and growth.

Measure of Economic Activity: Money serves as a key measure of economic activity through various monetary aggregates. Central banks and policymakers use measures like M1 (narrow money - currency and demand deposits) and M2 (broad money - M1 plus savings deposits and time deposits) to gauge the state of the economy. These aggregates provide valuable information about the money supply, inflation, and overall economic conditions, aiding in the formulation of appropriate monetary policies.

In conclusion, money's multifaceted functions are vital for modern economies, facilitating economic transactions, supporting economic efficiency, and providing stability in financial transactions. Its role as a medium of exchange, unit of account, and store of value underpin the functioning of markets, financial systems, and the overall economic well-being of societies.

Based on these characteristics, money can take various forms, including:

Currency: Physical notes and coins issued by the central bank of a country, such as the US Dollar, Euro, or Japanese Yen.

Deposits: Demand deposits held in banks, which can be easily converted into currency or used for electronic transactions.

Checks: While not money per se, checks act as a means of payment, facilitating the transfer of funds between accounts.

Electronic Money: Digital or electronic forms of payment, such as credit cards, debit cards, and mobile wallets.

Cryptocurrencies: Virtual currencies that use cryptographic techniques to secure transactions and create new units. Examples include Bitcoin and Ethereum.

RBI Classifications of Money

The Reserve Bank of India (RBI) classifies money into different categories based on its liquidity and its accessibility for various purposes. The RBI's classifications of money include the following:

M0 (Reserve Money): M0, also known as reserve money or high-powered money, represents the most liquid form of money in an economy. It includes the currency in circulation (coins and notes issued by the central bank) and the bank reserves held by commercial banks with the central bank. M0 is directly controlled by the central bank and serves as the base from which other forms of money are created.

M1 (Narrow Money): M1 is a broader measure of money and includes the most liquid components used for transactions. It consists of M0 (currency in circulation) and demand deposits held by the public with commercial banks. Demand deposits are accounts from which money can be withdrawn immediately without any notice or penalty. M1 is considered as "narrow money" because it represents money that is easily accessible for day-to-day transactions.

M2 (Broad Money): M2 is a more comprehensive measure of money supply that includes M1 plus a broader range of near-money assets. In addition to M1 components, M2 includes savings deposits with commercial banks, time deposits (fixed deposits) with maturities of up to one year, and post office savings deposits. M2 is referred to as "broad money" because it encompasses a wider range of financial assets that can be quickly converted into cash or used as a store of value.

M3 (Broad Money Supply as per the old classification): In the past, the RBI used to classify money into M1 and M3 categories. M3 represented the broadest measure of money supply and included M1, time deposits with maturities of more than one year, and total post office deposits. However, the RBI discontinued the M3 classification in 2014 and shifted to the M1 and M2 classifications.

It's important to note that the classifications of money may differ slightly in other countries based on the specific financial instruments and institutional arrangements in each economy. The RBI uses these classifications to monitor and analyze the money supply in the Indian economy, which is a crucial aspect of formulating and

implementing monetary policies to maintain price stability and support economic growth.

Theories of Money

Value of money is a term that is necessary to be understood to get acquainted with the theories of money. In economics, different economists have defined the term value of money differently. Some of the economists explained value of money as the value of gold and silver in terms of their weight and fineness. Other has defined the value of money as the value of Indian currency against foreign currencies.

On the other hand, few economists have associated the term value of money with the internal purchasing power of a nation. However, logically, value of money is associated with its purchasing power, which refers to the quantity of goods and services that can be purchased with a unit of money. The values of money and price levels in a country are inversely proportional to each other. For example, when the price level in a country is high, the value of money is low and vice-versa.

The Fisher Theory of Money

The Fisher Theory of Money, also known as the Fisher Equation or Fisher's Quantity Theory of Money, is an economic theory formulated by American economist Irving Fisher in the early 20th century. The theory seeks to explain the relationship between money, prices, and the level of economic activity.

Fisher's theory is based on the Quantity Theory of Money, which proposes that the general price level in an economy is directly related to the supply of money and the velocity of money circulation. The equation representing Fisher's theory is as follows:

$$\mathbf{MV = PT}$$

Where:

M = Money supply

V = Velocity of money circulation (the average frequency with which a unit of currency is spent)

P = Price level (the general price level of goods and services in the economy)

T = Volume of transactions (the total number of goods and services bought and sold)

Fisher's theory assumes that the velocity of money (V) and the volume of transactions (T) remain relatively stable in the short term. This means that changes in the money supply (M) would directly impact the price level (P) in the economy. The theory, therefore, implies that inflation is primarily a monetary phenomenon.

Fisher's Quantity Theory of Money has been influential in the study of monetary economics and has served as a basis for understanding the long-run relationship between money supply and inflation. However, critics have pointed out that the velocity of money and the volume of transactions can fluctuate significantly in the real world, and other factors, such as changes in productivity and expectations, can also influence the price level.

As with any economic theory, the Fisher Theory of Money should be considered within the broader context of economic analysis and combined with other theories to gain a comprehensive understanding of economic phenomena.

Cambridge Equations in Cash Balance Approach:

Cambridge cash balance theory of demand for money was given by Cambridge economists, **Marshall and Pigou**. It places emphasis on the function of money as a store of value instead of Fisher's emphasis on the use of money as a medium of exchange. The exchange function of money solves the problem of double coincidence of wants faced in the barter system. While the function of money as a store of value lays stress on holding money as a general purchasing power by individuals over a period of time for the sale and purchase of goods or services and subsequent transactions in the future.

Marshall and Pigou focused their analysis on the factors that determine individual demand for holding money in form of cash.

They also recognized that current interest rate, wealth owned by individuals, expectations of future prices and future rate of interest determine the demand for money. They also believed that changes in these factors remains constant or they are proportional to changes in individual's income.

So, they put forward a view that individual's demand for money in form of cash balances is proportional to the nominal income.

According to their approach, aggregate demand for money

$$M_d = kPY$$

M_d = Demand for money

Y = Real national income

P = Aggregate price level of currently produced goods and services

PY = Nominal Income

k = Proportion of nominal income that people want to hold as cash balances

Demand for money in this theory is a linear function of nominal income. The slope of the function is equal to k , ($k = M_d/PY$).

The important feature of this theory is that it makes the demand for money as a function of money income alone. A merit of this formulation is that it makes the relation between the demand for money and income as behavioural while in Fisher's approach demand for money was related to transactions in a mechanical manner. Another important feature of this approach is that the demand for money is proportional function of nominal income ($M_d = kPY$). Which makes it proportional function of both price level (P) and real income (Y). This gives (or implies) two things, First, income elasticity of demand for is unity and second, price elasticity of demand for money is also equal to unity so that any changes in the price level causes equal proportionate changes in the demand for money.

Banking

Banking refers to the business of providing financial services and products to individuals, businesses, and governments. Banks act as intermediaries between those who have excess funds (savers/depositors) and those who need funds (borrowers). They offer a range of services, including accepting deposits, granting loans, facilitating payments, offering investment products, and providing financial advice.

Types of Banking:

There are various types of banking institutions and financial services offered by banks. Some common types of banking include:

Retail Banks: Retail banks are the most familiar to the general public. They provide services to individual customers, including personal accounts, savings accounts, checking accounts, debit and credit cards, home loans, and consumer loans.

Commercial Banks: Commercial banks primarily serve businesses and corporate clients. They offer a wide range of financial products and services, such as business loans, trade financing, cash management services, and foreign exchange services.

Investment Banks: Investment banks focus on providing financial advisory services and facilitating capital market transactions. They help companies raise capital through initial public offerings (IPOs) and issuing bonds, offer merger and acquisition advice, and engage in securities trading.

Central Banks: Central banks are the top regulatory authorities responsible for overseeing the monetary policy and financial stability of a country. They control the money supply, set interest rates, and manage foreign exchange reserves.

Community Banks: Community banks are smaller, locally-oriented banks that serve specific communities or regions. They often focus on providing personalized services to individual and small business customers.

