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DEPARTMENT OF BUSINESS AND SOCIAL STUDIES

COURSE CODE: DBM1309

COURSE TITLE: INTRODUCTION TO MACROECONOMICS

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COURSE OUTLINE

DBM1309: INTRODUCTION TO MACROECONOMICS

Purpose: To enable learners understand and appreciate the importance of economics national activities and equip them with skills that help them actively play a practical role in economic development.

Course Objectives: By the end of the course unit the student should be able to:-

- Define and understand terminologies and meaning of key concepts used in economics
- Describe basic economics problems faced by different types of economic systems
- relate knowledge of Economic to other discipline such as commerce and industry
- Appreciate the relevance and importance of economics as a discipline
- Explore how they can contribute to the development of society

Course Content:

- Introduction to macroeconomics; relationship between micro and macroeconomics.
- National income accounting; national income difficulties in estimation of national income, uses of national income statistics
- Simple Keynesian model of income distribution, consumption, investment, government an d foreign sector
- Consumption of savings functions, theories of investment, the multiplier and accelerator effect, trade cycles
- Nature and development and functions of money ; the demand and supply of money, price index, credit creation, financial institutions, interest rates, monetary policies, equilibrium, in the money and product markets, money and capital markets
- Government taxation and expenditure, national debt, fiscal and monetary policies and macroeconomic objectives
- International trade theories; free trade and protectionism, terms of trade, balance of payments, international liquidity, exchange rates, international institutions
- **Teaching / Learning Methodologies**: tutorials; group discussion; demonstration; Individual assignment; Case studies

Recommended Text Books:

William A. Mceachern (2008), *Macroeconomics: A Contemporary Introduction*, 8th Edition, South Western Educational Publishing

Rob Tisisnai et al. (1999), *Introduction to Macroeconomics: mastering The Global Community*, University Access

Text Books for further Reading:

Koutsoyiannis A; (1994), *Modern Macroeconomics*, Macmillan Education Ltd

CHAPTER ONE: NATIONAL INCOME ANALYSIS

Learning Objectives

At the end of the lesson the student should be able to:

- Explain fully the various concepts of national income.
- Appreciate the importance of compiling national income figures.
- Use national income figures to compare the standards of living over time and between countries and know the problems involved.
- Explain fully why national output and employment fluctuate around their long term trends
- Show how the country can manipulate its resources for faster growth using the relationship between income, consumption and savings.

1.1 Definition of National Income

National Income is a measure of the money value of goods and services becoming available to a nation from economic activities. It can also be defined as the total money value of all final goods and services produced by the nationals of a country during some specific period of time – usually a year – and to the total of all incomes earned over the same period of time by the nationals.

Different Concepts of National Income

a) Gross Domestic Product

The money value of all goods and services produced within the country but excluding net income from abroad.

b) Gross National Product

The sum of the values of all final goods and services produced by the nationals or citizens of a country during the year, both within and outside the country.

c) Net National Product

The money value of the total volume of production (that is, the gross national product) after allowance has been made for depreciation (capital consumption allowance).

d) Nominal Gross National Product

The value, at current market prices, of all final goods and services produced within some period by a nation without any deduction for depreciation of capital goods.

e) Real Gross National Product

This is the national output valued at the prices during some base year or nominal GNP corrected for inflation.

f) National Income Accounting

This refers to the measuring of the total flow of output (goods and services) and of the total flow of inputs (factors of production) that pass through all of the markets in the economy during the same period. To see exactly what national income includes, how it is measured, and what it can tell us, we start with economic models: By economic models we mean:

'*A simplification of a real world or a practical situation aimed at explaining that situation within a set of assumptions'*

1.2 The Circular Flow of Income and Expenditure

This is an economic model illustrating the flow of payments and receipts between domestic firms and domestic households. The households supply *factor services* to the firms. In return, they get *factor incomes*. With factor incomes, they buy *goods and services* from the firms. These flows can be illustrated diagrammatically as shown in Figure 1.1.

