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ENABLERS FOR SCORING
CENTUM

XII STD

ECONOMICS STUDY MATERIAL

PART I

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“Equanimity, hard work and intelligent time-management are the secrets of success”
| Introduction | -the subject economics is classified into two branches  
|             | -micro and macro economics |
| Ragnar Frisch | -a Norwegian Economist  
|             | -won the first noble prize in economics science |
| Coined the words | -micro – meaning small  
|                | -macro – meaning large in the year 1933 |
| Macro Economics | -its modern form began with John Maynard Keynes  
|                  | -published in 1936 |
| Keynes | -an explanation for fallout from the great depression  
|        | -when goods remained unsold and workers unemployed  
|        | -hence Keynes is regarded as the “Father of Modern Macro Economics” |
| Meaning of Macro Economics | -the word “Macro” is derived from the Greek word “Makros” meaning large |
| Macro Economics | -is the study of the economy as whole  
|                  | -deal with aggregates such as national income, employment and output  
|                  | -macro economics is also known as “Income theory” |
| The subject matters | -covered in macro economics are the areas  
|                     | -employment, national income  
|                     | -inflation, business cycle  
|                     | -poverty, inequality  
|                     | -saving and investment  
|                     | -capital formation, infrastructural development  
|                     | -international trade  
|                     | -balance of trade and balance of payment  
|                     | -exchange rate and economic growth |
### Importance of Macro Economics
- Need for introducing a macro outlook
- There is a need to understand the functioning of the economy
- The aggregate level to evolve suitable strategies
- To solve the basic problems prevailing in an economy
- To understand the future problems
- Needs and challenges of an economy as whole
- Important to evolve precautionary measures
- Macro economics provide ample opportunities
- To use scientific investigation
- To understand the reality
- Helps to make comparison analysis of economic indicators
- Better prediction future
- To formulate suitable policies
- To avoid economic crisis

### Scope of Macro Economics
- It covers the major areas as follows

#### National Income
- Measurement of national income and its composition by sectors
- The basic aspects of macro economic analysis
- The trends in national income and its composition provide
- Long term understanding of the growth process of an economy

#### Inflation
- Refers to steady increase in general price level
- Estimating the general price level
- By constructing various price index numbers
- Such as wholesale price index, consumer price index, etc., are needed

#### Business cycle
- Almost all economic face the problem of business fluctuations and business cycle
- Cyclical movements in the economy need to carefully studied based on aggregate
<table>
<thead>
<tr>
<th>Topic</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cyclical movements</td>
<td>- boom, recession, depression and recovery</td>
</tr>
</tbody>
</table>
| Poverty and Unemployment                   | - the major problems are poverty and unemployment  
- this is one of the economic paradoxes  
- a clear understanding about the magnitude of poverty and unemployment facilitate  
- allocation of resources initiating corrective measures |
| Economic growth                            | - development of an economy and factors determining them  
- understand only through macro analysis                                                                                                      |
| Economic Policies                          | - macro economics is significant for evolving suitable economic policies  
- economic policies are necessary to solve the basic problems  
- to overcome the obstacles and to achieve growth                                                                                           |
| Limitations                                | - there is a danger a excessive generalisation of the economy as a whole  
- it assumes homogeneity among the individual units  
- there is a fallacy of composition  
- what is good of an individual need not be good for nation and vice versa  
- what is good for a country is not good for another country  
- at another time  
- many non-economic factors determine economic activities                                                                                   |
| Economy and its types                       |                                                                                                                                               |
| The term economy has been defined by       | - A.J. Brown as “a system by which people earn their living”                                                                                   |
| J.R. Hicks defined                         | - “an economy is a co-operation of producer and workers to make goods and services that satisfy the wants of the consumers”                     |

**Page No. 5**

Send Your Questions & Answer Keys to our email id - padasalai.net@gmail.com
Any economy referred to any system or area where economic activities are carried out - each economy has its own character - functions or activities also vary

The fundamental economic activities - production and consumption - these two activities are supported by several other activities - the ultimate aim achieve growth

The exchange activity - supports the production and consumption activities

The major economic activities - include transportation, banking, advertising, planning, government policy

The major non-economic activities - environment, health, education, entertainment, regulation, etc.,

In addition to supporting activities, External activities are - import, export, international relations, emigration, immigration, foreign investment, foreign exchange earnings, etc.,

**Economics can be classified into different types based on**

- **State of Development** - Developed, underdeveloped, undeveloped and developing economies
- **System of Activities** - Capitalistic, Socialistic and mixed economies
- **Scale of Activities** - Small and large economies
- **Nature of Functioning** - Static and dynamic economies
- **Nature of operation** - Closed and Open economies
- **Nature of advancement** - Traditional and modern economies
- **Level of National Income** - Low income, middle income and high income economies
- **Economic systems** - refers to the manner in which individuals
and institutions are connected together - it is the methodology of doing economic activities to meet the needs of the society

<table>
<thead>
<tr>
<th>There are three major types</th>
<th>Economic systems</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Capitalist Economy – Capitalism</td>
<td>- Socialist Economy – Socialism</td>
</tr>
<tr>
<td>- Mixed Economy – Mixedism</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Globalism</th>
<th>- the term coined by Manfred D Steger-2002</th>
</tr>
</thead>
<tbody>
<tr>
<td>- connects nations together through international trade</td>
<td></td>
</tr>
<tr>
<td>- aiming at global development</td>
<td></td>
</tr>
<tr>
<td>- this ideology is also termed as “extended capitalism”</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Capitalism and socialism</th>
<th>- two extreme and opposite approaches</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capitalism</td>
<td>- there is total freedom and private ownership of means of production</td>
</tr>
<tr>
<td>Socialism</td>
<td>- there is no freedom for private</td>
</tr>
<tr>
<td></td>
<td>- there is public ownership of means of production</td>
</tr>
<tr>
<td>Mixedism</td>
<td>- denotes the co – existence of capitalism and socialism</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Capitalist Economy</th>
<th>- Adam Smith is the “Father of Capitalism”</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Capitalist economy is also termed as a free economy</td>
<td></td>
</tr>
<tr>
<td>- Laissez faire in Latin word</td>
<td></td>
</tr>
<tr>
<td>- Market economy where</td>
<td></td>
</tr>
<tr>
<td>- the role of the government is minimum and market determines the activities</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>The means of production</th>
<th>- in a capitalistic economy and privately owned</th>
</tr>
</thead>
<tbody>
<tr>
<td>- manufacturers produce goods and services with profit motive</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>The USA, West Germany, Australia and Japan</th>
<th>- are best examples for Capitalist Economies</th>
</tr>
</thead>
<tbody>
<tr>
<td>- large scale social welfare measures to</td>
<td></td>
</tr>
</tbody>
</table>
safeguard the downtrodden people from the market forces

### Features of Capitalist Economy

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private ownership of property</td>
<td>- the basic features of capitalism is that all resources are owned private</td>
</tr>
<tr>
<td>and law of inheritance</td>
<td>- the property can be transferred to heirs after death</td>
</tr>
<tr>
<td>Freedom of choice and enterprises</td>
<td>- each individual is free to carry out any occupation and produce any commodity</td>
</tr>
<tr>
<td></td>
<td>- consumers are free to buy any commodity as per their choice</td>
</tr>
<tr>
<td>Profit Motive</td>
<td>- profit is the driving force</td>
</tr>
<tr>
<td></td>
<td>- each individual and organization ensure high profit</td>
</tr>
<tr>
<td>Advance technology</td>
<td>- division of labour and specialization are followed</td>
</tr>
<tr>
<td>The golden rule</td>
<td>- producer under capitalism is “to maximize profit”</td>
</tr>
<tr>
<td>Free competition</td>
<td>- both product and factor market</td>
</tr>
<tr>
<td></td>
<td>- the government or any authority cannot prevent from buying or selling</td>
</tr>
<tr>
<td></td>
<td>- in the market</td>
</tr>
<tr>
<td></td>
<td>- there is competition between buyers and sellers</td>
</tr>
<tr>
<td>Price Mechanism</td>
<td>- is the heart of any capitalist economy</td>
</tr>
<tr>
<td></td>
<td>- all economic activities regulated through price mechanism</td>
</tr>
<tr>
<td></td>
<td>- i.e. market forces of demand and supply</td>
</tr>
<tr>
<td>Role of Government</td>
<td>- price mechanism regulates economic activity</td>
</tr>
<tr>
<td></td>
<td>- government has a limited role</td>
</tr>
</tbody>
</table>
The government provides basic services — such as defence, public wealth, education, etc.

Inequalities of Income
- two classes have and have nots
  - haves — that is those who own property
  - have nots — who do not own property and work for their living
  - rich become richer
  - poor become poorer
  - here economic inequality goes on increasing

Merits of Capitalism
- Automatic working — without any government intervention
- Efficient use of resources — are put into optimum use
- Incentives for hardwork — encouraged and entrepreneurs get more profit for more efficiency
- Consumers sovereignty — all production activities are aimed at satisfying the consumer
- Higher rates of capital formation — increase in saving and investment
- Development of new technology — profit is aimed at producers invest on new technology and produce quality goods

Demerits of Capitalism
- Concentration of wealth and income — few hands and thereby increases inequalities of income
- Wastages of resources — large amount of resources are wasted on competitive advertising and duplication of products
- Class struggle — capitalism leads to class struggle as it divides the society into capitalist and workers
- Business cycle — free market system leads to frequent violent economic fluctuations and crises
- Socialist economy
  - the father of socialism is Karl Marx
  - to a system of total planning public ownership and state control on economic
Socialism is defined - as a way of organizing a society in which major industries are owned and controlled by the government

A socialist economy - is also known as “Planned Economy” or “Command Economy”

- all the resources are owned and operated by the government
- public welfare is the main motive behind all economic activities

It aims - at equality in the distribution of income and wealth and equal opportunity for all

Russia, China, Vietnam, Poland and Cuba - are examples of socialist economies

What, How, Whom to produce - completely determined and controlled by a central authority

**Features of Socialism**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public ownership of means of production</td>
<td>- all resources are owned by the government - it means that all the factors of production</td>
</tr>
<tr>
<td>Central planning</td>
<td>- is an integral part of socialist economy - all decision are undertaken by the central planning authority</td>
</tr>
<tr>
<td>Maximum social benefit</td>
<td>- social welfare is the guiding principle behind all economic activities - investments are planned in such a way that the benefits are distributed to the society at large</td>
</tr>
<tr>
<td>Non – existence of competition</td>
<td>- there is absence of competition in the market - state has full control over production and distribution - consumers will have a limited choice</td>
</tr>
<tr>
<td>Absence of price mechanism</td>
<td>- the pricing system works under the control and regulation of the central planning authority</td>
</tr>
</tbody>
</table>
| **Equality of Income** | - another essential feature of socialism  
- removal and reduction of economic inequalities  
- private property and the law of inheritance do not exist |
| **Equality of opportunity** | - socialism provide equal opportunity  
- free health, education and professional training |
| **Classless society** | - no class conflicts  
- in a true socialist society everyone is equal as far as economic status |

### Merits of Socialism

| **Reduction of inequalities** | - no one is allowed to own and use private property to exploit others |
| **Rational allocation of resources** | - the central planning authority allocates the resources in a planned manner  
- wastages are minimised and investments are made in a pre planned manner |
| **Absence of class conflicts** | - as inequalities are minimum  
- there is no conflict between rich and poor class  
- society functions in a harmonious manner |
| **End of trade cycles** | - planning authority takes control over production and distribution of goods and services  
- therefore economic fluctuations can be avoided |
| **Promotes social welfare** | - absence of exploitation  
- reduction of economic inequalities  
- avoidance of trade cycles  
- increase in productive efficiency help to promote social welfare |

### Demerits of Socialism

<p>| <strong>Red Tapism and Bureaucracy</strong> | - as decision are taken by government agencies, approval of many officials and movement take time lead |</p>
<table>
<thead>
<tr>
<th>Economic Systems</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Socialist</td>
<td>- Communism</td>
</tr>
<tr>
<td></td>
<td>- Pure planned economy</td>
</tr>
<tr>
<td></td>
<td>- Example: North Korea, China, Venezuela</td>
</tr>
<tr>
<td>Capitalist</td>
<td>- Pure competition</td>
</tr>
<tr>
<td></td>
<td>- Pure free market economy</td>
</tr>
<tr>
<td></td>
<td>- Example: France, Sweden, USA, Japan</td>
</tr>
<tr>
<td>Mixed Economics</td>
<td>Mixedism</td>
</tr>
<tr>
<td></td>
<td>- Socialist learning</td>
</tr>
<tr>
<td></td>
<td>- Capitalist learning</td>
</tr>
<tr>
<td>Mixed Economy</td>
<td>- System both private and public sectors co-exist</td>
</tr>
<tr>
<td></td>
<td>- Work together towards economic development</td>
</tr>
<tr>
<td></td>
<td>- It is a combination of both capitalism and socialism</td>
</tr>
<tr>
<td></td>
<td>- Eliminate the evils of both capitalism and socialism</td>
</tr>
<tr>
<td></td>
<td>- In these economies resources are owned by individuals and the government</td>
</tr>
<tr>
<td></td>
<td>- Example: India, Brazil</td>
</tr>
</tbody>
</table>

Absence of incentive: the major limitation of socialism is that this system does not provide any incentive for efficiency; therefore productivity also suffers.

Limited freedom of choice: consumers do not enjoy freedom of choice over the consumption of goods and services.

Concentration of power: the state takes all major decisions; private takes no initiative in making economic decisions; hence the state is more powerful and misuse of power can also take place.
### Features of Mixed Economy

**Ownership of property and means of production**
- owned by both private and public
- public and private have right to purchase use or transfer their resources

**Co-existence of public and private sectors**
- private industries undertake activities primarily for profit
- public sector firms are owned by the government
- to maximise social welfare

**Economic planning**
- the central planning authority prepares the economic plans
- national plans are drawn up by the government
- both private and public sectors abide
- in general, all sectors of the economy function according to the objectives priorities and targets laid down

**Solution of economic problems**
- the basic problems of what to produce, how to produce, from whom to produce
- how to distribute are solved through the price mechanism as well as state intervention

**Freedom and control**
- through private has freedom to own resources
- produce goods and services
- distribute the same
- overall on the economic activities rests with the government

### Merits of Mixed Economy

**Rapid economic growth**
- the best advantages of mixed economy
- thus, both public requirements and private needs are taken care of

**Balanced economic growth**
- mixedism promotes balanced growth
- it promotes balanced growth balanced agriculture and industry
- consumer goods and capital goods
- rural and urban etc
<table>
<thead>
<tr>
<th>Topic</th>
<th>Description</th>
</tr>
</thead>
</table>
| Proper utilization of resources     | - the government can ensure proper utilization of resources  
- the government controls most of the important activities directly  
- private sector indirectly                                                                 |
| Economic equality                   | - the government uses progressive rates of taxation  
- levying income tax to bring about economic equality                                                                                      |
| Special advantages to the society   | - the government safeguards the interest of the workers and weaker sections  
- by legislating on minimum wages and rationing  
- establishing fair price shops and formulating social welfare measures                                                                      |
| Demerits of Mixed Economy           | Lack of Co-ordination - the greatest drawback of mixedism is lack of co-ordination  
- between public sector and private sector  
- both work with divergent motives  
- it creates many co-ordination related problems                                                                                           |
| Competitive attitude                | - both government and private sectors  
- should work with a complementary spirit towards welfare of the society  
- but in reality they are competitive in their activities                                                                                   |
| Inefficiency                        | - most of the public sector enterprises remain inefficient  
- due to bureaucracy, red tapism and lack of motivation                                                                                      |
| Fear of Nationalization             | - discourages the private entrepreneur in their business operations  
- innovative initiatives                                                                                                                   |
Widening inequality - ownership of resources laws of inheritance and profit motive - people widens the gap between rich and poor

**Features of Capitalism**

| Ownership means of production | private |
| Economic Motive               | profit  |
| Solution of central problems  | free market system |
| Government Role               | internal regulation only |
| Income determination          | unequal |
| Nature of enterprise          | private |
| Economic freedom              | complete |
| Major problem                 | inequality |

**Features of Socialism**

| Ownership means of production | public |
| Economic Motive               | social welfare |
| Solution of central problems  | central planning systems |
| Government Role               | complete involvement |
| Income determination          | equal |
| Nature of enterprise          | government |
| Economic freedom              | lack of freedom |
| Major problem                 | inequality |

**Features of Mixedism**

| Ownership means of production | both private and public ownership |
| Economic Motive               | social welfare and profit motive |
| Solution of central problems  | central planning system and free market system |
| Government Role               | limited role |
| Income determination          | less unequal |
| Nature of enterprise          | both private and state |
| Economic freedom              | limited |
| Major problem                 | inequality and inefficiency |

**Concept of Macro Economics**

Stock and flow variables - variables used in economic analysis are classified as stock and flow - both stock and flow variables may increase
or decrease with time

<table>
<thead>
<tr>
<th>Stock</th>
<th>-refers to a quantity of a commodity measured at a point of time</th>
</tr>
</thead>
</table>
| In Macro Economics | -money supply, unemployment level, foreign exchange, reserve capital, etc  
-ex: stock variables |
| Flow variables | -measured over a period of time  
-national income, imports, exports, consumption, production, investment, etc  
-ex: of flow variable |
| Economic models | -simplified representation of real situation  
-to describe economic activities  
-relationship and their behaviour  
-most economic models are built with mathematics, graphs and equations to explain relationships between economic variables |
| The commonly used economic models | -the supply-demand models and circular flow models and smith models |
| Circular flow of income | -is a model of an economy showing connections between different sectors of an economy  
it shows flow of income, goods and services and factors of production between economic agents |
| Economic agents | -such as firms, households, government and nations |
| The circular flow analysis | -is the basis of national accounts and macro economics |
| There are three models | -circular flow of income representing the major economic systems  
two sector model  
three sector model  
four sector model |
| Two sector model | -simple economy with household and firms |
Three sector model - mixed and closed economy with households, firms and government

Four sector model - are open economy with households, firms, government and rest of the world (external sector)

Circular flow of income in two sector economy - two sectors namely household and firm sector

Household sector - is the sole buyer of goods and services - the sole supplier of factors of production - it spends its entire income on the purchase goods produced by the business sector - the household sector receives income from firm sector

Firms - revenue from by selling goods and services to household sector - it hires the factors of production owned by the household sector

Two sector economy - production and sales are equal - there will be a circular flow of income of goods

The outer circle - represents real flow (factors and goods)

The inner circle - represents the monetary flow (factors prices and commodity prices)

Real flow - indicates the factor services flow from household sector to the business sector - goods and services flow from business sector the household

Two sector economy - \( Y = C + I \) - where \( Y \) is Income - \( C \) is consumption - \( I \) is investment
Circular flow of income in three sector economy

- In addition to household and firms and government sector
- Purchase goods and services from firms
- Receive factors of production from household sector

Government also makes

- Social transfers such as pension, relief, subsidies households
- Pays the firms for the purchases of goods and services

Three forces

- \( Y = C + I + G \)
- Three sector model

Circular flow of income in a four sector economy

- In addition to household, firms and government, fourth sector namely external sector
- The external sector comprises exports and imports
- \( Y = C + I + G + (X - M) \)
- \( C + I + G \) domestic expenditure
- \( X - M \) net exports
# CHAPTER 2 NATIONAL INCOME

**National income**
- Measure of the economic activities of a nation
- It denotes the country’s purchasing power
- The growth of an economy is measured by its real national income grows

**National income serves**
- As an instrument of economic planning

**National income**
- One of the most significant macro economic variables

**Nobel laureate**
- Simon Kuznets first introduced the concept of national income

**National income**
- Means the total money value of all final goods and services produced in a country during a particular period of time (one year)

**Simon Kuznets**
- Creator of GDP 1932

## Basic concepts of National Income

**Gross domestic product**
- Is the total market value of final goods and services produced within the country during the year
- Calculated at market prices
- Is known as GDP at market prices

**GDP by expenditure**
- Method at market prices = C + I + G + (X – M)
- C = Consumption goods
- I = Investment goods
- G = Government purchases
- X = Exports; M = Imports
- (X – M) is net export which can be positive or negative

**Net Domestic product (NDP)**
- Is the value of net output of the economy during the year
- Country’s capital equipment wear out or become outdated each year during the production process

**Net Domestic product**
- GDP – Depreciation
Gross National Product (GNP) - is the total measure of the flow of final goods and services
- at market value resulting from current production in a country during a year
- including net income from abroad

GNP includes five types of final goods and services:
- 1. Consumption (C)
- 2. Gross Investment (I)
- 3. Goods and services produced (or) purchased by the government (G)
- 4. Net exports of goods and services, i.e., the difference between value of export and import of goods and services known as \( X - M \)
- 5. Net factor income from abroad

Net factor income from abroad - which refers to difference between factor income received from abroad
- factor incomes paid to the foreign residents for factor services by them in the domestic territory

- 5. GNP at market prices means the gross value of final goods and services + Net factor income from abroad C + I + G + (X – M) + (R – P)
- GNP at market price = GDP at market prices + Net factor income from abroad

Net national product (NNP) at market prices - refers to the value of the net output of the economy during the year
- NNP is obtained by deducting the value of depreciation (or)
- replacement allowance of the capital assets from the GNP

It is expressed as
- \( NNP = GNP \) – Depreciation allowance

 (Depreciation is also called Capital consumption allowance)

NNP at factor cost - refers to the market value of output
- NNP at factor cost is the total of income
payment made to factors of production
-money value of NNP at market price, we
deduct the amount of indirect taxes and
subsidies to arrive
-at the Net National Income at factor cost
-NNP at factor cost = NNP at market prices –
(Indirect taxes + Subsidies)

Personal Income
-is the total income received by the individuals
of a country from all sources before payment
of direct taxes in a year

Personal income
-is near equal to the national income
-Personal income = National Income – (Social
security contribution and undistributed
corporate profits) + Transfer payments

Disposable income
-is also known as disposable personal income
-it is the individuals income after the payment
of income tax
-this is the amount available for household for
consumption
-Disposable Income = Personal Income – Direct
tax
-as the entire disposable income is not spent on
consumption
-Disposable Income = Consumption + Saving

Percapita Income
-the average income of a person of a country in
a particular year is called percapita income
-percapital income is obtained by dividing

Percapita Income
\[ \text{Percapita Income} = \frac{\text{National Income}}{\text{Population}} \]

Real Income
-nominal income is national income
-expressed in terms of a general price level of a
particular year
-is the buying power of nominal income
National income is the final value of goods and services - produced and expressed in terms of money at current prices

Real income derived as follows

National Income at Constant price

\[ \text{National Income at Constant price} = \frac{\text{National Income at current price}}{P_1/P_0} \]
- \( P_1 \) – Price Index during current year
- \( P_2 \) – Price Index during base year

GDP deflator

- is an index of price changes of goods and services included in GDP
- it is a price index which is calculated by dividing the nominal GDP in a given year by the real GDP for the same year and multiplying in by 100

\[ \text{GDP deflator} = \frac{\text{Nominal GDP}}{\text{Real GDP}} \times 100 \]

Methods of measuring national income

- All goods and services produced in the country must be counted and converted against money value during year
- whatever is produced in either used for consumption or saving
- national output can be computed at any of three levels
- viz. production, income and expenditure

Accordingly three methods

- 1. Production or value added method
- 2. Income method or Factor earning method
- 3. Expenditure method

The following equation must hold

\[ \text{Output} = \text{Income} = \text{Expenditure} \]

GDP expenditure

- consumption
- government spending
- investment spending
- change in value of stocks
- exports
- imports
- GDP (Known as aggregate demand)

GDP factor income
- income from people in jobs and in self employment eg. wages and salaries
- profit of private sector business
- rent income from the ownership of land

GDP value of output
- value added from each of the main economic sectors
- these sectors are
- primary
- secondary
- manufacturing
- quaternary

Because the three methods
- are circular in nature
- measures the output of the of the country
- it is also called inventory method

Product method
- measures the output of the of the country
- it is also called inventory method

Gross value of output
- from different sectors like agriculture, industry trade and commerce etc.
- is obtained for the entire economy during a year
- the value obtained is actually the GNP at market prices
- to avoid double counting
- the value of the final product
- is derived by the summation of all the value added in the productive process
- to avoid double counting
- either the value of the final output should be taken estimate of GNP
- or the sum of values added should be taken

In India, the gross value of the farm output is obtained
- total production of 64 agriculture commodities is estimated
The output of each crop - is measured by multiplying the areas own by the average yield per hectare.
- the total output of each commodity is valued at market price.
- the aggregate value of total output measure the gross value of agricultural output.
- the net value of the agricultural output is measured by making deductions for the cost and depreciation from the gross value.

Precautions - the product method is followed in the underdeveloped countries.
- but it is less reliable because the margin of error in their method.
- In India, this method is applied to agriculture, mining and manufacturing including handicrafts.
- double counting is to be avoided under value added method.
- raw material or intermediate goods for the final production should not be included ex. cloth.
- the value of output used self consumption should be counted while measuring national income.
- In the case of durable goods, sale and purchase of second hand goods should not be included.

Income method
- factor earning method.
- this method approaches national income from the distribution side.
- national income is calculated by adding up all the income generated.

Steps involved
The enterprises - are classified into various industrial groups.

Factor incomes are grouped under - labour income, capital income, mixed income.

Labour income - wages, salaries, fringe benefits, employer’s
contribution to social security

Capital Income
- profit, interest, dividend or royalty

Mixed income
- farming, sole proprietorship and other professions

National income
- is calculated as domestic factor income plus net factor incomes from abroad
\[ y = w + r + i + \pi + (R - P) \]
- \( w \) = wage; \( r \) = rent; \( i \) = interest; \( \pi \) = profits;
- \( R \) = exports; \( P \) = imports
- this method is adopted for estimating the contribution of the remaining sectors
- income from abroad are obtained from the account of the balance of the country

Precautions
Items not to be included
- transfer payments are not be included in estimations of national income
- these payments are not received for any services provided in the current year
- such as pension, social, insurance, etc.
- the receipts from the sale of second hand goods should not be treated as a part of national income
- windfall gains such as lotteries are also not be included
- corporate profit tax should not be separately included

Items to be included
- imputed value of rent for self occupied houses or offices
- imputed value of services provided by owners of production units

The Expenditure method
- outlay method
- the total expenditure incurred by the society in a particular year is added together
- it includes personal consumption expenditure, net domestic investment, government
expenditure on consumption as well as capital goods and net exports
\[-\text{GNP} = \text{C} + \text{I} + \text{G} + (\text{X} - \text{M})\]
\[-\text{C} = \text{Private consumption expenditure}\]
\[-\text{I} = \text{Private investment expenditure}\]
\[-\text{G} = \text{Government expenditure}\]
\[-\text{X} - \text{M} = \text{Net exports}\]

**Precautions**

**Second hand goods**
- expenditure on second hand goods should not be included

**Purchase of shares and bonds**
- in the secondary market should not be included

**Transfer payment**
- old age pension should not be included

**Expenditure on intermediate goods**
- expenditure on seeds and fertilizers by farmers, cotton and yarn by textile industries
- not to be included to avoid double counting
- only expenditure on final product are to be included

**Factor cost**
- there are number of inputs are included into production process
- land, labour, capital and entrepreneurship
- incur a cost for using these factors of production
- these costs are ultimately added onto the price of the product

The factor cost refers
- the cost of production that is incurred by a firm when producing goods and services

**Example**
- cost of renting machine, purchasing machinery and land, paying salaries and wages, cost of obtaining capital, and the profit margins added by the entrepreneur
The factor cost does not include the taxes that are paid to the government - taxes are not directly involved in the production process - not part of the direct production cost.

**Subsidies received**
- included in the factor cost as subsidies are direct inputs into the production.

**Market price**
- once goods and services are produced they are sold
- in a market place at a set market price
- is the price that consumers will pay
- when they purchase it from the sellers

**Taxes charged**
- by the government will be added on the factor price

**Subsidies**
- provided will be reduced from the factor price to arrive at the market price

**MP**
\[ MP = FC + \text{Indirect taxes} - \text{Subsidies} \ldots \text{Equation 1} \]

**FC**
\[ FC = MP - \text{Indirect taxes} + \text{Subsidies} \ldots \text{Equation 2} \]

**National income (NNP<sub>FC</sub>)**
- Gross value added by all the production enterprises within the domestic territory of the country – Depreciation – Net indirect taxes + Net factor income from abroad (or)

**Value of output**
- Price X Quantity sold

**GDP<sub>MP</sub>**
- Private final consumption + Government final consumption expenditure + Gross domestic capital formation + Net exports

**Importance of National Income analysis**
- National income is of great importance for the economy of a country
- national income is regarded as accounts of the economy
- which are known as social accounts
- to know the relative importance of the various
sectors of the economy and their contribution
to formulate the national policies such as
monetary policy, fiscal policy and other
policies
to formulate planning and evaluate plan
progress
to build economic models both in short – run
and long – run
to make international comparison inter –
regional comparison and inter – temporal
comparison of growth
to know a country’s per capita income which
reflects the economic welfare of the country
to know the distribution of income for various
factors of production in the country
to arrive at many macro economic variables
namely tax – GDP ratio current account
Deficit – GDP ratio, Fiscal deficit – GDP ratio
Debt – GDP ratio, etc.

Difficulties in measuring national income
- Transfer payment
- difficulties in assessing depreciation allowance
- unpaid services
- income from illegal activities
- production for self – consumption and
  changing price
- capital gains
- statistical problems

Transfer payments
- form of pensions, unemployment allowance,
  subsidies, etc.
- these are government expenditure
- they are not included in the national income
- because they are paid without adding anything
to the production processes
- interest on national debt is also considered
  transfer payments
- past savings without any productive work
Difficulties in assessing depreciation allowance

- accidental damages, repair and replacement charges from the national income is not an easy task

Unpaid services

- a housewife renders a number of useful services not paid for them

Income from illegal activities

- like gambling, smuggling, illicit extraction of liquor, etc. not included in national income

Production for self – consumption and changing price

- farmers keep a large portion of food and other goods produced on the farm for self consumption
- product method is measured by the value of final goods and services at current market prices
- price do not remain stable
- they rise or fall
- calculate the real national income at a constant price index

Capital gains

- capital asset such as a house, other property, stocks or shares, etc.
- sold at higher price than was paid for it the time at the time of purchase
- capital gains are excluded from national income

Statistical problems

- to avoid double counting
- accurate and reliable data are not adequate
- farm output in the subsistence sector is not completely informed
- different languages, customs create computing estimates
- people in India are different to the official inquiries
- most of the statistical staff are untrained and inefficient
- National income estimates outside the country are not very accurate or adequate.
- There is at least 10% margin of error in underestimation or overestimation.
- GDP estimates for India vary from 2 trillion US dollars to 5 trillion US dollars.

**National Income and Social Accounting**
- National income is also being measured by the social accounting method.
- The social accounting framework is useful for economists as well as policy makers.
- It represents the major economic flows and various sectors of the economic systems.

**Social Accounting and Sector**
- The economy is divided into several sectors.

**The Economy is Divided into the Following Sectors**

<table>
<thead>
<tr>
<th>Sector</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Firms</td>
<td>Undertake productive activities, employ factors of production to produce goods and services.</td>
</tr>
<tr>
<td>Households</td>
<td>Consume entities and represent the factors of production.</td>
</tr>
<tr>
<td>The Government Sector</td>
<td>Public bodies at all levels, centre, state, and local.</td>
</tr>
<tr>
<td>Edey and Peacock</td>
<td>Defined government as a collective “person” that purchase goods and services from firm.</td>
</tr>
<tr>
<td>Social Goods</td>
<td>The main function of the government is to provide social goods. defence, public health, education, etc.</td>
</tr>
<tr>
<td>Sector</td>
<td>Description</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Rest of the world sector</td>
<td>relates to international economic transactions of the country</td>
</tr>
<tr>
<td>Capital sector</td>
<td>refers to saving and investment activities</td>
</tr>
<tr>
<td></td>
<td>it included the transaction of bank, insurance corporations, financial</td>
</tr>
<tr>
<td></td>
<td>houses, other agencies of the money market</td>
</tr>
<tr>
<td></td>
<td>these are not included under “firms”</td>
</tr>
<tr>
<td></td>
<td>these agencies provide financial assistance to the firm activities</td>
</tr>
<tr>
<td>Sectoral contribution to GDP</td>
<td>the economy is divided into three namely, primary, secondary and tertiary</td>
</tr>
<tr>
<td></td>
<td>sectors</td>
</tr>
</tbody>
</table>

### National income and welfare

- **National income**
  - is considered as indicator of the economic well-being of a country

- **The economic progress of countries**
  - is measured in terms of their GDP per capita and their annual growth rate

- **A country with a higher per capita income**
  - is supposed to enjoy greater economic welfare and higher standard of living

### Limitations

- composition of goods and services not favour economic welfare
- ex. greater the proportion of capital goods over consumer goods
- improvement in economic welfare will be lesser

- **Higher GDP**
  - greater environmental hazards such as air, water and soil pollution will be little economic welfare
the production of was goods not welfare
-employment of children not promote economic welfare

Physical Quality of Life Index (PQLI) -better indicator of economic welfare
-it includes standard of living, life expectancy at birth and literacy

National income and erosion of national wealth -higher GDP, larger natural resources are being depleted or damaged

National income in terms of US $ -the former looks very low
-if Purchasing Power Parity (PPP) method is adopted India looks better

Social environment cost -considered while enumerating national income

Personal income -total income received by the individuals of a country before payment of direct taxes

Capital sector -it includes saving and investment activities

Social accounts -national income considering the social cost generated by economic activities

Transfer payments -government makes payments in the form of pensions, unemployment allowance, subsidies, etc.
## CHAPTER 3 THEORIES OF EMPLOYMENT AND INCOME

### Unemployment

- is the most vexing

### Both Classical economists and Keynes

- have explained the relationship between employment and income

### The classical economists

- great faith in the law of markets
- articulated by J.B. Say
- the French economist

### J.M. Keynes

- greatest and most influential economists of the mid 20th century

### Meaning of full employment

- refers to a situation in which every person willing to work
- at the prevailing wage rate is employed

### Keynes defines

- full employment as the absence of involuntary unemployment

### Lerner defines

- that level of employment at which any further increase in spending would result in inflationary of wages and prices

### Full employment equilibrium

- efficiently employed to achieve maximum level of output

### Concept of full employment

- generally refers to full employment of labour force of a country

### Unemployment and its types

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unemployment</td>
<td>who are willing to work and able to work but cannot find suitable jobs</td>
</tr>
<tr>
<td>India’s rural economy</td>
<td>both unemployment and underemployment</td>
</tr>
</tbody>
</table>
**The major features of rural unemployment**
- existence of unemployment in the form of disguised unemployment and seasonal unemployment

**In India**
- frictional, structural and open unemployment exist in urban areas

**Types of unemployment**

<table>
<thead>
<tr>
<th>Types of unemployment</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>In India</td>
<td>nature of unemployment is different from developed countries</td>
</tr>
<tr>
<td>Developing countries</td>
<td>largely structural unemployment</td>
</tr>
<tr>
<td></td>
<td>which is due to slow rate of capital formation</td>
</tr>
<tr>
<td>Developed countries</td>
<td>the unemployment is purely temporary or cyclical or frictional</td>
</tr>
</tbody>
</table>

**Types of unemployment**
- Cyclical unemployment
- Seasonal unemployment
- Frictional unemployment
- Educated unemployment
- Technical unemployment
- Structural unemployment
- Disguised unemployment

**Cyclical unemployment**
- exists during the downturn phase of trade cycle
- during period of recession and depression, income and output fall
- leading to widespread unemployment
- its caused deficiency of effective demand
- cyclical unemployment can be caused by public investment or expansionary monetary policy