Savings Banks: Savings banks are similar to retail banks but are often owned by the depositors themselves or operate as mutual institutions. They offer savings accounts, mortgages, and consumer loans.

Credit Unions: Credit unions are cooperative financial institutions owned by their members (customers). They provide similar services to retail banks but typically offer better interest rates and lower fees due to their not-for-profit structure.

Online Banks: Online banks operate entirely through digital platforms, without traditional brick-and-mortar branches. They offer various banking services online, such as savings accounts, checking accounts, and loans.

Islamic Banks: Islamic banks operate based on Islamic principles that prohibit the charging or paying of interest (riba). Instead, they offer Sharia-compliant financial products and services that adhere to Islamic law.

Development Banks: Development banks focus on providing financial support and funding for development projects, infrastructure projects, and economic development initiatives in developing countries.

These are some of the major types of banking institutions and services available in the financial industry. Each type of bank serves specific customer segments and offers a unique range of financial products and services to meet their needs.

Commercial Banks

The scheduled commercial banks are those banks which are included in the second schedule of RBI Act 1934 and which carry out the normal business of banking such as accepting deposits, giving out loans and other banking services. The major difference between Scheduled Commercial Banks and Scheduled Cooperative Banks is their holding pattern, since cooperatives are registered under the Cooperative Societies Act as cooperative credit institutions.

Scheduled Commercial Banks can be further divided into four groups:

- Public Sector Banks: This includes:
 - SBI & Associates
 - Nationalized Banks
 - Other Public Sector Banks
- Private Banks
- Foreign Banks
- Regional Rural Banks

A commercial bank in India is a financial institution that operates primarily to cater to the banking needs of businesses, individuals, and other commercial entities. These banks are authorized by the Reserve Bank of India (RBI) to accept deposits from the public and extend various types of loans and advances to borrowers.

In India, commercial banks are an essential part of the banking system and play a crucial role in mobilizing savings from individuals and businesses and channelling those funds to support economic activities through lending and investments. They offer a wide range of financial products and services, including savings accounts, current accounts, fixed deposits, loans, credit cards, trade finance, foreign exchange services, and more.

Commercial banks in India are regulated and supervised by the Reserve Bank of India (RBI) to ensure financial stability, customer protection, and compliance with banking regulations. These banks are required to maintain

certain reserve ratios, adhere to prudential norms, and comply with other guidelines issued by the RBI to maintain the overall health of the banking sector and the economy.

Examples of well-known commercial banks in India include State Bank of India (SBI), ICICI Bank, HDFC Bank, Axis Bank, and Punjab National Bank (PNB), among others. These banks have a vast network of branches and digital channels to serve customers across the country and provide a wide range of banking services to meet their financial needs.

The main functions of commercial banks

Accepting Deposits: One of the fundamental functions of commercial banks is to accept deposits from individuals and businesses. They offer various types of deposit accounts, such as savings accounts, current accounts (checking accounts), fixed deposits (time deposits), and recurring deposit accounts. Deposits provide a stable source of funds for the bank, which can be used for lending and investment purposes.

Granting Loans and Advances: Commercial banks are major lenders in the economy. They extend loans and advances to individuals and businesses for various purposes, including business expansion, working capital needs, home loans, personal loans, and more. The interest charged on loans is one of the primary sources of income for commercial banks.

Overdraft Facilities: Commercial banks provide overdraft facilities to their customers, allowing them to withdraw more money from their current accounts than the balance available. Overdrafts help customers manage temporary cash shortages and provide flexibility in managing their finances.

Facilitating Payments: Commercial banks play a crucial role in facilitating domestic and international payments. They provide services like electronic fund transfers (EFT), automated clearing house (ACH) transactions, wire

transfers, and issuing letters of credit, which are essential for trade and commerce.

Issuing Credit and Debit Cards: Commercial banks issue credit cards and debit cards to their customers, enabling them to make cashless transactions and access credit facilities.

Providing Trade Finance Services: Commercial banks offer various trade finance services, such as letters of credit, bank guarantees, and export-import financing. These services help facilitate international trade and provide financial security to parties involved in trade transactions.

Foreign Exchange Services: Commercial banks engage in foreign exchange activities, offering services for buying and selling foreign currencies, remittances, and hedging against currency fluctuations.

Wealth Management and Investment Services: Some commercial banks offer wealth management and investment advisory services to high-net-worth individuals and corporate clients. These services include investment advice, portfolio management, and wealth preservation strategies.

Safekeeping of Valuables: Commercial banks may provide safe deposit boxes for customers to store valuable items and documents securely.

Online and Mobile Banking: Commercial banks offer digital banking services, allowing customers to access their accounts, make transactions, and manage finances through online banking platforms and mobile applications.

Merger And Acquisitions (M&A) of Banks

Merger and acquisitions (M&A) of banks refer to the consolidation or combination of two or more banking institutions into a single entity. These transactions are common in the banking industry and are driven by various strategic, financial, and regulatory factors. Here are some key points about bank mergers and acquisitions:

Reasons for Bank Mergers and Acquisitions:

Synergy and Cost Efficiency: Mergers can create cost synergies and economies of scale, leading to reduced operational costs and improved efficiency. By combining resources and eliminating duplicate functions, banks can achieve cost savings.

Market Expansion: Mergers and acquisitions can help banks expand their geographic presence and customer base. Acquiring banks may target new markets or regions where they previously had limited or no presence.

Diversification of Services: M&A can allow banks to diversify their product and service offerings. For example, a bank with a strong retail banking focus may acquire a bank with expertise in investment banking to broaden its business lines.

Strengthening Financial Position: A merger can strengthen a bank's financial position by increasing its asset base, capital reserves, and lending capacity. This can enhance the bank's ability to take advantage of growth opportunities and withstand economic downturns.

Compliance and Regulatory Requirements: Some mergers may be driven by regulatory changes that encourage consolidation or by the need to meet certain capital or compliance requirements.

Types of Bank Mergers and Acquisitions:

Horizontal Merger: This type of M&A involves two banks operating in the same line of business and merging to achieve greater market share and efficiency.

Vertical Merger: In a vertical merger, a bank acquires or merges with another bank that operates at a different stage of the value chain. For example, a retail bank may merge with a bank focused on providing loan products.

Conglomerate Merger: Conglomerate mergers involve banks with unrelated business lines coming together to diversify their operations and reduce risk.

Merger List of PSU Banks in India

Sl. No	Acquirer Banks	Banks to be Merged
1.	Punjab National Bank(PNB)	Oriental Bank of Commerce and United Bank of India
2.	Indian Bank	Allahabad Bank
3.	Canara Bank	Syndicate Bank
4.	Union Bank of India	Andhra Bank and Corporation Bank

Reserve Bank of India

The Reserve Bank of India, chiefly known as RBI, is India's central bank and regulatory body responsible for regulation of the Indian banking system. It is under the ownership of Ministry of Finance, Government of India. It is responsible for the control, issue and maintaining supply of the Indian rupee. It also manages the country's main payment systems and works to promote its economic development. It also plays a crucial role in the country's monetary policy and financial stability,

The main functions of the RBI can be broadly categorized into the following:

Monetary Policy Formulation and Implementation: As the central bank of India, the RBI has the responsibility of formulating and implementing monetary policy. The primary objective of monetary policy is to maintain price stability while also supporting economic growth. To achieve this, the RBI uses various monetary tools, such as the repo rate, reverse repo rate, cash reserve ratio (CRR), and statutory liquidity ratio (SLR). By adjusting these rates, the RBI influences the cost and availability of credit in the banking system, which impacts overall money supply and inflation. The central bank closely monitors economic indicators and takes appropriate actions to control inflation and stabilize the economy.

Issuance and Management of Currency: Another critical function of the RBI is to issue and manage currency notes and coins in India. It acts as the sole authority for the issuance and distribution of currency, ensuring an adequate supply of currency to meet the transactional needs of the public and the banking system. The RBI also replaces damaged and soiled notes and coins to maintain the quality and integrity of the currency in circulation. Additionally, it manages currency reserves to facilitate foreign exchange transactions.