The points at which flows from one sector meets the other sector and generate other flows are called *critical points.* In the above diagram, the critical points are A, B and C. At A, the flow of factor services from the households sector meets the firm sector and generates the *flow of factors incomes* from the firms to the households. At B, the flow of factor incomes meets the household sector and generates the flow of *consumer spending*. At C, the flow of consumer spending meets the firms sector and generates the flow of *goods and services.*

1.3 Approaches to Measuring National Income

The compilation of national income statistics is a very laborious task. The total wealth of a nation has to be added up and there are millions of nationals. Moreover, in order to double check and triple check the statistics, the national income statistician has to work out the figures out in three different ways, each way being based on a different aspect. The three aspects are:

a. *The national output:* - The creation of wealth by the nation's industries. This is valued at factor cost, so it must be the same as b) below.

b. *The national income:* - The incomes of all the citizens.

c. *The national expenditure* because whatever we receive we spend, or lend to the banks to invest it, so that the addition of all the expenditure should come to the same as the other two figures. Put in its simplest form we can express this as an identity:

$$National\ output \equiv National\ Income \equiv National\ Expenditure.$$

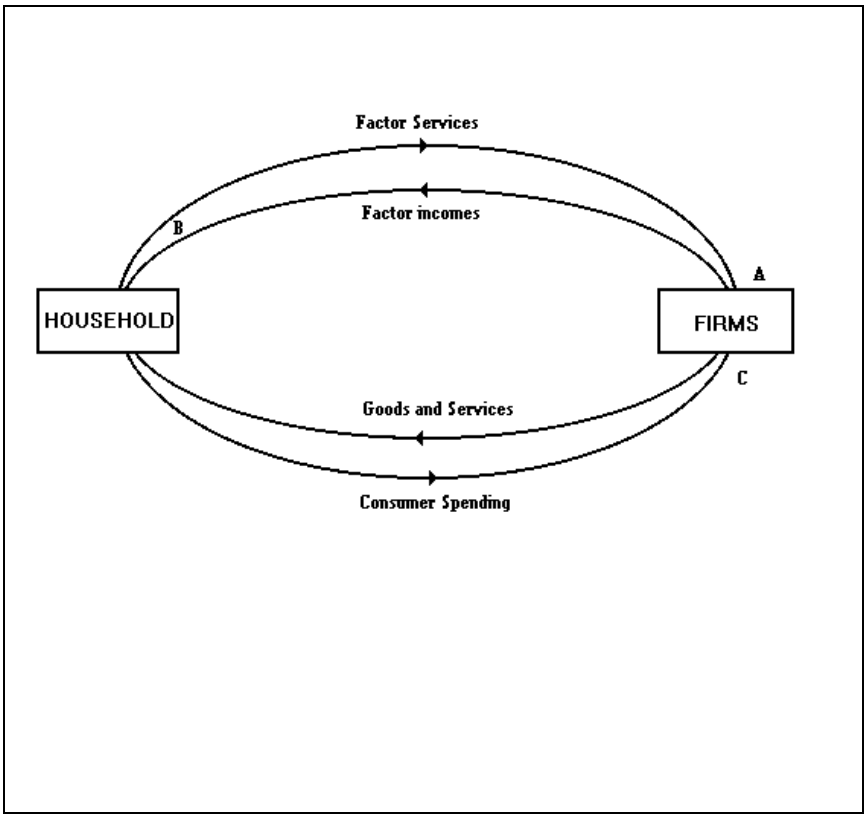

Figure 1.1 The Circular Flow of Income and Expenditure

i) Using Total Expenditure for Calculating National Income

The expenditure approach centres on the components of *final demand* which generate production. It thus measures GDP as the total sum of expenditure on *final goods and services* produced in an economy. It includes all consumers' expenditure on goods and services, except for the purchase of new houses which is included in gross *fixed capital formulation.* Secondly we included all general *government final consumption*. This includes all current expenditure by *central and local* government on goods and services, including wages and salaries of government employees. To these we add *gross fixed capital formation or expenditure on fixed assets* (buildings, machinery, vehicles etc) either for replacing or adding to the stock of existing fixed assets. This is the major part of the investment which takes place in the economy. In addition we add the *value of physical increases in the stocks, or inventories,* during the course of the year. The total of all this gives us *Total domestic expenditure* (TDE). We then add expenditure on exports to the TDE and arrive at a measure known as *Total Final Expenditure*. It is so called because it represents the total of all spending on final goods. However, much of the final expenditure is on *imported goods* and we therefore *subtract spending on imports*. Having done this we arrive at a measure known *as gross domestic product at market prices*. To gross domestic product at market price we *subtract the taxes on expenditure* levied by the government and add on the amount of subsidy. When this has been done we arrive at a figure known *as Gross Domestic Product at factor cost.* National Income however is affected *by rent, profit interest* and dividends paid to, or received from, overseas. This is added to GDP as net property income from abroad. This figure may be either *positive or negative.* When this has been taken into account we arrive

