



# SYLLABUS

## B.Com II YEAR

### Subject: - Applied Economics

Unit	Contents
UNIT – I	Historical Background of Applied Economics, Concept of Applied Economics, Scope, Nature and Importance, Its Limitations Difference between Micro and Macro economics, National Income -Concept, Gross National Product, Net National Product & Gross Domestic Product Net Domestic Product, Methods of Measurement of National Income and Problem related to that.
UNIT – II	Income and Consumption Relationship- Principles of Determination of Income Classical and Keynes's Theory, Solution of short term and long term consumption function, Consumption function in Indian economy
UNIT – III	Value of money- Concept and determinants of value of money, Quantity theory of money, Theory of Fisher and Cambridge, Theory of demand and supply of money, Theory of value of money, Theory of liquidity of money, Keynes's Money income theory.
UNIT – IV	Concept of economic development and economic growth, economic development and its Determining factors, economic and non-economic factors affecting economic growth, classical and modern theories of economic development, stages of economic development of Keynes and Rostow, strategy of balanced and unbalanced development.
UNIT – V	Changes in the value of money- Money Inflation, Money deflation, inflation and narrative inflation, demand driven inflation, cost growth inflation, stagflation, effects of Money Inflation & Money deflation in the Indian economy.



## UNIT-I

### What is Applied Economics?

Applied economics is the field of study that deals with applying economic theories in real-world scenarios. In the applied version of economics, the conclusions derived from the theoretical analysis are utilized to make complex economic terms and situations easy to understand for the information seekers or recipients.

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Applied economics aims to implement the theoretical facts and enhance the quality of business, adopt the best practices in carrying out daily activities, improve human behavior, etc. In addition, it helps figure out to what extent the choices made by an individual or entity would impact a business or individual decision.

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- Applied economics refers to the field of study where the knowledge gained from the theoretical economics lessons can be used to assess what will work well in a particular situation.
- It generally uses the basics of economics as the seed to ascribe relevant solutions to real-life problems.
- The application of economics makes finding answers to questions related to the environmental sector, human behavior, market situations, legal aspects, etc., easier.
- It works for both micro (individual-level) and macro-level (community, business, or national-level) problems.

### How Does Applied Economics Work?

Applied economics, as the name suggests, deals with the application of theoretical aspects of the subject. This area of study does not rely on any one principle of **economics**. Instead, it takes into consideration all the principles of the subject. It applies them in respective sectors to understand the effect of chosen alternatives on the decisions that individuals, policy-makers, and businessmen make.

Some of the concepts and principles that make the applied version of economics effective include **econometrics**, marginal principle, **opportunity cost**, the principle of voluntary returns, the **law of diminishing marginal utility**, and the real/nominal principle.

The **studies of applied economics** have shown how effective the implementation of the theoretical principles has been in dealing with a particular cause, issue, or situation. It also indicates how it uses economics as more than just a hub of theories.



Instead, the application of the subject is used as a tool to extend the scope of economics from books to real-world scenarios.

As economics is studied as **microeconomics** and **macroeconomics**, the applied version of the subject is also implemented at two levels: micro and macro. While the application at the micro-level tries to use theoretical economics to solve issues at the individual level, the macro-level application helps deal with problems at a city, state, or national level.

### **Relevance**

Applied economics marks the utilization of the knowledge and skills acquired by professionals during their theoretical economics lessons. The leaders, policy-makers, and decision-makers use it in any context to figure out how their choices would impact their decisions. However, they can approve or disapprove a strategy, initiative, or step after proper analysis and validation.

The field of study makes individuals apply theories and knowledge to solve their problems. It, therefore, finds relevance in different theories, concepts, and industries, including the **game theory**.

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### **Advantages & Disadvantages**

Applied economics helps make business decisions, whether it is the decision to purchase an asset or fixing the price at which they should sell their products/services to customers. This field of study plays a significant role in resolving issues that applied mathematics and accountancy cannot solve.

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However, this applied version of the subject works on certain assumptions. Conducting analysis using the application of economics is normally for a general group. Thus, such generalized principles might not work for individual cases, including certain places or markets.

### **What is applied economics?**

It deals with the implementation of theoretical principles to deal with a particular cause, issue, or situation. It uses economics as a tool rather than just describing the theory and extends the scope of economics from the text to the real world.

### **primary concerns of applied economics**

The primary concern is to ensure the knowledge of economics helps people make relevant decisions based on proper assessment and analysis of different factors. In



addition, it intends to improve the quality of business by implementing standard ethical practices, bettering daily life, framing public-friendly policies, and making relevant decisions keeping the same in mind.

**important to study applied economics**

It is important to study the field as it helps business leaders, policy-makers, and decision-makers understand the effect of their choices on the decisions they make. As a result, they carefully determine the right and not-so-right ways of proceeding with it.

**Difference between Microeconomics V/s Macroeconomics**

S.No.	Points	Microeconomics	Macroeconomics
1	<b>Study</b>	It studies individual unit	It studies aggregate or group of individual units.
2	<b>Assumption</b>	At micro level full employment is assumed which is never found in an economy. Hence this is an unreal assumption	At macro level, full employment is not assumed. Instead equilibrium employment is assumed which is a real assumption.
3	<b>Subject Matter</b>	We study demand supply, consumer behavior production, types of market, theory of cost & revenue etc.	We study national income, theory of wage, interest & employment, Theory of money, theory of international trade etc.
4	<b>Applicability</b>	It is useful in analysis of an individual unit like cost of an individual good, demand of a single good, price of a single good.	It is useful in analysis of aggregate units such as aggregate demand, aggregate prices or inflation-deflation, aggregate or national income etc.
5	<b>Usefulness to Govt.</b>	It is less useful to Govt. in formulating economic policies.	It is more useful to Govt. in formulating economic policies.

**INTERDEPENDENCE BETWEEN MICRO AND MACRO ECONOMICS**

Micro and macro economics are the two sides of the same coin. There is close interdependence between the two. We cannot analyse the individual behaviour without the assuming to aggregate and likewise aggregate cannot be effective unless individual variables are kept under consideration.

Micro economics contributes towards macro economics in a number of ways as:-  
**1. Study of economic fluctuations:**-Business cycles which are universal in every sector, are influenced by both individuals and aggregate factors. Unless we review both micro and aggregate



variables, we cannot provide an appropriate solution to business cycles. Therefore to study trade cycles micro and macro economics contribute significantly.

**2. Basis of economic laws**:-Micro economics acts as a basis macro economics because macro is an aggregate of individual units. The success and accuracy of aggregates depends on the individual units. Similarly, macro theories are used by micro economists.

**3. Role in international trade**:-In international trade both the approaches are used. Economists have developed their theories on the basis of micro economics presuming full employment of resources and mobility of factors of production. However, modern economists looked on the economy as a whole and recognized the role of aggregates. So general equilibrium is nothing but an extension of equilibrium of micro economics.

**4. Balance of payments and interdependence**:-Balance of payments problem is also a burning problem for economy. An individual sector may have favorable balance of payments whereas other sectors, unfavourable balance of payments. On the other hand, the overall position of an economy is to be assessed from aggregate position of all sectors.

**5. Theory of tariffs**:-Many economists have propounded that modern macro approaches of imposing tariffs with the intention of correcting balance of payments position is virtually based on the theory of monopoly. So micro economics has influenced the modern macro economics theory.

## **DEFINITIONS OF NATIONAL INCOME**

### **Marshall's Definition**

"The labour and capital of a country acting on its natural resources produce annually a certain net aggregate of commodities, material and immaterial, including services of all kinds. This is the true net annual income or revenue of the country or national dividend."

### **Pigou's Definition**

"National income is that part of the objective income of the community, including of course income derived from abroad, which can be measured in money."

"A national income estimate measures the volume of commodities and services turned out during a given period counted without duplication."

"The aggregate value of all final goods and services produced by the residents of a country, operating both within the national boundary and abroad, in any particular year, is called the national income of the country."

### **Characteristics of National Income –**

- 1) National income is estimated in monetary terms. This may be expressed at current prices or some base year prices.
- 2) Only the value of final goods and services are taken into account for measuring national income.
- 3) National income is always expressed with respect to a given time period. Hence, it is a 'flow' concept.
- 4) All types of 'pure exchange transactions' are excluded from national income accounting. In case of pure exchange transactions, nothing new is produced in the current year. For instance, second-



hand sales, purchase and sale of securities (shares and debentures), transfer payments (such as unemployment dole, pension payments) etc. are regarded as pure exchange transactions. All such transactions are not concerned with current year production. So, they are excluded from national income estimates.

- 5) National income is not simply the sum of all personal incomes in a country.

### Difference between Domestic Income and National Income -

S.No.	National Income	Domestic Income
1	It includes income earned by the residents only.	It includes income earned by the residents as well as non-residents.
2	It consists of income earned both within and outside the domestic territory of a country.	It consists of income earned only within the domestic territory.
3	It is an economic concept.	It is a geographic concept.
4	It includes net factor income from abroad.	It does not include net factor income from abroad.
5	National income = Domestic income + Net factor income from abroad.	Domestic income = National income - Net factor income from abroad.

**Net factor income from abroad** is the difference between the income received by the residents from abroad for rendering factor services (e.g., banking and insurance services, other financial services, engineering services, etc.) and the income paid for the factor services rendered by the non-residents in the domestic territory of a country.

### CONCEPTS OF NATIONAL INCOME

#### **1) Gross Domestic Product (at market prices):**

The gross domestic product at market price (GDPmp) indicates the value of all final goods and services produced within the domestic territory of a country during any particular year. These goods and services are valued at the prevailing market prices of those goods and services.