Regulation and Supervision of Banks and Financial Institutions: The RBI plays a vital role in ensuring the stability and soundness of the banking and financial sector. It acts as the regulator and supervisor of banks, non-banking financial companies (NBFCs), and other financial institutions. The RBI sets prudential norms and guidelines to maintain financial integrity, risk management, and corporate

governance standards. It conducts regular inspections and assesses the financial health of banks and financial institutions to identify potential risks and take corrective actions when necessary.

Foreign Exchange Management: The RBI manages India's foreign exchange reserves, which are essential for maintaining external economic stability. It intervenes in the foreign exchange market to smoothen exchange rate fluctuations and prevent extreme volatility in the value of the Indian rupee. By maintaining an adequate level of foreign exchange reserves, the RBI can help ensure the country's ability to meet its international payment obligations and provide confidence to foreign investors.

Banker to the Government and Debt Management: As the banker to the central and state governments, the RBI handles their banking transactions and manages their cash balances. It also facilitates the government's borrowing program by issuing government securities (bonds) in the market. The RBI plays a critical role in managing public debt, ensuring its sustainability and cost-effectiveness. Effective debt management helps in controlling fiscal deficits and maintaining macroeconomic stability.

Developmental Role: In addition to its regulatory and supervisory functions, the RBI plays a developmental role in the Indian economy. It promotes financial inclusion by encouraging banks to expand services to unbanked and underbanked areas. The RBI also develops and regulates various payment systems to facilitate safe and efficient transactions. Additionally, the central bank encourages the adoption of technology and innovation in the financial sector to improve efficiency and customer experience.

Conducting Research and Data Collection: The RBI conducts extensive research on various aspects of the Indian economy and financial markets. It publishes reports, studies, and data related to macroeconomic trends, financial stability, and policy analysis. This research and data collection help policymakers, businesses, and analysts in making informed decisions and understanding the evolving economic landscape.

Regulation of Payment Systems: The RBI regulates and oversees various payment systems in India to ensure their smooth functioning and safety. This includes retail payment systems like the National Electronic Funds Transfer (NEFT), Real-Time Gross Settlement (RTGS), Unified Payments Interface (UPI), and Bharat Bill Payment System (BBPS). The central bank continuously monitors these systems and updates regulations to meet the evolving needs of consumers and businesses.

s The RBI is responsible for maintaining financial stability in the country. It monitors risks and vulnerabilities in the financial system and takes pre-emptive measures to prevent financial crises. In times of financial distress or crisis, the RBI acts as a lender of last resort, providing liquidity support to banks and financial institutions to prevent systemic collapse.

Overall, the Reserve Bank of India plays a multifaceted role in the Indian economy, ranging from monetary policy management and financial regulation to developmental initiatives and crisis management. Its actions and decisions significantly impact economic growth, inflation, financial stability, and overall economic well-being in the country.

Credit Control by The Central Bank

Credit control by the central bank in India is a crucial aspect of monetary policy aimed at regulating the availability and cost of credit in the economy. The Reserve Bank of India (RBI) is the central bank of India and is responsible for formulating and implementing credit control measures to achieve its monetary policy objectives, such as price stability, economic growth, and financial stability.

The RBI uses various tools and instruments to control credit in the economy. Some of the key credit control measures employed by the RBI include:

1. Open Market Operations (OMOs): Open Market Operations are one of the most commonly used tools by the RBI to control credit in the economy. Through OMOs, the RBI buys or sells government securities in the open market. When it buys government securities from banks, it injects liquidity into the banking system, increasing the availability of funds for lending. Conversely, when the RBI sells government securities, it absorbs liquidity from the system, reducing the availability of funds for lending. OMOs help the RBI manage the money supply and influence interest rates.

2. Cash Reserve Ratio (CRR): CRR is the portion of a bank's total deposits that it must keep as reserves with the RBI in cash. By changing the CRR, the RBI controls the amount of money that banks can lend. When the CRR is reduced, banks are required to keep less money in reserves, freeing up more funds for lending. Conversely, increasing the CRR reduces the amount of money banks can lend, curbing credit expansion.

3. Statutory Liquidity Ratio (SLR): SLR is the percentage of a bank's total deposits that it must maintain in the form of liquid assets, such as government securities. It acts as a cushion to ensure the solvency and liquidity of banks. The RBI can change the SLR to influence the liquidity position of banks. Lowering the SLR releases funds that can be used for lending, while raising it restricts the lending capacity of banks.

4. Repo Rate and Reverse Repo Rate: Repo rate is the rate at which the RBI lends money to commercial banks, and reverse repo rate is the rate at which it borrows money from banks. These policy rates serve as benchmark rates for short-term borrowing and lending in the economy. By altering these rates, the RBI can control the cost of borrowing for banks. Lowering the repo rate encourages banks to borrow more from the RBI and, in turn, lower lending rates to customers. Conversely, raising the repo rate makes borrowing costlier, leading to higher lending rates.

5. Marginal Standing Facility (MSF): MSF is a facility that allows banks to borrow funds overnight from the RBI against eligible securities. The interest rate on MSF is typically higher than the repo rate, acting as a penalty for banks. It serves as a tool for banks to meet their short-term liquidity needs, but borrowing from MSF is considered a last resort due to the higher cost.

6. Bank Rate: The bank rate is the rate at which the RBI provides long-term funds to banks. It influences the cost of borrowing for banks and can impact long-term lending rates. Changes in the bank rate affect the cost of funds for banks, which, in turn, influences their lending decisions.

7. Credit Policy and Sector-Specific Regulations: The RBI issues credit policy guidelines and sector-specific regulations to direct credit flow to priority sectors, such as agriculture, small and medium enterprises (SMEs), and other sectors vital for economic development. By setting sector-specific credit targets and guidelines, the RBI ensures that credit is channelled to sectors that require support and investment.

Through a combination of these credit control measures, the RBI aims to maintain price stability, support economic growth, and ensure the overall stability of the financial system in India. The effectiveness of these measures depends on various factors, including economic conditions, inflationary pressures, and the transmission of monetary policy in the banking system.

Non-Banking Financial Company (NBFC)

A Non-Banking Financial Company (NBFC) is a type of financial institution that provides financial services and products similar to traditional banks, but without a banking license. NBFCs play a significant role in the Indian financial system by catering to the diverse financial needs of individuals and businesses. They are regulated and supervised by the Reserve Bank of India (RBI) under the provisions of the RBI Act, 1934.

Key features of Non-Banking Financial Companies (NBFCs) include:

Financial Services: NBFCs engage in a wide range of financial activities, such as providing loans and advances, accepting deposits (in certain cases), offering investment products, leasing, hire-purchase, insurance-related activities, and other types of financial intermediation.

Regulation: NBFCs are regulated by the RBI, and they must comply with various regulatory norms, prudential regulations, and reporting requirements to ensure financial stability and consumer protection.

Exclusion from Payment and Settlement Systems: Unlike banks, NBFCs are not part of the payment and settlement systems like the Real-Time Gross Settlement (RTGS) and National Electronic Funds Transfer (NEFT).

Deposit-Taking NBFCs: Some NBFCs are authorized to accept deposits from the public, while others cannot. NBFCs that accept public deposits are subject to additional regulations and restrictions to safeguard depositors' interests.

Ownership: NBFCs can be owned by individuals, corporations, or a combination of both. Foreign direct investment (FDI) is also permitted in certain types of NBFCs, subject to regulatory guidelines.

No Banking License: NBFCs do not have a banking license and cannot issue checks or offer demand deposits like traditional banks.

Credit Ratings: NBFCs may be subject to credit rating assessments by credit rating agencies to gauge their creditworthiness and financial health.

Credit to Unserved and Underserved Sectors: NBFCs often play a vital role in extending credit to sectors that are not adequately served by traditional banks, such as small and medium enterprises (SMEs), microfinance institutions, and rural areas.

Complementary Role to Banks: NBFCs complement the role of traditional banks by catering to specific customer segments and providing innovative financial solutions.