at the gross national product at factor cost. As production takes place, the capital stock of a country wears out. Part of the gross fixed capital formation is therefore, to replace worn out capital and is referred to as *Capital Consumption*. When this has been subtracted we arrive at a figure known as the *net national product*. Thus, summarising the above, we can say:

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

Calculating national income from total expenditure

Country Y National Expenditure (in £millions)		1999
Expenditure of Consumers		
Food		27,148
Alcoholic drink		13,372
Tobacco		6,208
Housing		27,326
Fuel and light		9,395
Clothing		12,114
Household goods and services		12,274
Transport and communications		31,475
Recreation		16,541
Other goods and services		23,356
Total		179,209
Less: Adjustment of non-profit making bodies		(443)
		178,766
		178,766
Add: Expenditure of non-profit making bodies		3,661
		182,427
Central Government expenditure		40,623
Local Government expenditure		25,236
Capital formation		49,559
Growth in stocks		267
Total Domestic expenditure at market prices		298,112
Deduct: Taxes on expenditure		49,865
		248,247
Add: Net result exports-imports	3,186	

Subsidies	6,056	
Net property income from abroad	1,948	11,190
		259,437
Less: Estimated depreciation on capital assets		36,490
		222,947m

(ii) Using Factor Incomes for Calculating National Income

A second method is to *sum up all the incomes* to individuals in the form of *wages, rents, interests and profits* to get domestic incomes. This is because each time something is produced and sold someone obtains income from producing it. It follows that if we add up all incomes we should get the value of total expenditure, or output. Incomes earned for purposes other than rewards for producing goods and services are ignored. Such incomes are *gifts, unemployment or relief benefits, lottery, pensions, and grants* for students etc. These payments are known as *transfer income (payments)* and including them will lead to *double counting.* The test for inclusion in the national income calculation is therefore that there should be a **"***quid pro quo"* that the money should have been paid against the exchange of a good or service. Alternatively, we can say that there should be a **"***real"* flow in the opposite direction to the money flow. We must also include income obtained from *subsistence output.* This is the opposite case from transfer payments since there is a flow of real goods and services, but no corresponding money flow. It becomes necessary to "impute'' values for the income that would have been received. Similarly workers may, in addition to cash income, receive *income in kind;* if employees are provided with *rent free housing,* the rent which they would have to pay for those houses on the open market should, in principle, be "imputed" as part of their income from employment. The sum of these incomes gives *gross domestic product GDP*. This includes incomes earned by foreigners at home and excludes incomes earned by nationals abroad. Thus, to *Gross Domestic Income* we add *Net property Income* from abroad. This gives *Gross National Income***.** From this we deduct *depreciation* to give *Net National Income.*

Country Y National Income rewards to factors (in £ millions)		1999
Incomes from employment		
Wages and salaries		143,348
Pay in cash and kind of HM Forces		3,121
Employers' contribution to National Health Insurance		10,632
Employers' contribution to other funds		12,971
		170,072
Income from self-employment		23,123
Other Incomes		
Profits of companies		41,530

Surpluses of public corporations		9,661
Surpluses of other public enterprises (-)		
		(109)
Rent		17,424
Imputed charge for consumption of capital		2,456
		264,157
Less: Stock appreciation		(4,326)
		259,831
Add: net property income from abroad		1,948
		261,779
Less: Residual error	2,342	
Estimated depreciation on capital assets	36,490	(38,832)
		222,947m

Table 1.1 Calculating National Income from factor Incomes

Note: The residual error is a small error (about 1%) in the collection of these figures.