#### **2) Net domestic product (at market prices):**

The Net domestic product at market prices (NDPmp) refers to the value of all final goods and services at the prevailing market prices within the domestic territory of a country during any particular year after making allowance for the consumption of fixed capital or depreciation allowance.

$$\text{NDPmp} = \text{GDPmp} - \text{Depreciation allowance}$$

#### **3) Gross National Product (at market price) :**

The Gross National Product at market prices (GNPmp) refers to the aggregate market value of all final goods and services produced by the residents of a country during any particular year.

#### **4) Net National Product (at market prices):**

The net national product at market prices (NNPmp) refers to the market value of all final goods and services produced by the residents of a country after allowing for the depreciation of fixed capital during any particular year. Thus, if we deduct the consumption of fixed capital or the depreciation allowance from the GNPmp, we get NNPmp.

$$\text{NNPmp} = \text{GNPmp} - \text{Depreciation allowance}$$

#### **5) Gross Domestic Product (at factor cost):**



The Gross Domestic Product at factor cost (GDP<sub>fc</sub>) refers to the estimation of GDP in terms of the aggregate earnings of factors of production.

### 6) Gross National Product (at factor cost):

The Gross National Product at factor cost (GNP<sub>fc</sub>) refers to the GNP in terms of factor incomes. It is the aggregate earnings received by different factors of production (i.e., wages, rent, interest and profits) supplied by the residents of a country during any particular year.

### 7) Net Domestic Product (at factor cost):

The net domestic product at factor cost (NDP<sub>fc</sub>) estimates the NDP in terms of the aggregate factor incomes of the residents and non-residents within the domestic territory of a country during any particular year.

### 8) Net National Product (at factor cost):

The net national product at factor cost (NNP<sub>fc</sub>) is the value of the final goods and services produced by the residents of a country, whether operating within the domestic territory or outside it, at their factor costs. It is also termed as the National Income of a country.

### 9) Private Income

Central Statistical Organization defines Private Income as “the total of factor income from all sources and current transfers from the government and rest of the world accruing to private sector” or in other words the private income refers to the income from socially accepted source including retained income of corporation.

**NI + Transfer payment + Interest on public debt + Social security + Profit and Surplus of public enterprises = Private Income**

### 10) Personal Income

Prof. Peterson defines Personal Income as “the income actually received by persons from all sources in the form of current transfer payments and factor income. In other words, Personal Income is the Total income received by the citizens of a country from all sources before direct taxes in a year.

**PI = Private Income + Undistributed Corporate Profits – Direct Taxes**

### 11) Disposable Income

Prof. Peterson defined Disposable Income as “the income remaining with individuals after deduction of all taxes levied against their income and their property by the government.”

Disposable Income refers to the income actually received by the households from all sources. The individual can dispose this income according to his wish, as it is derived after deducting direct taxes.

**DI = Personal Income - Direct taxes – Miscellaneous receipt of the government.**

### Methods of calculating National Income

#### A) Value added or production or output approach

1) The output approach focuses on finding the total output of a nation by directly finding the total value of all goods and services a nation produces.

2) Problem of Double counting: Because of the complication of the multiple stages in the production of a good or service, only the final value of a good or service is included in the total output. This avoids an issue often called 'double counting', wherein the total value of a good is included several times in national output, by counting it repeatedly in several stages of production. In the example of meat production, the value of the good from the farm may be Rs10, then Rs 30



from the butchers, and then Rs 60 from the supermarket. The value that should be included in final national output should be Rs 60, not the sum of all those numbers, Rs 90. The values added at each stage of production over the previous stage are respectively Rs 10, Rs 20, and Rs 30. Their sum gives an alternative way of calculating the value of final output.

## B) Income method

The income approach equates the total output of a nation to the total factor income received by residents or citizens of the nation. The main types of factor income are:

- Employee compensation/ salaries & wages (cost of fringe benefits, including unemployment, health, and retirement benefits);
- Interest received net of interest paid;
- Rental income (mainly for the use of real estate) net of expenses of landlords;
- Royalties paid for the use of intellectual property and extractable natural resources.
- Corporate Profits

## C) Expenditure or Consumption method

The expenditure approach is basically an output accounting method. It focuses on finding the total output of a nation by finding the total amount of money spent. This is acceptable, because like income, the total value of all goods is equal to the total amount of money spent on goods

$$\text{GDP} = \text{C} + \text{I} + \text{G} + (\text{X} - \text{M})$$

Where:

**C** = household consumption expenditures / personal consumption expenditures

**I** = gross private domestic investment

**G** = government consumption and gross investment expenditures

**X** = gross exports of goods and services

**M** = gross imports of goods and services

Note:  $(\text{X} - \text{M})$  is often written as  $\text{X}_N$ , which stands for "net exports"

### PROBLEMS OF CALCULATING NATIONAL INCOME IN INDIA

- 1) **Difficulty in defining the nation** – As the world has become a global village, it is very difficult to identify the national boundaries has become difficult.
- 2) **Non-marketed service** – Services like love, kindness, and mercy has economic value but have no money value.
- 3) **Possibility of double counting** – The possibility of double counting which arises from the failure to distinguish properly between a final and intermediate product.
- 4) **Transfer payment** – Individual get pension, unemployment allowance and interest on public loans, but whether these should be included in national income is a difficult problem. The best way to solve the difficulty is to consider only the disposable income of individual or personal income minus all transfer payments.
- 5) **Capital gains or losses** – Commodity product this year is sold next year if at higher price is capital gain & at loss then capital losses e.g. other example could be selling of shares.
- 6) **Income earned through illegal activities** –Such as gambling or illicit extortion cannot be included in national income.
- 7) **Self-consumed production** – In many backward countries, substantial part of the output is not exchanged for money in market it is being either consumed directly by producer or bartered for other goods & services in the unorganized sector.
- 8) **Paucity of statistics** – According to the national income committee of India, the available statistics, especially for agriculture & small scale industry are extremely unreliable & incomplete.





- 9) **Inflation may give a false impression of growth in national income** – In a country when price rise, inflation rises even though the production falls & vice versa. It leads to mis-measurement of national income. ,
- 10) **Difficulties in classifying the commodities** – Coal is both household use & industrial use as well ,so is the expenditure on coal consumption , expenditure or an investment.
- 11) **Multiple occupations** – The production in agri-industrial, in all sectors is highly scattered and unorganized making the calculation of national income very difficult.
- 12) **Capital depreciation** – Depreciation is charged on profit which lowers national income. But the problem of estimating the current depreciated value of a piece of capital whose expected life is forty year is very difficult.
- 13) **Data problems** – There are problems of collecting reliable statistical data about all the productive activities in the underdeveloped countries.
- 14) **Illiteracy** – The majority of people in the country like India are illiterate & they do not keep any accounts about the production & sale of their products.

**Measuring the level and rate of growth of national income (Y) is important for keeping track of:**

- **The rate of economic growth**
- **Changes to living standards**
- **Changes to the distribution of income between groups within the population**

### Gross Domestic Product

- **Gross domestic product (GDP) is the total value of output produced in a given time period**
- **GDP includes the output of foreign owned businesses that are located in a nation following foreign direct investment. For example, the output produced at the Nissan car plant on Tyne and Wear contributes to the UK's GDP**

### GDP – By Sum of Spending, Factor Incomes or Output

GDP (Expenditure)	GDP (Factor Incomes)	GDP (Value of Output)
<ul style="list-style-type: none"><li>• Consumption</li><li>• Government spending</li><li>• Investment spending</li><li>• Change in value of stocks</li><li>• Exports</li><li>• <b>- Imports</b></li><li>• = GDP (known as aggregate demand)</li></ul>	<ul style="list-style-type: none"><li>• Income from people in jobs and in self-employment (e.g. wages and salaries)</li><li>• Profits of private sector businesses</li><li>• Rent income from the ownership of land</li></ul>	<ul style="list-style-type: none"><li>• Value added from each of the main economic sectors</li><li>• These sectors are<ul style="list-style-type: none"><li>• Primary</li><li>• Secondary</li><li>• Manufacturing</li><li>• Quaternary</li></ul></li></ul>



### Three ways to measure GDP

There are three ways of calculating GDP - all of which in theory should sum to the same amount:

**National Output = National Expenditure (Aggregate Demand) = National Income**

#### (i) The Expenditure Method - Aggregate Demand (AD)

The full equation for GDP using this approach is

**GDP = C + I + G + (X-M) where**

- **C: Household spending on goods and services**
- **I: Capital Investment spending**
- **G: Government spending**
- **X: Exports of Goods and Services**
- **M: Imports of Goods and Services**

#### The Income Method – adding together factor incomes

**GDP is the sum of the incomes earned through the production of goods and services. This is:**

- **Income from people in jobs and in self-employment (e.g. wages and salaries)**
- **+**
- **Profits of private sector businesses**
- **+**
- **Rent income from the ownership of land**
- **=**
- **Gross Domestic product (by sum of factor incomes)**

**Only those incomes that are come from the production of goods and services are included in the calculation of GDP by the income approach. We exclude:**

**Transfer payments e.g. the state pension; income support for families on low incomes; the Jobseekers' Allowance for the unemployed and other welfare assistance such housing benefit and incapacity benefits**

**Private transfers of money from one individual to another**

**Income not registered with the tax authorities Every year, billions of pounds worth of activity is not declared to the tax authorities. This is known as the shadow economy.**

**Published figures for GDP by factor incomes will be inaccurate because much activity is not officially recorded – including subsistence farming and barter transactions**



## Gross Value Added and Contributions to a nation's GDP

- There are three main wealth-generating sectors in an economy – manufacturing and construction, primary (including oil& gas, farming, forestry & fishing) and a wide range of service-sector industries.
- This measure of GDP adds together the value of output produced by each of the productive sectors in the economy using the concept of value added. .