It's important to note that while NBFCs resemble banks in some aspects, they are distinct entities with their own set of regulations and limitations. The RBI classifies NBFCs into various categories based on their principal business activities, and each category is subject to specific regulatory guidelines to ensure financial stability and consumer protection.

Inflation

Inflation is an economic concept that refers to the general increase in prices of goods and services over time, leading to a decrease in the purchasing power of money. In other words, as inflation occurs, each unit of currency buys fewer goods and services. According to Samuleson-Nordhaus, "Inflation is a rise in the general level of prices".

Inflation has been categorized into following types on the basis of its different rates:

1. Creeping Inflation: Creeping Inflation also known as a Mild Inflation or Low Inflation refers to that type of inflation when the rise in prices is very slow like that of snail or creeper. It is the mildest form of inflation with less than 3% per annum.

2. Chronic Inflation: If creeping inflation persist for a longer period of time then it is often called as Chronic or Secular Inflation. It is called chronic because if an inflation rate continues to grow for a longer period without any downturn which may possibly lead to Hyperinflation.

3. Walking or Trotting Inflation: When prices rise moderately with a single digit of less more than 3% but less than 10% per annum it is called as Walking Inflation.

4. Running Inflation: A rapid acceleration in the rate of rising prices is referred as Running Inflation. This type of inflation occurs when prices rise by more than 10% per annum.

5. Galloping Inflation: Galloping inflation also known as Jumping inflation occurs when prices rise by double or triple digit inflation rates of more than 20% but less than 1000% per annum.

6. Hyperinflation: when prices rise at an alarming high rate with quadruple or four digit inflation rate of above 1000% per annum then is termed as Hyperinflation. It is a situation where the prices rise so fast that it becomes very difficult to measure its magnitude. During a worst-case scenario of

hyperinflation, value of national currency of an affected country reduces almost to zero. Paper money becomes worthless and people start trading either in gold and silver or sometimes even use the old barter system of commerce. Two worst examples of hyperinflation recorded in world history are of those experienced by Hungary in year 1946 and Zimbabwe during 2004–2009 under Robert Mugabe's regime.

There are several key concepts related to inflation:

Consumer Price Index: CPI is the measure of changes in the price level of a basket of consumer goods and services bought by households. CPI is a numerical estimation calculated using the rates of a sample of representative objects the prices of which are gathered periodically.

- The CPI captures changes in price level at the consumer level.
- Changes in prices at the producer level are tracked by the Wholesale Price Index (WPI).
- CPI can capture the change in the prices of services which the WPI cannot.
- The CPI is published by the National Statistical Office (NSO) under the Ministry of Statistics and Program Implementation.

Wholesale Price Index: The represents the price of a basket of wholesale goods. WPI focuses on the price of goods that are traded between corporations. It does not concentrate on goods purchased by the consumers.

- The main objective of WPI is monitoring price drifts that reflect demand and supply in manufacturing, construction and industry.
- WPI helps in assessing the macroeconomic as well as microeconomic conditions of an economy.
- It is estimated by the Office of Economic Adviser, Ministry of Commerce & Industry and measured on a monthly basis.

Hyperinflation: Hyperinflation is an extremely high and typically accelerating rate of inflation, often exceeding 50% per month. It erodes the value of money rapidly, leading to a loss of confidence in the currency.

Hyperinflation is often caused by a combination of factors, such as excessive money supply growth, loss of confidence in the government's ability to manage the economy, and political instability.

Deflation: In contrast to inflation, deflation is a general decline in prices of goods and services over time. Deflation can have negative implications for an economy as consumers may postpone spending in anticipation of lower prices, which can lead to reduced economic activity and employment.

Stagflation: Stagflation is a rare economic situation where an economy experiences stagnant economic growth, high unemployment, and inflation simultaneously. This phenomenon is challenging for policymakers as traditional measures to combat inflation, such as raising interest rates, may exacerbate unemployment.

Central banks and governments usually aim to maintain moderate and stable inflation rates, typically in the range of 2% to 3%. A controlled level of inflation can have positive effects on the economy, such as encouraging consumption and investment, while high or unpredictable inflation can create economic uncertainty and reduce the standard of living for the general population.

Types of Inflation

(i) Currency inflation:

This type of inflation is caused by the printing of currency notes.

(ii) Credit inflation:

Being profit-making institutions, commercial banks sanction more loans and advances to the public than what the economy needs. Such credit expansion leads to a rise in price level.

(iii) Deficit-induced inflation:

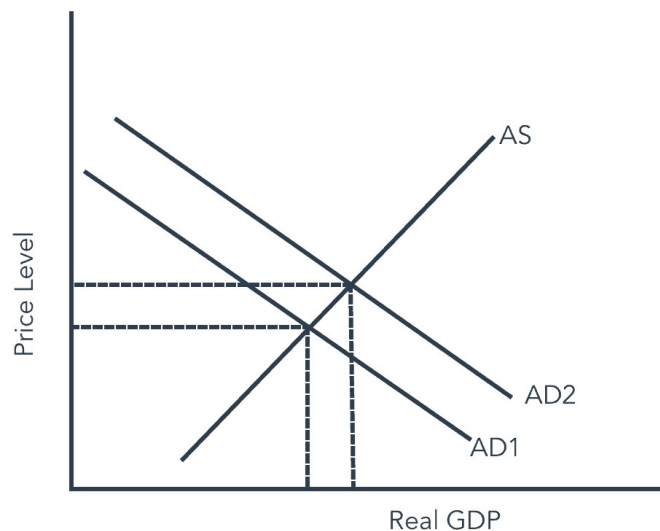
The budget of the government reflects a deficit when expenditure exceeds revenue. To meet this gap, the government may ask the central bank to print

additional money. Since pumping of additional money is required to meet the budget deficit, any price rise may be called the deficit-induced inflation.

Demand-pull inflation

Demand-pull inflation is a type of inflation that is caused when there is an increase in consumer demand for goods and services. This causes prices to go up as businesses try to meet the increased demand because of a lack of needed supply. This is historically the most common cause of inflation.

The demand-pull theory is a concept that explains inflation in economics and describes the effect of aggregate supply and demand being imbalanced. In other words, when demand outweighs the supply of a product then the price goes up. Economists often refer to this as "too many dollars chasing too few goods."



Causes Of Demand-Pull Inflation

Demand-pull inflation is typically caused by consumer demand out-pacing total available supply. The demand of consumers may be caused by a number of things, including:

1. Rising Inflation Rate: When the inflation rate rises then demand goods and services usually rises as well because people want to protect their money by buying goods while they are still affordable. For example, if a family wished to add a swimming pool to their property 2 years from now, but inflation was high, they might choose to make this purchase sooner than

later, resulting in increased swimming pool demand in the short-term (which can then further exacerbate inflation pressures).

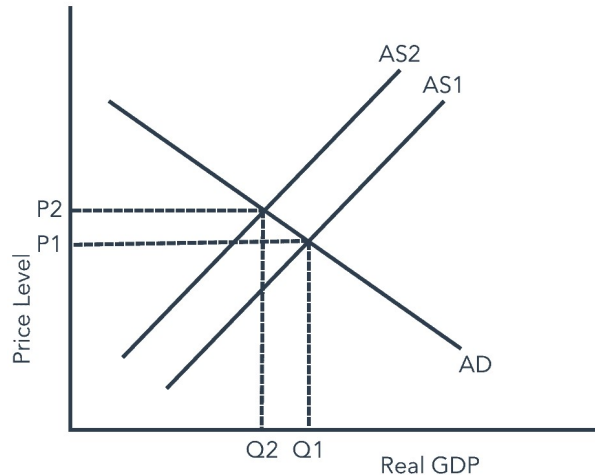
2. Overall Economic Growth: When the economy is doing well, demand for goods and services usually goes up because people have more money to spend. This is a result of more people being employed or a competitive job market that has driven salaries up for many. Consumers also tend to spend more money when they aren't worried about the status of their job. A growing economy gives consumers peace of mind.