(iii) Using the National Output for Calculating National Income

A final method which is more direct is the *"output method"* or the *value added approach.* This involves adding up the total contributions made by the various sectors of the economy. "Value Added" is the *value added by each industry to the raw materials or processed products that it has bought from other industries before passing on the product to the next stage in the production process.* This approach therefore centres on *final products.* Final products will include *capital goods* as well as *consumer goods* since while *intermediate goods* are used up during the period in producing other goods; capital goods are not used up (apart from "wear and tear" or depreciation) during the period and may be thought of as consumer goods *"stored up"* for future periods. Final output will include *"subsistence output",* which is simply *the output produced and consumed by households themselves.* Because subsistence output is not sold in the market, some assumption has to be made to value them at some price. We also take into account the *final output of government,* which provides services such as education, medical care and general administrative services. However, since state education and other governmental services are not sold on the market we shall not have market prices at which to value them. The only obvious means of doing this is to value public services at what it costs the government to supply them that is, by the *wages bill spent on teachers, doctors, and the like***.** When calculating the GDP in this matter it is necessary to avoid *double counting.*

Country Y National Product by industry (£ millions)		1999
Agriculture		5,535
Energy and water supply		29,645
Manufacturing		62,258
Construction		15,319
Distribution, hotels, catering, repairs		35,002
Transport		11,543
Communications		7,092
Insurance, banking and finance		31,067
Ownership of dwellings		15,761
Public administration, defence and social security		18,027
Public health and education services		24,021
Other services		16,415
Total domestic output		271,685
Deduct: Residual error	2,342	
Adjustment for financial services	11,854	
Estimated depreciation on capital assets	36,490	- 50,686
		220,990
Add: Net property income from abroad		1,948
Aggregate net national product		222,947 m

Table 1.2 Calculating national income from national output

1.4 Difficulties in Measuring National Income

National income accounting is beset with several difficulties. These are:

a. What goods and services to include

Although the general principle is to take into account only those products which change hands for money, the application of this principle involves some arbitrary decisions and distortions. For example, unpaid services such as those performed by a housewife are not included but the same services if provided by a paid housekeeper would be.

Many farmers regularly consume part of their produce with no money changing hands. An imputed value is usually assigned to this income. Many durable consumer goods render services over a period of time. It would be impossible to estimate this value and hence these goods are included when they are first bought and subsequent services ignored. Furthermore, there are a number of governmental services such as medical care and education, which are provided either 'free' or for a small charge. All these provide a service and are included in the national income at cost. Finally, there are many illegal activities, which are ordinary business and produce goods and services that are sold on the market and generate factor incomes.

b. Danger of Double Counting

The problem of double counting arises because of the inter-relationships between industries and sectors. Thus we find that the output of one sector is the input of another. If the values of the outputs of all the sectors were added, some would be added more than once, giving an erroneously large figure of national income. This may be avoided either by only including the value of the final product or alternatively by summing the values added at each stage which will give the same result.

Some incomes such as social security benefits are received without any corresponding contribution to production. These are *transfer payments* from the taxpayer to the recipient and are not included. *Taxes* and *subsidies* on goods will distort the true value of goods. To give the correct figure, the former should not be counted as an increase in national income for it does not represent any growth in real output.

c. Inadequate Information

The sources from which information is obtained are not designed specifically to enable national income to be calculated. Income tax returns are likely to err on the side of understatement. There are also some incomes that have to be estimated. Also, some income is not recorded, as for example when a joiner, electrician or plumber does a job in his spare time for a friend or neighbour. Also information on foreign payments or receipts may not all be recorded.

1.5 Factors affecting the size of a National Income

The size of a nation’s income depends upon the quantity and quality of the factor endowments at its disposal. A nation will be rich if its endowments of natural

resources are large, its people are skilled, and it has a useful accumulation of capital assets. The following points are of interest:

a) Natural Resources

These include the minerals of the earth; the timber, shrubs and pasturage available; the agricultural potential (fertile soil, regular rainfall, temperature or tropical climate); the fauna and flora; the fish; crustacea etc of the rivers and sea; the energy resources, including oil, gas, hydro-electric, geothermal, wind and wave power.

b) Human Resources

A country is likely to prosper if it has a large population; literate and numerate sophisticated and knowledgeable about wealth creating processes. It should be well educated and skilled, with a nice mixture of theory and practice. It should show enterprise, being inventive, energetic and determined in the pursuit of a better standard of living.