**Seasonal unemployment**
- during certain seasons of the year
- Ex: agriculture and agro based industries
- therefore people may remain unemployed during off season
- happens from demand side also
<table>
<thead>
<tr>
<th>Type of Unemployment</th>
<th>Description</th>
</tr>
</thead>
</table>
| Frictional unemployment                  | - temporary unemployment  
- arises due to imbalance between supply of labour and demand for labour  
- immobility of labour, lack of necessary skills, break down of machinery, shortage of raw materials, etc.  
- lose jobs and search for jobs are also included under frictional unemployment |
| Educated unemployment                    | - qualification does not match the job  
- faulty education system  
- lack of employable skills  
- mass student turnout  
- preference for white collar jobs |
| Technical unemployment                   | - capital intensive requires less labourers  
- technological unemployment  
- invention and innovations lead to adoption of new techniques  
- existing workers are retrenched  
- labour saving devices are responsible for technological unemployment |
| Structural unemployment                  | - to drastic change in the structure of the society  
- lack of demand for the product (or)  
- shift in demand to other products cause this type of unemployment  
- unemployment results from massive and deep rooted changes in economic structure |
| Disguised unemployment                   | - when more people are there than what is actually required  
- even if some workers are withdrawn production does not suffer  
- this type of unemployment is found in agriculture  
- a person contribution to output is less than what he can produce by working for normal |
<table>
<thead>
<tr>
<th>Situation</th>
<th>Marginal productivity of labour is zero or less or negative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classical theory of unemployment</td>
<td>different views of classical economists on the issue of income and employment in the economy</td>
</tr>
<tr>
<td>Adam Smith wrote the book</td>
<td>“An enquiry into the nature and causes of the wealth of nations” in 1776</td>
</tr>
<tr>
<td>Classical theory was developed by</td>
<td>David Ricardo, J.S. Mill, J.B. Say and A.C. Pigou</td>
</tr>
<tr>
<td>Classical economists assumed</td>
<td>economy operates at the level of full employment</td>
</tr>
<tr>
<td></td>
<td>without inflation in the long period</td>
</tr>
<tr>
<td>They also assumed</td>
<td>wages and price of goods were flexible</td>
</tr>
<tr>
<td></td>
<td>competitive market existed in the economy (laissez – faire economy)</td>
</tr>
<tr>
<td>Say’s law of market</td>
<td>Jean Baptist Say (1767-1832)</td>
</tr>
<tr>
<td></td>
<td>French economist and an industrialist</td>
</tr>
<tr>
<td></td>
<td>Core of the classical theory of employment</td>
</tr>
<tr>
<td></td>
<td>he was influenced by the writing of Adam Smith and David Ricardo</td>
</tr>
<tr>
<td>J.B. Say enunciated the proposition that</td>
<td>“Supply creates its own demand”</td>
</tr>
<tr>
<td></td>
<td>Hence there cannot be general over production (or)</td>
</tr>
<tr>
<td></td>
<td>the problem of unemployment in the economy</td>
</tr>
<tr>
<td>According to Say</td>
<td>when goods are produced by firms in the industry</td>
</tr>
<tr>
<td></td>
<td>they pay reward to the factors of production</td>
</tr>
<tr>
<td></td>
<td>the households after receiving rewards of the factors of production</td>
</tr>
<tr>
<td></td>
<td>spend the amount on the purchase of goods</td>
</tr>
</tbody>
</table>
and services produced by them
- each product produced in the economy creates demand equal to its value in the market

Classical theory explains
- A person receives his income from production which is spent on the purchase of goods and services produced by others

For the economy as a whole
- therefore "total production equal total income"

Ex ante and Ex post in Say’s law
- the statement that supply creates own demand (or) equivalently that the aggregate investment equals the aggregate saving always hold good in the ex post sense since it is simply an accounting identity

Say’s law of markets
- however states that these two are equal in ex ante sense
- the total quantity which people produce
- ie. aggregate supply must be equal to the total quantity which they plan to buy
- ie. aggregate demand

Assumptions of the Say’s law of market
- No single buyer or seller of commodity or an input can affect price
- full employment
- people are motivated by self interest
- it determines economic decisions

The laissez faire policy
- is essential for an automatic and self adjusting process of full employment equilibrium
- market forces determine everything right

Perfect competition
- in labour and product market
- there is wage-price flexibility
- money acts only as a medium of exchange
- long run analysis
- there is no possibility for over production or unemployment
- unutilized resources used until reaches full employment
- no government intervention automatic price adjustment mechanism operated
- interest rate flexibility leads to saving and investment equality

**Implications of Say’s law**
- there is no possibility for overproduction or unemployment
- unutilized resources used in the economy
- it is profitable to employ them up to the point of full employment
- willing to accept rewards on a par with their productivity

**As automatic price mechanism**
- operates in the economy
- there is no need for government intervention

**Interest flexibility**
- brings about equality between saving and investment

**Money performs**
- only the medium of exchange function in the economy as people will not hold idle money

**Criticism of Say’s law**

**According to Keynes**
- supply does not create its demand
- it is not applicable where demand does not increase as much as production increases
- automatic adjustment process will not remove unemployment
- unemployment can be removed by increase in the rate of interest
- money is not neutral

**Individual hold**
- money for unforeseen contingencies
- while business keep cash reserve for future activities
| Say’s law | -is based on the proposition that supply creates its own demand  
-there is no over production  
-Keynes said that over production is possible  
-Keynes regards full employment as a special case  
-because there is under employment in capitalist economies |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>The need for state intervention</td>
<td>-in the case of general over production and mass unemployment</td>
</tr>
</tbody>
</table>
| Keynes theory of employment and income | -the general theory of employment, interest and money  
-published in 1936 |
| Highly significant work | -turning point in the development of modern economic theory |
| The theory of Keynes | -against the belief of classical economists that the market forces  
-in capitalist economy adjust themselves to attain equilibrium |
| Keynes | -not only criticized classical economists  
-but also advocated his own theory of employment |
| Keynes theory | -was a general theory as it tried to explain all types of situations  
-ie. not only equilibrium level of employment but also the concept of full employment as well as possibility of under employment |
| Keynes theory of employment | -was based on the view of the short run |
| According to him | -the factors of production such as capital goods, supply of labour, technology and |
efficiency of labour unchanged
while determining the level of employment

John Maynard Keynes
- most influential economists of the 20th century
- he was born in Cambridge in 1883
- Civil servant, a director of the Bank of England
- leader of British delegation of negotiators at the Bretton Woods Conference

Economic theory based
- idea is known as Keynesian economics
- particularly in the field of macro economics

Effective demand
The starting point of Keynes theory
of employment and income is the principle of effective demand
Effective demand
denotes money actually spent by the people on products of industry
- entrepreneurs receive is paid in the form of rent, wage, interest and profit
- therefore effective demand equal national income

An increase in the aggregate effective demand
- increase the level of employment
A decline in total effective demand
- lead to unemployment
Total employment
determined total demand of country
According to Keynes
- theory of employment “effective demand signifies the money spend on consumption of goods and services and on investment”
The total expenditure
- is equal to the national income, which
The relationship between employment and output of an economy depends upon the level of effective demand which is determined by the forces of aggregate supply and aggregate demand.

\[ \text{ED} = Y = C + I = \text{Output} = \text{Employment} \]

Effective demand determines the level of employment in the economy. When effective demand increases, employment will increase, and when effective demand decreases, the level of employment will decrease.

The effective demand will be determined by two determinants namely consumption and investment expenditure.

The consumption function depends upon income of the people and marginal propensity to consume.

According to Keynes, if income increases, consumption will also increase but by less than increase in income.

The rate of interest and marginal efficiency of capital determine the investment levels.

Rate of interest depends on money supply and liquidity preference.

Keynes has given importance to the concept of liquidity preference.

Liquidity preference is based on three motives:
- Transactive motive
- Precautionary motive
- Speculative motive

MEC depends on two factors namely prospective yield of capital asset and supply price of capital.
Aggregate demand function (ADF)

Keynesian model
- output is determined mainly by aggregate demand
- is the amount of money which entrepreneurs expect to get by selling the output produced by the number of labourers employed

Therefore it is expected income or revenue
- from the sale of output at different level of employment

Aggregate demand
- following four components
  - 1. Consumption demand
  - 2. Investment demand
  - 3. Government expenditure
  - 4. Net export (Export – Import)

Desired demand in the economy
- is the sum total of desired private consumption expenditure, desired investment expenditure, desired government spending and desired net exports

The desired spending is called
- aggregate spending and can be expressed as
- \( AD = C + I + G + (X-M) \)

The above figure explains
Aggregate demand price increases or decreases
- with increase or decrease in the volume of employment
Aggregate demand curve - increases at an increasing rate in the beginning and then increases at a decreasing rate.

This shows that - as income increases owing to an increase in employment expenditure of the economy, income increase at a decreasing rate.

Aggregate Supply Function (ASF) - is increasing functions of the level of employment.

Aggregate supply refers - to the value of total output of goods and services produced in an economy in a year.

In other words, Aggregate supply - is equal to the value of national product, i.e., national income.

In other words, Aggregate supply refers - to the required amount of labourers and materials to produce the necessary output.

- Production involves cost.

Aggregate supply price

Aggregate supply price - is the total amount of money that all entrepreneurs in an economy expect to receive from the sale of output produced by a given number of labourers employed.

The term “price” refers - the amount of money received from the sale of output.

Components of aggregate supply are:

1. Aggregate (desired) consumption expenditure (C)
2. Aggregate (desired) private saving (S)
3. Net tax payment (T)

Total payment to be received by the government - transfer payment, subsidy and interest payments to be incurred by the government.
4. Personal (desired) transfer payments to the foreigners (Rf)
   Eg: Donations to international relief efforts

Aggregate supply

\[ C + S + T + Rf = \text{Aggregate income generated in the economy} \]

Figure 3.2 shows Aggregate Supply curve - the shape of the two aggregate supply curves drawn for the assumption of fixed money wage and variable wages
- \( Z \) curve is linear where money wages remains fixed
- \( Z_1 \) curve is non-linear wage increase with employment

When full employment level - \( Nf \) is reached it is impossible to increase output by employing more men

Aggregate supply curve - become inelastic vertical straight line

The slope of aggregate supply curve - depends on the relation between the employment and productivity

The capital stock - often fixed
- hence the law of diminishing marginal returns takes place
- as more workers are employed
The aggregate supply curve can be expected to slope upwards based upon this relation.

Aggregate supply depends on the relationship between price and wages.

If prices are high, wages low, the producers will try to employ labourers.

If prices are low, wages high, investment will be curtailed, output will fall, reduction in the productive capacity.

Aggregate supply is an important factor in determining the level of economic activity.

Equilibrium between ADF and ASF

Under the Keynes theory of employment, a simple two-sector economy consisting of the household sector and the business sector understand the equilibrium between ADF and ASF:

- all the decisions concerning consumption expenditure
- taken by the individual household while the business firms take decisions concerning investment
- it is also assumed that
Consumption function

-is linear and planned investment is autonomous

There are two approach to determination of the equilibrium

-level of income in Keynesian theory
-1. Aggregate demand – Aggregate supply approach

-2. Saving – Investment approach

Aggregate demand and aggregate supply approach

-is alone explained to understand the determination of equilibrium level of income and employment
-the employment level is $N_0$
-the tendency to employ more labour will stop once they reach point $E$
-at all level of employment beyond $O N_0$
-the aggregate demand curve is below the aggregate supply curve indicating loss to the producers
-they will never employ more than $O N_0$ labour

Thus effective demand concept becomes

-a crucial point in determining the equilibrium level of output
-in the capitalist economy or a free market economy in the Keynesian system

Equilibrium level

-employment need not be the full employment level $N_1$
-it is understand that the difference between $N_0 – N_1$ is the level of unemployment

The concept of effective demand

-becomes significant in explaining the unemployment equilibrium

Keynesianism

-short – run equilibrium
-saving is a vice

Function of money

-is a medium of exchange on the one side and
<table>
<thead>
<tr>
<th>Concept</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A store of value on the other side</td>
<td>-macro approach to national problems</td>
</tr>
<tr>
<td>-state intervention is advocated</td>
<td></td>
</tr>
<tr>
<td>Applicable to all situations</td>
<td>-full employment and less than full employment</td>
</tr>
<tr>
<td>-capitalism has inherent contradictions</td>
<td></td>
</tr>
<tr>
<td>Budgeting</td>
<td>-should be adjusted through changes in income</td>
</tr>
<tr>
<td>The equitability between saving and investment</td>
<td>-is advanced through changes in income</td>
</tr>
<tr>
<td>Rate of interest</td>
<td>-is determined by the demand for and supply of money</td>
</tr>
<tr>
<td>-rate of interest is a flow</td>
<td>-demand creates its own supply</td>
</tr>
<tr>
<td>Rate of interest</td>
<td>-is a reward for parting with liquidity</td>
</tr>
<tr>
<td>Classicism</td>
<td>-long – run equilibrium</td>
</tr>
<tr>
<td>-saving is a social virtue</td>
<td></td>
</tr>
<tr>
<td>Function of money</td>
<td>-is to act as a medium of exchange</td>
</tr>
<tr>
<td>-micro foundation to macro problems</td>
<td></td>
</tr>
<tr>
<td>-champions of laissez faire policy</td>
<td></td>
</tr>
<tr>
<td>-applicable only to the full employment situation</td>
<td></td>
</tr>
<tr>
<td>-capitalism is well and good</td>
<td>-balanced budget</td>
</tr>
<tr>
<td>The equality between saving and investment</td>
<td>-achieved through changes of rate of interest</td>
</tr>
<tr>
<td>Rate of interest</td>
<td>-is determined by saving and investment</td>
</tr>
<tr>
<td>-rate of interest is a stock</td>
<td>-supply creates its own demand</td>
</tr>
<tr>
<td>-rate of interest is a reward for saving</td>
<td></td>
</tr>
</tbody>
</table>
ENABLERS FOR SCORING
CENTUM

XII STD

ECONOMICS STUDY MATERIAL

PART II

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<td>6. BANKING</td>
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</table>

“Equanimity, hard work and intelligent time-management are the secrets of success”
# CHAPTER 4 CONSUMPTION AND INVESTMENT FUNCTION

The theory of multiplier and the theory of accelerator - the two sides of theory fluctuations

The theory of demand are the theory of supply - the two sides of the theory of value - the full theory must be that which shows both side in operation - J.R. Hicks

**Consumption and investment function** - which play a vital role in influencing national income

The primary macro economic objective - is acceleration of growth of national income

Consumption and investment goods - there is close correlation between investment and national income

The multiplier - refers to the change in national income resulting from change in investment

The value of multiplier - itself depends on consumption function (or) marginal propensity to consume

The consumption function - is the relationship between consumption expenditure and the national income

The unspent portion of national income - is called saving which becomes investment and thereby capital

The relationship between consumption expenditure and the capital expenditure - is explained by the principle of accelerator

**Meaning of consumption function**

The consumption function or propensity to consume - refers to income consumption relationship - it is a “functional relationship between two aggregates” - viz, total consumption and gross national income
Symbolically

Consumption function

- the relationship is represented as \( C = f(y) \)
- indicates a functional relationship between \( C \) and \( Y \)
- \( C \) is the dependent variable
- \( Y \) is the independent variable
- ie. \( C \) is determined by \( Y \)
- this relationship is based on the ceteris paribus
- if we take \( C = 100 + 0.8y \), then MPC = 0.8
- if \( y = 300 \), \( C = 340 \) \( \text{MPC} = \frac{\Delta C}{\Delta Y} = 0.8 \)

\[-C = a + by \text{ or } C = 20 + 0.8y\]
\[-b = \text{MPC (Marginal propensity to consume)}\]
\[-= 0.8 = \frac{\Delta C}{\Delta Y}\]

<table>
<thead>
<tr>
<th>Income Y</th>
<th>Consumption C</th>
<th>Savings S</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>20</td>
<td>-20</td>
</tr>
<tr>
<td>60</td>
<td>70</td>
<td>-10</td>
</tr>
<tr>
<td>120</td>
<td>120</td>
<td>0</td>
</tr>
<tr>
<td>180</td>
<td>170</td>
<td>10</td>
</tr>
<tr>
<td>240</td>
<td>220</td>
<td>20</td>
</tr>
<tr>
<td>300</td>
<td>270</td>
<td>30</td>
</tr>
<tr>
<td>360</td>
<td>320</td>
<td>40</td>
</tr>
</tbody>
</table>

The above table
- shows that consumption is an increasing function of income
- because consumption expenditure increase with increase in income
- here it shown that when income is zero

People spend out their
- past savings on consumption because they must eat in order to like (Autonomous consumption)
- Hence why \( y = 120 \) \( C = 120 \)
- point B is the diagram
- when \( y = 180 \) \( C = 170 \) \( S = 10 \)
- point S is the diagram
- If y increase to 360 C = 320 S = 40
- In the diagram income is measured horizontally and consumption is measured vertically
- In 45° line at all levels income and consumption are equal
- It is a linear consumption function based on the assumption that consumption changes by the same amount as does income

Thus the consumption function measures not only the amount spent on consumption but also the amount saved

This is because the propensity to save is merely the propensity not to consume - the 45° line may therefore be regarded as a zero-saving line

The shape and position of the C curve indicate the division of income between consumption and saving

Technical attributes of the consumption function
- Average total income 40000, amount of spent 30000
- Average propensity to consume 75%

Marginal
- Income increase 10000
  Income spent 2500
  Marginal propensity to consume 25%

(i) The Average propensity to consume = \( \frac{C}{Y} \)
(ii) The marginal propensity to consume = $\frac{\Delta C}{\Delta Y}$

(iii) The average propensity to save = $\frac{S}{Y}$

(iv) The marginal propensity to save = $\frac{\Delta S}{\Delta Y}$

The average propensity to consume (APC) = $\frac{C}{Y}$
- ie. the ratio of consumption expenditure to any particular level of income

The marginal propensity to consume (MPC) = $\frac{\Delta C}{\Delta Y}$
- defined as the ratio of the change in the consumption to the change in income
- MPC is positive but less than unity
  $0 < \frac{\Delta C}{\Delta Y} < 1$

The average propensity to save (APS) = $\frac{S}{Y}$
- is obtained by dividing the total saving by total income

In other words
- it is the ratio of total saving to total income

The marginal propensity to save (MPS) = $\frac{\Delta S}{\Delta Y}$
- is the ratio of change in saving to a change in income

MPS
- is obtained by dividing change in saving by change in income
- since MPC + MPS = 1
  - MPS = 1 – MPC and MPC = 1 – MPS

Generally the average
- ie. APC is expressed in percentage and MPC in fraction

**Keynes psychological law of consumption**

Keynes
- propounded the fundamental psychological law of consumption
He stated that the fundamental psychological law upon which we are entitled to depend with great confidence.

The law implies there is a tendency on the part of the people to spend on consumption less than the full increment of income.

**Assumptions**

Keynes law is based on the following assumptions:

1. Ceteris paribus (Constant extraneous variable) - The other variables such as income distribution, tastes, habits, social customs, price movements, population growth, etc. do not change and consumption depends on income alone.

2. Existence of normal conditions - The law holds goods under normal conditions. The economy is faced with abnormal and extraordinary circumstances like war, revolution or hyper inflation, the law will not operate.

Existence of a laissez faire capitalist economy - The law operates in a rich capitalist economy where there is no government interventions.

Propositions of the law - Three propositions:

When income increases consumption expenditure also increases but by a smaller amount:

- Our wants are satisfied side by side.
- So that the need to spend more on consumer goods diminishes.
- So the consumption expenditure increases with increase in income but less than proportionality.
The increased income will be divided in some proportion between consumption expenditure and saving - this follows from the first proposition because when the whole of increased income is not spent on consumption - the remaining is saved - in this way, consumption and saving move together

Increase in income always leads to an increase in both consumption and saving - this means that increased income is unlikely to lead to fall in either consumption or saving - thus with increased income both consumption and saving increase

Diagrammatically the three propositions are explained - income is measured horizontally and consumption and saving are measured on the vertical axis

- C is the consumption function curve
- 45° line represents income consumption equality

Proposition (1) - when income increases from 120 to 180 consumption also increases from 120 to 170 - but the increase in consumption is less than the increase in income - 10 is saved

Proposition (2) - when income increases from 180 to 240 - it is divided in same proportion between consumption by 170 and 220 - saving by 10 and 20 respectively
Proposition (3) - increases in income to 180 and 240 lead to increased consumption 170 and 220 - increased saving 20 and 10 than before - it is clear from the widening area below the C curve - the saving gap between 45° line and C curve

Determinants of consumption function

J.M. Keynes has divided factors influencing the consumption function in two - subjective factors and objective factors

Subjective factors - are the internal factors related to psychological feelings - major subjective factors influencing consumption function

Keynes list eight motives which lead individuals to refrain from spending

1. The motive of precaution - to build up a reserve against unforeseen contingencies - Eg: Accidents, sickness
2. The motive of foresight - the desire to provide for anticipated future needs - Eg: old age
3. The motive of calculation - the desire to enjoy interest and appreciation
4. The motive of improvement - the desire to enjoy for improving standard of living
5. The motive of financial independence
6. The motive of enterprise - desire to do forward trading
7. The motive of pride - desire to bequeath a fortune
8. The motive of avarice - purely miserly instinct

Keynes sums up - the motives as precaution, foresight, calculation, improvement, independence, enterprise, pride and avarice
The government, institutions and business corporation and firms may also consume mainly because of the following four motives:

1. The motive of enterprise - the desire to obtain resources to carry out further capital investment without incurring debt

2. The motive of liquidity - the desire to secure liquid resources to meet emergencies and difficulties

3. The motive of improvement - the desire to secure a rising income and to demonstrate successful management

4. The motive of financial prudence - the desire to ensure adequate financial provision against depreciation - obsolescence and to discharge debt

According to Keynes - the subjective factors do not change in the short – run consumption function remains stable in the short period

Objective factors - are the external factors which are real and measurable
- these factors can be easily changed in the long – run

Major objective factors influencing consumption function are

1. Income distribution - if there is large disparity between rich and poor

   The consumption is low - because the rich people have low propensity to consume - high propensity to save

   The community with more equal distribution of income - tends to high propensity to consume - this view has been corroborated by V.K.R.V. Rao
<table>
<thead>
<tr>
<th>Factor</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Price level</td>
<td>- plays an important role in determining the consumption function</td>
</tr>
<tr>
<td>When the price falls</td>
<td>- real income goes up&lt;br&gt;- people will consume more&lt;br&gt;- propensity to save of the society increase</td>
</tr>
<tr>
<td>Wage level</td>
<td>- plays an important role in determining the consumption function</td>
</tr>
<tr>
<td></td>
<td>- there is positive relation between wage and consumption</td>
</tr>
<tr>
<td>Consumption expenditure</td>
<td>- the rise in wages&lt;br&gt;- similar is the effect with regard to wind fall gains</td>
</tr>
<tr>
<td>Interest rate</td>
<td>- plays an important role in determining the consumption function</td>
</tr>
<tr>
<td>Higher rate of interest</td>
<td>- will encourage people to save more money and reduce consumption</td>
</tr>
<tr>
<td>Fiscal policy</td>
<td>- when government reduce the tax, the disposable income rises&lt;br&gt;- the propensity to consume of community increases</td>
</tr>
<tr>
<td>The progressive tax system</td>
<td>- increases the propensity to consume of the people&lt;br&gt;- by altering the income distribution in favour of poor</td>
</tr>
<tr>
<td>Consumer credit</td>
<td>- the availability of consumer credit at easy buy consumer durable goods&lt;br&gt;- Ex: Automobiles, fridge, computer&lt;br&gt;- this pushes up consumption</td>
</tr>
<tr>
<td>Demographic factors</td>
<td>- Ceteris paribus, the larger size of the family, the greater is the consumption</td>
</tr>
<tr>
<td>Size of family, stage of family life cycle, place of residence and occupation</td>
<td>- affect the consumption function</td>
</tr>
<tr>
<td>Duesenberry hypothesis</td>
<td>- two observations regarding the factors affecting consumption</td>
</tr>
</tbody>
</table>
The consumption expenditure depends not only on his current income but also on his current income - past income and standard of living - consumption same even the current income is reduced

Consumption is influenced by demonstration effect - the consumption standards of low income groups are influenced by the consumption standards of high income groups.

In other words - the poor people want to imitate the consumption pattern of rich - this results in spending beyond their income level.

Wind fall gains or losses - unexpected changes in the stock market leading to gains or losses - tends to shift the consumption function upwards or downwards.

Investment function - refers to investment – interest rate relationship - there is a functional and inverse relationship between rate of interest and investment - the investment function slope downwards

\[ I = f(R) \]

- \( I \) = Investment – Dependent variable
- \( r \) = Rate of interest – Independent variable

Meaning of investment - purchase of stocks and shares, debentures, government bonds and equities

According to Keynes - it is only financial investment and not real investment - this type of investment does result in an addition to the stock of real capital

In the views of Keynes - investment includes expenditure on capital investment

Types of investment - Autonomous investment and Induced investment

Autonomous investment - is not dependent on the national income - mainly done with the welfare motive and not for making profit
Ex: construction of road, bridge, school, charitable houses
- essential to development of nation and out of depression

Autonomous investment
- is the expenditure on capital formation
- which is independent of the change in income
- rate of interest or rate of profit
- this investment is independent of economic activity

Autonomous investment
- is income – inelastic
- the volume of autonomous investment is the same at all levels

The autonomous investment curve
- is horizontal, parallel to x axis

- in the time of economic depression
- the government try to boost the autonomous investment
- thus autonomous investment is one of the key concepts in welfare economics

Generally
- government make autonomous investment
- because of the welfare consideration

Induced investment
- is the expenditure on fixed assets and stocks which are required
- when level of income and demand in an economy goes up
- induced investment is profit motivated
The relationship between the national income and induced investment is positive. Decreases in national income lead to decreases in induced investment and vice versa.

Induced investment is income elastic. It is positively sloped as shown here.

Autonomous investment is independent. It is income inelastic. It serves a welfare motive.

Induced investment is planned. It is income elastic. It serves a profit motive.

**Determinants of investment function**

The classical economists believed investment depend exclusively on rate of interest. In reality, investment decision depends on a number of factors:

- Rate of interest
- Level of uncertainty
- Political environment
- Rate of growth of population
- Stock of capital goods
- Necessity of new products
- Level of income of investors
- Inventions and innovations
- Consumer demand
- Policy of the state
- Availability of capital
- Liquid assets of the investors

Keynes contended business expectations and profits are more important in deciding investment.

He also pointed out that investment depends on MEC and rate of interest.

- (i) Private investment is an increase in the
(ii) The MEC states the rate of return on an investment project. Specifically, it refers to the percentage yield earned by last additional unit of capital. (iii) If the marginal efficiency of capital is 5% and the interest rate is 4%, then it is worth borrowing at 4% to get an expected output of 5%.

Relationship between rate of interest and investment

An explanation of how the rate of interest influences the level of investment in the economy.

- Higher interest rate
  - reduce investment
  - because higher rates increase the cost of borrowing and require investment
  - to have a higher rate of return to be profitable

- Interest rate and investment
  - if interest rate rise from 5% to 8%
  - then we get a fall in the amount of investment from Rs. 100 cr to 80 cr
  - if interest rate are increased then it will tend to discourage investment
  - because investment has a higher opportunity cost
  - 1. with higher rates, it is more expensive to
borrow money from a bank  
- saving money in a bank gives a higher rate of return  
- therefore rising savings to finance investment has an opportunity cost of lower interest payments

<table>
<thead>
<tr>
<th>If interest rate rise</th>
<th>- firms will need to gain a better rate of return to justify the cost of borrowing using savings</th>
</tr>
</thead>
</table>

Marginal efficiency of capital

- MEC was first introduced by J.M. Keynes in 1936  
- as an important determinant of autonomous investment  
- the MEC is the expected profitability of an additional capital asset

| Meaning of marginal efficiency of capital | - MEC  
- is the rate of discount which makes the discounted present value equal to the cost of capital  
- expected income stream |
|------------------------------------------|-------------------------------------------------|

MEC depends on two factors

- 1. The prospective yield from a capital asset  
- 2. Supply price of a capital asset

Factors affecting MEC

- Three factors that are taken into consideration while making any investment decision  
- the cost of the capital asset  
- the expected rate of return from during its lifetime  
- the market rate of interest

The marginal efficiency of capital is influenced

- short – run as well as long run factors

Short – run factors

1. Demand for the product  
- is expected to grow and its costs are likely to fall  
- the rate of return from investment will be high  
- it entrepreneurs expect a fall in demand for goods
1. A rise in cost the investment will decline

2. Liquid assets
   - advantage of the investment opportunities
   - the MEC will be high

3. Sudden changes in income
   - the MEC is also influenced
   - windfall profit or tax concession the MEC will be high
   - hence investment in the country will go up

MEC falls
   - with the decrease in income

4. Current rate investment
   - another factor which influences MEC
   - industry is also very large
   - the marginal efficiency of capital will be low

5. Waves of optimism and pessimism
   - the marginal efficiency of capital is also affected in the business cycle

If businessmen are optimistic about future
   - the MEC will be likely to high
   - during period of pessimism the MEC is under estimated and so will be low

**Long – run factors**
   - the long run factors which influence the marginal efficiency of capital are as follows

(i) Rate of growth of population
   - marginal efficiency of capital also influenced by the rate of growth of population

Rapid rise in growth of population
   - will increase the MEC

Slowing down in its rate of growth
   - will discourage investment
   - reduce MEC

(ii) Technological progress
   - invention and technological improvement
   - encourage investment in various projects
   - increase MEC

(iii) Monetary and fiscal policies
   - cheap money policy and liberal tax policy pave the way for greater profit margin
   - so MEC is likely to be high

(iv) Political environment
   - stability, smooth at administration, maintenance

---

Send Your Questions & Answer Keys to our email id - padasalai.net@gmail.com
Resource availability

- cheap and abundant
- efficient labour and stock of capital
- enhance the MEC

Marginal efficiency of investment

- MEI is the expected rate of return on investment
- as additional units of investment are made under specified conditions over a period of time

When cost of borrowing is high

- business are less motivate to borrow money
- reduce profit margin of the business firms

Marginal efficiency of capital (MEC)

- it is based on a given supply price for capital
- it represents the rate of return
- all successive units of capital without regard to existing capital
- the capital stock is taken on the x axis of diagram
- it is a stock concept
- it determines the optimum capital stock
- in an economy at each level of interest rate

Marginal efficiency of Investment (MEI)

- it is based on the induced change in the price due to change in the demand for capital
- it shows the rate of return on just those units of capital
- over and above the existing capital stock
- the amount of investment is taken on the x axis of the diagram
- it is a “flow” concept
- it determines the net investment of the economy
- each interest rate given the capital stock

Multiplier

The concept of multiplier

- was first developed by R.F. Khan
- in terms of employment
- J.M. Keynes redefined it as investment multiplier
The multiplier is defined as the ratio of the change in national income to change in investment.

If $\Delta I$ stands for increase in investment, $\Delta Y$ stands for resultant increase in income. The multiplier $K = \frac{\Delta Y}{\Delta I}$ since $\Delta Y$ results from $\Delta I$. The multiplier is called investment multiplier.

**Assumption of multiplier**

Keynes theory of the multiplier works under certain assumption which limit the operation of the multiplier. They are as follows:
- there is change in autonomous investment
- there is no induced investment
- the MEC is constant
- consumption is a function of current income
- there are no time lags in the multiplier process
- consumer goods are available in response to effective demand
- there is a closed economy unaffected by foreign influences
- there is no changes in prices
- there is less than full employment level in the economy

Marginal propensity to consume and multiplier refers to the portion of income spent on consumption. The MPC refers to the relation between change in Consumption (C) and change in Income (I).

Symbolically $\text{MPC} = \frac{\Delta C}{\Delta Y}$

The value of multiplier depends on MPC. The multiplier $(K) = \frac{1}{1 - \text{MPC}}$ is the reciprocal of one minus MPC since marginal propensity to save is $1 - \text{MPC}$.
(MPC + MPS = 1)
- multiplier is 1/MPS
- multiplier is therefore defined as reciprocal of MPS

Multiplier
- inversely related to MPS and directly with MPC
- numerically if MPC is 0.75, MPS is 0.25 and k is 4

- using formula $k = 1/1 - \text{MPC}$
  $1/1 - 0.75 = 1/0.25 = 4$

Positive multiplier
- when an initial increase in an injection (or a decrease in a leakage)
- leads to a greater final increase in real GDP

Negative multiplier
- when an initial increases in an injection (or an increase in a leakage)
- leads to a greater final decrease in real GDP

Classification of multiplier
- static and dynamic multiplier

Static multiplier
- is otherwise known as simultaneous multiplier, timeless multiplier, and logical multiplier
- under static multiplier the change in investment
- the resulting change in income and simultaneous
- there is no time lag
- there is also no change in MPC
- as the economy move from one equilibrium position to another

Dynamic multiplier
- is also known as sequence multiplier
- income level does not increase instantly with investment
- in fact there is a time lag between increase in income and consumption expenditure

In real life
- the multiplier assume that those who earn income are likely to spend
- proportion to their additional income on consumption
- people tend to spend their additional income on consumption

Leakages of multiplier
<table>
<thead>
<tr>
<th>Other Items</th>
<th>- such expenses are known as leakages</th>
</tr>
</thead>
</table>
| Payment towards past debts | - if a portion of the additional income is used for repayment of old loan  
- the MPC is reduced  
- as a result the value of multiplier is cut |
| Purchasing of existing wealth | - money is circulated among people and never enters into the consumption stream  
- as a result the value of multiplier is affected |
| Import of goods and services | - income spent on imports of goods or services  
- little change to return to income stream in the country  
- thus imports reduce the value of multiplier |

**Non availability of consumer goods**

| The multiplier theory assumes | - instantaneous supply of consumer goods following demand  
- but there is often a time lag  
- during this gap (D > S) inflation is likely to rise  
- this reduce the consumption expenditure and thereby multiplier value |
| --- | --- |
| Full employment situation | - under conditions of full employment  
- resources are almost fully employed  
- so additional investment will lead to inflation only  
- rather than generation of additional real income |
| Uses of multiplier | - multiplier highlights the importance of investment in income and employment theory  
- the process throws light on the different stages of trade cycle  
- it also helps in bringing the equality between S and I  
- it helps in formulating government policies  
- it helps to reduce unemployment and achieve full employment |
Kinds of multiplier
- tax multiplier
- employment multiplier
- foreign trade multiplier
- investment multiplier

The accelerator principle
- the origin of accelerator principle can be traced back in the writings of Aftalion 1909 Hawtrey 1913 and Bickerdike 1914

The systematic development of the simple accelerator model was made by
- J.M. Keynes in 1917
- it was further developed by Hicks, Samuelson and Harrod in relation to the business cycle

Meaning
- a given increase in the demand for consumption goods in the economy
- generally leads to an accelerated demand for machineries (investment goods)

Accelerator
- an increase in consumption and the resulting increase in investment

Accelerator (\(\beta\))
\[ \frac{\Delta I}{\Delta c} \]
- the accelerator express the ratio of the net change in investment to change in consumption

Definition
- the accelerator coefficient is the ratio between induced investment and an initial change in consumption

Assumptions
- absence of excess capacity in consumer goods industries
- constant capital output ratio
- increase in demand is assumed to be permanent
- supply of funds and other inputs is quite elastic
- capital goods are perfectly divisible in any required size

Limitations
- the assumption of constant capital – output ratio
is unrealistic
- resources are available only before full employment
- excess capacity in capital goods industries is assumed
- accelerator will work only if the increased demand is permanent

- accelerator will work only when credit is available easily
- if there is unused excess capacity in the consumer goods industry
- the accelerator principle would not work

Super multiplier
- \( K \) and \( \beta \) interaction

The super multiplier
- is greater than simple multiplier
- which includes only autonomous investment and no induced investment
- while super multiplier includes induced investment
- in order to measure the total effect of initial investment on income
- Hicks has combined the \( K \) and \( \beta \) mathematically and given it the name of the super multiplier

The super multiplier
- is worked out by combining both induced consumption and induced investment

Leverage effect
- the combined effect of the multiplier and the accelerator
- is also called the leverage effect
- which may lead the economy to very high or low level of income propagation

Symbolically
- \[ y = C + I_A + I_P \]
- \( y = \) Aggregate income
- \( C = \) Consumption expenditure
- \( I_A = \) Autonomous investment
- \( I_P = \) Induced private investment
Consumption and investment function - can be summarized under three heads

The consumption function - deals with relationship between national income and consumption - viz APC, MPC, APS, MPC

The subjective and objective factors - determine consumption function
The investment function - includes autonomous and induced investment

The functional relationship - between interest rate and the investment
The role of MEC - rate of interest is determining the investment
The multiplier - is directly related to MPC - inversely related to MPS

Average propensity to consume (APC) - ratio of the consumption expenditure to income - \( \frac{C}{Y} \)
Marginal propensity to consume (MPC) - ratio of change in consumption to change in income - \( \frac{\Delta C}{\Delta Y} \)

Average propensity to save (APS) - ratio of the saving to income - \( \frac{S}{Y} \)
Marginal propensity to save (MPS) - ratio of change in saving to change in income - \( \frac{\Delta S}{\Delta Y} \)

Autonomous investment - additional investment that is independent income
Induced investment - additional investment demand that result from an increase in GDP
Subjective factors - internal factors related to psychological feeling
Objective factors - external factors which are real and measurable
Demonstration effect - the tendency to imitate superior consumption pattern
CHAPTER 5 MONETARY ECONOMICS

Introduction

Monetary economics is a branch of economics

Provide a framework

- for analyzing money
- its functions as
- medium of exchange
- store of value
- unit of account
- it examines the effect of monetary systems
- including regulation of money and associated financial institutions

Meaning of money

- is anything that is generally accepted
- payment for goods and services
- repayment of debts and serves as medium of exchange
- a medium of exchange is anything that is widely accepted as a means of payments

In recent years

- the importance of credit has increased in all the countries of the world
- credit instruments are used on an extensive scale
- the use of cheques, bills of exchange, etc
- that money is the basis of credit

Definitions

- many economists developed definition for money
- Walker and Crowther are given below

Walker

- “Money is what money does”

Crowther

- “Money can be anything that is generally acceptable as a means of exchange and at the same time acts as a measure and a store of value”

Evolution of Money

Barter system

- the introduction of money as a medium of exchange
- one of the greatest inventions of mankind

Page No. 25
| Before money was invested | exchange took place by barter  
|                          | commodities were directly exchanged for other commodities  
|                          | buyers and sellers of commodities had to face number of difficulties  
| Surplus goods            | were exchanged for money which in turn was exchanged for other needed goods  
| Goods like               | furs, skins, salt, rice, wheat, utensils, etc  
|                          | exchange of goods for goods was known as “Barter exchange” or “Barter system”  
| The history of barter system starts | way back in 6000 BC  
|                          | Barter system was introduced by Mesopotamia tribes  
|                          | Phoenicians adopted bartering of goods  
|                          | Various other cities across  
|                          | Babylonian’s also developed an improved barter system  
|                          | where goods were exchanged for goods  
| Metallic standard        | after the barter system and commodity money system  
|                          | modern money system evolved  
|                          | to determine the standard value of money and currency  
| Standard coins           | made out of the metal are the principal coins used under the metallic standard  
|                          | these standard coins are full bodied or full weighted legal tender  
|                          | their face value is equal to their intrinsic metal value  
| Gold standard            | is a system in which the value of the monetary unit  
|                          | the standard currency is directly linked with gold  
| The monetary unit        | is defined in terms of a certain weight of gold  

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<table>
<thead>
<tr>
<th>The purchasing power</th>
<th>-unit of money is maintained equal to the value of a fixed weight of gold</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silver standard</td>
<td>-is a monetary system in which the standard economic unit of account</td>
</tr>
<tr>
<td></td>
<td>-is a fixed weight of silver</td>
</tr>
<tr>
<td></td>
<td>-government allows conversion of its currency into fixed amount of silver</td>
</tr>
<tr>
<td>Paper currency standard</td>
<td>-refers to the monetary system in which the paper currency notes issued</td>
</tr>
<tr>
<td></td>
<td>-by the treasuries or the central bank or both circulate as unlimited legal tender</td>
</tr>
<tr>
<td></td>
<td>-paper currency is not convertible into any metal</td>
</tr>
<tr>
<td>Value is determined</td>
<td>-independent of the value of gold or any other commodity</td>
</tr>
<tr>
<td></td>
<td>-the paper standard is also known as managed currency standard</td>
</tr>
<tr>
<td>The quantity of money</td>
<td>-in circulation is controlled by the monetary authority</td>
</tr>
<tr>
<td></td>
<td>-to maintain price stability</td>
</tr>
<tr>
<td>Plastic money</td>
<td>-the latest type of money</td>
</tr>
<tr>
<td></td>
<td>-is one of the most evolved forms of financial products</td>
</tr>
<tr>
<td></td>
<td>-is an alternative to the cash or the standard “money”</td>
</tr>
<tr>
<td></td>
<td>-plastic cards used every day in place of actual bank notes</td>
</tr>
<tr>
<td>Plastic money can come in many</td>
<td>-different forms such as cash cards, credit cards, debit cards, pre – paid cash cards, store cards, forex cards, and smart cards</td>
</tr>
<tr>
<td>They aim at</td>
<td>-removing the need for carrying cash to make transaction</td>
</tr>
<tr>
<td>Crypto currency</td>
<td>-a digital currency in which encryption techniques are used</td>
</tr>
</tbody>
</table>
to regulate the generation of units of currency and verify the transfer of funds
-operating independently of a central bank

Decentralized
-crypto currencies such as Bitcoin
-provide an outlet for personal wealth
-that is beyond restriction and confiscation

Function of money
-the main functions of money can be classified into four categories
-primary functions
-secondary functions
-contingent functions
-other functions

1. Primary functions
-medium of exchange
-money as a measure of value

(i) Money as medium of exchange
-this is considered as the basic function of money
-money has the quality of general acceptability
-all exchanges take place in terms of money

On account of the use of money
-the transaction has now come to be divided into two parts

First
-money is obtained through sale of goods or services
-this known as sale

Later
-money is obtained to buy goods and services
-this is known as purchase

In the modern exchange
-system money acts as the intermediary in sales and purchases

(ii) Money as a measure of value
-the second important function of money
-is that it measure the value of goods and services
-the prices of all goods and services are expressed in terms of money
-money is looked upon as collective measure of value
-all the values are expressed in terms of money
-it easier to determine the rate of exchange
-between various types of goods in the community

2. Secondary functions

(i) Money as a store of value
-Savings done in terms of commodities were not permanent

The invention of money
-difficulty has now disappeared and savings are now done in terms of money

Money also
-serves as an excellent store of wealth
-as it can be easily converted into other marketable assets
-such as land, machinery, plant, etc.