3. Technological Innovations: When new technologies are introduced, demand for the products and services that support them often goes up. For example, when a new iPhone is released there becomes an immediate demand for a case that will protect that phone. When iPhones were fairly new, the number of suppliers making these cases was few, which meant the demand often outweighed the supply and people paid more than they might be willing to pay today.

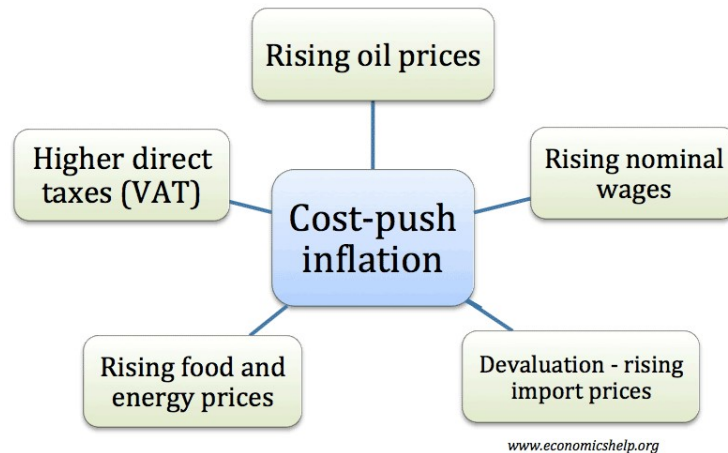
Cost-push inflation

Cost-push inflation occurs when we experience rising prices due to higher costs of production and higher costs of raw materials. Cost-push inflation is determined by supply-side factors, such as higher wages and higher oil prices.

Cost-push inflation is different to demand-pull inflation which occurs when aggregate demand grows faster than aggregate supply. Cost-push inflation can lead to lower economic growth and often causes a fall in living standards, though it often proves to be temporary.



In the above diagram, we see a shift or decrease in the Aggregate Supply curve from AS1 to AS2, resulting in a lower Real GDP and higher prices (from P1 to P2).



Causes of Cost-push inflation

1. Rise in Wages:

The basis cause of cost-push inflation is the rise in money wages more rapidly than the productivity of labour. In advanced countries, trade unions are very powerful. They press employers to grant wage increases considerably in excess of increases in the productivity of labour, thereby raising the cost of production of commodities. Employers, in turn, raise prices of their products. Higher wages enable workers to buy as much as before, in spite of higher prices. On the other hand, the increase in prices induces unions to demand still higher wages. In this way, the wage-cost spiral continues, thereby leading to cost-push or wage-push inflation. Cost push

inflation may be further aggravated by upward adjustment of wages to compensate for rise in the cost-of-living index.

2. Sectoral Rise in Prices:

Again, a few sectors of the economy may be affected by money wage increases and prices of their products may be rising. In many cases, their production such as steel, raw materials, etc. are used as inputs for the production of commodities in other sectors. As a result, the production cost of other sectors will rise and thereby push up the prices of their products. Thus wage- push inflation in a few sectors of the economy may soon lead to inflationary rise in prices in the entire economy.

3. Rise in Prices of Imported Raw Materials:

An increase in the prices of imported raw materials may lead to cost-push inflation. Since raw materials are used as inputs by the manufacturers of the finished goods, they enter into the cost of production of the latter. Thus, a continuous rise in the prices of raw materials tends to sets off a cost-price-wage spiral.

Causes of Inflation

Demand-Side Factors: When the overall demand for goods and services in an economy increases, it can outpace the economy's ability to supply them. This increased demand puts upward pressure on prices, leading to demand-pull inflation. Factors contributing to increased demand can include strong consumer spending, government stimulus, low interest rates encouraging borrowing and spending, and robust investment.

Supply-Side Factors: Inflation can also be caused by supply-side factors, which affect the production and supply of goods and services. Cost-push inflation occurs when businesses face rising production costs, such as higher wages, increased energy prices, or elevated raw material costs. As businesses try to maintain their profit margins, they pass on these higher costs to consumers through increased prices.

Monetary Policy: The actions of central banks, such as the Federal Reserve in the United States or the European Central Bank, can influence inflation. Expansionary monetary policy, characterized by low-interest rates and increased money supply, can stimulate borrowing and spending, leading to demand-pull inflation. Conversely, contractionary monetary policy, with higher interest rates and reduced money supply, can be used to control inflation.

Fiscal Policy: Government fiscal policies, such as taxation and public spending, can impact inflation. For instance, deficit spending and increased government expenditure can boost demand in the economy, potentially leading to inflation if it outpaces supply.

Effects of Inflation

Reduced Purchasing Power: As inflation increases, each unit of currency buys fewer goods and services, reducing the purchasing power of money. This means that consumers can buy less with the same amount of money, which can lead to a decline in their standard of living.

Uncertainty and Volatility: High or unpredictable inflation rates can create economic uncertainty. Businesses may have difficulty planning for the future, consumers might hold back on spending, and long-term investments may become riskier.

Income Redistribution: Inflation can redistribute income and wealth in an economy. Debtors benefit from inflation as they repay loans with money that has a lower value than when they borrowed it. On the other hand, savers and those living on fixed incomes may see their purchasing power eroded.

Interest Rates: Central banks may adjust interest rates to control inflation. Higher interest rates can help curb inflation by reducing borrowing and spending, but they can also lead to reduced economic growth and increased unemployment.

Measures to Control the Inflation

Controlling inflation is a crucial task for policymakers to maintain economic stability and ensure the purchasing power of a country's currency remains relatively stable. There are several measures that central banks and governments can use to control inflation:

Monetary Policy - Raising Interest Rates: One of the most common tools used by central banks to control inflation is raising interest rates. Higher interest rates make borrowing more expensive, leading to reduced consumer spending and investment. It also encourages saving over spending, which can help dampen demand and lower inflationary pressures.

Contractionary Monetary Policy: Central banks can implement a contractionary monetary policy by reducing the money supply. They can achieve this through open market operations, selling government bonds to banks, and raising reserve requirements for commercial banks. A reduced money supply leads to less spending and investment, curbing inflation.

Fiscal Policy: Reducing Government Spending: Governments can control inflation through fiscal policy by reducing government spending and increasing taxes. Reduced government expenditure lowers overall demand in the economy, while higher taxes reduce disposable income, both of which can help moderate inflation.

Supply-Side Policies: Supply-side policies aim to increase the productive capacity of the economy. These policies can include investments in infrastructure, education, and technology, as well as reducing bureaucratic red tape and regulatory burdens that hinder business growth. By improving productivity and reducing production costs, supply-side policies can help mitigate cost-push inflation.

Exchange Rate Policy: Countries with open economies may influence inflation through exchange rate policy. A depreciation of the national currency can make imports more expensive, leading to higher import prices

and potentially contributing to inflation. On the other hand, a stronger currency can help reduce imported inflation.

Wage Restraint: Controlling wage growth can be an effective measure to control inflation, especially in periods of demand-pull inflation. Implementing wage controls or encouraging moderate wage growth can help prevent excessive price increases.

Inflation Targeting: Some central banks adopt an inflation-targeting approach, where they set specific inflation rate targets (e.g., 2% per year) and use monetary policy tools to achieve those targets. This approach provides clarity and transparency to businesses and consumers about the central bank's intentions and can help anchor inflation expectations.

Price and Rent Controls (Cautionary Measure): In extreme cases, governments may consider imposing price controls on essential goods and services or rent controls in the housing market. However, these measures are generally regarded as temporary and can have unintended consequences, such as supply shortages and reduced investment.

It's important to note that controlling inflation requires a balanced approach. Extremely high inflation can be detrimental to an economy, but excessively tight measures to control inflation can lead to reduced economic growth and increased unemployment. Policymakers must carefully analyze the specific economic conditions and consider both short-term and long-term effects when implementing inflation control measures. Additionally, coordination between monetary and fiscal policies is essential to achieve effective and sustainable inflation control.

Phillips Curve

The Phillips Curve is a graphical representation of the short-term inverse relationship between inflation and unemployment in an economy. It was first introduced by New Zealand economist A.W. Phillips in 1958 based on his observations of historical data from the United Kingdom.