c) Capital Resources

A nation must create and then conserve capital resources. This includes not only tools, plant and machinery, factories, mines, domestic dwellings, schools, colleges, etc, but a widespread infrastructure of roads, railways, airports and ports. Transport creates the utility of space. It makes remote resources accessible and high-cost goods into low-cost goods by opening up remote areas and bringing them into production.

d) Self-sufficiency

A nation cannot enjoy a large national income if its citizens are not mainly self-supporting. If the majority of the enterprises are foreign –owned there will be a withdrawal of wealth in the form of profits or goods transferred to the investing nation.

e) Political Stability

Uses of national income figures

- We need national income statistics to measure the size of the "National cake' of goods and services available for competing uses of private consumers, government, capital formation and exports (less imports).
- National Income statistics are also used in comparing the standard of living of a country over time
- And also the standards of living between countries.
- National Income Statistics provide information on the stability of performance of the economy over time e.g. a steadily increasing income would be indicative of increasing national income.
- If National Income Statistics are disaggregated it would enable us to assess the

relative importance of the various sectors in the economy. This is done by considering the contribution of the various sectors to Gross National Product over time. Such information is crucial for planning purposes for it reveals to planners where constraints to economic development lie. It therefore becomes possible to design a development strategy that eventually would overcome these problems. This central contribution could be in the form of employment or the production of goods and services.

- By assessing exports and imports as a percentage of Gross national Product i.e. using national statistics, it is possible to determine the extent to which a country depends on external trade.

- National Income Statistics also help in estimating the saving potential and hence investment potential of a country.

1.6 Real Vs Nominal GNP: "Deflating" by a Price Index

One of the problems that confront economists when measuring GNP is that they have to use money as the measuring rod. These days however, inflation sends the general price level up and up clearly this means that the yardstick stretches in their hands everyday.

Economists repair most of the damage wrought by the *elastic* yardstick by using a *price index.* The price index used to remove inflation (or "deflate'' the GNP) is called the GNP deflator. The GNP deflator is defined as the ratio of nominal GNP to real GNP. It is constructed as follows:

$$\text{GNP Deflator} = \frac{\text{Nominal GNP}}{\text{Real GNP}}$$

$$\text{Real GNP} = \frac{\text{Value at current Price}}{\text{CPI}}$$

Where CPI is Consumer Price Index

The GNP deflator is useful because it includes prices on all goods and services in GNP.

Per Capita Income

By National Income is meant the value of outputs produced within a year. Income per capita is simply the National Income divided by the population of the country in a year.

$$\text{Income Per Capita} = \frac{\text{National Income}}{\text{Population}}$$

It shows the standard of living a country can afford for its people. The level of income per capita is determined by the size of a country's population. The higher is the rate of growth of population, the lower is the rate of growth of income per capita.

Per capita income is a theoretical rather than a factual concept. It shows what the share of each individual's National Income would be if all citizens were treated as equal. In a real world situation there exists considerable inequality in the

distribution of income especially in the third world countries

National Income and Welfare
The relationship between national income and welfare is best explained in terms of economic growth (By economic growth is meant capacity expansion). The effect of economic growth is an increase in the national income. This increase in National Income has several effects on a country's citizens.

1) Assuming a fair distribution of income, the average citizen would be in a position to enjoy a higher living standard.

2) The ordinary households or persons could be able to afford luxury commodities. NB: luxury differs in its definition from one country to another and the determining factor being the level of income. e.g. clothing can be a luxury for some people.

3) It enables the ordinary household to afford leisure which may be regarded as luxury i.e. reducing working hours.

Points 1, 2 and 3 are based on assumption that there exists a fair distribution of the National cake. This may not be the case in fact it is disastrous to rely on GNP, its growth rate and GNP per capita as indicators of economic well being. GNP per capita e.g. gives no indication of how National Income is actually distributed and who is benefiting most from the growth of production. A rising level of absolute and per capita GNP may camouflage the fact that the poor are not better than before. In fact the calculation of GNP and especially its rate of growth is in reality largely a calculation of the rate of growth, of the incomes of upper 20% who receive a disproportionately large share of the National Product. It is, therefore, unrealistic to use GNP growth rates as an index of improved economic welfare for the general public.