Value added is *the increase in the value of goods or services as a result of the production process*

Value added = value of production - value of intermediate goods

Say you buy a pizza from Dominos for £9.99. This is the retail price and will count as consumption. The pizza has many ingredients at stages of the supply chain – tomato growers, dough, mushroom farmers and also the value created by Dominos as they put the pizza together and deliver to the consumer.

Some products have a low value-added, for example cheap tee-shirts selling for little more than £5. These are low cost, high volume, low priced products.

Other goods and services are such that lots of value can be added as we move from sourcing the raw materials through to the final product. Examples include designer jewellery, perfumes, meals in expensive restaurants and sports cars. And also the increasingly lucrative computer games industry.

Manufacturing in the UK was 11% of GDP in 2015.

### Manufacturing in the World Economy

- The creative force behind 10bn unique products
- It accounts for 15-20 per cent of world economy
- It employs about 300m people (roughly 5 pc of world population)

### GDP by Output (Value Added)

- The majority of UK GDP comes from service industries such as banking and finance, tourism, retailing, education and health.
- In 2017, the service industries accounted for 79% of total UK economic output (Gross Value Added) and accounted for 83% of workforce jobs in September 2017.

### Manufacturing

Manufacturing is one of the production industries, which also include mining, electricity, water & waste management and oil & gas extraction. In 2015, the UK manufacturing sector accounted for 10% of total UK GDP and it accounted for 8% of jobs.

### Service sector industries

The main service sector industries in the UK are:



- Hotels and restaurants, and a range of services provided by local government
- Transport, logistics, storage and communication
- Business services and finance, motor trade, wholesale trades and retail trade
- Land transport and air transport, post and telecommunications
- Real estate activities, computer and related activities, Education, Health and social work
- Sewage and refuse disposal
- Recreational, cultural and sporting activities

## Manufacturing Industries

1. The process or business of producing goods in factories
2. The part of a company that is concerned with making goods, rather than designing or selling them

The manufacturing sector accounted for 10% of UK output (Gross Value Added) in 2012

In 2013 there were 2.6 million jobs in the manufacturing sector, this was 8% of all jobs in the UK economy



Food processing



Earth moving equipment



Additive manufacturing (3D)



**renaissance**

college of commerce & management



## Service Industries

1. Services are part of the tertiary sector of the economy
2. There are many different service industries – some focusing on business-to-business and others business-to-consumer products



Hotels and  
restaurants & retail



Education, health  
care, legal services



Transport and logistics

In 2012, the service sector accounted for 79% of UK output (Gross Value Added) and for 83% of jobs.

In 2013 there were 27.1 million jobs in the service sector, 83% of all jobs in the UK

### Manufacturing Per Capita Gross National Income

How much does each person earn on average? We use per capita measures to give us a guide to this. Income per capita is a way of measuring the standard of living for the inhabitants of a country.

*Gross National Income per capita = Gross National Income / Total Population*



## Measuring National Income Per Capita

### Per capita income

- Per capita means income per head of population
- = GDP / total population

### Population estimates

- In many countries, the official population data is inaccurate
- There has been a sharp rise in migrant flows

### UK Population Forecast

- UK pop is projected to increase by 9.6 million over the next 25 years
- Projected UK pop to reach 70 million in 2027

Year (Mid Year Figure)	UK Population (Millions)
1980	56.3
1990	57.2
2000	58.9
2005	60.2
2010	62.3
2013	63.6

**Per capita national income**

**Problems with using GDP as a measure for standard of living**



## UNIT -2

### Income and Consumption Function

Propensity to consume is also called consumption function. In the Keynesian theory, we are concerned not with the consumption of an individual consumer but with the sum total of consumption spending by all the individuals. However, in generalizing the consumption behaviour of the whole economy, we have to draw some useful conclusions from the study of the behaviour of a normal consumer, which may be valid for all consumers' behaviour of the economy. Aggregate consumption depends on consumption function or propensity to consume.

The economic term 'consumption' means the amount spent on consumption at a given level of income. 'Consumption function' or 'propensity to consume' means the whole of the schedule showing consumption expenditure at various levels of income. It tells us how consumption expenditure increases as income increases. The consumption function or propensity to consume, therefore, indicates a functional relationship between the aggregates, viz., total consumption expenditure and the gross national income. It is a schedule that expresses relationship between consumption and disposable income.

According to Keynesian theory, following are the factors that influence consumption:

- (a) The real income of the individual,
- (b) The past savings, and
- (c) Rate of interest.

#### Average and Marginal Propensities to Consume

The average propensity to consume (apc) is a relationship between total consumption and total income in a given period of time. In other words, apc is the ratio of consumption to income. Thus:

$$\text{apc} = \frac{C}{Y}$$

Where C : Consumption  
Y : Income  
apc : Average propensity to consume





While, the marginal propensity to consume (mpc) measures the incremental change in consumption as a result of a given increment in income. In other words, mpc is the ratio of change in consumption to the change in income.

$$\text{mpc} = \frac{\Delta C}{\Delta Y}$$

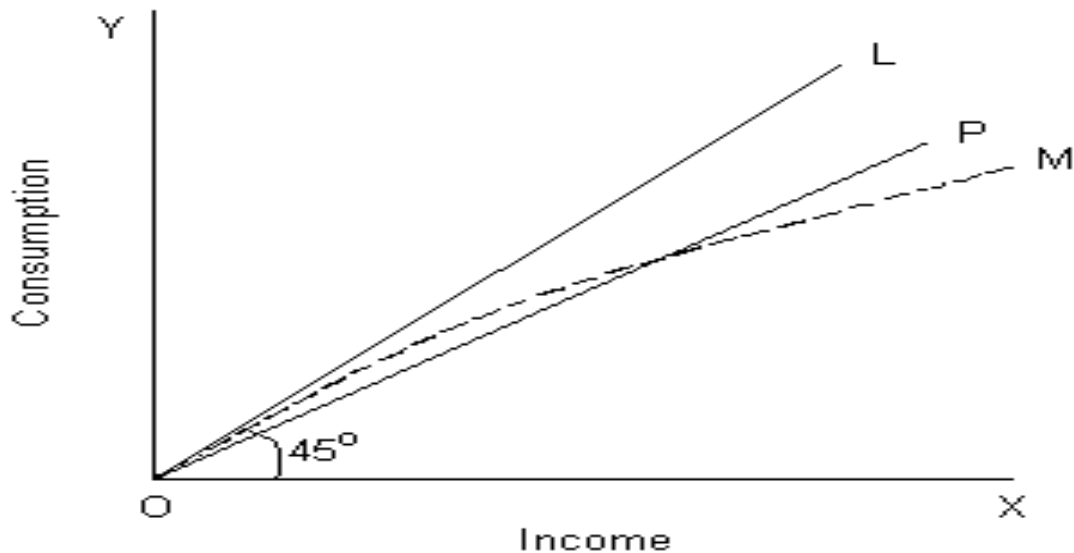
Where  $\Delta C$  : Incremental change in consumption

$\Delta Y$  : Incremental change in income

mpc : Marginal propensity to consume

the normal relationship between income and consumption is that when income increases, consumption also increases, but by less than the increase in income. In other words, in normal circumstances, mpc is less than one. It is drawn as a straight-line with a slope of less than one. This slope indicates the percentage of additional disposable income that will be spent. It is assumed that the whole additional income is not spent, i.e., a certain amount is spent and the remainder is saved. This can be further explained with the help of following table and diagram:

<b>Income</b>	<b>Consumption</b>	<b>Saving</b>
100	75	25
120	90	30
140	105	35
180	135	45
220	165	55



**Figure 1 – Income consumption relationship**

In the above diagram, OL is the income line and OP is income consumption curve. The income consumption line OP lies below the income line OL. The mpc will be measured by the tangent of the angle that income consumption curve makes with X-axis.

$$mpc = \tan \angle POX$$

The curve as we have drawn turns out to be straight line rising from the origin, which means that mpc is constant throughout. This, however, need not be so and the curve may well become flatter as income rises, for as more and more consumption needs have been satisfied, a greater share of an increase in income than before may be saved. The dotted curve OM represents such a relationship showing that as income rises, mpc becomes smaller and smaller.

There is a level of disposable income (DI) at which the entire income is spent and nothing is saved. This point is often known as 'point of zero savings. Below this level of DI, the consumption expenditure will exceed the DI. There may be cases in which the consumer has no income at all. In such cases, the income consumption curve may not rise from the origin but from farther left showing that when income is zero, consumption is not zero and that the individual is living on his past savings.



**Propensity to Save:**



**Figure 2 – Saving-income curve**

$$\begin{aligned} \text{Marginal propensity to save (mps)} &= \frac{\Delta S}{\Delta Y} \\ &= 1 - \frac{\Delta C}{\Delta Y} \end{aligned}$$

**Keynes' Law of Consumption:**

Keynes propounded a law based on the analysis of consumption function. This law is known as 'Fundamental Law of Consumption' or 'Psychological Law of Consumption'. It states that aggregate consumption is a function of aggregate disposable income.

**Propositions of the Law:**

This law consists of three propositions:

- (a) When aggregate income increases, consumption expenditure will also increase but by a somewhat smaller amount.
- (b) When income increases, the increment of income will be divided in same proportion between saving and consumption. Consumption and saving go side by side. What is not consumed is saved. Savings is, thus, the complement of consumption.