(ii) Money as a standard of deferred payments
-borrowing and lending were difficult problems under the barter system

In the absence of money
-the borrowed amount could be returned only in terms of goods and services

The modern money – economy
-has greatly facilitated the borrowing and lending processes

In other words
-money now act as the standard of deferred payments

(iii) Money as the means of transferring purchasing power
-the field of exchange also want on extending with growing economic development
-the exchange of goods is now extended to distant lands

It is therefore
-felt necessary to transfer purchasing power one place to another
### 3. Contingent functions

<table>
<thead>
<tr>
<th>(i) Basis of the credit system</th>
<th>- money is the basis of the credit system</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business transactions</td>
<td>- are either in cash or on credit</td>
</tr>
<tr>
<td>For example</td>
<td>- a depositor can make use of cheques only</td>
</tr>
<tr>
<td></td>
<td>- when there are sufficient funds in his account</td>
</tr>
<tr>
<td>The commercial banks</td>
<td>- create credit on the basis of adequate cash reserves</td>
</tr>
<tr>
<td></td>
<td>- but money is at the back of all credit</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>(ii) Money facilitates distribution of national income</th>
<th>- the task of distribution of national income was exceedingly complex under the barter system</th>
</tr>
</thead>
<tbody>
<tr>
<td>The invention of money</td>
<td>- facilitated the distribution of income as rent, wages, interest and profit</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>(iii) Money helps to equalize marginal utilities and marginal productivities</th>
<th>- consumer can obtain maximum utility only if he incurs expenditure</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>- on various commodities in such a manner as to equalize marginal utilities</td>
</tr>
<tr>
<td>Now in equalizing these marginal utilities</td>
<td>- money plays an important role</td>
</tr>
<tr>
<td></td>
<td>- because the prices of all commodities are expressed in money</td>
</tr>
<tr>
<td>Money also helps to equalize</td>
<td>- marginal productivities of various factors of production</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>(iv) Money increases productivity of capital</th>
<th>- money is the most liquid form of capital</th>
</tr>
</thead>
<tbody>
<tr>
<td>In other words</td>
<td>- capital in the form of money can be put to any use</td>
</tr>
<tr>
<td>It is on account of this liquidity of money</td>
<td>- capital can be transferred from the less productive to the more productive uses</td>
</tr>
</tbody>
</table>
4. Other functions

(i) Money helps to maintain repayment capacity
   - money possesses the quality of general acceptability
   - to maintain its repayment capacity
   - every firm has to keep assets in the form of liquid cash
   - the firm ensures its repayment capacity with money
   - banks, insurance companies and even governments have to keep some liquid money i.e. cash
   - to maintain their repayment capacity

(ii) Money represents generalized purchasing power
    - kept in terms of money can be put to anyone
    - it is not necessary that money should be used only for the purpose for which it has been served

(iii) Money gives liquidity to capital
    - money is the most liquid form of capital
    - it can be put to any use

Supply of money
- means the total amount of money in an economy
- it refers to the amount of money
- which is in circulation in an economy
- at any given time

Money supply
- plays a crucial role in the determination of price level and interest rate
- viewed at a given point of time is a stock
- over a period of time is a flow

Meaning of money supply
- In India, currency notes are issued by the Reserve Bank of India
- coins are issued by the Ministry of Finance, Government of India
- the balance is savings or current account deposits held by the public in commercial banks is also considered money

The currency notes
- are also called fiat money and legal tenders
Money supply

- is a stock variable
- RBI publishes information for four alternative measures of money supply
- namely M1, M2, M3 and M4

M1
- Currency, coins and demand deposits

M2
- M1 + Savings deposits with post office savings banks

M3
- M2 + Time deposits of all commercial and co-operative banks

M4
- M3 + Total deposit with post offices

M1 and M2
- are known as narrow money

M3 and M4
- are known as broad money
- the gradation are in decreasing order of liquidity

Currency symbol
- ₹
- the new symbol designed by D. Udaya Kumar
- a post graduate of IIT, Bombay
- finally selected by the Union Cabinet on 15th July, 2010

The new symbol
- is an amalgamation of Devanagiri ‘Ra’ and the Roman ‘R’ without the stem
- the symbol of India rupee come into use of 15th July 2010
- After America, Britain, Japan, Europe Union
- India is the 5th country to accept a unique currency symbol

Determinants of money supply
- CDR, RDR, CRR and SLR

1. Current Deposit Ratio (CDR)
- it is the ratio of money held by the public in currency
- they hold in bank deposits

2. Reserve Deposit Ratio (RDR)
- reserve money consists of two things
  - (a) vault cash in banks
  - (b) deposits of commercial bank with RBI

3. Cash Reserve Ratio (CRR)
- it is the fraction of the deposits the banks must keep with RBI
4. Statutory Liquidity Ratio (SLR) - it is the fraction of the total demand time deposits of the commercial banks in the form of specified liquid assets

Quantity theories of money - explain the relationship between quantity of money and value of money
- we are given two approaches of quantity theory of money
- viz Fisher’s transaction approach
- Cambridge Cash balance approach

(a) Fisher’s Quantity Theories of Money - is a very old theory
- it was first propounded in 1588
- by an Italian economist Davanzatti
- the credit for popularizing
- American economist
- Irving Fisher
- who published his book
- the purchasing power of money in 1911
- he gave it a quantitative form in terms of his famous “Equation of exchange”

The general form of equation given - by Fisher is \( MV = PT \)
- where \( M \) = money supply/quantity of money
- \( V \) = Velocity of Money
- \( P \) = Price level
- \( T \) = Volume of transaction

Fisher point out - in a country during any given period of time
- the total quantity of money (MV)
- will be equal to the total value of all goods and services bought and sold (PT)
- \( MV = PT \)
- supply of money = demand for money
- this equation is referred to as “Cash transaction equation”
- it is expressed as \( P = MV/T \)

- which implies that the quantity of money determines the price level
- the price level in its turn varies directly with the
quantity of money 
-provided ‘V’ and ‘T’ remain constant 
-the above equation considers only currency money 

Modern economy 
-banks demand deposits or credit money 
-its velocity play a vital part in business 

Fisher 
-extended his original equation of exchange 
-to include bank deposit $M_1$ and its velocity $V_1$ 

The revised equation 
 \[ PT = MV + M_1V_1 \] 
 \[ P = \frac{MV + M_1V_1}{T} \] 
-from the revised equation it is evident 
-the price level is determined by 
-(a)the quantity of money circulation ‘M’ 
-(b)the velocity of circulation of money ‘V’ 
-(c)the volume of bank credit money $M'$ 
-(d)the velocity of circulation of credit money $V'$ and the volume of trade ‘T’ 

Figure (A) 
-shows the effect of changes in the quantity of money on the price level 
-this relationship is expressed by the curve 
\[ OP = f(M) \] from the origin at $45^\circ$ 

Figure (B) 
-shows the inverse relation between the quantity of money and the value of money 
-this inverse relationship between the quantity of money 
-the value of money is shown by downward sloping curve \[ IO/P = f(M) \] 

(b) Cambridge Approach 
-cash balances approach 

(i) Marshall’s Equation 
-the marshall equation is expressed as 
\[ M = KPY \] 
-where $M$ – is the quantity of money 
-$Y$ – is the aggregate real income of the
- **P** – is the purchasing power of money commodity
- **K** – represent the fraction of the real income which the public desires to hold in the form of money

Thus
- the price level \( P = \frac{M}{KY} \) or the value of money
- the reciprocal of price level is \( \frac{1}{P} = \frac{KY}{M} \)

The value of money
- in terms of this equation can be found out by dividing
- total quantity of goods which the public desires to hold out of the total income by the total supply of money

According to Marshall’s equation
- the value of money is influenced not only by changes in \( M \)
- but also by changes in \( K \)

(ii) Keynes Equation
- Keynes equation is expressed as
  \[ n = pk \text{ (or) } p = \frac{n}{k} \]
- where \( n \) is the total supply of money
- \( p \) is the general price level of consumption goods
- \( k \) is the total quantity of consumption units
- the people decide to keep in the form of cash

Keynes indicates
- that \( k \) is a real balance because it is measured in terms of consumer goods

According to Keynes
- people desire to hold money in unaltered by monetary authority
- so price level and value of money can be stabilized through regulating quantity of money (\( n \))
- by the monetary authority

Later
- Keynes extended his equation in the following form
  \[ n = p(k + rk') \text{ or } p = \frac{n}{(k + rk')} \]
- where \( n \) = total money supply
- \( p \) = price level of consumer goods
-k = peoples desire to hold money in hand in the total income of them
-r = cash reserve ratio
-k’ = community’s total money deposit in banks in terms of consumers goods
-in this extended equal equation also
-Keynes assumes that k, k’ and r are constant

In this situation
-price level (p) is changed directly and proportionately changing in money volume (n)

Inflation

Meaning of inflation
-is a consistent and appreciable rise in the general price level

In other words
-inflation is the rate at which the general level of prices for goods and services is rising and consequently the purchasing power of currency is falling

Definitions

Coulbourn
-“Too much of money chasing too few goods”

Gregorye
-“A state of abnormal decrease in the quantity of purchasing power”

Types of inflation
-On the basis of speed
-(i)Creeping inflation
-(ii)Walking inflation
-(iii)Running inflation
-(iv)Galloping inflation or Hyper inflation

(i)Creeping inflation
-is slow – moving and very mild
-the rise in prices will not be perceptible
-but spread over a long period
-this type of inflation is no way dangerous to the economy
-this is also known as mild inflation or moderate inflation
(ii) Walking inflation - when prices rise moderately and the annual inflation rate is a single digit 3% to 9% - it is called walking or trolling inflation

(iii) Running inflation - when price rise rapidly like the running of a horse - at a rate of speed of 10% to 20% per annum - it is called running inflation

(iv) Galloping inflation - or Hyper inflation point out to unmanageably high inflation rates - run into two or three digits - by high inflation the percentage of the same is almost 20% to 100% from an overall perspective

The first hyper inflation - 21st century Zimbabwe’s annual inflation rate surged to an unprecedented 3714 percent at the end of April 2007

**Demand pull inflation** - demand and supply play a crucial in deciding the inflation levels - in the society at all the points of time

For instance - if the demand is high for a product and supply is low - the price of the product increase

Demand pull inflation - too much of money chasing too few goods

**Cost – push inflation** - when the cost of raw materials and other inputs rises inflation results - increase in wage paid to labour also leads to inflation

Wage – price spiral - is used to explain the cause and effect relationship - between rising wages and rising price or inflation
Other types of inflation - on the basis of inducement

(i) Currency inflation
- the excess supply of money in circulation
- causes rise in price level

(ii) Credit inflation
- when banks are liberal in lending credit
- the money supply increases and there by rising prices

(iii) Deficit induced inflation
- the deficit budget is generally financed through printing of currency
- by the central bank
- as a result, price rise

(iv) Profit induced inflation
- when the firms aim at higher profit
- they fix the price with higher margin
- so prices go up

(v) Scarcity induced inflation
- scarcity of goods happen either due to fall in production eg: farm goods
- or due to hoarding and black marketing
- this also pushes up the price
- this has happened is Veneuzla in the year 2018

(vi) Tax induced inflation
- increase in indirect taxes like excise duty, custom duty and sales tax
- may lead to rise in price eg: petrol and diesel
- this is also called taxflation

Causes of inflation
The main causes of inflation in India are as follows

(i) Increase in money supply
- inflation is caused by increase in the supply of money
- which leads to increase in aggregate demand

(ii) Increase in disposable income
- when the disposable income of the people increase
| (i)Disposable income may increase | - it raises their demand for goods and services
  - with the rise in national income or reduction in taxes
  - or reduction in the saving of the people |
| (iii)Increase in public expenditure | - government activities have been expanding due to developmental activities
  - social welfare programmes
  - this is also a cause for price rise |
| (iv)Increase in consumer spending | - the demand for goods and services increases
  - when they are given credit to buy goods
  - on hire – purchase and installment basis |
| (v)Cheap money policy | - or the policy of credit expansion also leads to increase in the money supply
  - which raises the demand for goods and services in the economy |
| (vi)Deficit financing | - in order to meet its mounting expenses
  - the government resorts to deficit financing
  - by borrowing from the public and even by printing more notes
  - this raises aggregate demand in relation to aggregate supply
  - thereby leading to inflationary rise in prices |
| (vii)Black Assets, Activities and money | - the existence of black money and black assets due to corruption, tax evasion, etc
  - increase the aggregate demand people spend such money lavishly
  - black marketing and hoarding reduces the supply of goods
  - these trends tend to raise the price level further |
| (viii)Repayment of public debt | - whenever the government repays its past internal debt to the public
  - it leads to increase in the money supply with the public
  - this tends to raise the aggregate demand for goods and services |
(ix) Increase in exports
- when exports are encouraged
- domestic supply of goods decline
- so prices rise

**Efforts of inflation**
- the effects of inflation can be classified into two heads
  1. Effects on production
  2. Effects on distribution

1. Effects on production
- when the inflation is very moderate
- it acts as an incentive to traders and producers
- this is particularly prior to full employment
- when resources are not fully utilized

The profit
- due to rising prices encourages and induces business class
- to increase their investment in production
- leading to generation of employment and income

(i) However hyper inflation
- result in a serious depreciation of the value of money
- it discourage savings on the part of the public

(ii) When the value of money undergoes considerable depreciation
- this may even drain out the foreign capital already invested in the country

(iii) With reduced capital accumulation
- the investment will suffer a serious set – back which may have an adverse effect on the volume of production in the country
- this may discourage entrepreneurs and business men from taking business risk

(iv) Inflation also leads to hoarding of essential goods
- both by the traders as well as the consumers and thus leading to still higher inflation rate

(v) Inflation encourage
- investment in speculative activities rather than productive purposes
2. Effects on distribution

(i) Debtors and creditors - during inflation, debtors are the gainers
- while the creditors are losers
- the reasons is that the debtors had borrowed
- when the purchasing power of money was high

Now repay the loans
- when the purchasing power of money is low
- due to rising prices

(ii) Fixed – Income groups - the fixed income groups are the worst hit during inflation

Because
- their incomes being fixed do not bear any relationship
- with the rising cost of living
- examples are wage, salary, pension interest, rent, etc.

(iii) Entrepreneurs - inflation is the boon to the entrepreneurs
- whether they are manufacturers, traders, merchants or businessmen
- because it serves as a tonic for business enterprises
- they experience windfall gains as the prices of their inventories suddenly go up

(iv) Investors - who generally invest in fixed interest yielding bonds and securities
- have much to lose during inflation

On the contrary
- those who invest in shares stand to gain by rich dividend and appreciation in value of shares

Measures to control inflation
- Keynes and Milton Fried man together suggested
- three measure to prevent and control of inflation
- 1. Monetary measures
- 2. Fiscal measures (J.M. Keynes)
- 3. Other measures
1. Monetary measures

- These measures are adopted by the central bank of the country

They are:
- (i) Increase in bank rate
- (ii) Sale of government securities in the open market
- (iii) Higher cash reserve ratio (CRR) and Statutory liquidity ratio (SLR)
- (iv) Consumer credit control
- (v) Higher margin requirements
- (vi) Higher repo rate and reverse repo rate

2. Fiscal measures

- Fiscal policy is now recognized as an important instrument to tackle an inflationary situation

The major inflationary fiscal measures are the following:
- Reduction of government expenditure
- Public borrowing
- Enhancing taxation

3. Other measures

- These measures can be divided broadly into short – term and long – term measures

(i) Short – term measures
- Can be in regard to public distribution of scarce essential commodities
- Through fair price shop rationing

In India:
- Whenever shortage of basic goods has been felt
- The government has resorted to import
- So that inflation may not get triggered

(ii) Long – term measures
- Will require accelerating economic growth
- Especially of the wage goods
- Which have a direct bearing on the general price and cost of living

Some restriction on present consumption:
- May help in improving saving and investment
- Which may be necessary for accelerating the rate of economic growth in the long run
Meaning of deflation, disinflation and stagflation

Deflation
- the essential feature of deflation is
  - falling price
  - reduced money supply
  - unemployment

Falling prices
- are desirable at the time of inflation
  - such a fall should not lead to the fall in the level of production and employment
  - but if prices fall from the level of full employment
  - both income and employment will be adversely affected

Disinflation
- is the slowing down the rate of inflation by controlling the amount of credit
  - available to consumers without causing more unemployment

Disinflation
- may be defined as the reversing inflation
  - without creating unemployment or reducing output in the economy

Stagflation
- is a combination of stagnant economic growth
  - high unemployment
  - high inflation

Trade cycle
- the economic activity is a capitalist economy
  - will study of these ups and downs
  - is called the study of business cycle
  - (or) trade cycle
  - (or) industrial fluctuation

Meaning of trade cycle
- refers to oscillations in aggregate activity particularly
  - in employment, output, income, etc.
  - it is due to the inherent contraction and expansion of the elements
  - which energize the economic activities of the nation
The fluctuations - periodical, differing in intensity and changing in its coverage

**Definition**
- J.M. Keynes
  - “A trade cycle is composed of periods of good trade characterized by rising prices and low unemployment percentages altering with periods of bad trade characterized by falling prices and high unemployment percentages”

**Phases of trade cycle**
- the four different phases of trade cycle is referred to as
  - (i) Boom (ii) Recession (iii) Depression
  - (iv) Recovery

**Boon or prosperity phase**
- the full employment and the movement of the economy beyond full employment is characterized as boom period
- during this period there is hectic activity in the economy
  - money wage rise
  - profit increase and interest rates go up
  - the demand credit increases and there is all round optimism

**Recession**
- the turning point from boom condition is called recession
- this happen at higher rate, than what was earlier
- generally, the failure of a company
- or bank bursts the boom and brings a phase of recession

**Investments**
- are drastically reduced
- production comes down
- income and profits decline
- there is panic in the stock markets
- business activities dullness
- liquidity preference of the people rises

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- money market becomes tight

(iii) Depression
- the level of economic activity becomes extremely slow
- firms incur losses
- closure of business become a common feature
- the ultimate result is unemployment
- interest prices, profits and wages are low
- the agricultural class and wage earners would be worst hit

Depression
- is the worst phase of the business cycle
- is called as “trough”
- because it is a deep point in business cycle
- any person full down in deeps could not come out from that without other’s help

Extreme point of depression
- an economy fell down in trough could not come out from this without external help

Similarly
- that autonomous investment of the government alone can help
- the economy to come out from the depression

Keynes advocated
- After a period of depression recovery sets in
- to revival towards upswing
- it begins with the revival of demand for capital goods
- autonomous investment boost the activity

(iv) Recovery
- the activity is directed towards the upswing with more production, profit, income, wages and employment

This is the turning point from depression
- may be initiated by innovation or investment or by government expenditure
- autonomous investment

The demand slowly picks up
- by the RBI and Union Government

Recovery
Bank deposits are created - by commercial banks and co-operative banks

The demand for money - is determined by a number of factors such as income, price level, interest rate, etc.
CHAPTER 6       BANKING

Finance
Economic activities
A bank
Which provides fundamental financial services
Banking sector
The banking system

-is the life blood of all economic activities
-such as trade, commerce, agriculture and industry
-is generally understood as an institution
-such as accepting deposit and lending loans
-act as the backbone of modern business world
-contributes for the development of any country
-due to the importance in the financial stability of a country
-banks are highly regulated in most countries

Historical development

The Ricks Bank of Sweden
The fundamental of the art of banking
A large number of central banks
International finance conference
History of Indian Banks
The Banking System in India

-private bank established in 1656
-oldest central bank in the world
-it acquired the sole right of note issue in 1897
-developed by the bank of England, 1864
-as the first bank of issue
-established between 1921 and 1954
-held at Brussels in 1920
-South African Reserve Bank, 1921
-Central Bank of China, 1928
-The Reserve Bank of New Zealand, 1934
-The Reserve Bank of India, 1935
-The Central bank of Ceylon, 1950
-the first bank of India was Bank of Hindustan 1770 under British rule
-was controlled and dominated by the presidency banks
-there were three presidency banks
-Bank of Bengal, 1809

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Bank of Bombay, 1840
Bank of Madras, 1843
All merged – 1921, Imperial Bank of India
Change into 1955, SBI

Commercial banks - refers to a bank, or a division of a large bank which more specifically deals with deposit and loan service provided to corporations or large/middle sized business.
They do not provide long-term credit as liquidity of assets is to be maintained.

Functions of Commercial Banks

Commercial banks - institutions that conduct business with profit motive
- accepting public deposit and lending loans for various investment purposes

The functions of commercial banks are broadly classified into primary functions, secondary functions and other functions.

Primary functions

1. Accepting deposits
- it implies that commercial banks are mainly dependent on public deposits

There are two types of deposits

(i) Demand deposit
- it refers to deposit that can be withdrawn by individuals without any prior notice to the bank
- the owners of these deposits are allowed to withdraw money any time

(ii) Time deposits
- it refers to deposits that are made for certain committed period of time
- banks pay higher interest on time deposits

2. Advancing loans
- it refers to granting loans to individual and businesses

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Primary functions
- commercial banks grant loans in the overdraft, cash credit, and discounting bills of exchange

Secondary functions
-can be classified under three heads, namely
-agency functions, general functions, utility functions and other functions

1. Agency functions
-it implies that commercial banks act as agents of customers by performing various functions

(i) Collecting cheques - banks collect cheques and bills of exchange on the behalf of their customers through clearing house facilities provided by the central bank

(ii) Collecting income - commercial banks collect dividends, pension, salaries, rent and interests on investments on behalf of their customers

(iii) Paying expenses - commercial banks make the payments of various obligations of customers such as telephone bills, insurance premium, school fees and rents
- credit voucher, a debit voucher is sent to customer

2. General utility facilities

(i) Provide locker facilities - provide locker facilities
- shares, debentures and other valuable items

(ii) Issuing traveller’s cheques - Banks issue traveller’s cheques to individuals for travelling outside the country
- traveller’s cheques are the safe and easy way to protect money while travelling
(iii) Dealing in foreign exchange - Commercial banks help in providing foreign exchange to businessmen dealing in export and imports. Commercial banks need to take the permission of the central bank for dealing in foreign exchange.

3. Transferring funds - It refers to transferring the funds from one bank to another. Funds transferred - by means of draft telephonic transfer, and electronic transfer.

4. Letter of credit - Issue letters of credit to their customers to certify their credit.

(i) Underwriting securities - As public has full faith in the credit worthiness of banks, public do not hesitate in buying the securities under written by banks.

(ii) Electronic Banking - Includes services such as debit cards, credit cards, and internet banking.

4. Other functions

(i) Money supply - It refers to one of the important functions of commercial banks. Demand deposit - there is no payment in cash; thus without printing additional money, the supply of money is increases.

(ii) Credit creation - Means the multiplication of loans and advances; commercial bank receive deposits from the public; these deposit to give loans.
- loans offered are many times more than the deposit
- this function of bank is known as “credit creation”

(iii) Collection of statistics
- banks collect and publish statistics
- relating to trade; commerce and industry
- they advice customers and the public authorities or financial matters

Mechanism – technique of credit creation by commercial banks

Bank credit
- refers to bank loans and many advances

Money is said to be
- created when the banks through their lending activities
- make a net addition to the total supply of money in the economy

Money is said to be
- when the loans are repaid is wiped out in the process

The power of commercial bank
- to create deposits through expanding their loans and advances is known as credit creation

Primary – passive deposit and derived active deposit

The modern banks create
- deposits in two ways
- they are primary deposit and derived deposit

When a customer gives cash to the bank
and the bank creates
- a book debt in his name called a deposit
- it is known as “primary deposit”

When such deposit is created
- without there being any prior payment of equivalent cash to the bank is called a “derived deposit”

Primary deposits
- bank makes loans and advances to its customers
- the initiative is taken by the customers themselves
- in this case, the role of the bank is passive
- so these deposits are also called “Passive deposit”
| Credit creation | -literally means the multiplication of loans and advances  
|                 | -every loan creates its own deposits |
| Central bank   | -insists the banks to maintain a ratio between the total deposit they create and cash  
|                 | -it is assumed that all banks keep ratio between cash and its deposits at a minimum of 20%  
|                 | -the banks do not keep any excess reserves  
|                 | -there are no drains in the supply of money |

**Role of commercial banks in economic development of a country**

1. **Capital formation**

   - is important role  
   - is essential for economic development of a country  
   - they mobilize the small savings of the people scattered over a wide areas  
   - make it available for productive purposes  
   - banks offer very attractive schemes to induce the people to save

2. **Creation of credit**

   - bank create credit for the purpose of providing more funds for development projects

3. **Channelizing the funds towards productive investment**

   - bank invest the savings mobilized by them for productive purposes  
   - savings should be allocated to various sectors of the economy  
   - to increase the productivity  
   - an important role in the economic development

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4. Encouraging right type of industries - by extending loan to right type of persons
   - help industrialization and economic development
   - grant loans and advance manufacturers
   - introducing new methods of production
   - raising the national income of the country
   - sub – prime lending is also clone
   - economic crisis in the year 2007-08 in the US

5. Banks monetize debt - commercial banks transform the loan to be repaid
   Manufacturer and wholesale traders - cannot increase their sales without selling goods on credit basis
   - credit sales may lead to locking up of capital
   - as a result production also be reduced

6. Finance to government - is acting as the promoter of industries in underdeveloped countries
   Bank provide - long – term credit to government by investing their funds
   - short – term finance by purchasing treasury bills

7. Employment generation - bank’s branches are opened frequently
   - creation of new employment opportunities

8. Banks promote entrepreneurship - particularly in developing countries like India
   - well formulated projects and provision of counseling service
   - like technical and managerial guidance

Non – Banking Financial Institution (NFBI)
or Non – Bank Financial Company (NFBC) - is a financial institution that does not have a full banking license
- is not supervised by the central bank

The NBFIs - do not carry on pure banking business

Page No. 53
- they will carry on other finance transactions
- they receive deposits and give loans
- they mobilize people’s saving and use the funds to finance expenditure on investment activities

In short
- they are institutions which undertake borrowing and lending
- they operate in both the money and the capital Markets

NBFIs
- broadly classified into two categories
  - viz (i) Stock exchange
  - (ii) Other financial institutions

Central Bank
- Reserve bank or monetary authority
- is an institution that manages a state’s currency, money supply and interest rates
- also usually oversee the commercial banking system

Functions of central bank
- RBI
  - which controls the monetary policy of the Indian rupee
  - its operations on 1st April 1935
  - in accordance with the Reserve Bank of India Act 1934
  - the RBI was nationalized on 1st January 1949

1. Monetary authority
- it controls the supply of money
- in the economy to stabilize exchange rate
- maintain wealth balance of payment
- attain financial stability
- control inflation
- strengthen banking system
<table>
<thead>
<tr>
<th>Number</th>
<th>Description</th>
<th>Details</th>
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</table>
| 2      | The issue of currency | - The objectives is to maintain the currency and credit system of the country  
- It is the sole authority to issue currency  
- Action to control the circulation of fake currency |
| 3      | The issue of banking license | - As per Sec 22 of Banking Regulation Act  
- Every bank has to obtain a banking license from RBI  
- To conduct banking business in India |
| 4      | Banker to the government | - It acts as the banker both to the central and the state government  
- It provides short-term credit  
- It manages all new issues of government loans  
- Servicing the government debt outstanding  
- Nurturing the market for government securities  
- It advises the government on banking and financial subjects |
| 5      | Banker’s bank | - RBI is the bank of all banks in India  
- It provides loan to banks  
- Accept the deposit of banks  
- Rediscout the bills of banks |
| 6      | Lender of last resort | - The banks can borrow from RBI by keeping eligible securities  
- Collateral at the time of need or crisis |
| 7      | Act as clearing house | - For settlement of banking transactions  
- RBI manages its clearing houses  
- It facilities the exchange of instruments  
- Processing of payment instructions |
| 8      | Custodian of foreign exchange reserves | - It acts as a custodian of FOREX  
- It administers and enforces the provision of |
Foreign Exchange Management Act (FEMA) 1999

RBI buys and sells foreign currency - to maintain the exchange rate of Indian rupees v/s foreign currencies

9. Regulator of economy - it controls the money supply in the system - monitors different key indicators like GDP, inflation, etc.