The curve shows that when the economy is experiencing low unemployment, inflation tends to be high, and when unemployment is high, inflation is low. This relationship suggests that there is a trade-off between the two variables in the short run – an increase in aggregate demand leads to lower unemployment but higher inflation, while a decrease in aggregate demand leads to higher unemployment but lower inflation.

The underlying reasoning behind the Phillips Curve is that when unemployment is low, workers have more bargaining power, leading to higher wage demands, which ultimately feed into higher inflation. Conversely, when unemployment is high, workers are willing to accept lower wage increases, putting downward pressure on inflation.

Stagflation

Stagflation is an economic condition characterized by a combination of stagnant economic growth, high unemployment, and high inflation occurring simultaneously. This phenomenon is considered unusual because inflation and unemployment are typically believed to have an inverse relationship, as depicted by the Phillips Curve in the short run.

The term "stagflation" gained prominence during the 1970s when many advanced economies, including the United States, experienced this challenging economic situation. There were several factors contributing to stagflation during that period:

Supply-side shocks: One of the primary causes of stagflation was the occurrence of significant supply-side shocks, particularly in the oil market. In 1973 and 1979, oil prices skyrocketed due to geopolitical events, disrupting energy supplies and causing production costs to rise substantially. These cost increases were passed on to consumers in the form of higher prices for goods and services, contributing to inflationary pressures.

Cost-push inflation: The supply-side shocks, especially the surging energy prices, led to cost-push inflation. As production costs increased, businesses faced higher expenses, which they passed on to consumers by raising prices. This contributed to a rise in the overall price level in the economy.

Demand-side policies: In some cases, demand-side policies, such as expansive fiscal and monetary measures, were implemented to combat unemployment or boost economic growth. However, in the context of supply-side shocks, these policies could exacerbate inflation without effectively addressing the underlying causes of stagflation.

Trade Cycles

A trade cycle refers to fluctuations in economic activities specially in employment, output and income, prices, profits etc. It has been defined differently by different economists. According to Mitchell, "Business cycles are of fluctuations in the economic activities of organized communities. The adjective 'business' restricts the concept of fluctuations in activities which are systematically conducted on commercial basis.

The noun 'cycle' bars out fluctuations which do not occur with a measure of regularity". According to Keynes, "A trade cycle is composed of periods of good trade characterised by rising prices and low unemployment percentages altering with periods of bad trade characterised by falling prices and high unemployment percentages".

Features of a Trade Cycle:

1. A business cycle is synchronic. When cyclical fluctuations start in one sector it spreads to other sectors.
2. In a trade cycle, a period of prosperity is followed by a period of depression. Hence trade cycle is a wave like movement.
3. Business cycle is recurrent and rhythmic; prosperity is followed by depression and vice versa.
4. A trade cycle is cumulative and self-reinforcing. Each phase feeds on itself and creates further movement in the same direction.
5. A trade cycle is asymmetrical. The prosperity phase is slow and gradual and the phase of depression is rapid.
6. The business cycle is not periodical. Some trade cycles last for three or four years, while others last for six or eight or even more years.
7. The impact of a trade cycle is differential. It affects different industries in different ways.
8. A trade cycle is international in character. Through international trade, booms and depressions in one country are passed to other countries.

Phases of a Trade Cycle

Generally, a trade cycle is composed of four phases – depression, recovery, prosperity and recession.

Depression: During depression, the level of economic activity is extremely low. Real income production, employment, prices, profit etc. are falling. There are idle resources. Price is low leading to a fall in profit, interest and wages. All the sections of the people suffer. During this phase, there will be pessimism leading to closing down of business firms.

Recovery: Recovery denotes the turning point of business cycle from depression to prosperity. In this phase, there is a slow rise in output, employment, income and price. Demand for commodities go up. There is increase in investment, bank loans and advances. Pessimism gives way to optimism. The process of revival and recovery becomes cumulative and leads to prosperity.



Prosperity: It is a state of affairs in which real income and employment are high. There are no idle resources. There is no wastage of materials. There is rise in wages, prices, profits and interest. Demand for bank loans increases. There is optimism everywhere. There is a general uptrend in business community. However, these boom conditions cannot last long because the

forces of expansion are very weak. There are bottlenecks and shortages. There may be scarcity of labour, raw material and other factors of production. Banks may stop their loans. These conditions lead to recession.

Recession: When the entrepreneurs realize their mistakes, they reduce investment, employment and production. Then fall in employment leads to fall in income, expenditure, prices and profits. Optimism gives way to pessimism. Banks reduce their loans and advances. Business expansion stops. This state of recession ends in depression.

Trade cycles, also known as business cycles or economic cycles, refer to the natural fluctuations in economic activity over time. These cycles typically consist of periods of expansion and contraction in economic output, employment, and other key indicators. Understanding the causes and implementing measures to control trade cycles is crucial for promoting economic stability and growth. Here are some of the causes and measures to control trade cycles:

Causes of Trade Cycles:

Aggregate Demand and Supply Fluctuations: Changes in consumer spending, business investments, government expenditures, and net exports can lead to shifts in aggregate demand and supply, causing fluctuations in economic activity.

Technological Advancements: Disruptive technologies can lead to economic booms as industries experience rapid growth, but they can also cause contractions when obsolete technologies or business models lead to downturns.

Monetary Policy: Central banks' decisions regarding interest rates, money supply, and credit availability can influence investment and consumption patterns, impacting economic cycles.

Fiscal Policy: Government spending, taxation, and borrowing can affect aggregate demand and economic growth, contributing to trade cycles.

Global Factors: Events such as geopolitical tensions, international trade conflicts, or changes in commodity prices can have ripple effects on national economies.

Measures to Control Trade Cycles:

Monetary Policy Tools: Central banks can use monetary policy tools to influence the money supply and interest rates. During economic downturns, they can lower interest rates and implement quantitative easing to stimulate borrowing and spending. Conversely, during periods of rapid growth, central banks may raise interest rates to prevent overheating and inflation.

Fiscal Policy: Governments can adjust fiscal policies to stabilize the economy. During downturns, they can increase public spending on infrastructure projects or social programs to boost demand and create jobs. During periods of economic expansion, they can reduce deficits and save for future downturns.

Automatic Stabilizers: Designing automatic stabilizers into the tax and welfare systems can help soften the impact of economic fluctuations. For example, unemployment benefits and progressive income taxes automatically increase during economic downturns, providing a safety net for those affected by job losses.

Regulatory Measures: Implementing appropriate regulations can help prevent excessive risk-taking and speculation that can exacerbate economic cycles. Proper oversight of financial markets and institutions is essential to prevent financial crises.

Education and Training: Investing in education and workforce training can enhance human capital and increase overall economic resilience. A skilled and adaptable workforce can better weather economic downturns and contribute to economic growth during expansions.

International Cooperation: Countries can work together to address global economic challenges and avoid protectionist measures that could worsen trade cycles. Cooperation in areas like trade agreements and climate change policies can promote global economic stability.

Infrastructure Development: Investing in infrastructure projects during economic downturns can create jobs and stimulate economic activity, while also providing long-term benefits for the economy.

It's important to note that while these measures can help moderate the intensity of trade cycles, completely eliminating economic fluctuations is challenging due to the inherent complexity of the global economy and the presence of external factors beyond national control. However, thoughtful and coordinated policies can mitigate the negative impacts and foster more stable and sustainable economic growth over time.

Financial Assets and Financial Instruments

Financial assets and financial instruments are both key components of the financial markets, but they have distinct characteristics and functions. Let's explore each concept:

Financial Assets:

Financial assets are intangible assets that represent a claim to future cash flows or economic benefits. They are instruments that hold value and can be traded in financial markets. Financial assets do not have a physical presence, unlike tangible assets such as real estate or machinery. Instead, they are represented by legal documents or electronic records. Financial assets are typically divided into two main categories:

a. Equity Securities: These represent ownership in a company and entitle the holder to a share of the company's profits (dividends) and voting rights. Common examples include stocks or shares in publicly traded companies.

b. Debt Securities: These represent a loan provided by the holder to the issuer (usually a government or corporation) in exchange for periodic interest payments and the repayment of the principal amount at maturity. Common examples include bonds, treasury bills, and corporate notes.