(c) As income increases, both consumption spending and saving go up. An increment in income is unlikely to lead either to less spending or less savings than before. It will seldom happen that a person may decrease his consumption or his savings when he has got more income.

**Assumptions:**

(a) Habits of people regarding spending do not change or that **the propensity to consume remains the same or stable.**

(b) **The economic conditions remain normal.** There is no hyper-inflation or war or other abnormal conditions.

(c) The economy is a **free-market economy.** There is no government intervention.

(d) The important characteristic of the slope of consumption function is that the **marginal propensity to consume (mpc) will be less than unity.** This results in low-consumption and high-saving economy.

**Implications:**

According to Keynesian theory, the mpc is less than unity, which brings out the following implications:

(a) Since consumption largely depends on **income and consumption function is more or less stable**, it is necessary to increase investment fill the gap of declining consumption as income increases. If this is not done, the increased output will not be profitable.

(b) When the income increases, and the consumption are not increased, there is a **danger of over-production.** The government will have to step in to remedy the situation. Therefore, the policy of laissez-faire will not work here.

(c) **If the consumption is not increased, the marginal efficiency of capital (MEC) will diminish.** The demand for capital will also diminish, and all the economic progress will come to a standstill.

(d) Keynes' Law explains the **turning points in the business cycle.** When the trade cycle has reached the highest point of prosperity, income has gone up. But since consumption does not correspondingly go up, the downward cycle starts, for demand has lagged behind. In the same manner, when the business cycle has touched the lowest point, the



cycle starts upwards, because consumption cannot be diminished beyond a certain point. This is due to the stability of  $mpc$ .

(e) Since the  $mpc$  is less than unity, this law explains the **over-saving gap**. As income goes on increasing, consumption does not increase as much. Hence saving process proceeds cumulatively and there arises a danger of over-saving.

(f) This law also explains the **unique nature of income generation**. If money is injected into the economic system, it will increase consumption but to a smaller extent than increase in income. This again is due to the fact that consumption does not increase along with increase in income.

### **Factors Influencing Consumption Function:**

There are certain factors affecting the propensity to consume in the long-run:

#### **1. Objective Factors:**

(a) **Distribution of income:** It is generally observed that the average and marginal propensities to consume of the poor are greater than those of the rich. This is because the poor has a lot of unsatisfied wants and he is likely to seize every opportunity that comes his way to satisfy them. On the other hand, the rich have already a high standard of living and relatively less urgent wants remain to be satisfied, so that in their case, an addition to their incomes is more likely to be saved than spent on consumption.

(b) **Fiscal policy:** Fiscal policy of the government will also influence the consumption behaviour of an economy. A reduction in taxation will leave more post-tax incomes with the people and this will stimulate higher expenditure on consumptions. Similarly, an increase in taxes will depress consumption.

(c) **Changes in business expectations:** Business expectations by affecting the incomes of certain classes of people affect consumption function.

(d) **Windfall gains and losses:** The windfall losses and gains arising out of changes in capital values affect the 'saving brackets' mostly and not the spending sections. Hence, their influence on consumption function is not so well marked.

(e) **Liquidity preferences:** Another factor is the people's liquidity preferences. If people prefer to keep their income in liquid form, consumption is reduced correspondingly.

(f) **Substantial changes in the rate of interest.**



## **2. Subjective Factors:**

### **(a) Individual motives to save:**

- (i) Building of reserves for unforeseen contingencies as illness or unemployment,
- (ii) To provide for anticipated future needs such as daughter's wedding, son's education, etc.
- (iii) To enjoy an enlarged future income by investing funds out of current income, etc.

### **(b) Business motives:**

- (i) The desire to expand business,
- (ii) The desire to face emergencies successfully,
- (iii) The desire to have successful management,
- (iv) The desire to ensure sufficient financial provision against depreciation and obsolescence.

## **Measures for Raising Consumption:**

1. Redistribution of income in favour of poor where propensity to consume is greater.
2. Comprehensive social security measures like unemployment doles, old-age pension, sickness insurance, etc.
3. Liberal wage policy, and
4. Credit facilities for middle and poor classes for purchasing more consumer goods.

## **Importance of Consumption Function:**

1. Important tool of macro-economic analysis.
2. Value of the multiplier gives us a link between changes in investment and changes in income.
3. Consumption function invalidates the Say's Law, which states that supply creates its own demand, because this theory does not hold accurate in the real world.
4. It shows the crucial importance of investment.
5. It explains the reasons of declining MEC.
6. It explains the turning points of business cycle.



### UNIT - 3

#### Meaning of Money

Money is an economic unit that functions as a generally recognized medium of exchange for transactional purposes in an economy. Money provides the service of reducing transaction cost, namely the double coincidence of wants. Money originates in the form of a commodity, having a physical property to be adopted by market participants as a medium of exchange. Money is commonly referred to as currency. Economically, each government has its own money system. Cryptocurrencies are also being developed for financing and international exchange across the world. Money is a liquid asset used in the settlement of transactions. It functions based on the general acceptance of its value within a governmental economy and internationally through foreign exchange. The current value of monetary currency is not necessarily derived from the materials used to produce the note or coin. Instead, value is derived from the willingness to agree to a displayed value and rely on it for use in future transactions. This is money's primary function: a generally recognized medium of exchange that people and global economies intend to hold, and are willing to accept as payment for current or future transactions. In general terms, the main function of money in an economic system is "to facilitate the exchange of goods and services and help in carrying out trade smoothly." Its basic characteristic is general acceptability. Functions of money are reflected in the following well-known couplet: "Money is a matter of functions four A medium, a measure, a standard, a store." Thus, conventionally money performs the following four main functions, each of which overcomes one or the other difficulty of barter. Medium of exchange and measure of value are primary functions because they are of prime importance whereas standard of deferred payment and store of value are called secondary functions because they are derived from primary functions.

#### **Function of Money**

**1. Money as the Medium of Exchange:** Money came into use to remove the inconveniences of barter as money has separated the act of purchase from sale. Medium of exchange is the basic or primary function of money. People exchange goods and services through the medium of money. Money acts as a medium of exchange or as a medium of payments. Money by itself has no utility (except perhaps to the miser). It is only an intermediary. The use of money facilitates exchange, exchange promotes specialisation Increases productivity and efficiency A good monetary system



is, therefore, of immense utility to human society. Money is also called a bearer of options or generalised purchasing power because it provides freedom of choice to buy things he wants most from those who offer best bargain.

**2. Money as a Unit of Account or Measure of Value:** Money serves as a unit of account or a measure of value. Money is the measuring rod, i.e.,

of production in terms of money and also plan their output on the basis of the money yield. It is, therefore, highly important that the value of money should be stable.

**3. Money as the Standard of Deferred Payments:** Deferred payments are payments which are made some time in the future. Debts are usually expressed in terms of the money of account. Loans are taken and repaid in terms of money. The use of money as the standard of deterred or delayed payments immensely simplifies borrowing and lending operations because money generally maintains a constant value through time. Thus, money facilitates the formation of capital markets and the work of financial intermediaries like Stock Exchange, Investment Trust and Banks. Money is the link which connects the values of today with those of the future.

**4. Money as a Store of Value:** Wealth can be stored in terms of money for future. It serves as a store value of goods in liquid form. By spending it, we can get any commodity in future. Keynes places great emphasis on this function of money. Holding money is equivalent to keeping a reserve of liquid assets because it can be easily converted into other things. People therefore normally wish to keep a part of their wealth in the form of money because savings in terms of goods is very difficult. This desire is known as liquidity preference. Clearly money is the best form of store of value. Wheat or any other product which will command a value cannot be stored for a long period. Another Function 'Liquidity of Money' is added these days. Money is perfectly liquid. Liquidity means convertibility into cash. Thus, the ability to convert an asset into money quickly and without loss of value is called liquidity of asset. Modern economists are laying stress on liquidity of money. Since, by definition, money is the most generally accepted commodity, it is also the most liquid of all resources. Possession of money enables one to get hold of almost any commodity in any place it is the units in terms of which the values of other goods and services are measured in money terms and expressed accordingly Different goods produced in the country are measured in different units like cloth in metres, milk in litres and sugar in kilograms. Without a common unit, exchange of goods becomes very difficult Values of all goods and services can be expressed easily in a single





unit called money. Again without a measure of value, there can be no pricing process. Without a pricing process, organised marketing and production is not possible. Thus, the use of money as a measure of value is the basis of specialised production. The measuring rod of money is also indispensable to all forms of economic planning. Consumers compare the values of alternative purchases in terms of money. Producers also compare the values of alternative purchases in terms of money. Producers compare the relative costliness of the factors.

### **QUANTITY THEORY OF MONEY (QTM)**

The quantity theory of money states that there is a direct relationship between the quantity of money in an economy and the level of prices of goods and services sold. According to QTM, if the amount of money in an economy doubles, price levels also double, causing inflation (the percentage rate at which the level of prices is rising in an economy). The consumer therefore pays twice as much for the same amount of the good or service. Another way to understand this theory is to recognize that money is like any other commodity: increases in its supply decrease marginal value (the buying capacity of one unit of currency). So an increase in money supply causes prices to rise (inflation) as they compensate for the decrease in money's marginal value. The quantity theory of money (QTM) also assumes that the quantity of money in an economy has a large influence on its level of economic activity. So, a change in the money supply results in either a change in the price levels or a change in the supply of goods and services, or both. In addition, the theory assumes that changes in the money supply are the primary reason for changes in spending. One implication of these assumptions is that the value of money is determined by the amount of money available in an economy. An increase in the money supply results in a decrease in the value of money because an increase in the money supply also causes the rate of inflation to increase. As inflation rises, purchasing power decreases. Purchasing power is the value of a currency expressed in terms of the amount of goods or services that one unit of currency can buy. When the purchasing power of a unit of currency decreases, it requires more units of currency to buy the same quantity of goods or services. Throughout the 1970s and 1980s, the quantity theory of money became more relevant as a result of the rise of monetarism. In monetary economics, the chief method of achieving economic stability is through controlling the supply of money.