Example: Assuming a 10 people economy and assuming 9 of them had no income and the 10^{th} person receives 100 units of income the GNP for this economy would be 100 units of income and per capita income would be 10 units. Suppose everyone's income increases by 20% so that GNP rises to 120 units per capita income would rise to 12 units. However for the 9 people without income before and currently such a rise in per capita income provides no cause for rejoicing since the one rich individual still has the income. In this case we observe that GNP instead of being a welfare index of a society as a whole is merely increasing the welfare of a single individual.

This exchange though an extreme case is indicative of what happens in the real life situation where incomes are very unequally distributed.

Costs of Economic Growth (Increase in National Income)

1. People living in industrial towns suffer from the effects of a polluted atmosphere.

2. The manufacture of intoxicants together with urbanization and urban housing problems leads to an increase in crimes. This creates for the state the additional

costs of the maintenance of prisons and a large police force to maintain law and order. Thus social welfare would be increased if the production and sale of intoxicants are curtailed.

3. While the expansion of the National Income owes a great deal to scientific research the application of research to new means of destruction add nothing to social welfare.

4. It leads to employment of women in industry leading to children being left without care or simply maternal care.

Arguments for and against Uneven Distribution of Income and Wealth

The basic economic argument to justify large income inequality was the assumption that high personal and corporate incomes were necessary conditions for saving which made possible *investments* and economic growth through mechanism such as the Harrod-Domar Model. In this argument it is maintained that the rich save and invests a significant proportion of their incomes while the poor spend all their incomes on consumer items, and since GNP growth is assumed to be directly related to the proportion of National Income saved then an economy characterised by highly unequal distribution of income would save more and grow faster than one with more equitable distribution of income. It was also assumed that eventually National per capita income would be high enough to allow for a sizeable distribution of income via Taxes and subsidies but until such time is reached, any attempt to redistribute income significantly could only serve to lower growth rate and delay the time when a large income cake would be cut up into smaller sizes for all population group.

Limitations of the argument (Against)
Unlike the historical experience of the now developed countries, the rich in contemporary Third World Countries are not noted for the desire to save and invest substantial proportions of their income in the local economy. Instead businessmen, politicians and other elites are known to squander much of their income on imported goods, luxury houses, foreign travel and investment in gold, jewellery and foreign banking countries. Such savings and investments do not add to the National Productive resources. Instead they represent substantial drains on these resources in that the income so derived is extracted from the sweat and toil of common uneducated unskilled labourers thus the rich do not necessarily save and invest a significantly large proportion of their income than the poor.

A growth strategy based on sizeable and growing income inequalities may in reality be nothing more than an opportunistic myth designed to perpetuate the vested interests and maintain "status quo" of the economic and political elite of the 3rd world, often at the expense of the great majority of the general population.

1) The low income and low levels of living for the poor which are manifested in poor health, nutrition and education can lower their economic productivity and thereby lead directly and indirectly to a slower growing economy. Therefore strategies to lift the living standard and incomes of say the bottom 40% would contribute not only to their material well being, but also to the productivity and income of the economy as a whole.

2) Raising the income level of the poor will stimulate an overall increase in the demand for locally produced necessity products like food and clothing. Rising demand for local goods provided a greater stimulus for local production i.e. stimulates local production, employment and investment. This creates a broader popular participation in that growth. The rich, on the other hand, tend to spend more of their additional income on imported luxuries.

3) A more equitable distribution of income achieved through the reduction of mass poverty can stimulate healthy economic expansion by acting as a powerful material and psychological incentive to widespread public participation in the development process. Wide income disparities and substantial absolute poverty on the other hand can act as a powerful and psychological disincentive to economic progress. In the extreme, it may create conditions for its ultimate rejection by the masses of frustrated and politically exploitive people notably the educated.

1.7 National Income and Standards of Living

Standard of living refers to the quantity of goods and services enjoyed by a person. These goods may be provided publicly, such as in the case of health care or education or they may be acquired by direct purchase. It also includes the less easily quantifiable aspects of living such as terms and conditions of employment and general living environment.