10. Managing government securities - in institutions when they invest specified minimum proportions - total assets/liabilities in government securities

11. Regulator and supervisor of payment and settlement systems - Act of 2007 (PSS Act) - RBI oversight authority for the payment and settlement systems in the country

RBI focuses on - the development and functioning of safe - secure and efficient payment and settlement mechanisms

Development role - quality banking system in India - ensuring that accredit is available to the productive sectors of the economy - designed to build the country’s financial infrastructure - it also helps in expanding access to affordable financial services - promoting financial education and literacy

Publisher of monetary data and other data - formulating and critically evaluating the economic policies in India - RBI collects, collates and publishes data regularly

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Exchange manager and controller

- RBI represents India as a member of the International Monetary Fund – IMF
- most of the commercial banks are authorized dealers of RBI

Banking ombudsman scheme

- RBI introduced the banking ombudsman scheme in 1995

Under this scheme

- the complaints can file their complaints in any form including online to the ombudsman against the awards
- other decisions of the banks

Banking codes and standards board of India

- to measure the performance of banks against codes standards based on established global practices
- RBI has set up the Banking Codes and Standards Board of India (BCSBI)

Credit control measures

- is the primary mechanism available to the central banks
- to realize the objectives of monetary management
- the RBI is much better placed than many of credit control
- the statutory basis for the control of the credit system
- by the Reserve Bank is embodies in the Reserve Bank of India Act 1934
- Banking Regulation Act 1949

Credit control measures

- General (Quantitative)
- Selective (Qualitative)

General methods (Quantitative method)

- Bank rate
- Open Market Operations
- Variable Cash Reserve Ratio
1. Bank rate
   - is the rate at which the central bank of a country is prepared
     - to re – discount the first class securities
     - it means the bank is prepared to advance loans on approved securities to its member banks

   As the central bank
   - is only the lender of the last resort

   The bank rate
   - is normally higher than the market rate

   For example if the central bank wants to control credit
   - it will raise the bank rate
   - as a result, the deposit rate and other lending rates in the money – market will go up
   - borrowing will be discouraged and will lead to contraction of credit

2. Open market operations

   In narrow sense
   - the central bank starts the purchase and sale of government securities in the money market

   In broad sense
   - the central bank purchase and sells only government securities
   - other proper bills and securities of private also

3. Variable Reserve Ratio (or) Cash Reserve Ratio
   - the central bank controls credit by changing the cash reserve ratio

   For example
   - if the commercial banks have excessive cash reserve
   - on the basis of which they are creating too much of credit
   - this will be harmful for the larger interest of the economy
   - so it will raise the cash reserve ratio
which the commercial banks are required to maintain with the central bank

Similarly when the central bank desires -commercial bank should increase the volume of credit
-in order to bring about an economic revival in the economy
-the central bank will lower down the cash reserve ratio
-with a view to expand the lending capacity of the commercial banks

Variable cash reserve ratio -as an objective of monetary policy was first suggested by J.M. Keynes
-it was first followed by Federal Reserve System in United States of America

The commercial banks as per the statute has to maintain reserves based -on their demand deposit and fixed deposit with central bank is called as cash reserve ratio

If the CRR high -the commercial banks capacity to create credit will be less

If the CRR low -the commercial banks capacity to create credit will be high

Statutory Liquidity Ratio (SLR) -is the amount which a bank has to maintain in the form of cash, gold or approved securities

The quantum is -specified on some percentage of the total demand and time liabilities of a bank
-ie.the liabilities of the bank which are payable on demand any time
Qualitative or selective method of credit control - are directed towards the diversion of credit into particular uses in the economy

Their objective is mainly - to control and regulate the flow of credit into particular industries or business

Frequent methods of credit control under selective method - Rationing of credit
- Direct action
- Moral persuasion
- Method of publicity
- Regulation of consumer’s credit
- Regulating the marginal requirements on security loans

1. Rationing of credit - oldest method of credit control
- as an instrument of credit control was first used by the Bank of England
- by the end of the 18th century

It aims to control - regulate the purposes for which credit is granted by commercial banks
- it is generally of two types
- the variable portfolio ceiling
- the variable capital asset ratio

The variable portfolio ceiling - it refers to the system by which the central bank fixes ceiling
- or maximum amount of loans and advances for every commercial bank

The variable capital asset ratio - refers to the system by the central bank fixes the ratio
- which the capital of the commercial bank

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| 2. Direct action | - against the erring banks can take the following forms  
|                 | - the central bank refuse grant discounting facilities  
|                 | - central bank may refuse to sanction further financial accommodation to bank |
| 3. Moral suasion | - this method is frequently adopted  
|                 | - give advice, then request  
|                 | - implementing credit policies |
| 4. Publicity    | - make their policies successful take the course of the medium of publicity  
|                 | - a policy can be effectively successful only when an effective public opinion is favour |
| 5. Regulation of consumer’s credit | - the down payment is raised and the number of installments reduced for the credit sale |
| 6. Changes the marginal requirements on security loans | - this system in mostly followed in USA  
|               | - The Board of Governor of the Federal Reserve System power to prescribe margin requirements  
|               | - the purpose of preventing an excessive use of credit for stock exchanging speculation  
|               | - this system keep the central bank in controlling volume of credit used for speculation  
|               | - under the Securities Exchange Act 1934 |
| **The RR and RRR** | - frequently used tools which the RBI  
|                   | - control the availability and the supply of money in the economy  
|                   | - RR is always greater than RRR in India |
| **Repo Rate (RR)** | - the rate at which the RBI is willing to lend to commercial banks  
|                   | - is called Repo Rate |
any shortage of funds banks borrow from RBI against securities

If the RBI increase Repo rate -it makes borrowing expensive for banks
-as a tool to control inflation

If the RBI decrease Repo rate -it makes borrowing more for banks
-as a tool to control deflation

Reverse Repo Rate (RRR) -the rate at which the RBI is willing to borrow from the commercial banks
-is called reverse repo rate

If the RBI increases the reverse repo rate -it means that RBI is willing to offer
-lucrative interest rate to banks to park their money with the RBI
-this results in decrease in the amount of money available for banks

Reserve Bank of India and Rural Credit -in a developing economy
-central bank of the country not only monetary
-development function in all sectors
-especially in the agriculture and industry

Role of RBI in agricultural credit -vital role in the provision of agricultural finance in the country
-the RBI set up a separate agriculture credit department
-the volume of informal loans has not declined sufficiently

Functions of Agriculture Credit Department -to maintain an expert staff to study all questions on agricultural credit
-to provide expert advice to central and state government
-to finance the rural sector engaged in the business
-agricultural credit and co – ordinate their activities
| RBI                                      | ex – officio capacity being the central bank of the country  
|                                          | it could not lend directly to the farmers  
| The supply of rural credit was done through the mechanism of refinance with institution  
| The RBI was providing medium term loans also for a period exceeding 15 months to 5 years  
|                                          | for reclamation of land; construction of irrigation works purchase of machinery, etc.  
| The RBI                                  | provide long – term loans to finance permanent changes in land  
|                                          | the redemption of old debts  
| NABARD                                   | establishment of National Bank for Agriculture and Rural Development  
|                                          | since 1982  
|                                          | all activities relating to rural credit  
|                                          | entirely looked after NABARD  
| The Agricultural Refinance Development Corporation (ARDC) | farmers in India require mainly medium and long term loans  
| The only organization providing long term credit is land development banks  
|                                          | the credit requirements of the agricultural sector are increasing year  
| With the aim of bridging                 | the gap in agricultural development an organization called the Agricultural Refinance Development Corporation (ARDC)  
|                                          | established by an act of parliament started functioning from July 1st 1963  

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Objectives of the ARDC
-to provide necessary funds by way of refinance to eligible institutions
-Central Land Development Banks, State co-operative Banks and Scheduled banks
-to subscribe to the debentures floated by the central land development banks are co-operative banks and scheduled banks
-provide they were approved by the RBI

Regional Rural Banks (RRB)
one of the important 20 point economic programme
-Mrs. Indira Gandhi during emergency was liquidation of rural indebtedness
-by stages and provide institutional credit to farmers and artisans in rural areas
-New economic programme that the Government of India
-setup Regional Rural Banks (RRBs) on 1975
-the share capital of RRB is subscribed by the Central government 50%
-state government concerned 15%
-sponsoring commercial bank 35%

The main objective
-the RRB is to provide credit and other facilities
-particularly to the small and marginal farmers, agricultural labourers,
-small entrepreneurs so as develop agriculture, trade commerce, industry
-productive activities in the rural areas

Concessions to RRBs
-the sponsor banks have continued to provide managerial and financial assistance to RRBs
-other concessions such as lower rate of interest 8.5%
-the cost of staff deputed to RRBs, training on expenses of RRB staff are borne by the sponsor banks
RBI has been granting many concessions to RRBs
- to maintain cash reserve ratio at 3%
- statutory liquidity ratio at 25%
- provide refinance facilities through NABARD

NABARD and its role in agricultural credit
- RBI has shown keen interest in agricultural credit
- maintained a separate department for this purpose

RBI extended
- short – term seasonal credit as well as medium – term and long – term credit
- to agriculture through state level co – operative banks and land development banks
- three tier cooperative credit structure
- state, central and primary cooperative society

RBI has also set up
- ARDC
- to provide refinance support to the banks to promote programmes of agricultural development
- particularly term credit
- role of bank credit from “agricultural development” to “rural development”
- government proposed to have more broad – based organization
- the apex level to extend support
- give guidance to credit institutions in matters
- the formulation and implementation of rural development programme
- NABARD – was set up in July 1982
- an Act of parliament
- ARDC and the refinancing functions of RBI
- to co-operative banks and RRBs

Government of India (GOI)
- nominates three central board directors on the board of NABARD
- a deputy governor of RBI
Padasalai

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- is appointed as chairman of NABARD

Functions of NABARD

- inherited its apex role from RBI
- ie., it is performing all the functions performed by RBI
- regard to agricultural credit
- NABARD acts as a refinancing institution for all kinds of production and investment
- promoting integrated rural development
- it provide short – term, medium and long – term credit

- NABARD gives long – term loans upto 20 years
- NABARD gives long term loans to any institutions
- concerned with agriculture and rural development
- NABARD has the responsibility of co – ordinating activities of central and state governments, planning commission now NITI Aayog
- with the development of small scale industries, tiny and decentralized sectors, etc.
- it has the responsibility to inspect RRBs and co-operative banks

It maintain a research and development fund

- to promote research in agriculture and rural development

Reserve Bank of India and Industrial Finance

- commercial banks lend for short terms only
- they got only short – term deposit from the public
- there is a need and urgency of establishing long – term credit facilities to industries
- the institutional set – up in India for financing
- promoting industries

Institutional set – up of India

- ICICI – Industrial Credit and Investment Corporation of India
- IDBI – Industrial Development Bank of India

State level institutions
- SFCs – State Financial Corporations
- SIDCs – State Industrial Development Corporation

IFCI – Industrial Finance Corporation of India
- provide financial assistance for industrial development
- establishment on July 1, 1948
- under the Act of the parliament

IFCI provide assistance to
- long-term loans both in rupees and foreign currencies
- underwriting of equity, preference and debenture issue
- subscribing to equity, preference and debenture issues
- guaranteeing of loans raised in foreign currency from foreign financial institutions

Financial assistance
- availed by any limited company in the public, private or joint sector
- setting up of new industrial projects
- diversification, renovation or modernization of existing
- concessional terms for setting up industrial projects districts in the states and UT

IFCI raises resources
- issue of bonds in the markets
- borrowing from industrial development bank of India
- central government
- foreign financial institutions and borrowings international capital markets
ICICI – Industrial Credit and Investment Corporation of India

- set up on 5th Jan 1955
- as a joint stock company
- three – man mission sponsored by the world bank and the Government of USA to the Government of India
- channelize the World Bank funds to industry
- to help build up a capital market
- initially the capital private but its equity capital public sector institutions, LIC, GIC and its subsidiaries

Function of ICICI

- assistance to industries
- provision of foreign currency loans
- merchant banking
- letter of credit
- projection promotion
- housing loans
- leasing operations

The significant features

- foreign currency loans sections
- nearly 50% of its foreign currencies
- enjoy of raising funds in foreign currencies
- world bank has been the single largest source of such funds
- entered the international capital markets
- raising foreign currency loans

Major portion

- rupee resources is raised by way of debentures in the capital market
- major portion of its assistance to the private sector

Industrial Development Bank of India (IDB)
- primary object of creating an apex institution
- to coordinate the activities of other financial institutions
- owned subsidiary of the Reserve Bank of India
upto February 15\textsuperscript{th} 1976
-it was delinked Feb 16 1976
-an autonomous corporation fully owned by the
Government of India

Function of IDBI
-fall into two groups
-1. Assistance to other financial institutions
-2. Direct assistance to industrial concerns own or
in participate other institution
-provide refinance in respect of term loans to
industrial concerns
-by the IFC, the SFC, other financial institutions

Special features
-provision for the creation of a special fund
-known as the assistance fund

The fund is intended
-to provide assistance to industries
-which require heavy investments with low
anticipated rate of return
-the financing of exports was also undertaken by
the IDBI
-establishment of EXIM Bank in March 1982

State level institution

State Financial Corporation (SFCs)
-the government of India passed 1951 the state
Financial Corporations Act
-SFCs were set up in many states
-SFCs mainly intended for the development of
small and medium industrial units

Provide loans
-under writing assistance to industrial units
capital and reserves not exceeding Rs.1 crore

The maximum amount that can be
sanctioned
-to an industrial concern by SFC is Rs. 60 lakhs
<table>
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<tr>
<th>Topic</th>
<th>Details</th>
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<tbody>
<tr>
<td>SFCs depend upon</td>
<td>the IDBI for refinance in respect of the term loans granted</td>
</tr>
<tr>
<td>Temporary borrowings</td>
<td>from the RBI and borrowings from IDBI by the sale of bonds</td>
</tr>
</tbody>
</table>
| State Industrial Development Corporations (SIDCOs) | set up by the state government  
- they are wholly owned by them  
- these institutions are not merely financing agencies  
- they are entrusted with responsibility of accelerating the industrialization of their states |
| SIDCO                                     | Small Industrial Development Corporation  
- provide financial assistance to industrial concerns  
- way of loans guarantees and under writing  
- direct subscriptions to shares and debentures |
| Undertake various promotional activities  | conducting techno-economic surveys, project identification and selection and training of entrepreneurs                                    |
| SIDCOs                                    | take 26% private co – promoter takes 25% of the equity  
- the rest is offered to the investing public  
- undertake the development of industrial areas  
- by providing all infrastructural facilities  
- initiation of new growth centres  
- they also administer various state government incentive schemes  
- get refinance facilities from IDBI  
- they also borrow through bonds and accept deposits |
| Monetary policy                           | is the macro economic policy laid down by the central bank  
-towards the management of money supply and |
interest rate

It is the demand side economic policy - used by the government of a country
- to achieve macro economic objectives like inflation, consumption growth and liquidity
- the monetary policy gained its significance after the World War II

Milton Friedman
- thanks to the initiation made by them
- who is associated with the doctrine of monetarism
- who received nobel prize in 1976
- the great depression of the 1930’s was largely the outcome of the budgeting monetary policies of Federal Reserve System

Monetary policy Expansionary policy
- is cheap money policy
- when a monetary authority uses its tools
- to stimulate the economy
- maintains short – term interest rates at a lower than usual rate
- increases the total supply of money in the economy
- more rapidly than usual
- it is traditionally used to try to combat unemployment
- by lowering interest rate
- in the hope that less expensive credit
- will entire businesses into expanding
- this increases aggregate demand
- which boosts short – term growth
- as measured by GDP growth

The contractionary monetary policy
- is dear money policy
- which maintain short – term interest rate higher than usual
- which slows rate of growth in the money supply or even shrinks it
- this shows short-term economic growth and lessens inflation
- can lead to increased unemployment
- depressed borrowing and spending by consumers and businesses
- which can eventually result in an economic recession
- if implemented too vigorously

Two faces of Monetary Policy

<table>
<thead>
<tr>
<th>Inflation</th>
<th>Recession</th>
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<tbody>
<tr>
<td>- cheap money policy</td>
<td>- dear money policy</td>
</tr>
<tr>
<td>- borrowing is easy</td>
<td>- borrowing is difficult</td>
</tr>
<tr>
<td>- consumers buy more</td>
<td>- consumers buy less</td>
</tr>
<tr>
<td>- business expand</td>
<td>- business postpone expansion</td>
</tr>
<tr>
<td>- more people are employed</td>
<td>- unemployment increases</td>
</tr>
<tr>
<td>- people spend more</td>
<td>- production is reduced</td>
</tr>
</tbody>
</table>

Objectives of monetary policy

- the monetary policy in developed economies
- to save the function of stabilization and maintaining
- proper equilibrium in the economic system

In case of underdeveloped

- monetary policy has to be more dynamic
- so as to meet the requirements of an expanding economy
- creating suitable conditions for economic progress
- It is now widely recognized that monetary policy can be a powerful tool of economic transformation.

The specific objectives of monetary policy are:
- Neutrality of money
- Stability of exchange rates
- Price stability
- Full employment
- Economic growth
- Equilibrium in balance of payments

Neutralization of money:
- Economists like Wicksteed, Hayek, and Robertson are the chief exponents of the neutrality theory. They hold the view that monetary authority should aim at neutrality of money in the economy. Monetary changes could be the root cause of all economic fluctuations.

According to neutralists:
- The monetary change causes distortion and disturbances in the proper operation of the economic system of the country.

Exchange Rate stability:
- Traditional objective of monetary authority.
- This was the main objective under the gold standard among different countries.

When there was disequilibrium:
- In the balance of payments of the country.
- It was automatically corrected by movements.
- It was popularly known as “expand currency and credit when gold is coming in, contract currency and credit when gold is going out”.
- This system will correct the disequilibrium.
- In the balance of payments and exchange rate stability will be maintained.
If there is instability in the exchange rates, it would result in outflow or inflow of gold resulting in an unfavourable balance of payments. Therefore, stable exchange rates are advocated.

Price stability - Economists like J.C. Stigler, Cassel and Keynes suggested price stabilization as a main objective of monetary policy is considered the most genuine objective of monetary policy. Stable prices repose public confidence.

It promotes - Business activity and ensure equitable distribution of income and wealth. There is a general wave of propensity and welfare in the commodity.

It is admitted that - Price stability does not mean “price rigidity” or “price stagnation”.

A mild increase - In the price level provide a tonic for economic growth. It has all the virtues of a stable price.

Full employment - During the world depression, the problem of unemployment had increased rapidly. It was regarded as socially dangerous, economically wasteful and morally deplorable. Full employment was considered as the main goal of monetary policy.

With the publication of Keynes’ General theory of employment, interest and money in 1936.

The objective of full employment - Gained full support as the chief objective of monetary policy.
Economic growth - is the process whereby the real per capita income of a country increases over a long period of time. It implies an increase in the total physical or real output, production of goods for the satisfaction of human wants. Therefore, monetary policy should promote sustained and continuous economic growth by maintaining equilibrium between the total demand for money and total production capacity, further creating favourable conditions for saving and investment, for bringing equality between demand and supply, flexible monetary policy in the best course.

Equilibrium in the balance of payments - is another objective of monetary policy which emerged significant in the post-war years. This is simply due to the problem of international liquidity on account of the growth of world trade at a more faster speed than the world liquidity.

It was felt that increasing of deficit in the balance of payments reduce the availability of an economy to achieve other objective. As a result, many less developed countries have to curtail their imports which adversely affects development activities. Monetary authority makes efforts to maintain equilibrium in the balance of payments.

Recent advancements in banking sector

E-Banking - online banking also known as internet banking is an electronic payment system.
- through the financial institution website
- part of the core banking system
- to day virtual banks or direct banks only an internet presence
- lower costs than traditional brick – and – mortar banks

RTGS and NEFT

- Inter Bank Transfer enables electronic transfer of funds
- there are two system of Inter Bank Transfer
- RTGS and NEFT
- both these system are maintained by RBI

NEFT

- National Electronic Fund Transfer
- Transaction happens in batches hence slow
- timing 08.00 a.m. to 06.30 a.m (12.30 p.m Saturday)
- no minimum limit

RTGS

- Real Time Gross Settlements
- Transaction happens in real time hence fast
- timings 09.00 a.m. to 04.30 p.m.
  (01.30 p.m. on Saturday)
- minimum amount for RTGS transfer is Rs. 2 lakhs

Automated Teller Machine (ATM)

- first introduced in 1967
- the next revolution in ATMs is to involve contactless payments
- like Apple pay or Google wallet
- Conduce contactless ATM transactions using a smart phone
- biometric authentication is already used in India
- these technologies can help overall bank security
- protecting against ATM backs
<table>
<thead>
<tr>
<th><strong>Paytm</strong></th>
<th>Payments bank</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>In August 2015</td>
</tr>
<tr>
<td></td>
<td>Paytm received a license from RBI to launch a payment bank</td>
</tr>
<tr>
<td></td>
<td>Is separate entity in which founder Vijay Shekhar Sharma</td>
</tr>
<tr>
<td></td>
<td>Will hold 51% share</td>
</tr>
<tr>
<td></td>
<td>One 97 communications holds 39%</td>
</tr>
<tr>
<td></td>
<td>10% will be held by a subsidiary of one 97 and Sharma</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>A debit card</strong></th>
<th>Is a card allowing the holder to transfer money electronically</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Their bank account when making a purchase</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>A credit card</strong></th>
<th>Is a payment card issued to users</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>To pay a merchant for goods and services</td>
</tr>
<tr>
<td></td>
<td>Complex fee structure in the credit cards industry may limit customers ability to shopping</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Recent issues NPA</strong></th>
<th>Non performing asset</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Once the borrower fails to make interest or principal payments for 90 days</td>
</tr>
<tr>
<td></td>
<td>Is considered to be a NPA</td>
</tr>
<tr>
<td></td>
<td>NPAs are problematic for financial institutions</td>
</tr>
<tr>
<td></td>
<td>Since they depend on interest payments for income</td>
</tr>
<tr>
<td></td>
<td>Now the size of NPAs is estimated to be around 10 lakh crores</td>
</tr>
<tr>
<td></td>
<td>As a result the bank do not have adequate capital</td>
</tr>
<tr>
<td></td>
<td>The Government of India forced to infuse capital to the banks</td>
</tr>
<tr>
<td></td>
<td>By using poor tax payers money</td>
</tr>
<tr>
<td></td>
<td>Already more than a sum of Rs. 2 lakh crores have injected</td>
</tr>
<tr>
<td></td>
<td>During 2018-19 the GOI has infused Rs.68,000 crores into the banking system</td>
</tr>
</tbody>
</table>

**Page No. 77**
NPAs ultimately affect the common people

Merger of Banks
- Union cabinet decided to merge all the remaining
- five associate banks of State Bank Group
- with State Bank of India in 2017
- After the parliament passed the merger bill
- the subsidiary banks have ceased to exist
- five associates and the Bharatiya Mahila Bank
- become the part of State Bank of India beginning April 1st 2017
- State Bank of India among the top 50 banks in the world
- State Bank of Bikaner and Jaipur (SBBJ)
- State Bank of Hyderabad (SBH)
- State Bank of Mysore (SBM)
- State Bank of Patiala (SBP)
- State Bank of Travancore (SBT)

Other two associate bank
- namely State Bank of Indore and State Bank of Saurashtra already been merged with SBI
- customer base of SBI increase 37 crore
- branch network 24,000
- 60,000 ATMs, across the country

Money market
- is the mechanism through which short term funds
- loaned and borrowed

It designates
- financial institutions which handle the purchase, sale and transfer
- short term credit instruments
- commercial banks acceptance house
- Non banking financial institutions catering to the requirements
- short term funds in the money market
Capital market - is a part of financial system - capital by dealing in shares, bonds and other long term investments

The market where investment instruments-like bonds, equities and mortages are traded is known as the capital market

Demonetisation - is the act of stripping a currency unit of its statues as legal tender - it occurs when ever there is a change of national currency - the current form or forms of money is pulled from circulation, often to be replaced with new coins or notes

On 8 November 2016, the Indian Prime Minister Mr. Narendra Modi announced the demonetization of all Rs. 500 and Rs. 1000 bank notes of the Mahatma Gandhi Series

ENABLERS FOR SCORING
CENTUM

XII STD

ECONOMICS STUDY MATERIAL

PART III

Prepared by,
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P.G. Assistant in Economics,
Ranipettai district – 632 517
Cell No: 9486938878
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<th>PAGE NO.</th>
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<td>8. INTERNATIONAL ECONOMIC ORGANISATION</td>
<td>32 – 57</td>
</tr>
<tr>
<td>9. FISCAL ECONOMICS</td>
<td>58 – 100</td>
</tr>
</tbody>
</table>

“Equanimity, hard work and intelligent time-management are the secrets of success”
CHAPTER 7 INTERNATIONAL ECONOMICS

Introduction
The subject “International Economics” evolved -from a simple theory of international trade

The subject first -originated in western Europe
-on account of increasing importance of foreign trade
-in the part of the world

The contributions of classical economists -like Adam Smith, David Ricardo, F.W. Taussig Haberler, J.S. Mill and Bela Balassa
-shaped the subject matter of international economics

International economics studies -entire range of international economic transactions
-not only trade in goods and services
-but also capital flows, technology transfer, the rate of exchange and balance of payments
-issues relating to tariffs, protection, free trade investment flows
-role of fiscal and monetary policies pursed by individual countries

Meaning of International Economics -branch of economics which is concerned with the exchange of goods and services
-between two or more countries
-hence the subject matter is mainly related to foreign trade

In other words -is a specialized field of economics
-which deals with the economic interdependence among the countries
-studies the effect of such interdependence and the factors that affect it

Subject matter of international economics -includes large number of segments
-which are classified into the following parts
1. Pure theory of trade
- This component explains the causes for foreign trade, composition, direction and volume of trade
- Determination of the terms of trade and exchange rate
- Related to balance of trade and balance of payments

2. Policy issues
- Under this part, the policy issues such as free trade vs protection
- Methods of regulating trade capital and technology flows
- Use of taxation, subsidies and dumping
- Exchange control and convertibility foreign aid
- External borrowings and foreign direct investment
- Measures of correcting disequilibrium in balance of payments, etc. are covered

3. International cartels and trade blocs
- This part deals with the economic integration in the form of international cartels, customs unions, monetary unions, trade blocs, economic unions and the like
- It also discusses the operation of multinational corporations (MNCs)

4. International Financial and Trade Regulatory Institution
- The financial institutions like International Monetary Fund (IMF), IBRD, WTO, etc.
- Which influence international economic transactions and relations
- Shall also be the part of international economics

Meaning of trade
- Trade is one of the powerful forces of economic integration
- The term “trade” means exchange of goods, wares or merchandise among people

Trade is of two types
- They are (a) Internal trade
- (b) International trade

Internal trade
- Refers to the exchange of goods and services
- within the political and geographical boundaries of a nation
- it is trade within a country
- this is also known as “domestic trade” or “home trade” or “intra – regional trade”

**Internal trade**
- exchange of goods and services between two or more countries

**In other words**
- it is trade among different countries or trade across political boundaries
- it is also called external trade or foreign trade or inter – regional trade

**Difference between Internal trade and International trade**

<table>
<thead>
<tr>
<th>Internal trade</th>
<th>International trade</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Trade take place between different individuals and firm within the same nation</td>
<td>1. In different nations</td>
</tr>
<tr>
<td>2. Labour and capital more freely from one foreign to another</td>
<td>2. Do not move easily from one nation to another</td>
</tr>
<tr>
<td>3. There will be free flow of goods and services since there are no restrictions</td>
<td>3. Do not easily move there are a number of restriction like tarrif and quota</td>
</tr>
<tr>
<td>4. There is only one common currency</td>
<td>4. Different currencies</td>
</tr>
<tr>
<td>5. The physical and geographical conditions of a country are more or less similar</td>
<td>5. There are differences of two countries</td>
</tr>
<tr>
<td>6. Trade and financial regulations are more or less the same</td>
<td>6. Interest rate, trade laws differ between countries</td>
</tr>
<tr>
<td>7. There is no difference in political affiliations, custom and habits of the people and government policies</td>
<td>7. Difference are pronounced</td>
</tr>
</tbody>
</table>
The classical theory of international trade

Introduction
- Adam Smith developed the theory of absolute cost advantages, 1776

But David Ricardo
- formulated as an explicit precise theory
- the theory of comparative cost advantages

Which was later improved and refined by the economists like J.S. Mill, Cairnes, Bastable, Taussig and Haberler

Adam Smith’s theory of absolute cost advantage
- Adam Smith argued that all nations can be benefited
- when there is free trade
- specialisation in terms of their absolute cost advantage

The theory
- according to Adam Smith
- the basis of international trade was absolute cost advantage
- trade between the countries would be mutually beneficial when one country produces a commodity at an absolute cost advantage over the country
- which in turn produces another commodity at absolute cost advantage over the first country

Assumptions
- 1. There are two countries and two commodities (2 X 2) model
- 2. Labour is the only factor of production
- 3. Labour units are homogeneous
- 4. The cost or price of commodity is measured by the amount of labour required to produce it
- 5. There is no transport cost

Illustration
- absolute cost advantage theory can be illustrated with the help of the following example
<table>
<thead>
<tr>
<th>Country</th>
<th>Wheat</th>
<th>Cloth</th>
</tr>
</thead>
<tbody>
<tr>
<td>India</td>
<td>20</td>
<td>6</td>
</tr>
<tr>
<td>China</td>
<td>8</td>
<td>14</td>
</tr>
</tbody>
</table>

From the illustration:
- It is clear that India has an absolute advantage in the production of wheat over China.
- China has an absolute advantage in the production of cloth over India.
- India specialized in the production of wheat and import cloth from China.
- China should specialize in the production of cloth and import wheat from India.
- This kind of trade would be mutually beneficial to India and China.

Ricardo’s theory of comparative cost advantage

David Ricardo:
- The British Economist in his “principle of political economy and taxation”
- Published in 1817
- Formulated a systematic theory called Comparative cost theory

Later it was refined:
- By J.S. Mill, Marshall, Taussig and other

Ricardo demonstrate:
- That the basis of trade in the comparative cost difference

In other words:
- Trade can take place even
- If the absolute cost difference is absent
- But there is comparative cost difference

According to Ricardo:
- A country can gain from trade
- When it produces at relatively lower costs
- Even when a country enjoys absolute advantages
- In both goods, the country would specialize in the production and export of those goods
- Which are relatively more advantageous
Similar, even when a country has absolute disadvantage in production of both goods - the country would specialize in production and export of the commodity - in which it is relatively less disadvantageous

Assumptions
- 1. There are only two nations and two commodities (2 X 2 model)
- 2. Labour is the only element of cost of production
- 3. All labourers are of equal efficiency
- 4. Labour is perfectly mobile within the country but perfectly immobile between countries
- 5. Production is subject to the law of constant returns
- 6. Foreign trade is free from all barriers
- 7. No change in technology
- 8. No transport cost
- 9. Perfect competition
- 10. Full employment
- 11. No government intervention

Illustration
- Ricardo’s theory of comparative cost can be explained
- with a hypothetical example of production costs of cloth
- wheat in America and India

<table>
<thead>
<tr>
<th></th>
<th>Cloth</th>
<th>Wheat</th>
<th>Domestic exchange ratios</th>
</tr>
</thead>
<tbody>
<tr>
<td>America</td>
<td>100</td>
<td>120</td>
<td>1 wheat = 1.2 cloth</td>
</tr>
<tr>
<td>India</td>
<td>90</td>
<td>80</td>
<td>1 wheat = 0.88 cloth</td>
</tr>
</tbody>
</table>

From the illustration
- it is evident from the example that India has an absolute advantage in production of both cloth and wheat
- concentrate on the production of wheat
- enjoys a comparative cost advantages
- 80/120 < 90/100
- the comparative cost disadvantages is lesser in cloth production
- hence America will specialize in the
production of cloth and export it to India in exchange for wheat

Any exchange ratio between 0.88 units and 1.2 units of cloth against one unit-wheat represents ‘gain’ for the both the nations.

India
- get 1 unit of cloth and 1 unit of wheat
- by using its 160 labour units

America
- get 1 unit of cloth and 1 unit of wheat
- by using its zero units of labour

Criticisms
- labour cost is a small portion of the total cost
- hence theory based on labour cost is unrealistic
- labourers in different countries are not equal in efficiency

Modern theory of international trade
- developed by Swedish economist
- Eli Heckscher and his student Bertil Ohlin in 1919

This model based
- on the Ricardian theory of International trade

This theory says that
- the basis for international trade
- is the difference in factor endowments
- it is otherwise called as “Factor Endowment Theory”

Factor endowment model
- developed by Heckscher and Ohlin
- countries with a relative factor abundance can specialize and trade
- abundance of skilled labour
  => specialisation
  => export
  => exchange for goods and services
- produced by countries with abundance of unskilled labour
- exports embody the scarce factor
- assumes a high degree of factor mobility

The theory
- the classical theory argued the basis for foreign trade
But the modern theory of international trade explains the causes for such comparative cost difference. This theory attributes international differences in comparative costs to:
(i) difference in the endowments of factors of production between countries
(ii) difference in the factor proportions required in production

Assumptions
1. There are two countries, two commodities, and two factors (2 x 2 x 2) model
2. Countries different in factor endowments
3. Commodities are categorized in terms of factor intensity
4. Countries use the same production technology
5. Countries have identical demand conditions
6. There is perfect competition in both product and factor markets in both countries

Heckscher–Ohlin (H.O) theorem
“...A capital-abundant country will export the capital-intensive good while the labour-abundant country will export the labour-intensive good”

Factor proportions model which links exports and imports to factor endowments

Exports
...a country exports those commodities produced with relatively large quantities of the country’s relatively abundant factor
...according to Heckscher–Ohlin
“...a capital-abundant country will export the capital-intensive goods while the labour-abundant country will export the labour-intensive goods”
...a factor is regarded abundant or scarce in relation to the quantum of other factors
...a country can be regarded as richly endowed

Page No. 10
capital only
-if the ratio of capital to other factors is higher than other countries

Illustration

<table>
<thead>
<tr>
<th>Particulars</th>
<th>India</th>
<th>America</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply of labour</td>
<td>50</td>
<td>24</td>
</tr>
<tr>
<td>Supply of capital</td>
<td>40</td>
<td>30</td>
</tr>
</tbody>
</table>

Capital – Labour ratio 40/50 = 0.8  30/24 = 1.25
-in the above example even though India has more capital in absolute terms
-America is more richly endowed with capital
-because the ratio of capital in India is 0.8
-which is less than that in America where it is 1.25
-the following diagram illustrates the pattern of world trade

Limitations
-1. Factor endowment of a country may change over time
-2. The efficiency of the same factor may differ in the two countries

For example
-America may be labour scare in terms of number of workers
-but in terms of efficiency the total labour may be larger

Comparison of classical theory and modern theory

Classical theory of International trade          Modern theory of international trade

1. Explains the phenomenon of international trade on the basis of labour theory of value - on the basis of general theory of value
2. It present a one factor model – labour - multi – factor model – labour and capital
3. It attributes the difference in the productive efficiency of workers in the two countries - to the difference in factor endowments in the two countries
Gains from International trade - helps a country to export its surplus goods to other countries
- secure a better market for it
- similarly international trade helps a country to import the goods which cannot be produced at all or can be produced at a higher cost

The gains from international trade - may be categorized under four heads

1. Efficient production - enables each participatory country to specialize in the production of goods
- in which it has absolute or comparative advantages

International specialization offers the following gains
- better utilization of resources
- concentration in the production of goods
- in which it has a comparative advantage
- saving in time
- perfection of skills in production
- improvement in the techniques of production
- increased production
- higher standard of living in the trading countries

2. Equalization prices between countries - international trade may help to equalize prices in all the trading countries
- prices of goods and equalized between the countries
- the difference is only with regard to the cost of transportation
- prices of factors of production are also equalized

3. Equitable distribution of scarce materials - international trade may help the trading countries to have equitable distribution of scarce resources

4. General advantages of international trade - availability of variety of goods for consumption
- generation more employment opportunities
- industrialization of backward nations
- improvement in relationship among countries
(However, in reality it has not happened)
Terms of Trade
The gains from international trade depend upon the terms of trade which refers to the ratio of exports prices to import prices.

Meaning
-it is the rate at which the goods of one country are exchanged for goods of another country.

It is expressed as the relationship between export prices and import prices.

Terms of trade improves when average price of exports is higher than average price of imports.

Types of trade-related to the ratio exchange between commodities:
-Net Barter Terms of Trade – Taussig
-Gross Barter Terms of Trade – Taussig
-Income Terms of Trade – G.S. Dorrance

1. Net Barter Terms of Trade
-this type was developed by Taussig in 1927
-the ratio between the prices of exports and imports
-is called the “net barter terms of trade”
-it is named by Viner as the commodity terms of trade

It is expressed as
\[ T_n = \left( \frac{P_x}{P_m} \right) \times 100 \]
Where
- \( T_n \) = Net Barter Terms of Trade
- \( P_x \) = Index number of export prices
- \( P_m \) = Index number of import prices

This is used to measure the gain from international trade
If ‘\( T_n \)’ is greater than 100
-then it is favourable terms of trade which will mean that for a rupee of export,
-more of imports can be received by a country.

2. Gross Barter Terms of Trade
-this was developed by Taussig in 1927 as an improvement over the net terms of trade.
it is an index of relationship between total physical quantity of imports and the total physical quantity of exports
- \( T_g = \left( \frac{Q_m}{Q_x} \right) \times 100 \)

Where
- \( Q_m \) = Index of import quantities
- \( Q_x \) = Index of export quantities

if for a given quantity of export - more quantity of import can be consumed by a country, then one can say that terms of trade are favourable

3. Income Terms of Trade - the income terms of trade was given by G.S. Dorrance in 1948

- it is the index of the value of exports divided by the price index for imports multiplied by quantity index of exports

In other words - it is the net barter terms of trade of a country multiplied by its exports – volume index
- \( T_y = \left( \frac{P_x}{P_m} \right) Q_x \)

Where
- \( P_x \) = Price index of exports
- \( P_m \) = Price index of imports
- \( Q_x \) = Quantity index of exports

Terms of trade related to the interchange between productive resources

1. The single factorial terms of trade - Viner has devised another concept called “the single factorial terms of trade”
- as an improvement upon the commodity terms of trade

It represents the ratio of
- export – price index to the import – price index adjusted for changes in the productivity
- country’s factors in the production of exports

Symbolically
- it can be stated as \( T_f = \left( \frac{P_x}{P_m} \right) F_x \)
- where \( T_f \) stands for single factorial terms of trade index
- \( F_x \) stands for productivity in exports
- which is measured index of cost in terms of quantity of factors of production used per unit of export
2. Double factorial terms of trade - Viner constructed another indeed called “Double factorial terms of trade”

- it is expressed as

\[ T_{ff} = \left( \frac{P_x}{P_m} \right) \left( \frac{F_x}{F_m} \right) \]

- which takes into account the productivity in country’s exports
- as well as the productivity of foreign factors

- \( F_m \) represent imports index

Which is measured as the index of cost - in terms of quantity of factors of production employed per unit of imports

Balance of trade and Balance of payments - two different concepts in the subject of international trade

Balance of trade (BOT) - refers to the total value of a country’s exports of commodities and total value of imports of commodities

Only export and import of commodities - included in the statement of balance of trade of a country

Movement of goods - export and imports of commodities
- are also known as visible trade
- because the movement of commodities
- between countries can be seen by eyes
- felt by hands and can be verified by custom authorities

Favourable BOT - when the total value of commodity exports of a country exceeds
- the total value of commodity imports of that country

It is said that

Unfavourable BOT - the country has a favourable balance of trade
- if the total value of commodity exports of a country is less than
- the total value of commodity imports of that country
- is said to have an “unfavourable balance of trade”
Balance of Payments (BOP) - is a systematic record of country’s economic and financial transactions with the rest of the world over a period of time.

When a payment is received from foreign currency it is a credit transaction.

While a payment to a foreign country is a debit transaction.

The principal items shown - on the credit side:
- exports of goods and services transfer receipts in a form of gift, etc
- from foreigners borrowing from abroad, foreign direct investment and official sale of reserve asset
- including gold to foreign countries and international agencies

Principal items on the debit side include:
- import of goods and services
- transfer payment to foreigners
- lending to foreign countries and official purchase of reserve assets
- or gold from foreign countries and international agencies

Components of BOPs

The credit and debit items are shown vertically in the BOP account of a country.