## **MONETARISM**

According to monetarism and monetary theory, changes in the money supply are the main forces underpinning all economic activity, so governments should implement policies that influence the money supply as a way of fostering economic growth. Because of its emphasis on the quantity of money determining the value of money, the quantity theory of money is central to the concept of monetarism. Monetarism According to monetarists, a rapid increase in the money supply can lead to a rapid increase in inflation. This is because when money growth surpasses the growth of economic output, there is too much money backing too little production of goods and services. In order to curb a rapid rise in the inflation level, it is imperative that growth in the money supply falls below the growth in economic output. When monetarists are considering solutions for a staggering economy in need of an increased level of production, some monetarists may recommend an increase in the money supply as a short-term boost. However, the long-term effects of monetary policy are not as predictable, so many monetarists believe that the money supply should be kept within an acceptable bandwidth so that levels of inflation can be controlled.

## **Keynesianism**

Many Keynesian economists remain critical of the basic tenets of the quantity theory of money and monetarism, and challenge the assertion that economic policies that attempt to influence the money supply are the best way to address economic growth. Keynesian economics is a theory of economics that is primarily used to refer to the belief that the government should use activist stabilization and economic intervention policies in order to influence aggregate demand and achieve optimal economic performance. John Maynard Keynes was a British economist who developed this theory in the 1930s as part of his research trying to understand, first and foremost, the causes of the Great Depression. At the time, Keynes advocated for a government response to the global depression that would involve the government increasing their spending and lowering their taxes in order to stimulate demand and pull the global economy out of the depression. In the 1930s, Keynes also challenged the quantity theory of money, saying that increases in the money supply actually lead to a decrease in the velocity of money in circulation and that real income—the flow of money to the factors of production—increased. Therefore, the velocity of money could change in response to changes in the money supply. In the years since Keynes' made this



argument, other economists have proved that Keynes' contention with the quantity theory of money is, in fact, accurate.

### Keynes' Liquidity Preference Theory

The determinants of the equilibrium interest rate in the classical model are the 'real' factors of the supply of saving and the demand for investment. On the other hand, in the Keynesian analysis, determinants of the interest rate are the 'monetary' factors alone.

Keynes' analysis concentrates on the demand for and supply of money as the determinants of interest rate. According to Keynes, the rate of interest is purely "a monetary phenomenon." Interest is the price paid for borrowed funds. People like to keep cash with them rather than investing cash in assets. Thus, there is a preference for liquid cash. People, out of their income, intend to save a part. How much of their resources will be held in the form of cash and how much will be spent depend upon what Keynes calls liquidity preference, Cash being the most liquid asset, people prefer cash. And interest is the reward for parting with liquidity. However, the rate of interest in the Keynesian theory is determined by the demand for money and supply of money.

Demand for Money:

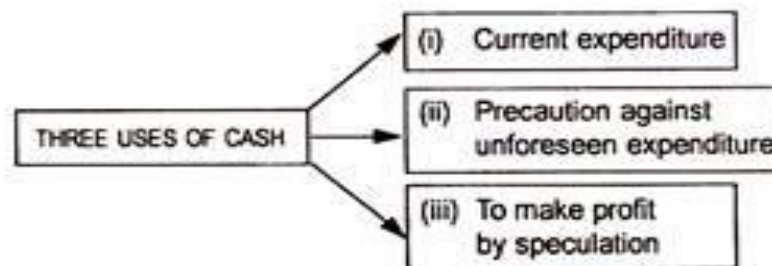
Demand for money is not to be confused with the demand for a commodity that people 'consume'. But since money is not consumed, the demand for money is a demand to hold an asset.

The desire for liquidity or demand for money arises because of three motives:

**(a) Transaction motive**

**(b) Precautionary motive**

**(c) Speculative motive**





## (a) Transaction Demand for Money:

Money is needed for day-to-day transactions. As there is a gap between the receipt of income and spending, money is demanded. Incomes are earned usually at the end of each month or fortnight or week but individuals spend their incomes to meet day-to-day transactions. Since payments or spending are made throughout a period and receipts or incomes are received after a period of time, an individual needs '**active balance**' in the form of cash to finance his transactions. This is known as transaction demand for money or need-based money—which directly depends on the level of income of an individual and businesses.

People with higher incomes keep more liquid money at hand to meet their need-based transactions. In other words, transaction demand for money is an increasing function of money income.

**Symbolically,**

$$T_{dm} = f(Y)$$

Where,  $T_{dm}$  stands for transaction demand for money and  $Y$  stands for money income.

## (b) Precautionary Demand for Money:

Future is uncertain. That is why people hold cash balances to meet unforeseen contingencies, like sickness, death, accidents, danger of unemployment, etc. The amount of money held under this motive, called '**Idle balance**', also depends on the level of money income of an individual.

People with higher incomes can afford to keep more liquid money to meet such emergencies. This means that this kind of demand for money is also an increasing function of money income. The relationship between precautionary demand for money ( $P_{dm}$ ) and the volume of income is normally a direct one.

Thus,

$$P_{dm} = f(Y)$$

## (c) Speculative Demand for Money:

This sort of demand for money is really Keynes' contribution. The speculative motive refers to the desire to hold one's assets in liquid form to take advantages of market movements regarding the uncertainty and expectation of future changes in the rate of interest.

The cash held under this motive is used to make speculative gains by dealing in bonds and securities whose prices and rate of interest fluctuate inversely. If bond prices are expected to rise



(or the rate of interest is expected to fall) people will now buy bonds and sell when their prices rise to have a capital gain. In such a situation, bond is more attractive than cash.

Contrarily, if bond prices are expected to fall (or the rate of interest is expected to rise) in future, people will now sell bonds to avoid capital loss. In such a situation, cash is more attractive than bond. Thus, at a low rate of interest, liquidity preference is high and, at a high rate of interest, securities are attractive. Now it is clear that the speculative demand for money ( $S_{dm}$ ) varies inversely with the rate of interest.

Thus,

$$S_{dm} = f(r)$$

Where,  $r$  is the rate of interest.

Total Demand for Money:

The total demand for money ( $DM$ ) is the sum of all three types of demand for money.

$$DM = T_{dm} + P_{dm} + S_{dm}$$

The demand for money has a negative slope because of the inverse relationship between the speculative demand for money and the rate of interest. However, the negative sloping liquidity preference curve becomes perfectly elastic at a low rate of interest. According to Keynes, there is a floor interest rate below which the rate of interest cannot fall. This minimum rate of interest indicates absolute liquidity preference of the people.

This is what Keynes called '**liquidity trap**'. In Fig. 6.20,  $D_m$  is the liquidity preference curve. At minimum rate of interest,  $r_{-min}$ , the curve is perfectly elastic. However, there is a ceiling of interest rate, say  $r_{-max}$ , above which it cannot rise. Thus, interest rate fluctuates between  $r_{-max}$  and  $r_{-min}$ .

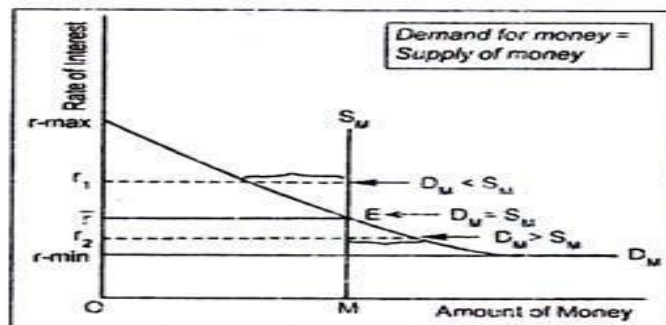


Fig. 6.20: Keynesian Theory



### Money Supply:

The supply of money in a particular period depends upon the policy of the central bank of a country. Money supply curve, SM, has been drawn perfectly inelastic as it is institutionally given.

### Determination of Interest Rate:

According to Keynes, the rate of interest is determined by the demand for money and the supply of money. OM is the total amount of money supplied by the central bank. At point E, demand for money becomes equal to the supply of money. Thus, the equilibrium interest rate is determined at or. Now, suppose that the rate of interest is greater than or.

In such a situation, supply of money will exceed the demand for money. People will purchase more securities. Consequently, its price will rise and interest rate will fall until demand for money becomes equal to the supply of money.

On the other hand, if the rate of interest becomes less than or, demand for money will exceed supply of money, people will sell their securities. Price of securities will tumble and rate of interest will rise until we reach point E.

### LIMITATIONS:

#### **Even Keynes' liquidity preference theory is not free from criticisms:**

Firstly, like the classical and neo-classical theories, Keynes' theory is an indeterminate one. Keynes charged the classical theory on the ground that it assumed the level of employment fixed.

Same criticism applies to the Keynesian theory since it assumes a given level of income. Keynes' theory suggests that  $D_m$  and SM determine the rate of interest. Without knowing the level of income we cannot know the transaction demand for money as well as the speculative demand for money. Obviously, as income changes, liquidity preference schedule changes—leading to a change in the interest rate.

Therefore, one cannot, determine the rate of interest until the level of income is known and the level of income cannot be determined until the rate of interest is known. Hence indeterminacy. Hicks and Hansen solved this problem in their IS-LM analysis by determining simultaneously the rate of interest and the level of income.