Other types of financial assets include derivatives, such as options and futures contracts, which derive their value from an underlying asset's performance.

Financial Instruments:

Financial instruments are contracts or agreements between parties that create a financial asset for one party and a financial liability for the other. They facilitate the flow of capital and risk transfer in financial markets. Financial instruments can be categorized based on their characteristics and uses:

a. Cash Instruments: These are simple financial instruments with a direct cash flow, such as banknotes, coins, and checks.

b. Equity Instruments: As mentioned earlier, these represent ownership in a company and include stocks and shares.

c. Debt Instruments: As mentioned earlier, these represent a loan agreement and include bonds, debentures, promissory notes, etc.

d. Derivative Instruments: These financial instruments derive their value from an underlying asset or benchmark and include options, futures, swaps, and forward contracts.

e. Foreign Exchange Instruments: These instruments are used for trading and hedging foreign currencies, such as currency pairs and currency futures.

f. Commodity Instruments: These instruments are used to trade commodities, such as agricultural products, precious metals, and energy resources.

Financial instruments are essential for various purposes, including raising capital, managing risk, speculating on future price movements, and hedging against adverse market conditions.

Functions of the Money Market

The money market is a vital component of the global financial system, providing a platform for short-term borrowing and lending of funds. It encompasses a range of financial instruments that serve various purposes for individuals, businesses, financial institutions, and governments. The functions of the money market are essential for maintaining liquidity, facilitating efficient capital allocation, managing risk, and supporting monetary policy objectives. This essay explores the crucial functions of the money market and its significant role in fostering financial resilience and stability.

There are certain functions that are performed by the money market.

Some of these functions have been listed and explained in detail in this article.

1. Short Term Funds for Banks and Private Entities

The money market performs a crucial function for all banks and private entities. Banks are required to maintain reserves to cover the loans that they make. However, the process of accepting deposits and issuing loans happens simultaneously. Hence, banks do not have the exact amount of reserves required.

Some banks end up having more reserves than required whereas others end up with fewer reserves than required. The interbank market which is a component of the money market allows banks with excess funds to lend money to banks with deficient funds overnight.

Hence, even though individual banks may have less or more reserves, the industry as a whole has the required reserves. The existence of an interbank market allows banks to conduct their deposit-taking as well as lending activity without fear of being unable to meet the reserve requirements. Hence, the money market enables the banking system to function at an optimal level.

This is also the case for other private entities. The money market allows for entities with excess cash to make short-term loans to entities that have deficient cash holdings. The end result is beneficial to both parties as it helps them meet their financial needs respectively.

2. Short Term Funds for Governments

The money market enables the government to borrow short-term funds.

It may seem irrelevant since the government can create more money if required. However, economists are of the opinion that since the creation of money by the government leads to inflation, the government must only use it for long-term purposes.

When it comes to short-term loans, the government simply borrows money from the money market by issuing treasury bills. These do not have an inflationary effect on the overall economy.

3. Helps In Implementing Monetary Policy Implementation

The money market can be used as a barometer to gauge the success of the monetary policy. In order to control the interest rates, governments create monetary policies which specifically target the interbank rate. Since the interbank rate is a benchmark rate, controlling that rate provides a high degree of control over the interest rates in the entire economy.

It also needs to be understood that the central bank has a great deal of influence on commercial banks. Also, these commercial banks are huge players in the various sectors of the monetary market. Hence, the central bank can use the influence of the commercial banks to influence the operations of the money market in such a manner that it aligns with the overall objective of the monetary policy.

4. Promotes Liquidity

In the absence of a highly liquid and short-term money market, entities across the world would be forced to hoard a large amount of cash for their transactional purposes. This would lead to lesser productivity as the smooth flow of funds would not be possible.

Money markets provide the much-needed liquidity to the market. They allow entities to hold their funds in cash equivalent assets instead of cash. This means that the funds are not lying idle but instead can be used by other entities.

5. Promotes Utilization of Funds Across Sectors

The money market also performs the function that all financial markets must perform i.e. it must channelize funds towards the most profitable investments.

There are various types of government and private entities which participate in the money market. Hence, if a particular sector of the economy is more profitable, it is able to obtain funds from the other sectors.

For instance, the flow of funds could be from the banking sector to the industrial sector in the money market. This helps firms diversify their own risks while also allowing the most efficient sector to have access to large amounts of funds.

6. Financing International Trade

The money markets play an important role in financing international trade as well. This is because a large number of private entities utilize money markets to raise short-term funds. These short-term funds are often used as working capital for international trade-related activities.

For instance, a company may borrow funds from the money market in order to open a letter of credit at a bank. Many suppliers do not release the shipment of goods until the funds have been deposited into the bank issuing the letter of credit.

The fact of the matter is that money markets are very important for the overall economy. They play a pivotal role in the day-to-day functioning of the economy and are crucial when it comes to the implementation of monetary policy. It is therefore impossible for the central banks to have a reasonable amount of control over the monetary policy unless they have strong and efficient money markets in place which help in implementing the policy at the grassroots level.

Functions of Capital Markets

The capital market is a vital segment of the financial market that facilitates the long-term financing of businesses, governments, and other entities. It serves as a platform for buying and selling various financial instruments that have longer maturities than those traded in the money market. The functions of capital markets are diverse and play a significant role in mobilizing savings, allocating capital efficiently, and promoting economic growth. Here are the key functions of capital markets:

Facilitating Long-Term Financing: One of the primary functions of capital markets is to enable businesses and governments to raise long-term funds for capital investments and expansion. Companies can issue equity (shares) or debt (bonds) securities to finance projects with long gestation periods, such as infrastructure development or research and development.

Mobilizing Savings: Capital markets provide a means for individuals and institutions to invest their savings in various financial instruments. By investing in stocks, bonds, mutual funds, and other securities, savers can earn returns on their investments and build wealth over time.

Allocating Capital Efficiently: Capital markets play a crucial role in allocating capital to its most productive uses. Investors, through the price discovery mechanism, determine which companies and projects are most likely to generate higher returns. This process ensures that capital flows to productive and innovative ventures, fostering economic growth.

Providing Liquidity and Exit Options: Investors in the capital markets have the option to buy and sell their securities, providing liquidity to their investments. This liquidity allows investors to exit their positions when needed, enhancing confidence and participation in the market.

Valuation of Financial Instruments: The capital market serves as a mechanism for determining the value of various financial instruments. The prices of stocks, bonds, and other securities are determined by market

forces, reflecting investors' perceptions of the issuers' financial health and prospects.

Raising Capital for Governments: In addition to companies, governments also use the capital market to raise funds through the issuance of sovereign bonds. These funds are utilized for various developmental projects and to finance budgetary deficits.

Facilitating Mergers and Acquisitions: Capital markets create opportunities for mergers and acquisitions (M&A) activities. Companies can acquire or merge with other firms by issuing new shares or debt securities, enabling strategic expansion and consolidation in the corporate landscape.

Promoting Corporate Governance: The existence of publicly traded companies in the capital market necessitates strong corporate governance practices. Companies are accountable to their shareholders, promoting transparency, accountability, and effective management.

Diversification and Risk Management: Capital markets offer a wide range of investment options, allowing investors to diversify their portfolios. Diversification helps spread risk and reduce the impact of adverse events on individual investments.

Innovation and Entrepreneurship: Capital markets provide a platform for innovative startups and entrepreneurs to raise funds through initial public offerings (IPOs) or venture capital investments. This fosters a dynamic entrepreneurial ecosystem and encourages innovation.

Wealth Creation and Retirement Planning: Participation in the capital market allows individuals to build wealth over time through investment returns. It also provides opportunities for retirement planning, ensuring financial security during post-employment years.