Horizontally - they are divided in three categories:
- (a) The current account
- (b) The capital account
- (c) The official statements account or official reserve assets account

(a) The current account - it includes all international trade transactions of goods and services - ie. tourism, transportation and royalty fees - international unilateral transfers ie. gifts and foreign aid.
(b) The capital account
Financial transactions consisting of direct investment and purchases of interest – hearing financial instruments
Non-interest bearing - demand deposits and gold fall under the capital account

(c) The official reserve assets account - consist of movements of international reserves by governments and official agencies - to accommodate imbalances arising from the current and capital accounts

The official reserve assets of a country - gold stock, holding of its convertible foreign currencies - SDRs - Special Drawing Rights - IMF - Net position International Monetary Fund

Balance of Payment (BOP) Account Chart

Credit (Receipt’s) - Debit (Payments) = Balance (Deficit (-) Surplus (+) Deficit if Debit > Credit)

Balance of Payment disequilibrium - when the receipts (R) and payment (P) are just equal
- i.e. \( R/P = 1 \)

BOP disequilibrium - the BOP is said to be balanced
- occurs when
- demand ≠ supply
- Debit > Credit => Deficit

Favourable BOP - when receipts exceed payments the BOP is said to be favourable
- that is \( R/P > 1 \)

Unfavourable BOP - when receipts are less than payments BOP is said to be unfavourable
- that is \( R/P < 1 \)

Types of BOP disequilibrium - there are three main types of BOP disequilibrium
-(a) Cyclical disequilibrium
-(b) Secular disequilibrium
-(c) Structural disequilibrium
<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
</table>
| Cyclical disequilibrium     | - occurs because of two reasons  
First                                | - two countries may be passing through different phases of business cycle  
Secondly                        | - the elasticities of demand may differ between countries                                                                                     |
| Secular disequilibrium      | - the secular or long – run disequilibrium in BOP occurs  
- because of long – run and deep seated changes in an economy  
- advances from one stage of growth to another |
| In the initial stages of development | - domestic investment exceeds domestic savings  
- imports exceed exports  
- as if happen in India since 1951 |
| Structural disequilibrium   | - structural changes in the economy  
- may also cause balance of payment disequilibrium  
- structural changes include development of alternative sources of supply  
- development of better substitutes  
- exhaustion of productive resources  
- changes in transport routes and costs |
| Causes for BOP disequilibrium | - major causes producing disequilibrium  
- the balance of payment of a country |
| 1. Cyclical fluctuation     | - cyclical disequilibrium in different countries is caused by their cyclical fluctuations  
- their phases and magnitude |
| World trade                 | - shrinks during depression  
- trade flourishes during propensity |
| 2. Structural changes       | - is caused by the structural changes brought by huge development  
- investment programmes in the developing economies  
- may have high propensity to import  
- want of capital for rapid industrialization  
- while export may not be boosted up to that extent |
3. Development expenditure
- Development disequilibrium is caused by rapid economic development
- which results in income and price effects
- the less developed countries in the early stage of development are not self sufficient

Income, saving and investment
- Abysmally low
- They depend upon developed countries for import of commodities, capital and technology
- Export potential is low and import intensity is high
- So the UDCs suffer from adverse BOP

4. Consumerism
- Balance of payments position of a country is adversely affected
- By a huge increase in consumption
- This increases the need for imports and decrease the capacity to export

5. Demonstration effect
- Deficit in the balance of payment of developing countries
- Is also caused by demonstration effect which influences the people in UDC
- To imitate western styled goods

This will raise the propensity to import - causing adverse balance of payments
- This is good for the developed countries

6. International borrowing and investment
   When the international borrowing is heavy
- May cause a deficit in the balance of payments
- A country’s balance of payments will be adverse since it repays loans within interest
- Servicing of debt is a huge burden
- That is why the UDC are forced to borrow more

7. Technological backwardness
- Due to technological backwardness
- The purpose are unable to use the energy (solar) available with them

As a result
- They import huge petroleum product from foreign countries, increasing the trade deficit

8. Global politics
- The rich countries Eg. USA
- Need to sell their weapons to promote their economy and generate employment
- War between the countries Iran and Iraq
- UDC are trapped forever

Measures to correct BOP disequilibrium
- depreciation
- devaluation

Export
- import control
- export promotion
- exchange controls
  - production of import substitutes

Import
- monetary policy
- capital import

These are a number of measures available for correcting the balance of payment disequilibrium. They are divided into two broad groups:
- (i) automatic correction
- (ii) deliberate measures

I. Automatic correction
- if the market forces of demand and supply allowed to play freely
- equilibrium will be automatically restored in course of time

Under the free exchange rate system
- the automatic adjustments of the balance of payments
- take place through change in the variables
  - like price, interest, income and capital flows

1. Price adjustments
- as a result of foreign exchange outflow from a deficit country to a surplus country
- there will be fall in the money supply in the deficit country
- increase in the money supply in the surplus country
- this will result in rise in the price in the surplus country
- which will encourage imports and discourage exports

Fall in the prices
- in the deficit country will encourage exports and discourage imports
- leading to restoration of BOP equilibrium
2. Interest rate adjustments
The contraction or expansion of money supply - resulting from the BOP deficit or surplus leads to a rise or fall in the interest rates. A rise in interest rate in the deficit country will encourage investors to withdraw their fund from abroad and invest in their home country. The opposite happens in the surplus country.

3. Income adjustments
A nation with payments surplus will experience rising income, which will increase imports and thereafter equilibrium is restored in balance of payments.

4. Capital flows
Changes in the interest rate consequent to the BOP disequilibrium will encourage capital flows from surplus nations to deficit nations helping restoration of the BOP disequilibrium.

II. Deliberate measures
The deliberate measures may be broadly grouped into:
(a) Monetary measures
(b) Trade measures
(c) Miscellaneous measures

(a) Monetary measures

1. Monetary contraction

High domestic price level - is responsible for high imports and low exports.

In order to control inflation - the central monetary authority controls credit, as a result, the prices come down and exports increase. This will help to correct adverse BOP.

However, if credit is controlled - investment will decline, production will go down, prices will increase. This is the cause of confusion between government and RBI in India in 2010s.
2. Devaluation - means deliberate reduction of the official rate which domestic currency is exchanged for another currency.

In other words - devaluation refers to a reduction in the external value of a currency in the terms of other currencies. For instance, instead of Rs. 70 per US dollar making Rs. 80 per US dollar.

A country with fundamental disequilibrium in the balance payments may devaluate its currency to stimulate its exports and discourage imports to correct the disequilibrium. Devaluation makes exports cheaper and imports dearer.

- that means making good cheaper for foreigners - foreign goods costlier for Indians.

3. Exchange control - means the state intervention in the forex market. It is a popular method employed to influence the balance of payment position of the country.

Under exchange control - the government or central bank assumes complete control over the foreign exchange reserve earning of the country.

The recipients of foreign exchange - like exporters are required to surrender foreign exchange to government.

Central bank - exchange for domestic currency.

By virtue - its control over the use of foreign exchange, the government can control imports.

Too much of imports control - would invite more and more smuggled goods.

Devaluation of Indian currency - India rupee was devalued three times since 1947:
- 1. on 29th September 1949
- 2. on 6th June 1966
- 3. on 1st July 1991

(b) Trade measures - include measures to promote exports and to reduce imports.

1. Export promotion - exports may be encourage by
- (i) reducing or abolishing export duties
- (ii) provide export subsidy.
-(iii) encouraging export production by giving monetary, fiscal, physical and institutional incentives

2. Import control
- imports may be controlled by
  -(i) imposing or enhancing import duties
  -(ii) restricting imports through import quotas
  -(iii) licensing and even prohibiting altogether the import of certain non-essential items
  - but this would encourage smuggling

Miscellaneous measures
- in addition to the measures mentioned above
  - there are a number of other measures that can help
  - the balance of payment position more favourable
    like
      -(i) foreign loans
      -(ii) encouraging foreign investment in the home country
      -(iii) development of tourism to attract foreign investment
      -(iv) providing incentives to enhance inward remittances
      -(v) import substitution

Exchange rate

Meaning of foreign exchange (FOREX)
- FOREX refers to foreign currencies
  - the mechanism through which payments are effected
  - between two countries having different currency system is called FOREX
  - it covers methods of payment
  - rules and regulation of payment
  - the institution facilitating such payments

Definition of FOREX
- FOREX is the system or process of covering one national currency into another transferring money from one country to another

Rate of Exchange
- the transactions in the exchange market are carried out at exchange rate
- it is the external value of domestic currency
- thus, exchange rate may be defined as the price paid in the home currency say Rs.75
- for a unit of foreign currency say 1 US dollar

It can be quoted in two ways
- 1. one unit of foreign money 1 USD to so many units of the domestic currency Rs. (or)
- 2. a certain number of units of foreign currency USD to one unit of domestic money Rs. 1

For instance
- 1 US dollar = Rs. 70 (or)
- Rs. 1 = US 1.42 units
- Rs. 1 = 1 dollar => 1947
- Rs. 70 = 1 dollar => 2018

Exchange rate
- the rate at which one country’s currency can be traded for another country’s currency

Definition of equilibrium exchange rate - Ragner Nurkse
- “The equilibrium exchange rate is that rate which over a certain period of time keeps the balance of payment in equilibrium”

Determination of equilibrium exchange rate
- the equilibrium rate of exchange is determined in the foreign exchange market
- in accordance with the general theory of value
- i.e by the interaction of the forces of demand and supply
- thus the rate of exchange is determined at the point
- where demand for FOREX is equal to the supply of FOREX
- in the above diagram
- y axis represent exchange rate
- that is value of rupee in terms of dollars
- x axis represents demand and supply of FOREX
- E is the point of equilibrium where DD intersects SS
- the exchange rate is P2
1. Fixed exchange rates - the countries following the fixed exchange rate is known as stable exchange rate and pegged exchange rate - system agree to keep their currencies at a fixed rate - as determined by the government

Under the gold standard - the value of currencies was fixed in terms of gold

2. Flexible exchange rates - is also known as floating exchange rate system

Exchange rates are freely determined - in an open market by market forces of demand and supply

Types of exchange rates - exchange rates are also in the form of
-(a) Nominal exchange rate
-(b) Real exchange rate
-(c) Nominal effective exchange rate (NEER)
-(d) Real effective exchange rate (REER)

- if 1 US dollar = RS. 75
- nominal exchange rate = 75/1 = 75
- this is the bilateral nominal exchange rate

Real exchange rate
\[ \frac{eP_f}{P} \]

- \( P \) = Price levels in India
- \( P_f \) = Price level in abroad (say US)
- \( e \) = nominal exchange rate

- if a pen costs Rs. 50 in India and it costs 5 USD in the US
- Real Exchange Rate is \( \frac{75 \times 5}{50} = 7.5 \)

- if real exchange rate is equal to 1
- the currencies are at purchasing power parity

- if the price of the pen in U.S. is 0.66 USD
- the real exchange rate = \( \frac{0.66 \times 75}{50} \)

- then it could be said that the USD and Indian rupee are at purchasing power parity

Determinants of Exchange rates - are determined by numerous factors
- they are related to the trading
Factors determining exchange rate
- differential in inflation
- differential in interest rates
- current account deficits
- public debt
- terms of trade
- political and economic stability
- recession
- speculation

1. Differential in inflation
- inflation and exchange rates are inversely related
A country with a consistently lower inflation rate
- exhibits a rising currency value
- as its purchasing power increase relative to other currencies

2. Differentials in interest rates
- there is a high degree of correlation between interest rates, inflation and exchange rates
Central banks
- influence over both inflation and exchange rates by manipulating interest rates
Higher interest rates
- attract foreign capital and cause the exchange rate to rise and vice versa

3. Current account deficits
- a deficit in the current account implies of payments over receipts
The country resorts
- to borrowing capital from foreign sources to make up the deficit
- excess demand for foreign currency lower a country’s exchange rate

4. Public debt
- large public debts are driving out foreign investors
- because it lead to inflation
- as a result exchange rate will be lower

5. Terms of trade
- a country’s terms of trade
- also determines the exchange rate
If the price of a country’s exports rise - by a greater rate that of its imports
- its terms of trade will improve
Favourable terms of trade - imply greater demand for the country’s exports and thus BOP becomes favourable

6. Political and economic stability - if a nation’s political climate is stable and economic performance is good - its currency value will be appreciated by attracting more foreign capital

7. Recession - interest rates are low during the recession phase - this will decrease inflow of foreign capital - as a result a currency will be depreciated against other currencies - thereby lowering the exchange rate

8. Speculation - if a country’s currency value is expected to rise - investors will demand more of that currency - in order to make a profit in the near future - this results in appreciation of the exchange rate

Beside the above determinants - relative dominance is the global politics and the power to announce - economic sanctions over other countries also determine exchange rate

Foreign direct investment and trade (FDI) - is an important factor in global economy - foreign trade and FDI are closely related

In developing countries like India - FDI is the national resource sector, including plantations, increases trade volume

Foreign production by FDI - is useful to substitute foreign trade

FDI is also influenced - by the income generated from the trade and regional integration schemes

FDI is helpful - to accelerate the economic growth by facilitating essential imports needed - carrying out development programmes like capital goods, technical know how - raw materials and other inputs and even scare - this is one of the hidden agenda of fund – bank policies
Meaning of FDI

- FDI means an investment in a foreign country that involves some degree of control and participation in management.

It corresponds to investment

- made by a multinational enterprise in a foreign country
- it is different from portfolio investment
- which is primarily motivated by short term profit
- it does not seek management control

Foreign Portfolio Investment (FPI)

- means the entry of funds into a nation
- where foreigners deposit money in a nation bank or make purchase in the stock and bond markets, sometimes for speculation
- FPI is part of capital account of BOP

Objectives of FDI

- FDI has the following objectives
- 1. Sales expansion
- 2. Acquisition of resources
- 3. Diversification
- 4. Minimization of competitive risk

Advantages of FDI

Foreign Investment mostly takes the form of direct investment

- hence we deal here with the foreign direct investment

The important advantages of foreign direct investment are the following

FDI may help to increase

- the investment level and thereby by the income and employment in the host country consumer goods

When the exports earning of a country

- not sufficient to finance for imports
- FDI may be required to fill the trade gap

FDI is encouraged by the factors-such as foreign exchange shortage, desire to create employment and acceleration of the pace of economic development
Many development countries strongly prefer foreign investment to imports.

Real impact of FDI on different sections of an economy (say India) may differ. It could be a boon for some as well as bane for others.

Large demand for USD generated by IMF and world bank policies helps the USD to gain value continuously. Investment may facilitate transfer of technology to the recipient country. It may also bring revenue to the government into the expansion, modernization or development of related industries. It may kindle a managerial revolution in the recipient country through professional and sophisticated management techniques.

Foreign capital may enable the country to increase its exports and reduce imports requirements thereby ease BOP disequilibrium.

Foreign investment may also help increase competition and break domestic monopolies.

If FDI adds more value to output in the recipient country, the return on capital from foreign investment then social returns are greater than the private returns on foreign investment.

By bring capital and foreign exchange FDI may help in filling the saving gap and the foreign exchange gap in order to achieve the goal of national economic development.

Foreign investment may stimulate domestic enterprise to investment to invest in ancillary industries in collaboration with foreign enterprises.

FDI flowing into a developing country also encourage its entrepreneurs to invest in the other LDCs.
Firms in India
- started investing in Nepal, Uganda, Ethiopia, Kenya and other LDCs
- while they are still borrowing from abroad

Larger FDI to India
- comes from a small country Mauritius

Disadvantages of FDI
The following criticisms are leveled against foreign direct investment

Private foreign capital
- tends to flow to the high profits areas rather than to the priority sectors

The technologies brought in by the foreign investor
- may not be appropriate to the consumption needs
- size of the domestic markets
- resource availabilities
- stage of development of the economy

Foreign investment
- unfavourable effect on the balance of payment of a country
- because when the drain of foreign exchange by way of royalty, dividend, etc
- is more than the investment made by the foreign investment made by the foreign concerns

Foreign capital
- sometimes interferes in the national politics

Foreign investor sometimes engage
- in unfair and unethical trade practices

Foreign investment
- in some case leads to the destruction or weakening of small and medium enterprises

Foreign investment
- result in the dangerous situation of minimizing eliminating competition and the creation of monopolies or oligopolistic structure

FDI in India
- the early 1991 witnessed reforms in the economic policy
- this helped to open up Indian Market to FDI
- FDI in India has increased over the years
India FDI

- advantageous in terms of free flow of capital
- improved technology
- management expertise and access to international markets

The major sector benefited from FDI in India

- financial sector
- insurance
- telecommunication
- hospitality and tourism
- pharmaceuticals
- software and information technology

FDI is not permitted in the industrial sectors

- arms and ammunition
- atomic energy
- railways
- coal and lignite
- mining of iron, manganese, chrome, gypsum, sulphur, gold, diamonds, copper etc.

FDI inflows in India

- increased from $97 million in 1990-91 to $5,535 million in 2004-05
- it amounted to $32,955 million in 2011-12
- UNCTAD’s world investment report 2018 reveals that FDI to India declined to $40 million in 2017 from $44 billion in 2016

Foreign portfolio investment (FPI)

- the entry of funds into a nation where foreigners deposit money in a nation’s bank or make purchase in the stock and bond markets
- sometimes for speculation

FPI is a part of capital

- account of BOP
CHAPTER 8 INTERNATIONAL ECONOMIC ORGANISATIONS

The great depression of 1930
World War II - led to purely nationalistic policies in which almost every country imposed trade restriction
-exchange control and exchange depreciation
-so as to boost exports and restrict imports considerable

John Maynard Keynes and Harry Dexter White – the “founding fathers” of both the World Bank and International Monetary Fund (IMF)

The Bretton Woods Conference proposed
-IMF, World Bank and International Trade Organization (ITO) in 1944

The IMF and World bank
-were stated in 1945

Instead of ITO - an interim arrangement was made and named GAAT (General Agreement on Tariff and Trade)

The GATT was transformed into WTO (World Trade Organization)
-from 1995

International Monetary Fund
- Washington D.C
- 1945

World Bank
- Washington D.C
- 1945

World trade organization
- Geneva 1995

The Republic of Nauru
-a tiny south pacific island nation in pacific ocean
-become the 189th member of International Monetary Fund and World Bank (IBRD)

International Monetary Fund
-to secure and promote economic and financial co-operation among member countries

The IMF was established
-to assist the member nations to tide over the balance
At present the IMF has 189 member countries - Republic of Nauru joined in 2016.

Objectives of IMF:
- to promote international monetary co-operation among the member nations
- to facilitate and balanced growth of international trade

To ensure exchange rate stability by curbing competitive exchange depreciation

To eliminate or reduce exchange controls imposed by member nation

To establish multilateral trade and payment system in respect of current transaction instead of bilateral trade arrangements

To promote the flow of capital from developed to developing nations

To solve the problem of international liquidity

IMF Functions:
- BOP crisis assistance
- exchange stability
- facilitate international trade
- foster sustainable economic growth

Functions of IMF:

(i) Bringing stability in exchange rate-stability and emphasizing devaluation criteria
- restricting members to go in for multiple exchange rates
- to buy or sell goods at prices other than declared par value

(ii) Correcting BOP disequilibrium
- the member countries in eliminating or minimizing
the short – period disequilibrium
-in their balance of payments either by selling or
lending foreign currencies to the member of nations

(iii) Determining par values
- IMF enforces the system of determination of par
values of the currencies of the member countries

According to the articles of agreement
the IMF
-every member nation should declare the par value
-its currency in terms of gold or US dollars
-under this article
- IMF ensures smooth working of the international
monetary system
-in favor of some developed countries

(iv) Balancing demand and supply of
 currencies
- IMF is entrusted with the important function of
maintaining balance between demand and supply of
various currencies

The fund IMF can declare
-a currency as scarce currency
-which is in great demand and can increase its supply
-borrowing it from the country concerned
-by purchasing the same currency in exchange of gold

(v) Reducing trade restrictions
- the fund also aims at reducing tariffs
- other trade barriers imposed by the member countries
- the purpose of removing restrictions on remittance
 of funds
- to avoid discriminating practices

(vi) Providing credit facilities IMF is
providing
-different borrowing and credit facilities
-with the objective of helping the member countries
-these credit facilities offered by it include
-basic credit facility
-extended fund facility for a period of three years
-compensatory financing facility and structural
The functions of IMF are grouped under three heads:

1. Financial assistance - to correct short and medium term deficit in BOP
2. Regulatory - code of conduct
3. Consultative - counseling and technical consultancy

Facilities offered by IMF:
- Fund has created several new credit facilities for its members.
  - Chief among them are:

  (i) Basic credit facility
  - Financial assistance to its member nations
  - To overcome their temporary difficulties relating to balance of payments

A member nation can purchase:
- Fund other currencies, SDRs, in exchange for its own currency to finance payment deficits

The loan is repaid:
- When the member repurchases its own currency with other currencies or SDRs
- A member can unconditionally borrow from the fund in a year equal to 25% of its quota

The unconditional borrowing right is called the reserve tranche

Special drawing rights (SDRs):
- Which is otherwise called “paper gold”
- They are a form of international reserves created by the IMF in 1969
- To solve the problem of international liquidity
- They are allocated to the IMF members in proportion to their fund quotas

SDRs are used as means of payment:
- Fund members to meet balance of payments deficits
- Their total reserve position with the fund

SDR act:
- Both as international unit of account and a means of payment
all transactions by the fund in the form of loans and
their repayments its liquid reserves its capital, etc.
expressed in the SDR

The achievements of the fund can be
summed - the words of Haien that ‘Fund is like an international Reserve Bank’

(ii) Extended Fund facility - under the arrangement the IMF provides additional borrowing facility up to 140% of the member’s quota over and above the basic credit facility

The extended facility - is limited for a period up to 3 years and the rate of interest is low

(iii) Compensatory financing facility - 1963
IMF established - compensatory financing facility to provide additional assistance to the member countries particularly primary producing countries facing short fall in export earnings
1981 - the coverage of the compensatory financing facility was extended to payment problem caused by the fluctuations in the cost of cereal inputs

(iv) Buffer stock facility - was started in 1969
The purpose of this scheme - was to help the primary goods producing countries to finance contributions to buffer stock arrangements the stabilization of primary product prices

(v) Supplementary financing facility - IMF makes temporary arrangements to provide supplementary financial assistance to member countries facing payment problems relating to their present quota sizes

(vi) Structural adjustment facility - IMF established in March 1986 - to provide additional balance of payments assistance on concessional terms to the poorer member countries
In December 1986, the Enhanced Structural Adjustment Facility (ESAF) was set up to augment the availability of concessional resources to low income countries.

The purpose of SAF and ESAF is to force the poor countries to undertake strong macro economic structural programmes to improve their balance of payment positions and promote economic growth.

**Achievements of IMF**

The main achievements of IMF:

(i) Establishment of monetary reserve fund

- the fund has played a major role in achieving the sizeable stock of the national currencies of different countries
- to meet the foreign exchange requirements of the member nations

IMF uses its stock

- to help the member nations to meet foreign exchange requirements

(ii) Monetary discipline and cooperation

- the IMF has shown keen interest in maintaining monetary discipline and cooperation among the member countries

To achieve this objective

- it has provided assistance only to those countries which make sincere efforts to solve their problems

(iii) Special interest in the problems of UDCs

- maintain acute problems of developing countries

The fund has provided

- financial assistance to solve the balance of payment problem of UDCs
- while the developed countries have achieved
sustained growth

India and IMF - till 1970
India stood fifth in the fund
the power to appoint a permanent executive director

India - has been one of the beneficiaries of the fund assistance
it has been getting aid from the various fund agencies
from time to time and has been regularly repaying its debt

India’s current quota - in the IMF is SDRs 5,821.5 million
making it the 13th largest quota holding country at IMF
with shareholdings of 2.44%
besides receiving loans to meet deficit
in its balance of payments
India has benefited in curtained other respect from the members of the fund

SDR - Fiat money of the IMF
- a potential claim on underlying currency basket

SDR stands - special drawing right
SDR created - to be the world reserve currency
- create global liquidity
SDR valued - original 1969 creation
- the value of the SDR was initially defined as
equivalent to 0.888671 grams of fine gold
- which at the time was also equivalent to one US dollar

International Bank for Reconstruction
and Development or World Bank (IBRD) - otherwise called the World Bank
- established in 1945
- under Bretton Woods Conference in 1944

The purpose of - bring about a smooth transition from a
war – time to peace – time economy
It is known as a sister institution - along with the investment monetary fund.

The membership in IMF is prerequisite to become a member of IBRD.

IBRD was established to provide long – term financial assistance to member countries.

World Bank group includes:
- International bank for reconstruction and development
- International development association
- International finance corporation
- Multinational investment guarantee agency
- International centre for settlement of investment disputes

Objectives of the World Bank:
- Reconstruction and development
- Encouragement to capital investment
- Establishment of peace – time economy
- Encouragement to international trade
- Environmental protection

The following are the objectives of the World Bank:

To help member countries for economic reconstruction and development.

To stimulate long – run capital investment for restoring balance of payments (BOP) equilibrium and thereby ensure balance development of international trade among the member nations.

To provide guarantees for loans meant for infrastructural and industrial projects of member nations.

To help war ravaged economies transform into peace economies.

To supplement foreign private investment with direct loans out of its funds for productive purpose.

World Bank’s lending procedure:
- The bank advances loans to members in three ways.
-loans out of its own fund
-loans out of borrowed capital
-loans through bank’s guarantee

The world bank has changed its
development -loan strategy and lays more emphasis on financing
schemes
-influence the well being of poor masses
-especially the developing countries

The amount of agricultural loans-increased more rapidly than in any other sector

The bank take interest in the activities
of the development of rural areas
such as -spread of education among the rural people
-development of roads in rural areas
-electrification of the village

Functions of IBRD -performs the major rate of providing loans for
development to member countries
-especially to underdeveloped countries

The world bank -provides long – term loans for various development
projects

Article 1 -of the agreement states the function performed by the
world bank follows

1.Investment for productive purpose
The world bank performs -the function of assisting the reconstruction and
development
-of territories of member nations through facility
-of investment for productive purpose
-it also encourages the development of productive
facilities and resources
-is less developed countries

2.Balanced growth of international trade-promoting the long range balanced growth of trade
- at international level and the maintaining equilibrium in BOPs of member nations by encouraging international investment

3. Provision of loans and guarantees
- arranging the loans or providing guarantee on loans by various other channels
- to execute important projects

4. Promotion of foreign private investment
- by means of guarantees on loans and other investment made by private investors
- private investment by providing finance for productive purpose
- its own resources or from borrowed funds

5. Technical services
The world bank
- facilities different kinds of technical services to the member countries
- through staff college and experts

Achievements of World bank
- primary objective of reconstruction and development of war ravaged nations

It helped greatly in reconstruction of Europe
- after World war II
- it has been providing the developed and developing countries
- the same treatment in the process of growth

(i) It is noted that the bank's membership
- increased from the initial member 30 countries to 68 countries in 1960
- 151 countries in 1988
- the IBRD has 189 member countries

(ii) The bank grants medium and long term loans
- payable over a period of 15.20 years
- reconstruction and development purposes to the member countries

The actual term of a loan depends upon - the estimated useful life of the equipment or plant.
Initially the World Bank loans - mainly directed at the European countries - later it changed its development loan strategy and - lays more emphasis of financing scheme for the poor masses of the development countries

The world bank grants to loans member countries - only for productive purposes particularly for agriculture, irrigation, power and transport

In other words - the bank strengthens infrastructure needed for further development

The International Development Association (IDA) - the soft loans window of the bank provide loans to UDCs - at very low rate of interest - the economic inequality among the member countries goes on increasing - many African countries are yet to improve their economic status

India and World Bank - the name “International Bank for Reconstruction and Development” - was first suggested by India to the drafting committee - developed close relationship with each other from framing the policies of economic development in India to financing the implement of these policies

The world bank - large financial assistance to India for economic development - infrastructure such as electric power, transport, communication, irrigation projects and steel industry

The world bank - assisted a number of projects in India

The IFC - identified five priority areas namely capital market
development, direct foreign investment access to foreign markets equity investments in new and expanding companies and infrastructure.

The world bank also assisted:
- India in accelerating programmes of poverty alleviation and economic development
- China to become a member of the world bank in 1980
- India to become the largest beneficiary of the world bank assistance.

India and IBRD:
- A sustainable relationship
- India is a member of four of the five constituents of the world bank group.

India member in:
- IBRD – International Bank for Reconstruction and Development, 1945
- IDA – International Development Association, 1960
- IFC – International Finance Corporation, 1956

International Centre for Settlement of Investment disputes (ICSID):
- 1966
- India is not a member.

India is one of the founder members:
- of IBRD, IDA and IFC
- World bank assistance in India started from 1949
- Funding for agricultural machinery project was approved.

First investment of IFC:
- In India took place in 1959 with 1.5 million US dollar
- Become a member of MIGA in January 1994

India:
- Has an executive director in the Board of Director of IBRD/IFC/IDA/MIGA

World Trade Organization:
- Established in 1995
As a successor to the GATT
- new international organization set up as a permanent body
- play the role of watch dog
- in the spheres of trade in goods and services, foreign investment and intellectual property rights

The Dunkel Draft
- formulated by Arthur Dunkel
- its Secretary General
- become the base for WTO

Every two years
- the member countries
- commerce ministers conference
- organized to discuss and settle
- the important souls and trade related matters
- the first WTO conference was held at Singapore in 1996

The recent conference
- was held at Argentina in 2017
- it was planned to organize 12th ministerial conference at Kazakhstan in 2020

WTC headquarters located
- New York, USA
- it featured the landmark, Twin towers
- which was established on 4th April 1973
- later it was destroyed on 11th September 2001 by the craft attack
- it brings together business involved in international trade from around the globe

Objectives of WTO

The basic aim is to
- expand international trade
- bring about economic prosperity
- by liberalizing trade restrictions

To ensure
- reduction of tariff and other barrier

To eliminate
- discrimination in trade
To facilitate a higher standard of living
To facilitate the optimal use of world’s resources
To enable LDCs to secure a fair share in the growth of international trade
To ensure linkages between trade policies, environmental policies and sustainable development

WTO agreements
Agreement on trade -related intellectual property rights (TRIPs)
-include copy right, trademarks, patents, geographical indications, trade secrets, industrial design, etc.

Trips agreement -provides for granting product patents instead of process patents
-the period of protection will be 20 years for patents
-50 years of copy rights
-10 years for layout designs
-7 years for trade marks

As a result of TRIPS -the dependence of LDCs on advanced countries for seeds, drugs, fertilizer and pesticides has increased
-farmers are depending on the industrial firm for their seeds

The establishment of the WTO’s TRIPs-trade related aspects -intellectual property rights
-agreement in 1995 changed
-the face of international intellectual property (IP) law and policy – making

TRIPs negotiators -recognized that short comings
-inconsistencies in IP protection
-distort trade and impede its benefits

TRIPs agreement -helps ease trade tensions about IP issues
Agreement on Trade related Investment Measures (TRIMs)

- related to conditions or restrictions in respect of foreign investment in the country
- it calls for introducing equal treatment for foreign companies on par with national companies

TRIMs

- were widely employed by developing countries
- restrictions on foreign investment on following grounds are to be removed
  - no restriction on area of investment
  - no binding on use of local material
  - no mandatory exports
  - no restriction on repatriation of royalty dividend and interest
  - no trade balancing requirement
  - no trade balancing requirement
  - imports not exceeding exports

General agreement on trade in services (GATS)

- is first multilateral set of rules covering trade in services like
  - banking, insurance, transportation, communication, etc.
- all member countries are supposed to extend MFN (Most favoured nation)
- status to all other countries without any discrimination
- transparency should be maintained by
- publishing all relevant laws and regulations over services

Phasing out of multi fibre agreement

- MFA
  - governed the world trade in textile and garments since 1974
  - it imposed quotas on export of textiles
  - by developing nations to the developed countries
This quota system - was to be phase out over a period of ten years
- this was beneficial to India

Agreement on Agriculture (AOA) - agriculture was included for the first time under GATT

The important aspects of the agreement - tariffication, tariff cuts and subsidy reduction

Dispute settlement body - puts an end to procedural delays

It is mandatory to settle any dispute - within 18 months

The disputes are resolved - through multilateral trading system

However - India has lost a huge export earning
- because of the conditions laid out by the body

**Functions of WTO**
The following are the functions of the WTO

**It facilities**
- the implementation administration
- operation of the objective of the agreement
- the multilateral trade agreements

**It provide**
- forum for negotiations among its members
- concerning their multilateral trade relations
- in matters relating to the agreements

**It administers**
- the understanding on rules and procedures
- governing the settlement of disputes

**It cooperates**
- IMF and the world bank
- its affiliated agencies with a view to achieving greater coherence in global economic policy making

**Major WTO functions**
- administering WTO trade negotiations
- forum for trade negotiations, handling trade disputes
- monitoring national trade policies
-technical assistance and training for developing countries
-cooperation with other international organizations

Achievements of WTO
-the major achievements of WTO are as follows
-use of restrictive measures for BOP problems has declined markedly
-services trade has been brought into the multilateral system and many countries
-opening their markets for trade and investment

The trade policy
-review mechanism has created a process of continuous monitoring of trade policy development

WTO ministerial conference

- Kazakhstan - 2020
- Buenos Aiers - 10 – 13 December 2017
- Nairobi - 15 – 18 December 2015
- Bali - 3 – 6 December 2013
- Geneva - 15 – 17 December 2011
- Geneva - 30 November – 2 December 2009
- Hongkong - 13 – 18 December 2005
- Cancun - 10 – 14 September 2003
- Doha - 9 – 13 November 2001
- Seattle - 30 November – 3 December 1999
- Singapore - 9 – 13 December 1996

WTO and India
-is the founder member of the WTO
-favours multilateral trade approach
-it enjoy MFN status
-same status to all other trading partners

India benefited from WTO on following grounds
-by reducing tariff rates on raw materials
- components and capital goods
- it was able to important more for meeting her developmental requirements
- India’s imports go on increasing
- India gets market access in several countries
- without any bilateral trade agreements
- advanced technology has been obtained at cheaper cost
- India is in better position to quick redressal from trade disputes
- the Indian exporters benefited from wider market information

**Trade blocs**
- cover different kinds of arrangements between or among countries for mutual benefit

**The economic integration**
- takes the form of free trade area, customs union, common market and economic union

**A free trade area**
- is the region encompassing a trade bloc whose member countries have signed a free trade agreement (FTA)
- such agreements involve cooperation between at least two countries
- reduce trade barriers
- eg. SAFTA, EFTA

**A customs union**
- is defined as a type of trade block which is composed of free trade area
- with no tariff among member with a common external tariff
- eg. BENELUX (Belgium, Netherland and Luxumberg)

**Common market**
- is established through trade pact
- a group formed area to promote duty free trade
- free movements of labour and capital among its members
An economic union is composed of a common market with a customs union.

The participant countries have both common policies on product regulation, freedom movement of goods and services, factors of production and a common external trade policy. For example, the European Union.

South Asian Association for Regional Cooperation (SAARC) - Kathmandu, 1985

- ASEAN: Bangkok, 1967
- BRICS: Shangai, 2001
- SAARC: The South Asian Association for Regional Cooperation

SAARC is an organization of South Asian Nations established on 8th December 1985 for the promotion of economic and social progress, cultural development within the South Asia region, friendship and cooperation with other developing countries.


The basic aim of the organization is to accelerate the process of economic and social development of member states through joint action in the agreed areas of cooperation.

The SAARC secretariat was established in Kathmandu – Nepal on 16th January 1987.

The first SAARC summit was held at Dhaka in the year 1985. SAARC meets once in two years.

Recently, the 20th SAARC summit was hosted by Sri Lanka in 2018.
Objectives of SAARC

According to Article I of the charter of the SAARC, the objectives of the organization are as follows:

To promote the welfare of the people in South Asia and improve the quality of life.

To accelerate economic growth, social progress and cultural development in the region.

To promote strengthened collective self-reliance among the countries of South Asia.

To contribute mutual trust, understanding and appreciation of one other’s problem.

To promote active collaboration and mutual assistance in the economic, social, cultural, technical and scientific fields.

To strengthen cooperation among themselves in international forums on matters of common interest.

To cooperate with international and regional organizations with similar aims and purposes.

Functions of SAARC

The main functions of SAARC are as follows:

- Maintenance of the cooperation in the region.
- Prevention of common problems associated with the member nations.
- Ensuring strong relationship among the member nations.
- Removal of poverty through various packages of programmes.
- Prevention of terrorism in the region.
Achievements of SAARC - the establishment of SAARC preferential trading agreement (SAPTA) and reduction in tariff - non-tariff barriers on imports

The setting up of technical committees - economic cooperation among SAARC countries relating to agriculture, communications, education, health and population, rural development, science and technology, tourism, etc.

**SAARC – SAIC**
- agricultural information centre (SAIC) in 1988
- works as a central information institution for agriculture related resources like fisheries, forestry, etc.