**Quantity Theory of Money: Fisher's Transactions Approach:**

The general level of prices is determined, that is, why at sometimes the general level of prices rises and sometimes it declines. Sometime back it was believed by the economists that the quantity of money in the economy is the prime cause of fluctuations in the price level.

The theory that increases in the quantity of money leads to the rise in the general price was effectively put forward by Irving Fisher.' They believed that the greater the quantity of money, the higher the level of prices and vice versa.

Therefore, the theory which linked prices with the quantity of money came to be known as quantity theory of money. In the following analysis we shall first critically examine the quantity theory of money and then explain the modern view about the relationship between money and prices and also the determination of general level of prices.

The theory can also be stated in these words: The price level rises proportionately with a given increase in the quantity of money. Conversely, the price level falls proportionately with a given decrease in the quantity of money, other things remaining the same.

There are several forces that determine the value of money and the general price level.

**The general price level in a community is influenced by the following factors:**

**(a) The volume of trade or transactions;**

**(b) The quantity of money;**

**(c) Velocity of circulation of money.**

The first factor, the volume of trade or transactions, depends upon the supply or amount of goods and services to be exchanged. The greater the amount or supply of goods in an economy, the larger the number of transactions and trade, and vice versa.

But the classical and neoclassical economists who believed in the quantity theory of money assumed that full employment of all resources (including labour) prevailed in the economy. Resources being fully employed, the total output or supply of goods (and therefore the total trade or transactions) cannot increase. Therefore, those who believed in the quantity theory of money assumed that the total volume of trade or transactions remained the same. The second factor in the determination of general level of prices is the quantity of money. It should be noted that the



quantity of money in the economy consists of not only the notes and currency issued by the Government but also the amount of credit or deposits created by the banks.

The third factor influencing the price level is the velocity of circulation. A unit of money is used for exchange and transactions purposes not once but several times in a year. During several exchanges of goods and services, a unit of money passes from one hand to another.

**Fisher's Equation of Exchange:**

An American economist, Irving Fisher, expressed the relationship between the quantity of money and the price level in the form of an equation, which is called 'the equation of exchange'.

$$PT = MV \dots (1)$$

$$\text{Or } P = MV/T$$

Where P stands for the average price level:

T stands for total amount of transactions (or total trade or amount of goods and services, raw materials, old goods etc.)

M stands for the quantity of money; and

V stands for the transactions velocity of circulation of money.

The equation (1) or (2) is an accounting identity and true by definition. This is, because MV which represents money spent on transactions must be equal to Pr which represents money received from transactions.

However, the equation of exchange as given in equations (1) and (2) has been converted into a theory of determination of general level of prices by the classical economists by making some assumptions. First, it has been assumed that the physical volume of transactions is constant because it is determined by a given amount of real resources, the given level of technology and the efficiency with which the given available resources are used.

**Quantity Theory of Money: The Cambridge Cash Balance Approach:**

The equation of exchange has been stated by Cambridge economists, Marshall and Pigou, in a form different from Irving Fisher. Cambridge economists explained the determination of value of money in line with the determination of value in general.

Value of a commodity is determined by demand for and supply of it and likewise, according to them, the value of money (i.e., its purchasing power) is determined by the demand for and supply of money. As studied in cash-balance approach to demand for money Cambridge economists laid





stress on the store of value function of money in sharp contrast to the medium of exchange function of money emphasised by in **FISHER'S TRANSACTIONS APPROACH TO DEMAND FOR MONEY.**

According to cash balance approach, the public likes to hold a proportion of nominal income in the form of money (i.e., cash balances). Let us call this proportion of nominal income that people want to hold in money as k.

Then cash balance approach can be written as:

$$M_d = kPY \dots(1)$$

Y = real national income (i.e., aggregate output)

P = the price level PY = nominal national income

k = the proportion of nominal income that people want to hold in money

M<sub>d</sub> = the amount of money which public want to hold

Now, for the achievement of money-market equilibrium, demand for money must equal worth the supply of money which we denote by M. It is important to note that the supply of money M is exogenously given and is determined by the monetary policies of the central bank of a country.

Thus, for equilibrium in the money market.

$$M = M_d$$

$$\text{As } M_d = kPY$$

Therefore, in equilibrium  $M = kPY \dots(2)$

Monetary equilibrium Cambridge cash balance approach is shown in Fig. 20.2 where demand for money is shown by a rising straight line kPY which indicates that with k and Y being held constant demand for money increases proportionately to the rise in price level. As price level rises people demand more money for transaction purposes.

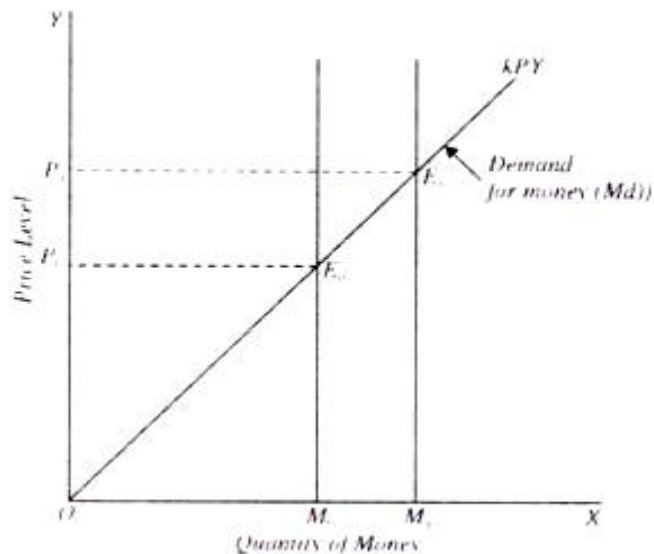


Fig. 20.2. Determination of Price Level : Cambridge Cash Balance Approach

Now, if supply of money fixed by the Government (or the Central Bank) is equal to  $M_0$ , the demand for money  $APK$  equals the supply of money,  $M_0$  at price level  $P_0$ . Thus, with supply of money equal to  $M_0$  equilibrium price level  $P_0$  is determined. If money supply is increased, how the monetary equilibrium will change? Suppose money supply is increased to  $M_1$  at the initial price level  $P_0$  the people will be holding more money than they demand at it.

Therefore, they would want to reduce their money holding. In order to reduce their money holding they would increase their spending on goods and services. In response to the increase in money spending by the households the firms will increase prices of their goods and services.

Like Fisher's equation, cash balance equation is also an accounting identity because  $k$  is defined as: Quantity of Money Supply/National Income, that is,  $M/PY$

Now, Cambridge economists also assumed that  $k$  remains constant. Further, due to their belief that wage-price flexibility ensures full employment of resources, the level of real national income was also fixed corresponding to the level of aggregate output produced by full employment of resources.

Thus, from equation (3) it follows that with  $k$  and  $Y$  remaining constant price level ( $P$ ) is determined by the quantity of money ( $M$ ); changes in the quantity of money will cause proportionate changes in the price level.

Some economists have pointed out similarity between Cambridge cash-balance approach and



Fisher's transactions approach. According to them,  $k$  is reciprocal of  $V$  ( $k = 1/V$  or  $V = 1/k$ ). Thus in equation (2) if we replace  $k$  by  $1/V$ , we have

$$M = 1/PY$$

$$\text{Or } MV = PY$$

Which is income version of Fisher's quantity theory of money? However, in spite of the formal similarity between the cash balance and transactions approaches, there are important conceptual differences between the two which makes cash balance approach superior to the transactions approach. First, as mentioned above.

Fisher's transactions approach lays stress on the medium of exchange function of money, that is, according to its people want money to use it as a means of payment for buying goods and services. On the other hand, cash balance approach emphasizes the store-of-value function of money. They hold money so that some value is stored for spending on goods and services after some lapse of time.

Further, in explaining the factors which determine velocity of circulation, transactions approach points to the mechanical aspects of payment methods and practices such as frequency of wages and other factor payments, the speed with which funds can be sent from one place to another, the extent to which bank deposits and cheques are used in dealing with others and so on.

On the other hand,  $k$  in the cash balance approach is behavioural in nature. Thus, according to Prof S.B. Gupta, "Cash- balance approach is behavioural in nature: it is build around the demand for money, however simple. Unlike Fisher's  $V$ ,  $k$  is a behavioural ratio. As such it can easily lead to stress being placed on the relative usefulness of money as an asset."

Like Fisher's approach, cash balance approach also assumes that full- employment of resources will prevail due to the wage-price flexibility. Hence, it also believes the aggregate supply curve as perfectly inelastic at full-employment level of output.



## UNIT - 4

### Economic Growth

Economic growth can be defined as an increase in the value of goods and services produced in an economy over a period of time. This value calculation is done in terms of % increase in GDP or Gross Domestic Product.

Economic growth is calculated in real terms where the effects of variation in the value of goods and services due to inflation distortion are also accounted for.

### Factors influencing Economic Growth

1. Human resources – this is a major factor that is responsible for boosting the economic growth of a country. The rate of increase in the skills and capabilities of a workforce ultimately increases the economic growth of a country.
2. Infrastructure development- Improvements and increased investment in physical capital such as roadways, machinery, and factories will increase the efficiency of economic output by reducing the cost.
3. Planned utilization of natural resources – Proper use of available natural resources like mineral deposits helps boost the productivity of the economy.
4. Population growth – An increase in the growth of the population will result in the availability of more human resources which in turn will increase the output in terms of quantity. This is also an important factor that influences economic growth.
5. Advancement in technology – Improvement in technology will affect the economic growth of a country positively. The application of advanced technology will result in increased productivity of labor and economic growth will advance at a lower cost.