In conclusion, the functions of capital markets are diverse and far-reaching, encompassing everything from long-term financing for businesses and governments to wealth creation and risk management for individual investors. These markets play a pivotal role in allocating capital efficiently, fostering economic growth, and promoting financial stability. Strong and well-regulated capital markets are essential for robust and thriving economies, and they continue to be a driving force behind global economic development.

Stock Exchange market

Stock Exchange market is a vital component of a stock market. It facilitates the transaction between traders of financial instruments and targeted buyers. A stock exchange in India adheres to a set of rules and regulations directed by Securities and Exchange Board of India or SEBI. The said authoritative body functions to protect the interest of investors and aims to promote the stock market of India.

Bombay Stock Exchange (BSE):

- Established in 1875, BSE is one of the oldest stock exchanges in Asia and the first stock exchange in India.
- Located in Mumbai, Maharashtra, it is also known as the "Dalal Street."
- BSE provides a platform for trading a wide range of financial instruments, including equities, bonds, mutual funds, exchange-traded funds (ETFs), and derivatives.

National Stock Exchange (NSE):

- Founded in 1992, NSE is the leading stock exchange in India and is based in Mumbai, Maharashtra.
- It is the first fully automated electronic exchange in the country.
- NSE offers trading in equities, equity derivatives, currency derivatives, interest rate futures, and debt instruments.
- Apart from BSE and NSE, India also has a few regional stock exchanges that have historically operated in specific regions but have limited activity compared to the two major exchanges.

Sensex

Sensex, also known as the Sensitive Index, is the benchmark stock market index of the Bombay Stock Exchange (BSE) in India. It comprises the 30 largest and most actively traded companies listed on the BSE, representing various sectors of the Indian economy. The index is calculated using a market capitalization-weighted methodology, with the base year set as 1978-79 and a base value of 100.

As a market barometer, the Sensex reflects the overall sentiment and performance of the Indian stock market. It is closely watched by investors, analysts, policymakers, and the media as an indicator of market trends and economic health. The Sensex's fluctuations and movements are influenced by factors such as economic conditions, corporate earnings, global market trends, and geopolitical events.

Investors and fund managers often use the Sensex as a reference point to gauge the performance of their investments. It serves as a valuable tool for benchmarking investment returns and analyzing the broad performance of the Indian economy. The inclusion of prominent blue-chip companies from diverse sectors in the index provides a comprehensive view of the country's economic landscape.

Nifty

Nifty, officially known as the Nifty 50, is the benchmark stock market index of the National Stock Exchange (NSE) in India. It represents the performance of the 50 largest and most liquid companies listed on the NSE across various sectors of the Indian economy. The index is calculated using a market capitalization-weighted methodology, with the base year set as 1995 and a base value of 1,000.

As one of the most widely tracked stock market indices in India, Nifty serves as a key indicator of the overall performance of the Indian equity market. It is considered a barometer of market sentiment and economic health. Fluctuations in the Nifty are closely watched by investors, analysts, and policymakers as an indicator of market trends.

Nifty's composition includes companies from sectors such as banking, information technology, energy, consumer goods, automobiles, and more. The diverse representation of sectors provides a comprehensive view of the Indian economy's performance.

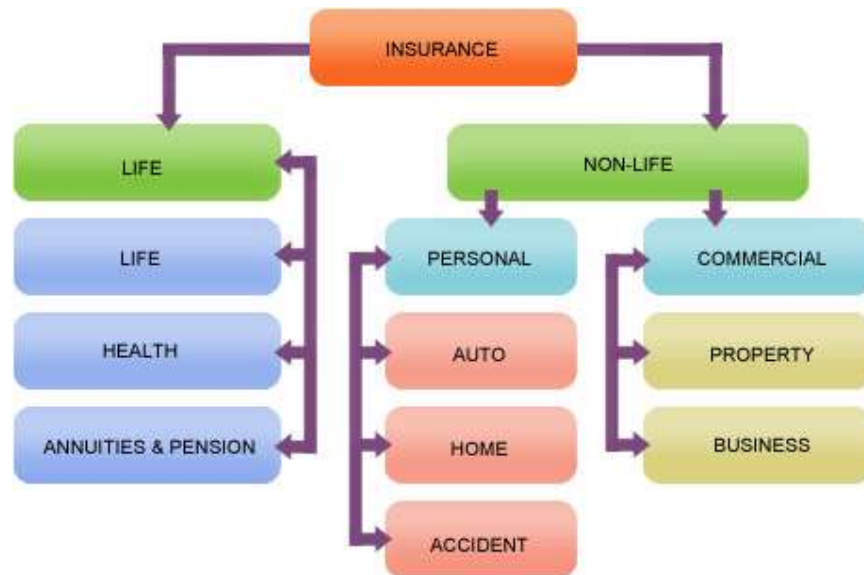
Investors and fund managers use Nifty as a reference point to gauge the performance of their investments and benchmark their returns. The index's

movements are influenced by various factors, including economic conditions, corporate earnings, global market trends, and geopolitical events.

Insurance

Insurance is a risk management and financial protection tool that provides individuals, businesses, and organizations with coverage against potential losses and uncertainties. It involves the transfer of the financial burden of a potential loss from the insured to the insurer in exchange for a premium payment. Insurance operates on the principle of spreading risk among a large number of policyholders, allowing each individual or entity to share the cost of potential losses.

Types of Insurance:



Life Insurance: Life insurance provides a payout to the beneficiaries upon the insured's death. It offers financial support to the family or dependents of the insured and can help cover funeral expenses, outstanding debts, and other financial obligations.

Health Insurance: Health insurance covers medical expenses and provides financial assistance in case of illness, injury, or hospitalization. It helps individuals access quality healthcare without facing significant financial burdens.

Motor Insurance: Motor insurance provides coverage for damages or injuries resulting from accidents involving vehicles. It is mandatory in many jurisdictions to protect both drivers and third parties.

Home Insurance: Home insurance offers protection against property damage or loss due to events like fire, theft, vandalism, or natural disasters. It ensures homeowners can rebuild or repair their property after a covered loss.

Property Insurance: Property insurance covers assets such as buildings, equipment, and inventory against damages or losses caused by events like fire, theft, or natural disasters. It is vital for businesses to protect their assets.

Liability Insurance: Liability insurance protects individuals or businesses from legal liabilities arising from bodily injury or property damage caused to others. It covers legal defense costs and potential settlements or judgments.

Travel Insurance: Travel insurance provides coverage for medical emergencies, trip cancellations, lost luggage, and other travel-related risks. It ensures travelers have financial protection during their journeys.

Business Insurance: Business insurance includes various policies to protect businesses from risks such as property damage, liability claims, business interruption, and employee-related risks.

Importance of Insurance

Risk Management: Insurance is a vital risk management tool that helps individuals and businesses transfer the financial burden of potential losses to insurance companies. It safeguards against unforeseen events, providing financial security and stability.

Financial Protection: Insurance offers a safety net against unexpected expenses, ensuring individuals and businesses can recover from losses without suffering severe financial hardships.

Encourages Investment: Insurance gives individuals and businesses the confidence to invest in higher-risk ventures, knowing that they have protection against potential losses. It promotes entrepreneurship and economic growth.

Promotes Social Welfare: Life insurance ensures the financial security of families and dependents in case of the insured's death, reducing financial hardships for loved ones.

Legal Compliance: Many types of insurance, such as auto insurance and workers' compensation insurance, are mandatory by law. Compliance with insurance requirements protects individuals and businesses from legal consequences.

Supports Economic Stability: Insurance helps stabilize the economy by reducing the financial burden on individuals and businesses during times of crisis, such as natural disasters or accidents.

Peace of Mind: Knowing that they are financially protected against unforeseen events, individuals and businesses can have peace of mind and focus on their personal and professional goals.

Fulfills Contractual Obligations: Insurance is often required for obtaining loans, mortgages, and business contracts. It ensures parties fulfill their financial obligations in case of unexpected events.

In summary, insurance plays a crucial role in providing financial protection, managing risks, promoting economic stability, and supporting social welfare. The diverse types of insurance available cater to various individual and business needs, ensuring a secure and stable future for policyholders.