**SADF**
- South Asian Development Fund
- for development projects human resource development and infrastructural development projects
- with all there tall claims the inter – SAARC trade
- not gone beyond three percent in the last 30 years

**Association of South East Asian nations (ASEAN)**
- established on 8th August 1967 in Bangkok
- five original member countries
- Indonesia, Malaysia, Philippines, Singapore, Later Brunei Darussalam, Vietnam Laos and Myanmar and Cambodia joined

Besides ten members of the asian
- there are six dialogue partners
- which have been participating in its deliberations
- they are China, Japan, India, South Korea, New Zealand and Australia

**The ASEAN nations**
- are expected to benefit from the FTA
- as it will reduce tariff and non- tariff barriers
- the common historical and cultural background made the member countries
<table>
<thead>
<tr>
<th><strong>ASEAN countries</strong></th>
<th>-to maintain their unity and solidarity by establishing a trade block</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ASEAN summit</strong></td>
<td>-following globalization and prudent macro economic policies</td>
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<td></td>
<td>-the head of governments of member countries is the highest forum for ASEAN cooperation</td>
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<td></td>
<td>-its meeting are held once in three years</td>
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<tr>
<td></td>
<td>-ASEAN / ministerial meeting foreign ministers is the next highest decision – making body</td>
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<tr>
<td><strong>India’s relationship with ASEAN</strong></td>
<td>-started in 1992</td>
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<td></td>
<td>-when India become a “Sectoral dialogue partner” of ASEAN</td>
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<tr>
<td><strong>The geographic proximity of ASEAN</strong></td>
<td>-countries to India</td>
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<td></td>
<td>-facilitates faster exports and lower freight costs</td>
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<tr>
<td><strong>Objectives of ASEAN</strong></td>
<td>-declaration states the aims and purposes of the association as</td>
</tr>
<tr>
<td><strong>To accelerate the economic growth</strong></td>
<td>-social progress and cultural development in the region</td>
</tr>
<tr>
<td><strong>To promote</strong></td>
<td>-regional peace and stability and adherence to the principles of the United Nations Charter</td>
</tr>
<tr>
<td></td>
<td>-to promote cooperation among the members of ASEAN</td>
</tr>
<tr>
<td></td>
<td>-through the exchange of knowledge and experience</td>
</tr>
<tr>
<td></td>
<td>-in the field of public sector auditing</td>
</tr>
<tr>
<td><strong>To provide</strong></td>
<td>-a conductive environment and facilitates for research training, and education among the members</td>
</tr>
<tr>
<td><strong>To serve</strong></td>
<td>-centre of information and as an ASEAN link</td>
</tr>
<tr>
<td></td>
<td>-with other international organizations</td>
</tr>
</tbody>
</table>
Functions of the ASEAN

It facilitates
- free movements of goods, services and investments
- ASEAN by creating a single regional market
- like the European Union

It provide
- free access to the marketers of one member country
- to the markets of all the other member countries
- fostering growth in the region

It improves
- business competitiveness between business from different countries
- narrow developmental gap between member countries
- way for market and investment opportunities for the member nations

If fosters
- cooperations in many areas including industry and trade

All the ASEAN
- economies expressed a great economic crisis in the year 1997

BRICS
- Brazil – Russia – India – China – South Africa
- association of five major emerging national economies
- originally the first four were grouped as “BRIC” before the induction of South Africa in 2010

The term “BRIC”
- was coined in 2001
- The BRICS member are known for their significant influence on regional affairs

Since 2019
- the BRICS nations, have met annually at formal summits

South Africa
- hosted the both BRICS summit in July 2018

The agenda for BRICS, 2018
- include inclusive growth trade issues, global governance, shared prosperity, international peace
and security

Its headquarters is
-at Shanghai, China
-New Development Bank formerly referred to as the BRICS

The first BRICS summit
-was held at Moscow

South Africa
-hosted the tenth conference in Johannesburg in July 2018

India
-an opportunity of hosting fourth and eighth summits
-in 2012 and 2016 respectively

Few facts about the BRICS
-make up 21% of global GDP
-they have interested their share of global GDP three fold in the past 15 years
-the BRICS are home to 43% of the world’s population
-the BRICS countries have combined foreign reserves of an estimated 4.4 trillion US dollars

Objectives of BRICS

To increase trade
-cooperation by making an exclusive trade block

To use currency
-other than US dollar
-since dollar is a dominant currency and US can control the flow of dollar
-BRICS helps in the countries operating with alternative currencies

To increase
-regional cooperation

To create
-a separate trade block made for developing countries for trade cooperation

Functions of BRICS

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It acts as a promoter - more legitimate international system
- advocating reform of the UN security council

This group of nations - is especially meant for south - south frame work for cooperation

It performs - as an agent to bridge the increasing gap between developed and developing countries
- for instance, in the WTO, the BRICS countries emphasizing to promote a fair order regarding agricultural policies

It performs - commendable contribution for assisting developing countries
- is gaining in areas such as an advantage in trade and climate change negotiations

It disseminates - information and exchange platform beyond economic cooperation

It acts - as a catalytic in protecting the interests of middle powers on global forum

**Achievements of BRICS**

The establishment of the contingent reserve arrangement (CRA) - further deepened and consolidated the partnership
- its members in the economic – finance area

In the six BRICS summit - in Brazil
- the member countries signed an agreement
- to create a development bank (New Development Bank)
- headquarters at Shangai China in 2015
- on the lines of Asian Development Bank and the world bank

The economic potential - demographic development are putting the BRICS countries
- increasingly in a leading position in setting

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-the global agenda and having a greater say in the
global governance

It has to be remembered

- BRICS share 43% of world population
- only 21% of the global GDP
CHAPTER 9  FISCAL ECONOMICS

Fiscal economics - the term new one
Public finance - old and popular term
-related to the financing of the state activities
-is discuss the financial operation of the government treasury

The term fiscal - is derived from greek word
-which means basket and symbolizes the public purse
-hence the subject “Public finance” has been newly termed Fiscal economics

Public finance - studies the manner in which the state raises
-spends the resources
-the state is concerned with the collective wants of the citizen

The modern state - is a welfare state
-the activities of the state have increased extensively and intensively
-to perform these activities the state needs funds

This chapter deals - with the public revenue
-the public expenditure
-public debt
-budget
-federal finance
-local finance

Meaning of public finance - public finance is a study of the financial aspects of government
-it is concerned with the revenue and expenditure of the public authorities
-adjustment of the one of the other

Definition

Huge Dalton - “Public finance is one of those subjects that lie on the border lie between economics and politics
-it is concerned with income and expenditure of public authorities and the adjustment of one of the other”

Adam Smith - “Public finance is an investigation into the nature and
Subject matter of public finance

- "Public finance" includes five major subdivisions:
  1. Public Revenue
  2. Public Expenditure
  3. Public Debt
  4. Financial Administration
  5. Fiscal policy

Public Revenue
- Deals with the methods of raising public revenue, such as tax and non-tax.
- Principles of taxation.
- Rates of taxation.
- Impact, incidence, and shifting of taxes and their effects.

Public Expenditure
- This part studies the fundamental principles that govern government expenditure.
- Effects of public expenditure.
- Control of public expenditure.

Public Debt
- Deals with the methods of raising loans from internal and external sources.
- The burden, effects, and redemption of public debt fall under this head.

Financial Administration
- This part deals with the study of the different aspects of public budget.
- The budget is the annual master financial plan of the government.
- The various objectives and steps in preparing a public budget.
- Passing or sanctioning allocation evaluation.
- Auditing fall within financial administration.

Fiscal Policy
- Taxes, subsidies, public debt, and public expenditure are the instruments of fiscal policy.

Public Finance and Private Finance

Public Finance- Deems with study of income, expenditure, borrowing.

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Financial administration of the government

Private finance - is the study of income expenditure, borrowing and financial administration of individual or private companies.

Both public and private finance - fundamentally similar in nature - different from each other on various operational aspects.

### Similarities

<table>
<thead>
<tr>
<th>Similarity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rationality</td>
<td>Both public and private finance are based on rationality.</td>
</tr>
<tr>
<td>Maximization</td>
<td>Welfare</td>
</tr>
<tr>
<td>Least cost</td>
<td>Factor combination underlie both.</td>
</tr>
<tr>
<td>Limit to borrowing</td>
<td>Both have to apply restraint. With regard to borrowing. The government also cannot live beyond its means. There is a limit to deficit financing by the state also.</td>
</tr>
<tr>
<td>Resource utilization</td>
<td>Both the private and public sectors have limited resources at their disposal. Both attempt to make optimum use of resources.</td>
</tr>
<tr>
<td>Administration</td>
<td>The effectiveness of measures of the government as well as private funds. On the administrative machinery. If the administrative machinery is efficient and correct, it will result in wastages and losses.</td>
</tr>
</tbody>
</table>

### Dissimilarities

1. Income and expenditure adjustment - The government adjusts the income to the expenditure. While individuals adjust their expenditure to the income.
2. Borrowing - The government can borrow from internal and external sources. It can borrow from the people by issuing bonds. - Involves stitching coat according to cloth available.
   - Decides the cloth according to the need for the coat.
-however, an individual cannot borrow from himself

3. Right to print currency
- the government can print currency
- this involves the creation, distribution and motoring of currency
- the private sector cannot create currency

4. Present vs Future decisions
- the public finance is more involved with future planning and making long – term decision
- these investments could include building of schools, hospitals and infrastructure
- the private finance makes financial decisions
- on projects with a short – term vision

5. Objective
- the public sector’s main objective is provide social benefit in the economy
- private sector aims to maximize personal benefit ie. profit

6. Coercion to get revenue
- the sources of income of a private individual is relatively limited while those of the government is wide

7. Ability to make huge and deliberate changes
- the public finance has the ability to make big decision on income
- example it can effectively and deliberately adjust the revenue
- but individuals cannot make such massive decisions

Functions of modern state
- the modern state is a welfare state and not just police state

The state assumes grater roles by creating
- economic and social overheads
- ensuring stability both internally and externally
- conserving resources sustainable development and soon

(i) The primary function
- of the government is to protect the people from external aggression and internal disorder
- the government has to maintain adequate policy and military forces
(ii) Judiciary
- rendering justice and settlement of disputes are the concern of the government
- it should provide adequate judicial structure to render justice to all classes of citizens

(iii) Enterprises
- the regulation and control of private enterprise fall under the purview of the modern state
- ownership of certain enterprises and operating them successfully
- the responsibilities of the government

(iv) Social welfare
- it is the duty of the state to make provision for education, social security, social insurance, health and sanitation
- for the betterment of the people in the country

(v) Infrastructure
- modern states have to build the base for the economic development of the country
- by creating social and economic infrastructure

(vi) Macro – economic policy
- the government has to administer fiscal and monetary policy
- to achieve macro – economic goals

(vii) Social justice
- during the progress of growth of an economy certain sections of the society gain at the cost of others
- the government needs to intervene with fiscal measure to redistribute income

(viii) Control of monopoly
- concentration of economic power is another evil to be corrected by the government
- so the state intervenes through control of monopoly and restrictive trade practices
- to curb concentration of power

The state can play three kinds of role
- as a producer of goods and services
- as a supplier of public goods and social goods
- as a regulator of the system
## Public expenditure

### Meaning
- Public expenditure refers to government spending incurred by central, state and local government of a country.

### Definition
- Public expenditure can be defined as “The expenditure incurred by public authorities like central, state and local governments to satisfy the collective social wants of the people is known as “public expenditure”.

### Classification public expenditure are as follows

1. **Classification on the basis of benefit**
   - Cohn and Plehn has classified the public expenditure on the basis of benefit into four classes

   (a) **Public expenditure benefiting** the entire society eg. the expenditure on general administration, defence, education, public health, transport.

   (b) **Public expenditure conferring a special benefit** on certain people and at the same time common benefit on the entire commodity eg. administration of justice, etc.

   (c) **Public expenditure directly benefiting** particular group of persons and indirectly the entire society eg. social security, public welfare, pension, unemployment relief, etc.

   (d) **Public expenditure conferring a special benefit** on some individuals eg. subsidy granted to a particular industry.

2. **Classification on the basis of function**
   - Adam Smith classified public expenditure on the basis of functions of government in the following main groups

   (a) **Protection functions**
   - Public expenditure incurred on the security of the citizen
   - To protect from external invasion and internal disorder eg. defence, police, courts, etc.
(b) Commercial functions
This group includes
- public expenditure incurred on the development of trade and commerce
- eg. development of means of transport and communication, etc.

(c) Development functions
This group includes
- public expenditure incurred for the development of infrastructure and industry

Causes for the increase in government expenditure
-the modern state is a welfare state

In a welfare state
- the government has perform several functions
- viz. social, economic and political
- these activities are the cause for increasing public expenditure

1. Population growth
- during the 67 years of planning
- the population of India has increased from 36.1 crore in 1951 to 121 crore in 2011

This growth in population requires massive investment in
- health and education law and order, etc.

Young population requires
- increasing expenditure, education and youth services
- whereas the aging population requires transfer payments
- like old age pension, social security and health facilities

2. Defence expenditure
- India during planning period increase
The defence expenditure increase
- due to modernization of defence equipment
- the defence expenditure of the government was Rs. 10,874 crores in 1990-91
- which increased significantly to Rs. 2,95,511 crores in 2018-19

3. Government subsidies
- the government of India has been providing subsidies on a number of items
- such as food fertilizer interest on priority sector lending
export, education, etc
-because of the massive amounts of subsidies the public expenditure has increased manifold

The expenditure
-on subsidies by central government in 1990-91 was Rs. 9581 crores with
-increased significantly to Rs. 2,29,715.67 crores in 2018-19
-besides subsidies (incentive) of more than Rs. 5 lakh crores

4. Debt servicing
-the government has been borrowing heavily both from internal and external sources
-as a result the government has to make huge amount of repayment towards debt servicing

The interest payment
-central government has increased from Rs. 21,500 crores in 1990-91 to Rs. 5,75,794 crores in 2018-19

5. Development projects
-the government has been undertaking various development projects such as
-irrigation, iron and steel, heavy machinery, power, telecommunications, etc
-the development projects involve huge investment

6. Urbanisation
-there has been an increase in urbanization
-In 1950-51 about 17% of the population was urban based
-now the urban population has increased to about 43%
-there are more than 54 cities above one million population
-the increase in urbanization requires heavy expenditure on law and order, education and civic amenities

7. Industrialisation
-setting up of basic heavy industries involves a huge capital and long gestation period
-it is the government which starts such industries in a planned economy

The under developed countries
-need a strong infrastructure like transport, communication, power, fuel, etc.
8. Increase in grants in aid to state and union territories

Public revenue

Meaning

According to Dalton

In its wider sense

In its narrow sense

Classification public revenue

Tax revenue – Meaning
Definitions
-A tax is a compulsory payment made by a person or a firm to a government without reference to any benefit the payer may derive from the government – Anatol Murad
-A tax is a compulsory contribution imposed by the public authority irrespective of the exact amount of service rendered to the tax payer in return and not imposed as a penalty for any legal offence – Dalton

Characteristics of tax
1. A tax -is a compulsory payment made to the government -people on whom a tax is imposed must pay the tax -refusal to pay the tax is a punishable offence

2. There is no quid pro quo -between a taxpayer and public authorities -this means that the tax payer cannot claim any specific benefit against the payment of a tax

3. Every tax involves -some sacrifice on part of the tax payer

4. A tax is not levied -as a fine or penalty for breaking law

Some of the tax revenue source are -Income tax -Corporate tax -Sales tax -Surcharge and -Cess

Non-tax revenue -the revenue obtained by the government from sources other than tax is called non-tax revenue -the sources of non-tax revenue are

1. Fees -are another important source of revenue for the government -a fee is charged by public authorities for rendering a service to the citizens
-unlike tax, there is no compulsion in case of fees -the government provides certain services and changes certain services and changes certain fees for them
For example - fees are charged for issuing of passports, driving licenses, etc.

2. Fine
-is a penalty imposed on an individual for violation of law
For example - violation of traffic rules, payment of income tax after the stipulated time, etc

3. Earnings from public enterprise - the government also get revenue by way of surplus from public enterprises
-some of the public sector enterprises do make a good amount of profits
-the profits or dividends which the government gets can be utilized for public expenditure

4. Special assessment of betterment levy – it is a kind of special charge levied on certain members of the community
-who are beneficiaries of certain government activities or public projects
For example - due to a public park or due to construction of a road
-people in that locality may experience an appreciation in the value of their property or land

5. Gifts, grants and aids - a grant from one government to another is an important source of revenue in the modern days

The government - at the centre provides grants to state governments
The state governments - provide grants to the local government to carry out their functions
Grants from foreign countries - are known as foreign aid
-developing countries receive military aid, food aid, technology aid, etc. from other countries

6. Escheats - it refers to the claim of the state to the property of persons
- who die without legal heirs or documented will

Canons of taxation - the characteristics or qualities which a good tax should possess are described as canons of taxation
- it must be noted that canons refer to the qualities of an isolated tax and not to the tax system as a whole.
- A good tax system should have a proper combination of all kinds of taxes having different canons.

According to Adam Smith, there are four canons or maxims of taxation, which are as follows:

1. **Canon of ability**
   - the government should impose tax in such a way that the people have to pay taxes according to their ability.
   - In such case, a rich person should pay more tax compared to a middle class person or a poor person.

2. **Canon of certainty**
   - the government must ensure that there is no uncertainty regarding the rate of tax or the time of payment.

If the government collects taxes arbitrarily, then these will adversely affect the efficiency of the people and their working ability too.

3. **Canon of convenience**
   - the method of tax collection and the timing of the tax payment should suit the convenience of the people.

The government should make convenient arrangement for all the tax payers to pay the taxes without difficulty.

4. **Canon of economy**
   - the government has to spend money for collecting taxes for example salaries are given to the persons who are responsible for collecting taxes.

The taxes where collection costs are more are considered as bad taxes.
- Hence, according to the Smith, the government should impose only those taxes whose
collection costs are very less and cheap

Direct tax
- is referred to as a tax levied on person’s income and wealth and is paid directly to the government
- the burden of such tax cannot be shifted
- the tax is progressive in nature
- it is levied according to the paying capacity of person
- i.e. the tax is collected more from the rich
- less from the poor people

The plans and policies
- the direct taxes are being recommended
- by the (CBDT) Central Board of Direct Taxes
- which is lender the Ministry of Finance Government of India

Merits of Direct Taxes

1. Equity
- Direct taxes are progressive i.e. rate of tax varies according to tax base
- for example, income tax satisfies the canon of equity

2. Certainty
- canon of certainty can be ensures by direct taxes
- for example, an income tax payers knows when and what rate
- he has to pay income tax

3. Elasticity
- direct taxes also satisfy the canon of elasticity
- income tax is income elastic in nature
- as income level increases, the tax revenue to the government also increases automatically

4. Economy
- the cost of collection of direct taxes is relatively low
- the tax payers pay the tax directly to the state

Demerits of direct taxes

1. Unpopular
- direct taxes are generally unpopular
- it is inconvenient and less flexible

2. Productivity affected
- according to many economists direct tax may adversely affect productivity
- citizens are not willing to earn more income
- because in that case they have to pay more taxes
3. Inconvenient:
-the tax payers find it inconvenient
to maintain accounts, submit returns and pay tax in lump sum

4. Tax evasion:
-the burden of direct tax is so heavy that tax– payers always try to evade taxes
-this ultimately leads to the generation of black money
-which is harmful to the economy

Indirect tax:
-is referred to as a tax charged on a person
-who purchase the goods and services
-and it is paid indirectly to the government
-the burden of tax can be easily shifted to the another person
-it is levied on all persons equally whether rich or poor

There are several types of indirect taxes such as

Excise tax:
-payable by the manufacturer
-who shifts the tax burden to retailers and wholesalers

Custom duty:
-import duties levied on goods from outside the country
-ultimately paid for by consumers and retailers

Sales tax:
-paid by a shopkeeper or retailer
-who then shifts the tax burden to customers
-by charging sales tax on goods and services

Entertainment tax:
-liability is on the cinema theatre owners
-who transfer the burden to cinema goers

Service tax:
-charged on services like telephone bill, insurance premium such as food bill in a restaurant, etc.

Merits of Indirect taxes

1. Wider coverage:
-all the consumers, whether they are rich or poor, have pay indirect taxes
-for this reason, it is said that indirect taxes can cover more people than direct taxes

For example:
in India everybody pay indirect tax as against just
2% paying income tax

2. Equitable
- the indirect tax satisfies the canon of equity
- when higher tax is imposed on luxuries used by rich people

3. Economical
- cost of collection is less
- producers and retailers collect tax and pay to the government
- the traders act as honorary tax collectors

4. Checks harmful consumption
- the government imposes indirect taxes
- on those commodities which are harmful to health
- eg. tobacco, liquor, etc.
- they are known as sin taxes

5. Convenient
- indirect taxes are levied on commodities and services
- whenever consumers make purchase
- they pay tax along with the prices
- they do not feel the pinch of paying tax

Demerits of indirect taxes

1. Higher cost of collection
- indirect taxes is higher than the direct taxes
- the government has to spend huge money to collect indirect taxes

2. Inelastic
- indirect taxes are less elastic compared to direct taxes
- as indirect taxes are generally proportional

3. Regressive
- indirect taxes are sometimes unjust and regressive in nature
- rich and poor have pay same amount of taxes
- irrespective of their income level

4. Uncertainty
- the rise in indirect taxes increase the price
- reduce the demand for goods
- therefore the government is uncertain about the expected revenue collection
- so Dalton says under indirect taxes 2 + 2 is not 4 but 3 or even less than 3
5. No civic consciousness
-as the tax is hidden in price
-the consumers are not aware of paying tax

**Direct tax**

**Meaning**
- Direct tax is referred to as the tax
  - levied on person’s income and wealth

**Nature**
- progressive

**Incidence and impact**
- falls on the same person

**Tax base**
- income or wealth of assesses

**Evasion**
- tax evasion is possible

**Inflation**
- Direct tax helps in controlling the inflation

**Imposition and collection**
- from assesses, i.e. individual, HUF (Hindi Undivided Family), company, firm, etc.

**Burden**
- cannot be shifted

**Indirect tax**

**Meaning**
- referred to as the tax, levied on a person
  - who consumes the goods and services
  - is paid indirectly to the government

**Nature**
- Regressive

**Incidence and impact**
- falls on different persons

**Tax base**
- purchase/sale/manufacture of goods and provision of services

**Evasion**
- is hardly possible
  - because it is included in the price of the goods and services

**Inflation**
- indirect taxes push up price inflation
Imposition and collection - from consumers of goods and services - but paid and deposited by the assesses

Burden - can be shifted

**Goods and Services Tax (GST)** - is an indirect tax
- which has replaced many indirect taxes in India
- The Goods and Services Tax Act was passed
- in the Parliament on 29th March 2017
- the Act came into effect on 1st July 2017

Goods and services Tax in India is a comprehensive, multistage destination based tax - that is levied on every value addition

In simple words - Goods and services Tax (GST)
- is an indirect tax levied on the supply of goods and services
- this laws has replaced many indirect tax laws
- that previously existed in India

GST - is one indirect tax for the entire country
- under the GST regime
- the tax will be levied at the final point of sale
- in case of intra – state sales
- Central GST and State GST will be charged

Inter-state sales will be chargeable to integrated GST
Single tax - to replace multiple levies
- right from manufacturer, supplier to consumer

Destination based - consider goods manufactured in Tamil Nadu
- sold to the final consumer in Karnataka
- since Goods and Services Tax is levied at the point of consumption
- in this case, Karnataka the entire tax revenue
- will go to Karnataka and not Tamil Nadu

Components of GST - are 3 types
- they are CGST, SGST and IGST

CGST - collected by the Central government on an intra – state sale eg. within state/ union territory
SGST - collected by the state government on an intra – state sale eg. within state/union territory

IGST - collected by the Central government for inter – state sale eg. Maharashtra to Tamil Nadu

In most cases, the tax structure under the new regime will be as follows

<table>
<thead>
<tr>
<th>Transaction</th>
<th>-sale within the state</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Regime</td>
<td>-CGST + SGST</td>
</tr>
<tr>
<td>Old Regime</td>
<td>-VAT + Central Excise/Service tax</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Transaction</th>
<th>-sale to another state</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Regime</td>
<td>-IGST</td>
</tr>
</tbody>
</table>
| Old Regime                       | -Central Sales tax + Excise/Service tax
- there will only be one type of tax (central) in case of inter state sales
- the center will then share the IGST
- revenue based on the destination of goods

Nature of sales tax, VAT and GST-sales tax was multipoint tax with cascading effect
- VAT was multipoint tax without cascading effect
- GST is one point tax without cascading effect

Advantages of GST

1. GST will mainly remove
- the cascading effect on the sale of goods and services
- removal of cascading effect will directly impact the cost of goods
- since tax on tax is eliminated in this regime
- the cost of goods decreases
- GST is also mainly technologically driven

2. All activities like
- registration, return filing, application for refund and response to notice need to be done on the GST portal
- this will speed up the processes

Public debt
- In the 18th and 19th centuries
- the role of the state was minimum
- But in 20th century there has been increase in the responsibilities of the state
Hence the state has to supplement the traditional revenue source with borrowing from individuals and institutions within and outside the country.

The amount of borrowing is huge in the under developed countries to finance development activities. The debt burden is a big problem and most of the countries are in debt trap.

Definitions

- “The debt is the form of promises by the treasury to pay the holders of these promises a principal sum and in most instances interest on the principal, borrowing is restored in order to provide funds for financing a current deficit” – Philip E. Taylor
- “The receipt from the sale of financial instruments by the government to individuals or firms in the private sector to induce the private sector to release manpower and real resources and to finance the purchase of these resources to make welfare payment or subsidies” – Carl S. Shoup

Types of Public debt

- Internal and external public debt

(i) Internal public debt

- is a loan taken by the government from the citizens or from different institution within the country.
- internal public debt only involves transfer of wealth.

The main sources of internal public debt are as follows

- individuals, who purchase government bonds and securities
- banks, both private and public, buy bonds from the government
- non financial institution like UTI, LIC, GIC, etc. also buy the government bonds
- central bank can lend the government in the form of money supply
- the central bank can also issue money to meet the expenditure of the government

(ii) External public debt

- when a loan is taken from abroad or from an international organization it is called external.
public debt

The main sources of external public debt are as follows
- IMF, World Bank, IDA and ADB, etc.
- Loan from other countries and the government

Countries external debt

USA  
-Rank – 1  
-External debt(USD millions) – 21,171,000  
-Percapita US dollars – 58,200  
-% of GDP – 98

UK  
-Rank – 2  
-External debt(USD millions) – 8,475,956  
-Percapita US dollars – 127,000  
-% of GDP – 313

France  
-Rank – 3  
-External debt(USD millions) – 5,689,745  
-Percapita US dollars – 87,200  
-% of GDP – 213

Germany  
-Rank – 4  
-External debt(USD millions) – 5,398,267  
-Percapita US dollars – 65,600  
-% of GDP – 141

Japan  
-Rank – 7  
-External debt(USD millions) – 3,586,817  
-Percapita US dollars – 28,200  
-% of GDP – 74

China  
-Rank – 13  
-External debt(USD millions) – 1,710,625  
-Percapita US dollars – 1,200  
-% of GDP – 14

Russia  
-Rank – 21  
-External debt(USD millions) – 537,458  
-Percapita US dollars – 3,700  
-% of GDP – 40
India
-Rank – 22
-External debt(USD millions) – 529,000
-Percapita US dollars – 380
-% of GDP – 20

Causes for the increase in public debt

1. War and preparation of war -waging war has become one of the important causes for incurring debts by the governments
   In modern times -the preparation for war and nuclear defence programmes
   -take away the major share of the government’s revenue

2. Social obligation -modern states are considered to be “welfare states”
   -they have undertake many social obligations like public wealth, sanitation, education, insurance and communication, etc.
   -besides providing the minimum necessaries of life to the citizens of the country
   -to finance these, state has to incur a heavy public debt

3. Economic development and deficit -the government has to undertake many projects for economic development of the country
   Construction of -railways, power projects, irrigation projects, heavy industries, etc.
   -could be thought of only by means of mobilizing resources in the form of public debt
   Due to heavy public expenditure -the government always face deficit budget
   -such deficit have to be financed only through borrowings

4. Employment -most of the government of modern days face the problem of unemployment
   -become the duty to solve this by making huge public expenditure
   -to solve the unemployment problem; and to fight recession
   -the government has to make huge expenditure
   -for this the state have to resort to public debt

5. Controlling inflation -the government can withdraw excess money from
circulation
-by raising public debt
-thus prevent prices from rising

6. Fighting depression
-phase, private investment is lacking
-the government applies compensatory public spending
by borrowing from internal and external sources

Methods of redemption of public debt - the process of repaying a public debt is called redemption

The government
-sells securities to the public at the time of maturity
-the person who holds the security surrenders in to the government

The following methods are adopted for debt redemption

1. Sinking fund
-under this method the government establishes
-a separate fund known as “sinking fund”
-the government credits every year a fixed amount of money to this fund
-by the time the debt matures the fund accumulates enough amount
-to pay off the principal along with interest

This method was first introduced in England by Walpole

2. Conversion
-is another method of redemption of public debt
-it means that an old loans is converted into new loans
-under this system, a high interest public debt is converted into a low interest public debt
-Dalton felt that debt conversion actually relaxes the debt burden

3. Budgeting surplus
-when the government presents surplus budget
-it can be utilized for repaying the debt
-surplus occurs when public revenue exceeds the public expenditure
-however this method is rarely possible

4. Terminal annuity
-in this method, government pay off the public debt
-on the basis of terminal annuity in equal annual instalments
5. Repudiation - it is the easiest way the government to get rid of the burden of payment of a loan - in such cases, the government does not recognize its obligation to repay the loan - it is certainly not paying off a loan but destroying it - however, in normal case the government does not do so - if done it will lose its credibility

6. Reduction in rate of interest - another method of debt redemption is the compulsory reduction in the rate of interest during the time of financial crisis

7. Capital Levy - when the government imposes levy on the capital assets owned by an individual or institution - is called capital levy

This levy - is imposed on capital assets above a minimum limit on a progressive scale - the fund so collected can be used by the government for paying off war time debt obligations

This is the most controversial method of debt repayment

Budget - the word “budget” is said to have its origin from the French word “Bougett” - which refers to a “a small leather bag”

The budget - is an annual financial statement - which shows the estimated income and expenditure of the government - for the forthcoming financial year

Definitions - “It is a document containing a preliminary approved plan of public revenue and expenditure” – Reney Stourn - “The budget has come to mean the financial arrangement of a given period, with the usual implication that they have been submitted to the legislature for approval” – Bastabale

Union budget and State budget - India is a federal economy - hence public budget is divided into two layers of the government
According to the Indian constitution—the central government has to submit annual financial statement—i.e. Union budget under article 112 to the parliament—each state government has to submit the same for the state—in the legislative assembly under article 202

Types of Budget

Revenue and Capital budget—on the basis of expenditure on revenue account and other accounts—a budget can be presented in two ways

(i) Revenue budget—it consists of revenue receipts and revenue expenditure
The revenue receipts—can be categorized into tax revenue and non–tax revenue

Revenue expenditure—can also be categorized into plan revenue expenditure and non–plan revenue expenditure

(ii) Capital Budget—it consists of capital receipts and capital expenditure
—in this case, the main sources of capital receipts are loans, advances, etc.

On the other side—capital expenditure can be categorized into plan expenditure and non–plan expenditure

(iii) Supplementary budget—during the time of war emergencies and natural calamities like tsunami, flood, etc.
—the expenditures allotted in the budget provisions are not always enough
—under these circumstances a supplementary budget can be presented by the government to tackle these unforeseen events

Vote – on – accounts—under article 116 of the Indian constitution
—the budget can be presented in the middle of the year
—the reason may be political in nature
—the existing government major may not continue for the year
—the reason may be political in nature
—the existing government major may not continue for the year
On account of the fact that elections are due than the government places a “lame duck budget”
-this is also called “vote – on – account budget”

The vote on account budget -is a special provision by which the government gets permission from the parliament
-incure expenditures on necessary items till the budget is finally passed in the parliament

The legal permission -both the houses of the parliament for the withdrawal of the money from the consolidated fund of India
-meet the requisite expenses till the budget is finally approved
-is known as vote – on – account budget

This type of budget -is generally sanctioned for not more than two months

(v) Zero Base budget -the government of India presented ZBB in 1987-88
-it involves fresh evaluation of expenditure in the government budget
-assuming it as a new item
-the review has been made to provide justification
(otherwise for the project a whole in the light of the socio – economic objectives
-which have been already set up for this project
-in view of the priorities of the society

(vi) Performance budget -when the outcome of any activity is taken as the base of any budget
-such budget is known as “performance budget”

For the first time in the world -the performance budget was made in USA

The administrative reforms commission was set up in 1949 in America under Sir Hooper
-this commission recommended making a “performance budget” in USA
-in the “performance budget” it is the compulsion of the government to tell “what is done” “how much done”
-for the betterment of the people

India -the performance budget is also known as “outcome budget”
(vii) Balanced budget vs Unbalanced budget

(a) Balanced budget - is a situation, in which estimated revenue of the government during the year is equal to its anticipated expenditure.

Government’s estimate revenue = Government’s proposed expenditure

(b) Unbalanced budget - the budget in which revenue and expenditure are not equal to each other is known as unbalanced budget.

Unbalanced budget is two types - Surplus budget, Deficit budget

**Surplus budget** - the budget is a surplus budget when the estimated revenue of the year are greater than anticipated expenditure.

Government Estimate revenue > Estimated Government expenditure

**Components of Budget** - Budget receipt, Budget expenditure

Budget receipts - Revenue receipts, Capital receipts

Revenue receipts - tax receipts, non-tax receipts

Capital receipts - recovery of loans, borrowing and other liabilities, disinvestment

Budget expenditure - Revenue expenditure, Capital expenditure

Revenue expenditure - Plan expenditure, non-plan expenditure
Capital expenditure - plan expenditure
- non plan expenditure

**Deficit budget**  
- is one where the estimated government expenditure  
- is more than expected revenue

Government’s estimated budget < Government’s proposed expenditure

**Budgetary procedure**  
- refers to the system through which the budget  
- is prepared enacted and executed

(A) Preparation of Budget  
- the ministry of finance  
- prepares the central budget every year

At state level  
- the finance department is responsible for the annual state budget  
- while preparing the budget the following factors are taken into account  
- the macro economic target to be achieved within a plan period  
- the basic strategy of the budget  
- the financial requirements of different projects

Estimates of the revenue expenditure  
- includes defence expenditure, subsidy, interest payment on debt, etc.

Estimates of the capital expenditure  
- includes development of railways, roadways, irrigation, etc.

Estimates of revenue receipts  
- from tax and non – tax revenues

Estimates of capital receipts  
- the recovery of loans, disinvestment of public sector units, market borrowing, etc

Estimates of the gap  
- between revenue expenditure and revenue expenditure

Estimates of fiscal deficit  
- primary deficit and revenue deficit

(B) Presentation of the budget  
- the hon’ble minister of finance, on behalf of the central government  
- places the union budget before parliament on the eve of a new financial year
Similarly at the state levels - the hon’ble finance minister of the respective state government places the state budget before the state legislature.

According to the Indian Constitution - all money bills must be initiated in the lower house.

All the money bills - first placed before the lok sabha at the centre
Before the Vidhansabha - at the state level
- the demands of various tax proposals are included in the budget

After the finance bill is passed - an appropriation bill is presented to give legal effect to the voted demands
- to authorize the expenditure as per the budget
- in this way the budget are enacted in India

(C)Execution of the budget - the budget is mainly executed by different departments of the government
- proper execution of the budgetary provisions are important
- the efficient utilization of the allocated funds

Parliamentary control over the budget - In India
- the government accounts are maintained in three parts
- (i) Consolidated fund
- (ii) Contingency fund
- (iii) Public accounts

There are also two committees of parliament, viz.
- (i) The public accounts committee
- (ii) The estimates committee
- these committee keep a constant vigil on the expenditure
- so that no ministry or department exceeds the amount sanctioned to it

Budgetary deficits - is a situation where budget receipts are less than budget expenditure
- this situation is also known as government deficit

In reference to the Indian Government Budget - Budget deficit is of four major types
-(i) Revenue deficit
-(ii) Budget deficit
-(iii) Fiscal deficit
-(iv) Primary deficit

Revenue deficit
-it refers to the excess of the government revenue expenditure over revenue receipts
-it does not consider capital receipt and capital expenditure
-it implies that the government is living beyond its means to conduct day-to-day operations

Revenue Deficit (RD) = Total Revenue Expenditure (RE) – Total Revenue Receipts (RR)

(ii) Budget Deficit
-is the difference between total receipts and total expenditure (both revenue and capital)

Budget deficit = Total Expenditure – Total Revenue

(iii) Fiscal Deficit = Budget Deficit + Government’s Market Borrowings and liabilities

(iv) Primary Deficit
-is equal to fiscal deficit minus interest payments
-it shows the real burden of the government
-it does not include the interest burden on loans taken in the past

Primary deficit
-reflects borrowing requirement of the government exclusive of interest payments

Primary Deficit (PD) = Fiscal Deficit (FD) – Interest Payment (IP)

Federal finance
-refers to the system of assigning the sources of revenue to the central as well as state governments
-for efficient discharge of their respective functions
-i.e. clear cut division is made regarding the allocation of resources
-of revenue between the central and state authorities

Division of powers
-In our constitution, there is a clear division of power so that none violates its limits
-tries to encroach upon the functions of other and functions within own sphere of responsibilities
-there are three lists enumerated in the seventh schedule
of constitution
They are
-the Union list, the State list and the Concurrent list

The Union List
-consists of 100 subjects of national importance such as defence, railways, post and telegraph, etc.