### Economic Development

The term economic development can be explained as the process by which the economic well-being and quality of life of a nation, community, or particular region are improved according to predefined goals and objectives.

Economic development is a combination of market productivity and the welfare values of the nation.



**Factors Affecting Economic development**

1. Infrastructural improvement – Development in the infrastructure improves the quality of life of people. Therefore, an increase in the rate of infrastructural development will result in the economic development of a nation.
2. Education – Improvement in literacy and technical knowledge will result in a better understanding of the usage of different equipment. This will increase labor productivity and in turn, will result in the economic development of a nation.
3. Increase in the capital – Increase in capital formation will result in more productive output in an economy and this will affect the economic development positively.

**Difference between Economic Growth & Development**

<b>Economic growth</b>	<b>Economic development</b>
Increase in market output results in economic growth	Economic development can be measured in terms of welfare values and market output
It is a quantitative concept	It is a qualitative concept
Economic growth is uni-dimensional	Economic development is multidimensional
This is one of the major concern of developed countries	This is a major concern of developing countries
Economic growth is independent of the development	Economic development can only happen if economic growth takes place.
Indicators of Economic growth <ul style="list-style-type: none"><li>• Real GDP</li><li>• Real per capita income</li></ul>	Indicators of economic development <ul style="list-style-type: none"><li>• Human Development Index</li><li>• Physical Quality of Life Index</li><li>• Net Economic Welfare (NEW)</li></ul>



## **Economic and Non-Economic Factors**

### **1. Economic Factors**

1. **Natural Resource:** The principal factor affecting the development of an economy is the availability of natural resources. The existence of natural resources in abundance is essential for development. A country deficient in natural resources may not be in a position to develop rapidly. But a country like Japan lacking natural resources imports them and achieve faster rate of economic development with the help of technology. India with larger resources is poor.

**2. Capital Formation:** Capital formation is the main key to economic growth. Capital formation refers to the net addition to the existing stock of capital goods which are either tangible like plants and machinery or intangible like health, education and research. Capital formation helps to increase productivity of labour and thereby production and income. It facilitates adoption of advanced techniques of production. It leads to better utilization of natural resources, industrialization and expansion of markets which are essential for economic progress.

**3. Size of the Market:** Large size of the market would stimulate production, increase employment and raise the National per capita income. That is why developed countries expand their market to other countries through WTO.

**4. Structural Change:** Structural change refers to change in the occupational structure of the economy. Any economy of the country is generally divided into three basic sectors: Primary sector such as agricultural, animal husbandry, forestry, etc; Secondary sector such as industrial production, constructions and Tertiary sector such as trade, banking and commerce. Any economy which is predominantly agricultural tends to remain backward.

**5. Financial System:** Financial system implies the existence of an efficient and organized banking system in the country. There should be an organized money market to facilitate easy availability of capital.

**6. Marketable Surplus:** Marketable surplus refers to the total amount of farm output cultivated by farmers over and above their family consumption needs. This is a surplus that can be sold in the market for earning income. It raises the purchasing power, employment and output in other sectors of the economy. The country as a result will develop because of increase in national income.



**7. Foreign Trade:** The country which enjoys favorable balance of trade and terms of trade is always developed. It has huge forex reserves and stable exchange rate.

**8. Economic System:** The countries which adopt free market mechanism (*laissez faire*) enjoy better growth rate compared to controlled economies. It may be true for some countries, but not for every country.

## **2. Non- Economic Factors**

'Economic Development has much to do with human endowments, social attitudes, political conditions and historical accidents. Capital is a necessary but not a sufficient condition of progress. – Ragnar Nurkse.

**1. Human Resources:** Human resource is named as human capital because of its power to increase productivity and thereby national income. There is a circular relationship between human development and economic growth. A healthy, educated and skilled labour force is the most important productive asset. Human capital formation is the process of increasing knowledge, skills and the productive capacity of people. It includes expenditure on health, education and social services. If labour is efficient and skilled, its capacity to contribute to growth will be high. For example Japan and China.

**2. Technical Know-how:** As the scientific and technological knowledge advances, more and more sophisticated techniques steadily raise the productivity levels in all sectors. Schumpeter attributed the cause for economic development to innovation.

**3. Political Freedom:** The process of development is linked with the political freedom. Dadabhai Naoroji explained in his classic work 'Poverty and Un-British Rule in India' that the drain of wealth from India under the British rule was the major cause of the increase in poverty in India.

**4. Social Organization:** People show interest in the development activity only when they feel that the fruits of development will be fairly distributed. Mass participation in development programs is a pre-condition for accelerating the development process. Whenever the defective social organization allows some groups to appropriate the benefits of growth, majority of the poor people do not participate in the process of development. This is called crony capitalism.

**5. Corruption free administration:** Corruption is a negative factor in the growth process. Unless the countries root-out corruption in their administrative system, the crony capitalists and traders



will continue to exploit national resources. The tax evasion tends to breed corruption and hamper economic progress.

**6. Desire for development:** The pace of economic growth in any country depends to a great extent on people's desire for development. If in some country, the level of consciousness is low and the general mass of people has accepted poverty as its fate, then there will be little scope for development.

**7. Moral, ethical and social values:** These determine the efficiency of the market, according to Douglas C. North. If people are not honest, market cannot function.

**8. Casino Capitalism :** If People spend larger proportion of their income and time on entertainment liquor and other illegal activities, productive activities may suffer, according to Thomas Piketty.

**9. Patrimonial Capitalism :** If the assets are simply passed on to children from their parents, the children would not work hard, because the children do not know the value of the assets. Hence productivity will be low as per Thomas Piketty.

### **Modern Theories of Economic Growth**

#### **Definition of Economic Growth**

Economic growth refers to an increase in the goods and services produced by an economy over a particular period of time. It is measured as a percentage increase in real gross domestic product which is GDP adjusted to inflation. GDP is the market value for all the final goods and services produced in an economy.

#### **Theories of Economic Growth**

##### **The Classical Approach**

Adam Smith laid emphasis on increasing returns as a source of economic growth. He focused on foreign trade to widen the market and raise productivity of trading countries. Trade enables a country to buy goods from abroad at a lower cost as compared to which they can be produced in the home country.

In modern growth theory, Lucas has strongly emphasized the role of increasing returns through direct foreign investment which encourages learning by doing through knowledge capital. In





Southeast Asia, the newly industrialized countries (NICs) have achieved very high growth rates in the last two decades.

### **The Neoclassical Approach**

The neoclassical approach to economic growth has been divided into two sections –

- The first section is the competitive model of Walrasian equilibrium where markets play a very crucial role in allocating the resources effectively. To secure the optimal allocation of inputs and outputs, markets for labor, finance and capital have been used. This type of competitive paradigm was used by Solow to develop a growth model.
- The second section of the neoclassical model assumes that technology is given. Solow used the interpretation that technology in the production function is superficial. The point is that R&D investment and human capital through learning by doing were not explicitly recognized.

The neoclassical growth model developed by Solow fails to explain the fact of actual growth behavior. This failure is caused due to the model's prediction that per capita output approaches a steady state path along which it grows at a rate that is given. This means that the long-term rate of national growth is determined outside the model and is independent of preferences and most aspects of the production function and policy measures.

### **The Modern Approach**

The modern approach to market comprises of several features. The new economy emerging today is spreading all over the world. It is a revolution in knowledge capital and information explosion. Following are the important key elements –

- Innovation theory by Schumpeter, inter firm and inter industry diffusion of knowledge.
- Increasing efficiency of the telecommunications and micro-computer industry.
- Global expansion of trade through modern externalities and networks.

Modern theory of economic growth focuses mainly on two channels of inducing growth through expenses spent on research and development on the core component of knowledge innovations. First channel is the impact on the available goods and services and the other one is the impact on the stock of knowledge phenomena.



### W.W. Rostow and the Stages of Economic Growth

One of the key thinkers in 20th-century Development Studies was W.W. Rostow, an American economist and government official. Prior to Rostow, approaches to development had been based on the assumption that "modernization" was characterized by the Western world (wealthier, more powerful countries at the time), which were able to advance from the initial stages of underdevelopment. Accordingly, other countries should model themselves after the West, aspiring to a "modern" state of capitalism and liberal democracy.

Rostow penned his classic "**Stages of Economic Growth**" in 1960, which presented five steps through which all countries must pass to become developed:

- 1) Traditional society,
- 2) Preconditions to take-off,
- 3) take-off,
- 4) Drive to maturity and
- 5) Age of high mass consumption.

The model asserted that all countries exist somewhere on this linear spectrum, and climb upward through each stage in the development process:

- **Traditional Society:** This stage is characterized by a subsistent, agricultural-based economy with intensive labor and low levels of trading, and a population that does not have a scientific perspective on the world and technology.
- **Preconditions to Take-off:** Here, a society begins to develop manufacturing and a more national/international—as opposed to regional—outlook.
- **Take-off:** Rostow describes this stage as a short period of intensive growth, in which industrialization begins to occur, and workers and institutions become concentrated around a new industry.
- **Drive to Maturity:** This stage takes place over a long period of time, as standards of living rise, the use of technology increases, and the national economy grows and diversifies.
- **Age of High Mass Consumption:** At the time of writing, Rostow believed that Western countries, most notably the United States, occupied this last "developed" stage. Here, a country's economy flourishes in a capitalist system, characterized by mass production and consumerism.



### **Criticisms of Rostow's Model**

As the Singapore case shows, Rostow's model still sheds light on a successful path to economic development for some countries. However, there are many criticisms of his model.