The State List
-consists of 61 subjects of local interest such as public health, police, etc.

The Concurrent List
-has 52 subjects important to both the union and the state such as electricity, trade union, economic and social planning etc.

Central State Financial Relationship

(I) Union Sources
-corporation tax
-currency, coinage and legal tender, foreign exchange
-duties of customs including export duties

Duties of excise
-on tobacco and certain goods manufactured or produced in India

Estate duty in
-respect of property other than agricultural land

Fees in respect of
-any of the matters in the union list
-but not including any fees taken in any court
-foreign loans
-lotteries organized by the Government of India or the Government of a state
-post office savings bank
-post and telegraphs
-telephones, wireless broadcasting and other forms of communication
-property of the union
-public debt of the union
-railways

Rates of stamp duty
-in respect of bills of exchange, cheques, promissory notes, etc.
-Reserve Bank of India
-Taxes on income other than agricultural income

Taxes on the capital value
-the assets, exclusive of agricultural land of individual
and companies

| Taxes other than stamp duties | - on transactions in stock exchanges and future markets |
| Taxes on sale or purchase of | - newspapers and on advertisements published therein |
| Terminal taxes | - on goods or passengers, carried by railways, sea or air |

(II) State sources - capitation tax

| Duties in respect of | - succession to agricultural land |

| Duties of excise | - on certain goods produced or manufactured in the state such as alcoholic liquids, opium, etc. |

| Estate duty | - in respect of agricultural land |

| Fees in respect of | - any of the matters in the state list |
| | - but not including fees taken in court |
| | - Land revenue |

| Rates of stamp duty in respect of | - documents other than those specified in the union list |
| | - taxes on agricultural income |
| | - taxes on land and buildings |

| Taxes on mineral rights | - subject to limitations impose by parliament relating to mineral development |
| | - Taxes on the consumption or sale of electricity |
| | - Taxes on the entry of goods into a local area for consumption, use or sale therein |

| Taxes on | - sale and purchase of goods other than newspaper |

| Taxes on | - the advertisements other than those published in newspapers |

| Taxes on | - goods and passengers carried by road or on inland waterways |
| | - Taxes on vehicle |
- Taxes on animal and boats

Taxes on - professions, trades, callings, and employments

Taxes on - luxuries, including taxes on entertainment, amusements, betting and gambling, tolls

(III) Taxes levied and collected by union but assigned to the state (Article 269)

Duties in respect of - succession to property other than agricultural land

Estate duty - in respect of property other than agricultural land

Taxes on - railway fares and freights

Taxes other than - stamp duties on transactions in stock exchange and future markets

Taxes on the - sale or purchase of newspaper and on advertisements published therein

Terminal taxes on goods - or passengers carried by railways, sea or air

Taxes on the - sale or purchase of goods other than newspaper - where such sale or purchase takes place in the course of inter – state or commerce

(IV) Duties levied by the union but collected and appropriated by the state (Article 268)

Stamp duties - and duties on excise on medicinal and toilet preparation

- shall be levied by the Government of India but shall be collected

(i) In the case where such duties are - leviable within any union territory, by Government of India

(ii) In other cases, - by the states within which such duties are respectively leviable

(iii) Taxes which are levied and collected by the union but which may be distributed between the union and states (Articles 270 – 272)
- Taxes on income other than agricultural income
- Union duties of excise other than such duties of excise on medicinal and toilet preparations mentioned in the Union list and collected by the Government of India

### Taxes on Income
- does not include corporation tax

### The distribution of income tax
- proceeds between the union and the states is made on the recommendations of the finance commission

#### Principles of Federal finance
- in this case of federal system of finance
- the following main principles must be applied

### Principle of
- Independence
- Equity
- Uniformity
- Adequacy
- Fiscal Access
- Integration and Coordination
- Efficiency
- Administrative Economy
- Accountability

1. **Principle of Independence**
   - Under the system of federal finance
   - should be autonomous and free about the internal financial matters concerned
   - it means each government authority to levy taxes, to borrow money and to meet the expenditure
   - the government should normally enjoy autonomy in fiscal matters

2. **Principle of Equity**
   - the resources should be distributed among the different states
   - so that each state receives a fair share of revenue

3. **Principle of uniformity**
   - in a federal system, each state should contribute equal tax payments for federal finance
   - but this principle cannot be followed in practice because the taxable capacity of each unit is not the same

4. **Principle of Adequacy of resources**
   - the resource of each government
-i.e. Central and State should be adequate to carry out its function effectively

Here adequacy must be decided with reference to both current as well as future needs
-besides the resources should be elastic in order to meet the growing needs
-un forseen expenditure like war, floods, etc.

5. Principle of fiscal access
-in a federal system, there should be possibility for the central and state government
-to develop new sources of revenue within their prescribed fields
-to meet the growing financial needs
-in nutshell the resources should grow with the increase in the responsibility of the government

6. Principle of Integration and Co-ordination
-the financial system as a whole should be well integrated
-there should be perfect coordination among different layers of the financial system of the country
-then only the federal system will survive
-to promote the overall economic development of the country

7. Principle of Efficiency
-should be well organized and efficiently administered
-there should be no scope for evasion and fraud
-no one should be taxed more than once in a year
-double taxation should be avoided

8. Principle of Administrative economy-is the important criterion of any federal financial system
-the cost of collection should be at the minimum level
-the major portion of revenue should be made available for the other expenditure outlays of the government

9. Principle of accountability
-each government should be accountable
-to its own legislature for its financial decisions
-i.e. the central to the parliament and the state to the assembly
History of finance commission

Finance commission - is a quasi – judicial body
- set up under Article 280 of the Indian Constitution
- it was established in the year 1951
- to define the fiscal relationship framework between the centre and the state

Finance commission aims - to reduce the fiscal imbalance between the centre and the states (vertical imbalance)
- between the states (horizontal imbalance)
- it promotes inclusiveness

A finance commission - is set up once in every 5 years
- it is normally constituted two years before the period
- it is temporary body

The 14th finance commission - set up in 2013
- its recommendation were valid for the period from
  1st April 2015 to 31st March 2020

The 15th finance commission - set up in November 2017
- its recommendation will be implemented starting
  1st April 2020

Finance Commission

First
Chairman - K.C. Neogy
Operational duration - 1952 – 57

Second
Chairman - K. Santhanam
Operational duration - 1957 – 62

Third
Chairman - A.K. Chanda
Operational duration - 1962 – 66

Fourth
Chairman - P.V. Rajamannar
Operational duration - 1966 – 69
<table>
<thead>
<tr>
<th>No.</th>
<th>Year</th>
<th>Chairman</th>
<th>Operational duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fifth</td>
<td>1968</td>
<td>Mahaveer Tyagi</td>
<td>1969 – 74</td>
</tr>
<tr>
<td>Sixth</td>
<td>1972</td>
<td>K. Brahmananda Reddy</td>
<td>1974 – 79</td>
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<td>Seventh</td>
<td>1977</td>
<td>J.M. Shelat</td>
<td>1979 – 84</td>
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<td>1983</td>
<td>Y.B. Chavan</td>
<td>1984 – 89</td>
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<tr>
<td>Ninth</td>
<td>1987</td>
<td>N.K.P. Salve</td>
<td>1989 – 95</td>
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<td>Eleventh</td>
<td>1998</td>
<td>A.M. Khusro</td>
<td>2000 – 05</td>
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<td>Dr. Vijay L. Kelkar</td>
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Functions of Finance Commission of India

Article 280 (3) - speaks about the functions of the finance commission - the Article states that it shall be the duty of the commission to make the recommendations to the President as to
- 1. The distribution between the union and the states of the net proceeds of taxes - which may be divided between and the allocation among the states of the respective shares of such proceeds
- 2. To determine the quantum of grants – in – aid by the centre to states Article 275 (1) - to evolve the principles governing the eligibility of the state for such grant – in – aid
- 3. Any other matter referred to the commission by the President of India in the interest of sound finance - several issue like debt relief, financing of calamity relief of state, additional excise duties, etc.
- referred to the commission invoking this clause

Article 280 of constitution - mandates the finance commission - to recommend the distribution of the net proceeds of taxes - between the centre and the states every five years - 15th finance commission’s recommendations on tax sharing between - centre and states are to kick in form April 2020

Distribution of tax proceeds
- States 42%
- Centre 58%
- with GST states now get 50% of the kitty

Local finance - refers to the finance of local bodies in India - there is a large variety of local bodies in India - we have the following main four local bodies - which are functioning today in an country

Types of local bodies
- Village Panchayats
- District Boards or Zila Pharishads
- Municipalities
- Municipal Corporations

1. Village Panchayats establishment - the jurisdiction of a panchayat is usually confined to
one revenue village
-two or more small villages grouped under one
panchayat
-the establishment of panchayat raj is the allowed policy
of most states in India

Functions
-(a) Panchayats range over a wide area including civil,
economic and so on
-thus small disputes may be disposed of by panchayat
on the spot
-(b) Roads, primary schools, village dispensaries, etc.
-managed by panchayats
-(c) The supply of water both for drinking and irrigation,
falls within their field of responsibility
-in some cases farming, marketing storage, etc. are
entrusted to them

Sources of revenue of village
panchayats
-(i) General property tax
-(ii) Taxes on land
-(iii) Profession tax
-(iv) Tax on animals and vehicles

Other taxes include
- Service tax, Octroi, theatre tax, pilgrim tax, tax on
marriage, tax on birth and deaths and labour tax
-as a matter of fact, taxes are levied by the panchayats
only with the sanction of the state government

2. District boards or Zila Parishads
establishment
-in rural areas district boards or Zila Parishads are
established at district level
-the territorial jurisdiction of a district board is
generally a revenue district

Functions
-In Tamil Nadu, the Zila Parishad is a coordinating body

Which exercises general supervision
over
-working of panchayat samits
-advises them on implementation of development
schemes

Sources of revenue district boards-grants – in – aid from the state government
-land Cesses
3. Municipalities

Establishment and Functions
- the municipalities are bodies or institutions
- which are established in urban areas

Local affairs
- such as
  - sanitation, public health, local roads, lighting, water supply, cleaning of streets, maintenance of hospitals, dispensaries and veterinary hospitals, provision of drainage, provision of primary education
  - however all these functions are performed subject to the control of the state government

Sources of revenue of municipalities
- taxes on property
- taxes on goods, particularly octroi and terminal tax
- personal taxes, taxes on profession, trade and employment
- taxes on vehicles and animals
- theatre or show tax
- grants – in – aid from state government

4. Municipal corporations

Establishment and functions
- wide powers and enjoy greater freedom as compared to municipalities
- the municipal corporations are usually entrusted with the functions
  - such as water supply and drainage, lighting, roads, slum clearance, housing and town planning, etc.
  - the rapid increase in the population of cities has definitely added to the functions of municipal corporations

Sources of revenue of corporations
- tax on property
- tax on vehicles and animals
- tax on trades, calling and employment
- theatre and show tax
- taxes on goods brought into the cities for sale
- taxes on advertisements
- octroi and terminal tax, etc.

The corporations have a fair degree of freedom in respect of their choice and modification of these taxes, subject to the maximum and minimum rates laid down by the law.

**Fiscal policy**

- as an instrument of macro economic policy
- fiscal policy has been very popular among modern governments
- the growing importance of fiscal policy
- due to the great depression and the development of new economics by Keynes

**Meaning of Fiscal Policy**

- means the budgetary manipulations affecting the macro economic variables
- output, employment, saving, investment, etc.

**Definitions**

- “The term fiscal policy refers to a policy under which the government uses its expenditure and revenue programmes to produce desirable effects and avoid undesirable effects on the national income, production and employment” – Arthur Smithies

- “By fiscal policy is meant the use of public finance or expenditure, taxes, borrowing and financial administration to further our national economic objectives” – Buehler

**Fiscal instruments**

- fiscal policy is implemented through fiscal instruments also called “fiscal tools” or “fiscal levers”
- government expenditure taxation and borrowing are the fiscal tools

**Taxation**

- taxes transfer income from people to the government
- taxes either direct or indirect
- an increase in tax reduces disposable income

- should be raised to control inflation
During depression - taxes are to be reduced

(ii) Public expenditure - raises wages and salaries of the employers thereby the aggregate demand for goods and services

Public expenditure - is raised to fight recession reduced to controlled inflation

(iii) Public debt - when government borrows by floating a loan there is transfer of funds from the public to the government

At the time of interest payment - repayment of public debt funds are transferred from government to public

Expansionary fiscal policy - government spending increase taxes are decrease

Contractionary fiscal policy - government spending decrease taxes are increase

Objective of fiscal policy - full employment price stability economic growth equitable distribution external stability capital formation regional balance

Fiscal policy is useful to achieve the following objectives

1. Full employment - is the common objective of fiscal policy in both developed and developing countries

Public expenditure - social overheads help to create employment opportunities

In India - public expenditure on rural employment programmes like MGNREGS is aimed at employment generation

2. Price stability - is caused by mismatch between aggregate demand and aggregate supply
Inflation -is due to excess demand for goods
If excess demand -is caused by government expenditure in excess of real output
-the most effective measure is to cut down public expenditure
Taxation of income -is the best measures if excess demand is due to private spending
Taxation -reduces disposable income and so aggregate demand
To fight depression -the government needs to increase its spending and reduce taxation

3. Economic growth -fiscal policy is used to increase the productive capacity of the economy
Tax -is to be used as an instrument for encouraging investment
Tax holidays and tax rebates -for new industries stimulate investment
When resources mobilization through tax measures -is inadequate, the government resorts to borrowing
both from internal and external sources to finance growth projects

4. Equitable distribution progressive rates -in taxation help to reduce the gap between rich and poor
-progressive rates in public expenditure
-through welfare schemes such as free education
noon meal for school children
-subsidies promote the living standard of poor people

5. Exchange stabilities fluctuations -in International trade cause movements in exchange rate
Tax concessions and subsidy -to export oriented units help to boost exports
Custom duties -on import of non-essential items help to cut import bill
Reduction import duty -import of raw material and machinery enables
-reduction in cost and make the exports competitive
6. Capital formation -is essential for rapid economic development
Tax relief helps -to increase disposable income saving and thereby capital formation
government expenditure development like power and transport encourage private investment
7. Regional balance - fiscal incentives for industries in the backward regions help to narrow down regional imbalances

Public expenditure - may be used to start industrial estates so that industrial activity is stimulated in backward regions
ENABLERS FOR SCORING
CENTUM

XII STD
ECONOMICS STUDY MATERIAL
PART IV

Prepared by,
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Send Your Questions & Answer Keys to our email id - padasalai.net@gmail.com
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“Equanimity, hard work and intelligent time-management are the secrets of success”
CHAPTER 10 ENVIRONMENTAL ECONOMICS

Environmental Economics (E.E) - is the study of interactions between human activity and natural environment
- EE is the subset of economics
- that is concerned with the efficient allocation of environmental resources

The environment provides - both a direct value as well as raw material intended for economic activity
- thus making the environment and the economy interdependent

E.E takes into consideration issues - such as the conservation and valuation of natural resources, pollution control, waste management and recycling

Resources - weather human, natural or monetary – are finite

Public policies - are most effective only when they achieve the maximum possible benefit in the most efficient way

Meaning of Environment - the term environment has been derived from a French word
- “Environia” means to surround

Environment means - “the conditions, circumstances and influences surrounding
- affecting the development of an organism or group of organisms”

It also means that - the complex of physical, chemical and biotic factors that act upon
- an organism or an ecological community ultimately determine its form and survival

Meaning of environmental economics - it is a different branch of economics that recognizes the value of both the environment
- the economic activity and make choices based on those values
The goal is to balance the economic activity - the environmental impacts by taking into account all the cost and benefits

Environmental economics - is an area of economics that studies the financial impact of environmental issues and policies

Environmental economics - involves theoretical and empirical studies of the economic effects of national or local environmental policies around the world

Eco System - an eco system includes all living things in a given areas interacting with each other

- non – living environments

- ex. weather, earth, sun, soil, climate atmosphere

- are the foundation of the Biosphere and they determine the health of the entire earth system

Linkage between economy and environment - the life also depends on social, political, ethics, philosophical and other aspects

- in fact, the life of human beings is shaped by his living environment

The relationship between the economy and the environment - is generally explained in the form of a “material balance model”

- developed by AlenKneese and R.V. Ayres

- the model considers the total economic process as a physically balanced

- flow between inputs and outputs

Inputs are bestowed - with physical property of energy which is received from the environment

The first law of thermodynamics - i.e. the law of conservation of matter and energy, emphasizes that in any production system

- “What goes in must come out”

- this is known as the materials balance approach or material balance principles
The material flow diagram implies mass inputs must equal mass outputs for every process.

Moreover, all resources extracted from the environment eventually become unwanted wastes and pollutants.

Production of output by firms from inputs resulting in discharge of solid and gaseous wastes.

Similarly waste results from consumption activities by households.

In short material and energy are drawn from environment, used for production and consumption activities returned back to the environment as wastes.

- in its sample from the material balance approach can be put in form equation

\[ M = G - R_c - R_p + R'_p + R'_c = R^d_c + R^d_c \]

Material and energy inflow from natural world (M) = Economic Activities of Goods and Services

Production(G) – Consumption and production residual discharges from consumption and production activities (R_C + R_p) + Recycles from production and consumption (R'_p + R'_c)

= Final Residual Discharge from production and consumption (R^d_c + R^d_c)

Economy – Environmental Interlinkages Material Balance Model

Environment R (Raw material) => Production Sector => R = F + WI

Household Sector F = W2

R = W1 + W2 (Input = Output)

W1 & W2 = Waster from production and household sector

F = Final product
Environmental goods - typically non-market goods
Including: clean air, clean water, landscape, green transport, infrastructure, public parks, urban parks, rivers, mountains, forests, and beaches.

Concerns with environmental goods focus on the effect that the exploitation of ecological systems have on the economy, the well-being of humans and other species, and on the environment.

Environment quality - a set of properties and characteristics of the environment ethics generalized or local as they impinge on human beings and other organisms.

It is a measure of the condition of a environment - relative to requirements of one or more species and to any human need.

Environmental quality - has been continuously declining due to capitalist mode of functioning.

Environment - is a pure public good.

A pure public goods - is one for which consumption is non-revival which it is impossible to exclude a consumer pose a free-rider problem.

As a result - resources or depleted - the contribution of the matter to GDP as well as depletion of natural resources - are not accounted in the present system of national income enumeration.

Externalities and the environment
Introduction
In Environmental Economics - one of the most important market failure is caused by negative externalities - arising from production and consumption of goods and services.
Externalities
-third party effects
-arising from production and consumption of goods and services
-which no appropriate compensation is paid
-occur outside of the market
-i.e. they affect people not directly involved in the production and consumption of a goods or services
-they are also known as spill – over effects

Meaning of Externalities
-ref to external effects or spill over effects
-resulting from the act of production or consumption on the third parties

Definitions
-Externalities may be defined as
-“the cost or benefit imposed by the consumption and production activities of the individual on the rest of the society not directly involved in these activity and towards which no payment is made”

The externalities
-arise from both production and consumption activities and their impact could be beneficial or adverse

Beneficial externalities
-are called “positive externalities”

Adverse ones
-are called “negative externalities”

Classification of externalities
-Consumption
-Production

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Positive production externality
-the ideal location for beehives
-they help bees make honey
-and pollination of apple
-they benefits accrue to both producers
-this is called reciprocal untraded interdependency
Example of negative production externalities - include pollution generated by a factory that imposes costs on other

**Pollution**

**Meaning**

- is the introduction of contaminants into the natural environment
- causes adverse change in the form of killing of life, toxicity of environment, damage to ecosystem and aesthetics of our surrounding

**Types of pollution**

- Air pollution
- Water pollution
- Noise pollution
- Land pollution

**Air pollution**

**Definition**

- Air pollution is the presence of any solid, liquid or gaseous substance in the atmosphere
- in such concentration as may be or tend to be injurious to human beings or other living creatures or plants or property or environment
- The Air (prevention and control of pollution) Act 1981

**Types of Air pollution**

**Indoor Air pollution**

- It refers to toxic contaminants that we encounter in our daily lives
- In our homes, schools, workplaces
- For example, cooking and heating with solid fuels on open fires or traditional stores
- Results in high levels of indoor air pollution

**Outdoor Air pollution**

- It refers to ambient air
- The common sources of outdoor air pollution are caused by combustion processes
- From motor vehicles, solid fuel burning and industry

**Causes of Air pollution**

1. Vehicle exhaust smoke
   - To release high amounts of Carbon Monoxide
   - Millions of vehicles are operated every day

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2. Fossil fuel based power plants - a wider scale problem when they are burned for energy in power plants
- chemicals like Sulfur dioxide are released during the burning process, which travel straight into the atmosphere
- these type of pollutants react with water molecules to yield something known as acid rain

3. Exhaust from industrial plants and factories - heavy machineries located inside factories
- also emit pollutants into the air

4. Agricultural activities - construction debris would include dust particles and gaseous emissions

Likewise - using of ammonia for agriculture is a frequent by product
- one of the most dangerous gases affecting air

5. Natural causes - earth is one of the biggest polluters itself
- through volcanoes, forest fires, and dust storms

6. Household activities - cooking, heating and lighting use of various forms of mosquito repellents, pesticides
- sources that contribute to air pollution

Effects of Air pollution
1. Respiratory and heart problems - creates along with cancer
- children are highly vulnerable and exposed to air pollutants
- commonly suffer from Pneumonia and Asthma

2. Global warming - increasing temperature
- increase sea level rise melting of polar icebergs
- displacement and loss of habitat

3. Acid rain - harm gases like Nitrogen oxide and Sulfur oxides are released
- into the atmosphere during the burning of fossil fuels
- acid rain causes great damage to human beings, animals and crops
4. Eutrophication
-is a condition where high amount of nitrogen present in some pollutants
-which adversely affects fish, plants and animal species

5. Effects on wild life
-toxic chemical present in the air
-wild life species to move to new place
-change their habitat

6. Depletion of ozone layer
-ozone exists in earth’s atmosphere
-is responsible for protecting humans from harmful ultraviolet rays

Ozone layer is depleting
-due to presence of chlorofluoro carbons and hydro chlorofluoro carbons in the atmosphere

7. Human health
-outdoor air pollution is a major cause of death and disease globally
-to increased risk of premature death
-an estimated 4.2 billion premature death globally
-are linked to ambient air pollution

Everyday
-93% of the world’s children under the age of
15 (1.8 billion children) breath polluted air – WHO

Remedial measures to control
Air pollution
-establishment of industries away from the town and cities
-increasing the length of the chimneys in industries
-growing more plants and trees
-use of non-conventional fuel like Biogas, CNG and LPG
-use of mass transit system

Water pollution

Definition
-“The introduction of substances or energy into the marine environment results in deleterious effects to living resources, hazards to human health, hindrance to marine activities” – United Nations, 1971
Types of Water pollution

(i) Surface water pollution
- Surface water includes natural water found on the earth’s surface, like rivers, lakes, lagoons and oceans.
- Hazardous substances coming into contact with this surface water.
- Dissolving or mixing physically with water.
- Can be called surface water pollution.

(ii) Ground water pollution
- Occurs when man made products such as gasoline, oil and chemicals get into the ground water.

(iii) Microbiological pollution
- People drink untreated water.
- Natural pollution caused by micro-organisms like viruses and bacteria.
- Causes both aquatic and human illness.

(iv) Oxygen depletion pollution
- When oxygen levels in the water are depleted.
- Relatively harmless aerobic micro-organisms die, and anaerobic micro-organisms begin to thrive.

Some anaerobic micro-organisms are harmful.
- To people, animals and the environment.
- They produce harmful toxins such as ammonia and sulfides.

Causes of Water pollution

1. Discharge of sewage and waste
   Water-liquid waste of households, agricultural run off and effluents from factories are discharged into lakes and rivers.
   - These wastes contain harmful chemicals and toxins.
   - Which make the water poisonous for aquatic animals and plants.

2. Dumping of solid wastes
   Litters in water bodies cause huge problems.

3. Discharge of industrial wastes
   Industrial wastes contain pollutants.
   - Like asbestos, lead, mercury, grease, oil and petrochemicals.
   - Which are extremely harmful to both people and environment.
| **4. Oil spill** | - Sea water gets polluted  
- Due to oil spilled from ships and tankers while travelling  
- The spilled oil does not dissolve in water and forms a thick sludge polluting the water |
| **5. Acid Rain** | - Is a pollution of water caused by air pollution  
- When the acidic particles caused by air pollution in the atmosphere mix with water vapor  
- It results in acid rain |
| **6. Global warming** | - Increase in water temperature  
- As a result aquatic plants and animals are affected |
| **7. Eutrophication** | - Is an increased level of nutrients in water bodies  
- This results in bloom of algae in water  
- It also depletes the oxygen in water  
- Which negatively affects fish and other aquatic animal population |

**Effects of Water pollution**

**Water pollution**

- Adversely affects the health and life of man, animal and plants  
- Harmful affects the crops and the soil fertility

**Pollution of sea water**

- Damages the oceanic life

**The effects can be**

- Catastrophic depending on the kinds of chemicals  
- Concentrations of the pollutants

**The effects of water pollution**

- Are varied and depend on what chemicals are dumped and in which locations

**Many water bodies**

- Near urban areas are highly polluted  
- This is the result of both garbage dumped by individuals

**Dangerous chemicals**

- Legally or illegally dumped by manufacturing industries, health centers and markets
(i) Death of aquatic animals
Water pollution - it kills organisms that depend on the water bodies

(ii) Disruption of food – chains
Pollutants such as - pollution disrupts the natural food chain as well
- lead and cadmium are eaten by tiny animals
- later, these animals are consumed by fish
- food chain continues disrupted at all higher levels

(iii) Diseases
The discharge of untreated and under – treated effluent contributes to severe ecological degradation

The indiscriminate human activities such as open defecation solid waste dumping discharge of drainage water are responsible

The pathogenic bacteria - water – borne diseases like Hepatitis – A, Typhoid, Malaria, Dysentery, Jaundice, Dengue fever, Viral fever and Worm infections

(iv) Destruction of ecosystems
Remedial measure to control water pollution - severely destroyed by water pollution
- comprehensive water management plan
- construction of proper storm drains and settling ponds
- maintenance of drain line
- effluent and sewage treatment plant
- regular monitoring of water and waste water
- stringent actions towards illegal dumping of waste into the water bodies

Noise pollution

Definition - Noise pollution is unwanted or excessive sound that can have deleterious effects on human health and environmental quality
- Noise pollution is commonly generated by many factories it also comes from highway, railway and airplane traffic and from outdoor construction activities.
  - Jerry A. Nathanson and Richard E. Berg, 2018
Types of noise pollution

(i) Atmosphere noise
- Static is caused by lighting discharges in thunderstorms
- Other natural electrical disturbances occurring in the atmosphere

(ii) Industrial noise
- Refers to noise that is created in the factories
- Sound becomes noise it becomes unwanted

Heavy industries like
- Ship building, iron and steel have long been associated
- Noise induced Hearing loss (NIHL)

(iii) Man made noise
- The main sources of man-made noise pollution
- Ships, aircraft, seismic exploration, marine construction, drilling and motor boats

Causes of noise pollution

(i) Poor urban planning
- Improper urban planning
- Will cause more nuisances among the city travelers

(ii) Sounds from motor vehicles
- Can cause temporary hearing loss

(iii) Crackers
- Used in some occasions
- Such activities create a very louder noise
- To the level of harming the public
- Sometimes, they may even cause deafness to children aged

(iv) Factory machinery
- Noise caused by continuous operation
- Mills, machines and pneumatic drills
- Is unbearable nuisance to the workers

Effects of noise pollution

(a) Hearing loss
- Chronic exposure to noise may noise – induced hearing loss

Older people are exposed
- To significant occupational noise
- Thereby reduced hearing sensitivity
(b) Damage physiological and psychological health - unwanted noise can damage health - for example, annoyance and aggression, hyper tension and high stress levels

(c) Cardiovascular effects - high noise levels can contribute - exposure to blood pressure

(d) Detrimental effect on animals and aquatic life - on animals, increasing the risk of death

(e) Effects on wildlife and aquatic animals - it creates hormone imbalance, chronic stress, panic and escape behavior and injury

Remedial measures to control pollution - use of noise barriers - newer roadway for surface transport - traffic control - regulating times for heavy vehicles - installation of noise barriers in the work place - regulation of loudspeakers

Land pollution
Definition - the land pollution is defined as “the degradation of land because of the disposal of waste on the land” - Any substance that is discharged emitted or deposited in the environment in such a way that it alters the environment causes land pollution - Protection of the Environment Operations Act 1997

Types of land pollution
(i) Solid waste - it includes all kinds of rubbish like - plastic containers, bottles, food, used cars, broken electronic goods - municipal wastes and hospital waste

(ii) Pesticides and Fertilizers - many farming activities engage in the application of fertilizers, pesticides and insecticides for higher crop yield, which pollute land
(iii) Deforestation

**Trees absorb**
- carbon dioxide from the air and release oxygen
- which is needed for life
- forest helps replenish soils and help retain nutrients being washed away

**Deforestation**
- is led to land pollution

### Causes of land pollution

(i) **Deforestation and soil erosion**
- deforestation carried out to create dry lands is one of the major concerns
- barren land, can never be made fertile again
- whatever the magnitude of measures to convert it

(ii) **Agricultural activities**
- farmers often use highly toxic fertilizers and pesticides to get rid off insects, fungi and bacteria from their crops
- Over use of these chemicals result in contamination and poisoning of land

(iii) **Mining activities**
- several land spaces are created beneath the surface

(iv) **Land fills**
- each household produces tones of garbage
- Garbage like plastic, paper, cloth, wood and hospital waste get accumulated
- items that cannot be recycled become a part of the landfills that cause land pollution

(v) **Industrialization**
- due to increasing consumerism
- more industries were developed which led to deforestation
- Modern fertilizers and chemicals that were highly toxic led to soil contamination

(vi) **Construction activities**
- due to urbanization large amount of construction activities
- this has resulted in large waste articles like wood, metal, bricks, plastics
- urban areas that lead to land pollution
(vii) Nuclear waste - the leftover radioactive materials, harmful and toxic chemicals affect human health

Effects of land pollution

1. Soil pollution - where the upper layer of the soil is damaged - this is caused by the overuse of chemical fertilizer and pesticides - this leads to loss of fertile land

2. Health impact - the land when contaminated with toxic chemicals and pesticides - lead to problem of skin cancer and human respiratory system

3. Cause for air pollution - landfills and waste dumping lead to air pollution - the abnormal toxic substances spread in the atmosphere - cause transmit respiratory diseases among the masses

4. Effects on wildlife - face a serious threat with regards to loss of habitat and natural environment - the constant human activity on land is leaving it polluted

Remedial measures to control land pollution - making people aware about concept of a reduce, recycle and reuse - buying biodegradable products - minimizing the usage of pesticides - shifting cultivation - disposing unwanted garbage properly either by burning or by burning under the soil - minimizing the usage of plastics

Global warming - is the current increase in temperature of the earth’s surface as well as atmosphere - average temperatures around the world have risen by 0.75°C (1.4°F) over last 100 years - about two thirds of this increase has occurred since 1975
Green house gases
-Carbon dioxide, methane, chlorofluorocarbon, nitrous oxides are cause warming the earth’s surface
-so it is called green house effect

The CO\textsubscript{2} is the most important of the green house gases -contributing to 50% global warming

Result to CO\textsubscript{2} -the burning of fossil fuel, an other biomass and deforestation

Global warming -adversely affects agriculture, horticulture and ecosystem
-reduced rainfall, higher temperature and increased pest
-weed growth hamper farming

Threats to health arise due to increase -in disease carrying vectors such as mosquitoes resulting in malaria, dengue fever, encephalitis and yellow fever

An increase in the global average surface air temperature -magnitude will bring about alarming changes in rainfall patterns
-other climatic conditions
-resulting in serious ecological disequilibrium

Climate change -refers to seasonal changes over a long period
-with respect to growing accumulation of greenhouse gases in the atmosphere
-to increase in the concentration of carbon dioxide in the atmosphere by as much as 40%
-280 parts per million in the pre-industrial period to 402 parts per million in 2016
-warning of coastal water high temperature
-change in rainfall patterns
-increased intensity and frequency of storms
-sea level and temperature are expected to be rising

Acid Rain -is one of the consequence of air pollution
-it occurs when emissions from factories car or heating boilers
These emissions contain nitrogen oxides, Sulphur dioxide and Sulphur trioxide - which when mixed with water becomes sulfurous acid, nitric acid and sulfuric acid. This process also occurs by nature through volcanic eruptions. Harmful effects on plants, aquatic animals and infrastructure.

**E – waste**
- Sources of e – waste
- Home, hospital, government and private sectors

**Electronic waste**
- Which is commonly referred as “e-waste”
- Is the new byproduct of the Info tech society
- It is physical waste in the form of old discarded growing range of electronic devices from large household appliances
- Such as refrigerators, air conditioners, cellular phones computers and other electronic goods
- Devices are disposed or sent for re-cycling

**Solid waste**
- Is basically discharge of useless and unwarranted materials as a result of human activity
- Most commonly they are composed of solids, semi-solids or liquids

**Solid wastes consists**
- Discards of households, hospital refuse, dead animals debris from construction site, ashes, agricultural wastes and industrial wastes, etc
- Severe public – health and hygiene hazards

**Sustainable development**
**Meaning**
- Is concerned with the welfare of not only present generation
- But also future generation
- The present generation should not exhaust the resources left by the past generation
- But it should leave the same for the sake of future generation
- This is called inter – generational equity
Definitions

- “Sustainable development is development that meets of the present without compromising the ability of future generations to meet their own needs”
  - World Commission on Environment and Development, 1987
- “The alternative approach is to focus on natural capital assets and suggest that they should not decline through time”
  - Pearce, Markandya and Barbier, 1989

Sustainable development goals (SDGs)

It is crucial to harmonize three core elements - such as
- economic growth
- social inclusion
- environmental protection
- a set of 17 goals for the world’s future can be achieved before 2030

Three unanimous principles - fixed by United Nations such as universality
- integration, transformation

1. No poverty - end poverty is all its forms everywhere

2. Zero hunger - end hunger, achieve food security and improved nutrition and promote sustainable agriculture

3. Good health and well-being - ensure healthy lives and promote wellbeing for all at all ages

4. Quality education - ensure inclusive and quality education for all and promote lifelong learning

5. Gender equality - achieve to gender and empower women and girls

6. Clean water and sanitation - ensure access to all water and sanitation for all

7. Affordable and clean energy - ensure access to affordable, reliable, sustainable and modern energy for all
8. Decent work and economic growth - promote inclusive and sustainable economic growth employment and decent work for all

9. Industry, innovation and infrastructure - build resilient infrastructure, promote sustainable industrialization and foster innovation

10. Reduced inequalities - reduce inequality within and among countries

11. Sustainable cities and communities - make cities inclusive, safe, resilient and sustainable

12. Responsible consumption and production - ensure sustainable consumption and production patterns

13. Climate action - take urgent action to combat climate change and its impacts

14. Life below water - conserve and sustainable use the oceans, seas and marine resources

15. Life on land - sustainably manage forests, combat desertification, halt and reverse land degradation, halt biodiversity loss

16. Peace and justice - promote just peaceful and inclusive societies

17. Partnership’s for the goals - revitalize the global partnership for sustainable development

Green initiatives - number of organizations, business and people are striving for sustainability
- eco-friendly lifestyles is increasing
- they are passionate towards protecting the earth
- developed countries should be made to pay for the pollution control efforts

Organic farming
Which relies
- is a system of agricultural production
- on animal manure, organic waste, crop rotation, legumes and biological pest control
- it avoids the use of synthetic fertilizer, pesticides and live stocks and additives
**Organic inputs**  - enriching soil for microbes

**Organic production**  - is a holistic system designed to optimize the productivity

**Diverse communities**  - within the agro – ecosystem including soil organisms, plants, livestock and people

**The principal goal of organic production**  - is to develop enterprises that are sustainable and harmonious with environment

**The general principles of organic farming are**
- protect the environment, minimize soil degradation and erosion, decrease pollution,
- optimize biological productivity and promote a sound state of heath

**Maintain long – term**
- soil fertility by optimizing conditions for biological activity within the soil
- maintain biological diversity within the system
- recycle materials and resources to the greatest extent possible within the enterprise

**Organic farming**  - green leaf manures, vermin compost, crop rotation, manures, biological management, bio – fertilizers, animal husbandry

**Alkali farming**  - nearly 50% of the irrigated land in the arid and semi – arid regions has some degree of soil salinization problems
- accumulation of excess salt acid in the root zone
- result in a partial or complete loss of soil productivity
- such soil is defined as problem soil
- exist mainly in arid and semi – arid regions

**The alkali soils**  - predominantly located in the indo – gangetic plains
- encompassing states of Punjab, Haryana, UP, Bihar

**Partly in states**  - Chattisgarh, Rajasthan, AP, Gujarat, Maharashtra, Karnataka, MP, TN
Tree plantation - trees contribute to their environment by providing oxygen, improving air quality, conserving water, preserving soil and supporting wild life.
- so trees are considered to be the lungs of the earth.
- natural forests and tree plantation improve the water cycle in diminishing run off and improving the replenishment of the water table.

Seed ball or seed bomb - is a seed that has been wrapped in soil materials.
- usually a mixture of clay and compost and then dried.
- essentially, the seed is “pre – planted”
- seed balls are an easy and sustainable way to cultivate plants.
- provide a larger window of time
- when the sowing can occur.
CHAPTER 11  ECONOMICS OF DEVELOPMENT AND PLANNING

Meaning of development and under development

Introduction
The concept “development” refers to the structural changes towards betterment

After World War II - economists started devoting their attention underdeveloped countries - formulating theories and models of development and growth

Approaches to economic development - there are two main approach to concept of development - viz. (i) the traditional approach (ii) new welfare oriented approach

(i) Traditional approach - defines development strictly in economic terms - the increase in GNP - is accompanied by decline in share of agriculture in output and employment - while those of manufacturing and service sectors increase - it emphasizes the importance of industrialization - it was assumed that growth in GNP per capita would trickle down to people at the bottom

(ii) New welfare oriented approach - during 1970s economic development was redefined in terms of reduction of poverty “inequality” and unemployment - the context of a growing economy - in this phase “redistribution with growth” - become popular slogan

To quote Michael P. Todaro - “Development must, therefore be as a multidimensional process involving major changes in social structures, popular attitudes - national institutions as well as the acceleration of growth, the reduction of inequality and eradication of absolute poverty”
Under development - The UDCs are characterized by predominance of primary sector
- i.e. agriculture, low percapita income, widespread poverty wide inequality in distribution of income and wealth
- over population, low rate of capital formation
- high rate of unemployment technological backwardness dualism, etc.

Features of an underdeveloped economy

Introduction - the term “underdeveloped country” is relative

The World Bank - in its World Development Report classified various countries
- on the basis of Gross National Income (GNI) percapita

Low Income Countries - GNI percapita of 906 US dollars and below
Middle Income countries - GNI percapita ranging between 906 US dollars and 11,115 US dollars
High Income countries - GNI percapita of 11,116 US dollars or more

Meaning of under development

The term under development - refers to the state of an economy
- where levels of living of masses are extremely low
- due to very low levels of percapita income
- resulting from low levels of productivity and high growth rate of population

Economic Growth vs Economic Development

<table>
<thead>
<tr>
<th>Economic Growth</th>
<th>Economic development</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. State of development</td>
<td>To those of developed countries</td>
</tr>
</tbody>
</table>
2. Nature and level of change

| Is a gradual and steady in the long run | Is a discontinuous and spontaneous change |

3. Scope of change

| Simply means more output | Refers to efficiency in Production i.e. output per unit of input Change competition of output In allocation of resources reduction of poverty, inequality and unemployment |

4. Extent of change

| Wider concept | Taken to mean growth plus structural change |

**Difference between economic growth and economic development**

<table>
<thead>
<tr>
<th>Economic Growth</th>
<th>Economic Development</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deals with the problems of developed countries</td>
<td>Deals with the problems of UDCs</td>
</tr>
<tr>
<td>Change is gradual and steady</td>
<td>Change is discontinuous and spontaneous</td>
</tr>
<tr>
<td>Means more output</td>
<td>Means not only more output but also its composition</td>
</tr>
<tr>
<td>Concerns quantitative aspects i.e. increase in per capita income</td>
<td>Quantitative as well as Qualitative</td>
</tr>
<tr>
<td>Narrow</td>
<td>Wider concept Development = Growth + Change</td>
</tr>
</tbody>
</table>

**Measurement of Economic development** on the basis of four criteria

**Gross National Product (GNP)** - GNP is the total market value of all final goods and services produced within an nation in a particular year

- plus income earned by its citizen (including income of those located abroad)
- minus income of non – residents located in that country

- is one measure of the economic condition of a country
- under the assumption that a higher GNP leads to a higher quality of living, all other things being equal
GNP per capita - this relates to increase in the per capita real income of the economy over the long period - this indicator of economic growth emphasizes that for economic development

Rate of increase in real per capita income - should be higher than the growth rate of population

Welfare - economic development is regarded as a process - there is an increase in the consumption of goods and services by individuals - from the welfare perspective economic development is defined as a sustained improvement in health, literacy and standard of living

Social indicators - normally referred to a basic and collective needs of the people

The direct provision of basic needs such as health, education, food, water, sanitation and housing facilities check social backwardness

Determinants of economic development - is not determined by any single factor - Economic development depends on Economic, Social, Political and Religious factors

Economic and Non – Economic factors

Determinants of economic development - Economic Factors - Non – Economic Factors

Economic factors - Natural resources - Capital formation - Size of the market - Structural change - Financial system - Marketable surplus - Foreign trade - Economic system

Non – Economic factors - Human resources - Technical know-how - Political freedom
-Social organization
-Corruption free administration
-Desire for development
-Moral, ethical and social values
-Casino capitalism
-Patrimonial capitalism

Economic factors

1. Natural resources

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. Deficient in natural resources may not be in a position to develop rapidly. Japan, lacking natural resources, imports them and achieves a faster rate of economic development with the help of technology. India, with larger resources, is poor.

2. Capital formation

-is the main key to economic growth
-refers to the net addition to the existing stock of capital goods
-which are either tangible like plants and machinery

Intangible like health, education and research

Capital formation helps to increase productivity of labour 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, raise the national per capita income

Developed countries expand their market to other countries through WTO

4. Structural change

-refers to change in the occupational structure of the economy
Any economy - generally divided into three basic sectors

Primary sectors - agricultural, animal husbandry, forestry, etc.
Secondary sectors - such as industrial production, construction
Tertiary sector - such as trade, banking and commerce

Any economy - which is predominantly agricultural tends to remain backward

5. Financial system - implies the existence of an efficient and organized banking system
- there should be an organized money market
- to facilitate easy availability of capital

6. 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 the other sectors of the economy
- result will develop because of increase in national income

7. Foreign trade - the country which enjoy favourable balance of trade
- terms of trade is always developed
- it has huge forex reserve and stable exchange rate

8. Economic system - the countries which adopt free market mechanism
- enjoy better growth rate compared to controlled economies
- it may be true for some countries
- but not for every country

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

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1. Human Resources

- is named as human capital
- its power to increase productivity and thereby national income
- there is a circular relationship between development and economic growth

A healthy, educated and skilled labour force is 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
-example: Japan and China

2. Technical know – how

-as the scientific and technological knowledge advances
-increase the productivity levels all sectors

Schumpeter attributed the cause for economic development to innovation

3. Political freedom

Dadabhai Naoroji explained in his classic work “Poverty and un – employment British rule in India”
-the drain of wealth from India under the british rule
-major cause of the increase in poverty in India

4. Social organization

-mass participation in development programs is a pre – condition for accelerating the development process
-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 Capitalist and traders will continue the 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.
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, the 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.

VICIOUS CIRCLE OF POVERTY

Low per capita Income

Low productivity

Low level of saving

Low levels of Investment in physical and Human capital

There are circular relationships known as “vicious circle of poverty”
- Tend to perpetuate the low level of development in less developed countries (LDCs)
Nurkse explains - Idea in these words
- “It implies a circular constellation of forces tending to act and react upon one another in a state of poverty”
- A country is poor because the country is poor

The vicious circle of poverty - operates both on the demand side and supply side

On the supply side
- the low level of real income means low savings
The low level of saving leads to low investment and to deficiency of capital
The deficiency of capital - in turn leads to low levels of productivity and back to low productivity and back to low levels of productivity and back to low income

These vicious circle - is complete from the supply side

Low per capita Income

Low productivity Low level of demand

Low levels of Investment in physical and Human capital

The demand side
- the vicious circle is that the low level of real income leads to low level of demand
- which turn; leads to a low rate of investment

Back to deficiency of capital - low productivity and low income

Breaking vicious circle of poverty - associated with low rate of supply and investment on the supply side

In UDCs
- the rate of investment and capital formation can be stepped up without reduction in consumption

For this, the marginal rate of savings
is to - greater than average rate of savings

To break the vicious circle on - the demand side

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Nurkse suggested the strategy of balanced growth

If investment is made in several industries - simultaneously the workers employed in various industries will become consumers of each other’s products - will create demand for one another - the balanced growth i.e. simultaneous investment in large number of industries creates mutual demand.

The strategy of balanced growth - vicious circle of poverty operating on the demand side of capital formation can be broken.

Planning

Meaning - Planning is a technique, a means to an end being, the realization of certain pre-determined and well-defined aims and objectives laid down by a central planning authority.

Definitions

Robbins - Economic planning is collective control or suppression of private activities of production and exchange.

Dalton - Economic planning in the widest sense is the deliberate direction by persons in-charge of large resources of economic activity towards chosen ends.

Economic planning in India - consists of economic decisions - schemes formed to meet certain pre-determined economic objectives and specific goods - within specific period of time.

The current thinking of economic planning - is fairly new, somewhat rooted in Marxist socialism.

In the 20th century - intellectuals, theorists, thinkers from Europe put
forward the idea of state involvement  
-to stop capitalism and the inequality of society

Soviet Union  
-adopted economic planning for the first time in 1928  
-country to turn into an industrial superpower

The idea of economic planning  
-strengthened during the Great depression in 1930s

The outbreak of the World War II  
-required adequate and suitable planning of economic resources

The effective management  
-after the effects of post war economy

After independence in 1948  
-declaration of industrial policy was announced  
-the policy suggested the creation of national planning commission and the elaboration of the policy of a mixed economy system

On January 26, 1950  
-the constitution came into force

March 15, 1950  
-planning commission was created

Plan Era  
-began on April 1st  
-the first five year plan 1951 – 56

The evolution of planning in India is stated below

1. **Sir M. Vishveshwaraya (1934)** - prominent engineer and politician  
-first attempt in laying foundation for economic planning in India in 1934  
-Book  
-“Planned Economy of India”  
-it was a 10 year plan

2. **Jawaharlal Nehru (1938)** - set up “National Planning Commission” by the committee  
-but due to the changes in the political era and Second World War  
-it did not materialize

3. **Bombay plan (1940)** - the leading industrialists of Bombay presented “Bombay plan”
- it was a 15 year investment plan

**4.S.N. Agarwal (1940)**
- gave the “Gandhiyan Plan”
- focusing on the agricultural and rural economy

**5.M.N. Roy (1945)**
- drafted ‘People’s Plan’
- it was aiming at mechanization of Agricultural production and distribution by the state only

**6.J.P. Narayan (1950)**
- advocated “Sarvodaya Plan”
- which was inspired by Gandhian plan
- the idea of Vinoba Bhave
- it gave importance not only for agriculture
- but encouraged small, and cottage industries in the plan

**Planning commission**
- was set up to formulate Five year plan in India by Jawaharlal Nehru
- He was the first chairman of planning commission
**Government of India**

**Case for planning**
- The economic planning is justified on the following grounds

1. To accelerate and strengthen
   **market mechanism**
   - works imperfectly in underdeveloped countries
   - ignorance and unfamiliarity with it
   - the large part of the economy comprises the non–monetized sector
   - product, factor, money and capital markets are not organized properly
   **Planned economy**
   - will be a better substitute for free economy

2. To remove unemployment

   **Capital being scarce**
   - labour being abundant
   - the problem of providing gainful employment opportunities
   - ever – increasing labour force is a difficult task
- removing widespread unemployment and disguised unemployment in such economies

3. To achieve balanced development - for rapid economic development, underdeveloped countries require the development of the agricultural and industrial sectors - the establishment of social and economic overheads - the expansion of the domestic and foreign trade sectors a way

(i) Development of agricultural and industrial sectors - interdependent - reorganization of agriculture releases surplus labour force - which can be absorbed by the industrial sector

Development of agriculture - is also essential to supply the raw materials needs of the industrial sector

(ii) Development of infrastructure - in the absence of economic and social overheads - the building of canals, roads, railways, power stations, etc. - is indispensable for agriculture and industrial development

Infrastructure involve - huge capital investment long gestation period - low rate of return

State alone - provide strong infrastructural bases through planning

(iii) Development of money and capital markets - expansion of the domestic and foreign trade - not only the development of agricultural and industrial sectors - along with social and economic overheads - but also existence of financial institutions

Money and capital markets - are not adequate in underdeveloped countries - this factor acts as an obstacle to the growth of industry and trade
4. To remove poverty and inequalities

- planning is the only path open to underdeveloped countries
- raising national and per capita income
- reducing inequalities and poverty
- increasing employment opportunities

Arthur Lewis says

- “Planning is more necessary in backward countries to devise ways and means and to make converted efforts to raise national income”

Case against planning prime goal of economic planning

- stabilization in developed countries and growth in LDCs
- market mechanism invited state intervention

1. Loss of freedom

- in decision making may act as an obstacle for economic growth

Regulations and restrictions

- are the backbone of the planned economy

The economic freedom comprises

- freedom of consumption
- freedom of choice of occupation
- freedom to produce
- freedom to fix prices for the products

Under planning

- the crucial decisions are made by the central planning authority
- no freedom of choice

Therefore Hayek explains

- in his book “Road to Serfdom”
- centralized planning leads to loss of personal freedom
- ends in economic stagnation
- the decisions by the government are not always rational
- profit will be given top priority
- welfare will be regulated
2. Elimination of initiative

Under centralized planning - there will be no incentive for initiative and innovations - planning follows routine procedure and may cause stagnation in growth

(a) The absence of private ownership - profit motive discourages entrepreneurs from taking bold decision and risk taking

Attractive profit is the incentive for searching new ideas, new lines and new methods - these are missing in a planned economy

(b) As all enjoy equal reward - under planned economy irrespective of their effect - efficiency and productivity nobody is interested in undertaking new and risky ventures

(c) The bureaucracy and red tapism - which are the features of planned economy - as they cause procedural delay and time loss - the ease of doing business is disrupted

Russia and China - offer incentives to private enterprises

3. High cost of management - cost of management of the economic affairs outweighs the benefits of planning

As Lewis remarks - “The better we try to plan the more planners we need” - inadequate data, faulty estimations and improper implementation of plans - wastage of resources and cause either surplus or shortages

4. Difficulty in advance calculation - there is no such mechanism in a planned economy - it is also very difficult to put the calculations into practice under planning

Types of planning

Economic planning - is a process under which attempts are made to achieve desired targets of economic development within a specified period of time
<table>
<thead>
<tr>
<th>Type of Planning</th>
<th>Description</th>
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</thead>
</table>
| Democratic planning      | - implies planning within democracy  
   - people are associated at every step  
   - a democratic plan characterized  
   - various state government and private enterprises at the stage of preparation  
   - planning commission prepared  
   - it can be accepted rejected or modified by the parliament of the country |
| Totalitarian planning    | - there is central control and direction of all economic activities  
   - accordance with single plan  
   - division of economics controlled by the state  
   - planning authority is supreme body  
   - it decides about the targets scheme and allocations  
   - methods and procedures of implementation of the plan |
| Centralized planning     | - the entire planning process in a country is under a central planning authority  
   - this authority formulate a central plan, fixes objectives, targets and priorities for every sector of the economy  
   - it is called “Planning from above” |
| Decentralized planning   | - local organizations and institutions formulate, adopt execute and supervise the plan  
   - without interference by the central authorities  
   - In other words “it is called planning from below” |
| Planning by direction    | - this is a central authority which plans  
   - directs and orders the execution of the plan in accordance  
   - with pre – determined targets and priorities |
| Planning by inducement   | - the people are induced to act in a certain way through monetary and fiscal measures  
   - if the planning authority wishes to encourage the production of a commodity  
   - it can give subsidy to the firms |
Thus planning by inducement -is able to achieve the same result as under planning by direction
-with less sacrifice of individual liberty

**Indicative planning**

-is peculiar to the mixed economics
-it has been in practice in France since the Monnet plan of 1946 – 50

Mixed economy -the private and public sector work together
-outline of the plan is prepared by the government
-discussed with representatives
-private management, trade unions, consumer groups
-finance institution

The essential function of planning -is coordination of different economic units

The planning -procedure is soft and flexible

Under **imperative planning**-the state is all powerful in preparation and implementation of the plan
-once a plan is drawn up,
-its implementation is a matter of enforcement

The USSR President Stalin used to say -“Our plans are our instructions”
-there is complete control by state
-the government policies are procedures are rigid

China and Russia -follow imperative planning

**Short, medium and long term planning**

Planning
-long – term (over 10 years)
-medium term (3 – 7 years)
-short term (upto 1 year)

**Short term plan**

-are known as “controlling plan”
-they encompass the period of one year
-they are also known as “annual plans”
-period of 1 year – operational planning

**The medium term plans**

-last for the period of 3 to 7 years
-but normally the medium term plan is made for the
period of five years
- i.e. not only related to allocation of financial resources but also physical resources
- period of 5 years – tactical planning

| Long term plans | - last for the period of 10 to 30 years
|                 | - they are also known as “perspective plans”
|                 | - the basic philosophy behind long – term planning is to bring structural changes in the economy
|                 | - over 10 years – strategic planning

| Financial planning | - refers to the technique of planning in which resources are allocated in terms of money

| Physical planning | - the allocation of resources in terms of men, materials and machinery

| Functional planning | - refers to that planning which seeks to remove economic difficulties
|                     | - by directing all the planning activities within the existing economic and social structure

| The structural planning | - refers to a good deal of changes in the socio – economic frame work of the country
|                         | - this type of planning is adopted mostly in under developed countries

| Comprehensive planning | - general planning
|                        | - which concerns itself with the major issues for the whole economy
|                        | - is known as comprehensive planning

| Partial planning | - is to consider only the few important sector of the economy

| NITI Aayog | - National Institution for Transforming India
|           | - was formed on January 1st 2015
|           | - through a Union Cabinet resolution
|           | - is a policy think – tank of the Government of India
|           | - it replaced the Planning Commission from 13th August 2014
|           | - The Prime Minister is the Chair person of
NITI Aayog
- Union Ministers will be ex–officio members
- The Vice – Chairman of the NITI Aayog
- is the functional head
- First Vice – Chairman was Arvind Panangariya

Functions of NITI Aayog

1. Cooperative and competitive federalism
   - to enable the states to have active participation
   - in the formulation of national policy

2. Shared National Agenda
   - to evolve a shared vision of national development
   - priorities and strategies with the active involvement of states

3. Decentralized planning
   - to restructure the planning process into a bottom–up model

4. Vision and scenario planning
   - to design medium and long–term strategic frameworks towards India’s future

5. Network of expertise
   - to mainstream external ideas and expertise into government policies and programmes through a collective participation

6. Harmonization
   - actions of different layers of government
   - especially when involving cross–cutting and overlapping issues across multiple sectors
   - through communication, coordination, collaboration and convergence amongst all the stakeholders

7. Conflict resolution
   - to provide a platform for mutual consensus
   - to inter–sectoral, inter–departmental, inter–state, as well as centre–state issues
   - speedy execution of the government programmes

8. Coordinating interface with the world
   - it will act as a nodal point to harness global expertise and resources coming from International Organizations for India’s developmental process

9. Internal consultancy
   - it provides internal consultancy to central and
state governments on policy and programmes

10. **Capacity building**
- it enables to provide capacity building and technology up-gradation across government
- benchmarking with latest global trends and providing managerial and technical know-how

11. **Monitoring and evaluation**
- it will monitor the implementation of policies and programmes and evaluate the impacts
NITI Aayog is based on the 7 pillars of effective governance

Pro – people
- fulfills aspirations of society as well as individuals

Pro – Activity
- in anticipation of and response to citizen needs

Participation
- involvement of citizenry

Empowering
- women in all aspects

Inclusion of all
- SC, ST, OBC, minorities, gareeb, gaon, kisaan

Equality
- of opportunity for the youth

Transparency
- making government visible and responsive
CHAPTER 12 INTRODUCTION TO STATISTICAL METHODS AND ECONOMETRICS

Statistics is the grammar of science - Karl Pearson

Etymology and milestones of statistics in global level

The term statistics originated - in the west
- was known as various names
- such as “status” in Latin
- “statistic” in German
- “statistique” in French
- it is said that Gottfried Achenwell used the word Statistik in 1749
- to describe the political science of different countries
- all these names in short mean to describe the political state

The first book to have statistics - as its title was “contributions to vital statistics”
- by Francis GP Neison in 1845
- it was to prepare a systematic study of birth and death related data

The monumental contribution to the subject of statics - can be attributed to R.A. Fisher (1890 – 1962)
- who was able to apply statistics to a variety of fields
- such as Biometry, Genetics, Psychology, Education, Agriculture and others
- besides he is also known as the pioneer of estimation theory
- analysis of variance and design of experiments
- hence he is known as the father of statistics

Father of Statistics - Ronald Fisher
- The fundamental principles of statistics were developed by biologist,

Ronald Fisher - who lived in England during the last century
- his studies in statistics led to the synthesis of evolution and modern genetics
### Evolution of Statistics in India
- Evidence from history proves that during the reign of Chandra Gupta Maurya,
- there existed a system of maintaining vital statistics,
- including registration of birth and deaths
- Arthashastra even before 300 B.C.

### The book “Ain – e – Akbari”
- 1596 – 97
- Mentions the statistical and administrative surveys conducted during Akbar’s rule

### P.C. Mahalanobis
- Known as the founder of modern statistics
- Father of Satics in India
- 29th June 2007, every year is celebrated as Statistics Day to commemorate his birth anniversary

### Definitions of Statistics

#### The term “statistics”
- Is used in two senses as singular and plural

#### Singular
- Form it simply means statistical method
- Helps in the collection, presentation, classification and interpretation of data to make it easily

#### In its plural
- Form it denotes collection of numerical figures and facts

#### In narrow sense
- It has been defined as the science of counting and science of average

#### Boddington
- Statistics as a science of estimates and probabilities

#### Croxton and Cowden presentation
- Statistics may be defined as the collection, analysis and interpretation of numerical data

### Characteristics and function of statistics

#### (i) Statistics are an aggregate of facts
- For example number in a calendar pertaining to a year will not be called statistics
- But to be included in statistics in should contain a series of figure with relationship for a prolonged
(ii) Statistics are numerically enumerated, estimated and expressed.

(iii) Statistical collection should be systematic with predetermined purpose—the purpose of collection of statistics should be determined beforehand and accurate information.

(iv) Should be capable of being used as a technique for drawing comparison—it should be capable of drawing comparison between two different sets of data by tools such as average ratio, rates, co-efficient, etc.

**Functions of statistics**
- Presents facts in a definite form
- It simplifies mass of figures
- It facilitates comparison
- It helps in formulating and testing
- Helps in prediction
- It helps in the information of suitable policies

**Nature of statistics**
- Different statistician and economists differ in views about the nature of statistics
- Some call it a science and some say it is an art

**Tipett on the other hand consider**
- Statistics both as a science as well as an art

**Scope of statistics**
- Applied in every sphere of human activity
- Social as well as physical

**Like**
- Biology, Commerce, Education, Planning, Business management, Information technology, etc.

**Statistics and Economics**

**Statistical data and techniques**
- Useful in solving many economic problems
- Such as fluctuation in wages, price, production, distribution of income and wealth and so on

**Statistics and firms**
- Is widely used in many firms
- To find whether the product is conforming to specification or not
| Statistics and commerce | -statistics are life blood of successful commerce |
|-------------------------|-------------------------------------------------
| Market survey           | -plays an important role to exhibit the present conditions  
|                         | -forecast the likely changes in future |
| Statistics and Education| -necessary for the formulation of policies to start new course  
|                         | -according to the changing environment  
|                         | -public and private engaged in research and development work to test  
|                         | -the past knowledge and evolve new knowledge  
|                         | -these are possible only through statistics |
| Statistics and planning | -statistics in indispensable in planning |
| “World of planning”     | -almost all the organization seeking the help of planning for effective working  
|                         | -formulation of policy decision and execution of the same |
| Advanced statistical techniques | -used for processing analyzing, and interpreting data |
| In India                | -statistics play an important role in planning  
|                         | -both at the central and state government levels |
| Statistics and medicine | -in order to test the efficiency of a new drugs or two medicines test for the two samples is used  
|                         | -more and more applications of statistics are at present used in clinical investigation |
| Statistics and modern applications | -field of computer and information technology have enabled statistics to integrate their models  
|                         | -statistics a part of decision making procedures of many organizations  
|                         | -many software packages available for solving |

**Limitations of statistics**

| Statistics | -is not suitable to the study of qualitative phenomenon  
|            | -laws are not exact |
1. **Statistics is not suitable to the study of qualitative phenomenon**

   - Statistics is basically a science and deals with a set of numerical data.
   - It is applicable to the study of quantitative measurements.
   - Qualitative aspects like leadership, honesty, poverty, intelligence, etc.
     - cannot be expressed numerically.
     - Statistical analysis cannot be directly applied on these qualitative phenomena.

2. **Statistical laws are not exact**

   - Statistical laws are not exact and statistical laws are only approximations.
   - Statistical conclusions are not universally true.
   - They are true only on an average.

3. **Statistical table may be misused**

   - Statistics must be used only by experts.
   - Statistical methods are the most dangerous tools on the hands of the inexpert.
   - Inexperienced and untrained persons might lead to wrong conclusions.

4. **Statistics is only one of the methods of studying a problem**

   - Statistical methods do not provide complete solution of the problems.
   - Because problems are to be studied taking the background of the countries culture, philosophy religions etc. into consideration.
   - Thus the statistical study should be supplemented by other evidences.

**Types of statistics**

- There are two major types of statistics:
  - Descriptive statistics and inferential statistics.

**Descriptive statistics**

- The branch of statistics devoted to the summarization and description of data is called descriptive statistics.

**Inferential statistics**

- The branch of statistics concerned with using sample data to make an influence about a population of data.
Major difference between descriptive and inferential statistics

1. Descriptive statistics
   - it describe the population under study
   - it presents the data in a meaningful way
   - through charts, diagrams, graphs, other than describing in words
   - it gives the summary of data

Inferential statistics
   - it draws conclusion for the population based on the sample result
   - it uses hypothesis, testing and predicting on the basis of the outcome
   - it tries to understand the population beyond the sample

Data
   - is the information about facts or numbers collected to be examined
   - used to help with decisions
   - data are the basic raw materials of statistics

Statistics data are classified
   - two broad categories
   - 1. Quantitative data
   - 2. Qualitative data

1. Quantitative data
   - are those that can be quantified in definite units of measurement
   - those refer to characteristics whose successive measurement yield quantifiable observation
   - Eg. Age, income, number of firms, etc.

2. Qualitative data
   - refer to the qualitative characteristics of a subject or an object
   - its observations are defined and noted in terms of the presence or absence of a certain attribute in discrete numbers
   - these data are the further classified as nominal and rank data
   - Eg. Gender, community, honesty…
(i) Nominal data - are the outcome of classification into two or more categories of items or units comprising a sample or a population according to some quality characteristic

Classification of:
- students according to the sex
- workers according to their skill
- employees according to their level of education

(ii) Rank data - are the result of assigning ranks to specify order in terms of the integers 1, 2, 3, ..., n

Ranks may be assigned:
- according to the level of performance in a test, a contest, a competition, an interview or a show

Sources of collection of data:
- based on the data sources
- data could be seen as if two types
  - secondary data and primary data

(i) Primary data:
- those data which do not already exist in any form
- thus have to be collected for the first time from the primary source
- these data are fresh and first time collected

(ii) Secondary data:
- they are already exist in some form
- published or unpublished in identifiable secondary source
- they are generally available from published sources
- though not necessarily in the form actually required
- eg. Data from CSO, NSSO, RBI

Arithmetic Mean or Mean (\(\bar{X}\))

Central value:
- is called a measure of central tendency (or) an average or a measure of locations
- they are five averages
- among them mean, median and mode are called simple averages
- other two averages geometric mean and harmonic mean are called special average

Meaning of average:
- measure of central tendency is a typical value around
which other figures congregate
-an average stands for the whole group of which it forms of part yet represents the whole
-one of the most widely used set of summary figures is known as measures of location

| Standard Deviation (σ) | -the measures of central tendency serve locate the centre of the distribution
|                        | -but they do not reveal how items are spread out on either side of the centre
|                        | -this characteristic referred to as dispersion
|                        | -the degree of variation evaluated by various measures of dispersion

There are two kinds of measures of dispersion namely
-absolute measures of dispersion
-relative measures of dispersion

Absolute measures of dispersion
-indicates the amount of variation in a set of values in terms of units of observations

Relative measures of dispersion
-free from the units of measurements of the observations
-they are pure numbers

Standard deviations
-is one of the methods of absolute measures of dispersion

Karl Pearson
-Introduced the concept of standard deviation in 1893
-Standard deviation is also called root mean square deviation
-the reason is that it is the square root of the mean of the squared deviation from the arithmetic mean
-it provides accurate result

Square of standard deviation
-is called Variance
-definition
-it is defined as the positive square root of the arithmetic mean of the square of the deviations of the given observation from their arithmetic mean

Correlation (Y)
Introduction

- Correlation is a statistical device that helps to analyse the covariation of two or more variables

Sir Francis Galton

- is responsible for the calculation for correlation co-efficient

Types of correlation

- correlation is classified in several different ways

Three of the most important ways of classifying correlation

Based on the direction of changes of variables

- Positive correlation
- Negative correlation

Based upon the number of variable studied

- Simple correlation
- Multiple correlation
- Partial correlation

Based upon the constancy of the ratio of change between the variables

- Linear correlation
- Non – Linear correlation

**Based on the direction of change of variables**

Positive correlation

- if the values of two variables move in the same direction
- ex. \( y = a + bx \)

Negative correlation

- when the values of variables move in the opposite correlation
- ex. \( y = a – bx \)

**Based upon the number of variable studied**

Simple correlation

- if only two variables are taken for study then it is said to be simple correlation

Multiple correlation

- if three or more than three variables are studied simultaneously
-then it is termed as multiple correlation

| Partial correlation | -if there are more than two variables  
|                     | -but only two variables are keeping the other variables constant |

**Based upon the constancy of the ratio of change between the variables**
- two types
  - as linear and non-linear correlation

| Linear correlation | -correlation is said to be linear  
|                   | -when the amount of change in one variable tends to bear a constant ratio  
|                   | -to the amount of change in the other  
|                   | -ex. \( y = a + bx \)

| Non – Linear correlation | -the correlation would be non – linear  
|                          | -if the amount of change in one variable does not bear a constant ratio  
|                          | -to the amount of change in the other variables  
|                          | -ex. \( y = a + bx^2 \)

**Methods of studying correlation**
- the various methods of ascertaining whether two variables are correlated or not are
  - 1. Scatter diagram method
  - 2. Graphic method
  - 3. Karl Pearson’s co-efficient of correlation
  - 4. Method of Lease squares
- the first two are based on the knowledge of diagram and graphs
- whereas the others are mathematical methods

| **1. Scatter diagram method** | -is a graph of observed plotted points  
|                              | -where each points represents the values of \( X \) and \( Y \) as a coordinate |

**Advantages of Scatter diagram method**
- it is very simple and non-mathematical method
- it is not influenced by the size of extreme item
- it is the first step in resting the relationship between two variables

**Disadvantages of scatter diagram method**
- it cannot establish the exact degree of correlation between the variables
- but provides direction of correlation and depicts it is high or low

2. Graphic method
- individual values of two variables are plotted on the graph sheet
- draw the centers of both variables say X and Y
- if both X and Y are moving in the same direction
  - either upward or downward
  - then the correlation is said to be positive

If the curves of X and Y
- move the opposite direction then the correlation is said to be negative

Karl Pearson’s coefficient of correlation
- is popularly known as Pearson’s coefficient of correlation denoted by the symbol ‘r’

The coefficient of correlation ‘r’
- measures the degree of linear relationship between two variables say X and Y

‘r’ is calculated
- by direct method without taking deviation of terms
  - from actual mean or assumed mean

Formula of Karl Pearson’s coefficient of correlation
- Ungrouped data
  - Direct method
  - Indirect method

Direct method
- using the variable as it is

Indirect method
- Actual mean deviation method

Regression
Evolution of regression
- the term “regression” was first coined and used in 1877 by Francis Galton
- studying the relationship between the height of fathers and sons
- the average height of children born of parents of a given height tended to move or “regress”
  - toward the average height in the population as a whole

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Galton’s law of universal regression - confirmed by his friend Karl Pearson

The literal meaning of the word - “regression” is stepping back toward the average

The line describing two tendency to regress or going back was called - by Galton “Regression line”

### Difference between Correlation and Regression

<table>
<thead>
<tr>
<th>Correlation</th>
<th>Regression</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Which vary with the other in the same or the opposite direction</td>
<td>Showing the average relationship between two variables</td>
</tr>
<tr>
<td>2. Both the variable X and Y are random Variable</td>
<td>Both the variable may be random variable</td>
</tr>
<tr>
<td>3. Not cause and effect relationship</td>
<td>It indicates the cause and effect Relationship</td>
</tr>
<tr>
<td>4. It find out the degree of relationship</td>
<td>Establishes functional relationship</td>
</tr>
<tr>
<td>5. The coefficient of correlation is relative measure</td>
<td>Regression coefficient is also relative measure</td>
</tr>
<tr>
<td>6. It has limited application</td>
<td>It has wider application</td>
</tr>
<tr>
<td>7. It is confined only to linear</td>
<td>It studies linear and non linear</td>
</tr>
<tr>
<td>8. It is useful for further mathematical treatment</td>
<td>It is widely used for further mathematical treatment</td>
</tr>
</tbody>
</table>

### Introduction to econometrics

Irving Fisher - is the first person developed mathematical equation
- in the quantity theory of money
- Norwegian economist and Statistician
- Integration of three subjects such as Economics, Statistics, Mathematics
- as Econometrics in 1926
- got Nobel Prize in 1969

The term econometrics - formed from two words Greek Origin
Oukovouia - meaning economic
Uetpov - meaning measure
Econometrics - emerged as an independent discipline studying economic phenomenon

Economics + Mathematics - Mathematical economics

Mathematical economics + Statistical data & its techniques - Econometrics

(Economics + Statistics + Mathematics) + Empirical Data = Econometrics

Econometrics - means economic measurement - deals with the relationship of economic relationships

Definition

H. Theif - Econometrics is concerned with the empirical determination of economic laws

Ragnar Frisch - The mutual penetration of quantitative econometric theory and statistical observation in the essence of econometrics

Objectives of econometrics - it helps to explain the behavior of forthcoming period that in forecasting economic phenomena - it helps to prove the old and established relationship among the variables or between the variables - it helps to establish new theories and new relationships - it helps to test the hypothesis and estimation of the parameter

Mathematical models theories - Economics are developed based on economic theories

Econometric models - developed based on economic theories to test the validity of economic theories in reality through the actual data

Regression analysis in statistics does not - concentrate more on error term
Econometric models - concentrate more on error terms

Official statistics - statistics published by government agencies (or) public bodies such as international organizations.

They provide - quantitative and qualitative information

Official statistics - make information on economic and social development, impact of government policies, improving accountability.


After merging - Department of Statistics and Department of Programme Implementation.

The ministry has two wings - Statistics and Programme implementation.

The statistics wing called - the National Statistical Office (NSO) - consists of - Central Statistical Office (CSO), the computer centre - National Sample Survey Office (NSSO).

Central Statistical office - one of two wings of the National Statistical Organisation (NSO) - it is responsible for co-ordination of statistical activities in the country - evolving and maintaining statistical standards.

Its activities include - compilation of national accounts - conduct of annual survey of Industries and Economic censuses - compilation of index of industrial production as well as computer price indices.

It also deals - various social statistics training, international cooperation industrial classification.
CSO is headed by
-a director – general
-assisted by 5 additional director generals

Looking after the
-National Account division, Social statics division, economic statistics division, training division and the coordination and public division

CSO is located
-in the Sardar Patel Bhawan, Parliament Street, New Delhi

The Industrial Statics Wing of CSO
-located in Kolkata

The computer centre CSO is located
-R.K. Puram, New Delhi

National Sample Survey Organisation (NSSO)
-known as National Sample Survey Office
-organisation under the Ministry of Static, the Government of India
-it is the largest organization in India
-conducting regular socio-economic surveys
-it was established in 1950

NSSO has four division
-Survey Design and Research Division (SDRD)
-Field Operation Division (FOD)
-Data Processing Division (DPD)
-Co-ordination and Publication Division (CPD)

The programme implementation wing
-three division
-(i) Twenty point programme
-(ii) Infrastructure Monitoring and Project Monitoring
-(iii) Member of Parliament, Local Area Development Scheme

National Statistical Commission
-created through a resolution of Government of India
-one autonomous institute

Indian Statistical Institute declared as
-Institute of National importance by an act of Parliament