While Rostow illustrates faith in a capitalist system, scholars have criticized his bias towards a western model as the only path towards development. Rostow lays out five succinct steps towards development and critics have cited that all countries do not develop in such a linear fashion; some skip steps or take different paths. Rostow's theory can be classified as "top-down," or one that emphasizes a trickle-down modernization effect from urban industry and western influence to develop a country as a whole. Later theorists have challenged this approach, emphasizing a "bottom-up" development paradigm, in which countries become self-sufficient through local efforts, and urban industry is not necessary. Rostow also assumes that all countries have a desire to develop in the same way, with the end goal of high mass consumption, disregarding the diversity of priorities that each society holds and different measures of development. For example, while Singapore is one of the most economically prosperous countries, it also has one of the highest income disparities in the world. Finally, Rostow disregards one of the most fundamental geographical principals: site and situation. Rostow assumes that all countries have an equal chance to develop, without regard to population size, natural resources, or location.

### **Balanced Vs. Unbalanced Growth for Economic Development**

Currently, there are, among the development specialists, two major schools of thought regarding the strategy of economic development that should be adopted in developing countries. On the one side, there are economists like Ragnar Nurkse and Rosenstein-Rodan who are of the view that the strategy of investment should be so designed as to ensure a balanced development of the various sectors of the economy.

They, therefore, advocate simultaneous investment in a number of industries so that there is a balanced growth of different industries. Economists, like H.W. Singer and A.O. Hirschman, on the other side, believe that for rapid economic growth there should be concentration of investment in certain strategic industries rather than an even distribution of investment among the various industries. In other words, in the view of these latter economists, unbalanced growth is more



conducive to economic development than a balanced one. We may now consider both these views at some length.

In an underdeveloped country, the level of per capita income is low which means that the people's purchasing power is low. Owing to small incomes and low purchasing power their demand for consumer goods is low. As a result of low demand for goods, the inducement for investment is less and capital equipment per capita (i.e., per worker) is small. Since the amount of capital per capita is small, productivity per worker is low. Low per capita productivity means low per capita income, i.e., poverty. The size of the market can be increased only by increasing productivity.

As **Nurkse** puts it, "The crucial determinant of the size of the market is productivity." Increase in productivity will increase people's incomes and hence their purchasing power. The level of people's income in any country can be raised and consequently their purchasing power can be increased by increasing productivity and aggregate output or, in other words, by increasing productive employment.

A situation of higher productivity, the greater employment and incomes and high purchasing power of the people will provide a profitable field for investment. It may be said that the size of the market can be enlarged by lowering the price of the products. But this is no solution of the problem. The real solution of the problem is only an increase in productivity of the people by raising productive-employment. Only as a result of increase in productivity, there is increase in income and increase in purchasing power which will increase demand and enlarge the size of the market.

Say's law propounded by classical economists tells us that production or supply creates its own demand, but this law cannot be accepted in the sense that the production of cloth creates its own demand because the workers engaged in the making of cloth will not spend their entire earnings on the purchase of cloth. In the same way, production of shoes cannot create its own demand.



## UNIT-5

### Inflation

**Inflation** is a rise in prices, which can be translated as the decline of purchasing power over time. The rate at which purchasing power drops can be reflected in the average price increase of a basket of selected goods and services over some period of time. The rise in prices, which is often expressed as a percentage, means that a unit of currency effectively buys less than it did in prior periods. Inflation can be contrasted with deflation, which occurs when prices decline and purchasing power increases. Prices rise, which means that one unit of money buys fewer goods and services. This loss of purchasing power impacts the cost of living for the common public which ultimately leads to a deceleration in economic growth. The consensus view among economists is that sustained inflation occurs when a nation's money supply growth outpaces economic growth.

#### **Causes of Inflation**

An increase in the supply of money is the root of inflation, though this can play out through different mechanisms in the economy. A country's money supply can be increased by the monetary authorities by:

- Printing and giving away more money to citizens
- Legally devaluing (reducing the value of) the legal tender currency
- Loaning new money into existence as reserve account credits through the banking system by purchasing government bonds from banks on the secondary market (the most common method)

In all of these cases, the money ends up losing its purchasing power. The mechanisms of how this drives inflation can be classified into three types: demand-pull inflation, cost-push inflation, and built-in inflation.

#### **Demand-Pull Effect**

Demand-pull inflation occurs when an increase in the supply of money and credit stimulates the overall demand for goods and services to increase more rapidly than the economy's production capacity. This increases demand and leads to price rises.

When people have more money, it leads to positive consumer sentiment. This, in turn, leads to higher spending, which pulls prices higher. It creates a demand-supply gap with higher demand and less flexible supply, which results in higher prices.



### **Cost-Push Effect**

Cost-push inflation is a result of the increase in prices working through the production process inputs. When additions to the supply of money and credit are channeled into a commodity or other asset markets, costs for all kinds of intermediate goods rise. This is especially evident when there's a negative economic shock to the supply of key commodities.

These developments lead to higher costs for the finished product or service and work their way into rising consumer prices. For instance, when the money supply is expanded, it creates a speculative boom in oil prices. This means that the cost of energy can rise and contribute to rising consumer prices, which is reflected in various measures of inflation.

### **Built-in Inflation**

Built-in inflation is related to adaptive expectations or the idea that people expect current inflation rates to continue in the future. As the price of goods and services rises, people may expect a continuous rise in the future at a similar rate. As such, workers may demand more costs or wages to maintain their standard of living. Their increased wages result in a higher cost of goods and services, and this wage-price spiral continues as one factor induces the other and vice-versa.

### **Types of Price Indexes**

Depending upon the selected set of goods and services used, multiple types of baskets of goods are calculated and tracked as price indexes. The most commonly used price indexes are the Consumer Price Index (CPI) and the Wholesale Price Index (WPI).

#### **The Consumer Price Index (CPI)**

The CPI is a measure that examines the weighted average of prices of a basket of goods and services that are of primary consumer needs. They include transportation, food, and medical care. CPI is calculated by taking price changes for each item in the predetermined basket of goods and averaging them based on their relative weight in the whole basket. The prices in consideration are the retail prices of each item, as available for purchase by the individual citizens.

#### **The Wholesale Price Index (WPI)**

The WPI is another popular measure of inflation. It measures and tracks the changes in the price of goods in the stages before the retail level.

While WPI items vary from one country to another, they mostly include items at the producer or wholesale level. For example, it includes cotton prices for raw cotton, cotton yarn, cotton gray



goods, and cotton clothing. Although many countries and organizations use WPI, many other countries, including the U.S., use a similar variant called the producer price index (PPI).

### **The Producer Price Index (PPI)**

The PPI is a family of indexes that measures the average change in selling prices received by domestic producers of intermediate goods and services over time. The PPI measures price changes from the perspective of the seller and differs from the CPI which measures price changes from the perspective of the buyer.

### **The Formula for Measuring Inflation**

The above-mentioned variants of price indexes can be used to calculate the value of inflation between two particular months (or years). While a lot of ready-made inflation calculators are already available on various financial portals and websites, it is always better to be aware of the underlying methodology to ensure accuracy with a clear understanding of the calculations.

Mathematically,

$$\text{Percent Inflation Rate} = (\text{Final CPI Index Value} / \text{Initial CPI Value}) \times 100$$

### **Effects of Inflation**

Inflation can affect the economy in several ways. For example, if inflation causes a nation's currency to decline, this can benefit exporters by making their goods more affordable when priced in the currency of foreign nations.

On the other hand, this could harm importers by making foreign-made goods more expensive. Higher inflation can also encourage spending, as consumers will aim to purchase goods quickly before their prices rise further. Savers, on the other hand, could see the real value of their savings erode, limiting their ability to spend or invest in the future.

## **DEFLATION**

### **Meaning of Deflation**

Deflation is a decrease in the general price level of goods and services. Put another way, deflation is negative inflation. When it occurs, the value of currency grows over time. Thus, more goods and



services can be purchased for the same amount of money. Deflation is widely regarded as an economic “problem” that can intensify a recession or lead to a deflationary spiral.

### **Causes of Deflation**

Economists determine the two major causes of deflation in an economy as

(1) Fall in aggregate demand and

(2) Increase in aggregate supply.

The fall in aggregate demand triggers a decline in the prices of goods and services. Some factors leading to a decline in aggregate demand are:

Fall in the money supply

A central bank may use a tighter monetary policy by increasing interest rates. Thus, people, instead of spending their money immediately, prefer to save more of it. In addition, increasing interest rates lead to higher borrowing costs, which also discourages spending in the economy.

Decline in confidence

Negative events in the economy, such as recession, may also cause a fall in aggregate demand. For example, during a recession, people can become more pessimistic about the future of the economy. Subsequently, they prefer to increase their savings and reduce current spending.

An increase in aggregate supply is another trigger for deflation. Subsequently, producers will face fiercer competition and be forced to lower prices. The growth in aggregate supply can be caused by the following factors:

Lower production costs

A decline in price for key production inputs (e.g., oil) will lower production costs. Producers will be able to increase production output, which will lead to an oversupply in the economy. If demand remains unchanged, producers will need to lower their prices on goods to keep people buying them.

Technological advances

Advances in technology or rapid application of new technologies in production can cause an increase in aggregate supply. Technological advances will allow producers to lower costs. Thus, the prices of products will likely go down.





### **Effects of Deflation**

Frequently, deflation occurs during recessions. It is considered an adverse economic event and can cause many negative effects on the economy, including:

Increase in unemployment

During deflation, the unemployment rate will rise. Since price levels are decreasing, producers tend to cut their costs by laying off their employees.

Increase in the real value of debt

Deflation is associated with an increase in interest rates, which will cause an increase in the real value of debt. As a result, consumers are likely to defer their spending.

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