National Income figures can be used to measure the standard of living at a particular point of time and over time. This is done by working out the per capita income of the country. *By per capita income we mean: the value of goods and services received by the average man.* Per capita income is obtained by dividing the National Income by the Total population. If the per capita income is high, it can be deduced that the standard of living is high.

Problems of using per capita income to compare standard of living over time

1) The composition of output may change. e.g. more defence-related goods may be produced and less spent on social services, more producer goods may be made and less consumer goods, and there may be a surplus of exports over imports representing investment overseas. Standards of living depend on the quantity of consumer goods enjoyed.

2) Over time prices will change. The index of retail prices may be used to express the GNP in real terms but there are well known problems in the use of such methods.

3) National Income may grow but this says nothing about the distribution of that income. A small group may be much better off. Other groups may have a static standard of living or be worse off.

4) Any increase in GNP per capita may be accompanied by a decline in the general quality of life. Working conditions may have deteriorated. The environment may have suffered from various forms of pollution. These non-monetary aspects are not taken into account in the estimates of the GNP.

5) Finally the national income increases when people pay for services which they previously carried out *themselves.* If a housewife takes an office job and pays someone to do her housework, national income will increase to the extent of both persons' wages. Similarly a reduction in national income would occur if a man painted his house rather than paying a professional painter to do the same. Changes of the above type mean that changes in the GNP per capita will only imperfectly reflect changes in the standard of living.

Per Capita income and International Comparisons

Per capita income figures can also be used to compare the standards of living of different countries. Thus if the per capita income of one country is higher than that of another country, the living standard in the first country can be said to be higher. Such comparisons are made by aid giving international agencies like the United Nations and they indicate the relevant aid requirements of different countries.

But there are major problems in using *real income per head* (per capita income) to measure the standard of living in different countries. First there is the whole set of *statistical problems* and, secondly, there are a number of difficult *conceptual problems* or problems of interpretation.

i. *Inaccurate estimates of population:* The first statistical problem in calculating income per head particularly in less developed countries is that we do not have very accurate population figures with which to divide total income.

ii. *Specific items which are difficult to estimate:* Another data problem, as already mentioned, is that data for depreciation and for net factor income from abroad are generally unreliable. Hence although we should prefer figures for "the' national income, we are likely to fall back on GDP, which is much less meaningful figure for measuring income per head. Inventory investment and work-in-progress are also difficult items to calculate.

iii. *Non-marketed subsistence output and output of government:* some output like subsistence farming and output of government are not sold in the market. These are measured by taking the cost of the inputs. In one country, however, salary of doctors for instance, might be higher and their quality low compared to another country. Although the medical wage bill will be high, the "real consumption" of medical care in the former might be lower. Since "public consumption" is an important element in national income, this could affect comparisons considerably.

Also in making international comparisons it is assumed that the complied national income figures of the countries being compared are equally accurate. This is not necessarily the case. If, for example, in one country there is a large subsistence sector, a lot of estimates have to be made for self-provided commodities. The national figures of such a country will, therefore, be less accurate than those of a country whose economy is largely monetary or cash economy.

iv. *Different degrees of income distribution:* If the income of one country is evenly distributed, the per capita income of such a country may be higher than that of another country with a more evenly distributed income, but this does not necessarily mean that most of its people are at a higher living standard.

v. *Different Types of Production:* If one country devotes a large proportion of its resources in producing non-consumer goods e.g. military hardware, its per capita income may be higher than that of another country producing largely consumer goods, but the standard of living of its people will not necessarily be higher.

vi. *Different forms of Published National Income figures:* The per capita income figures used in international comparisons are calculated using the published figures of national income and population by each country. For meaningful comparisons, both sets of national income figures should be in the same form i.e. both in real terms or both in money terms, the latter may give higher per capita income figures due to inflation, and thus give the wrong picture of a higher living standard. On the other hand, if both sets are in money terms the countries being compared should have the same level of inflation. In practice, this is not necessarily the case.

vii. *Exchange Rates:* Every country records its national income figures in its own currency. To make international comparisons, therefore, the national income figures of different countries must have been converted into one uniform currency. Using the official exchange rates does this. Strictly speaking, these apply to internationally traded commodities, which normally form a small proportion of the national production. The difficulty is that these values may not be equivalent in terms of the goods they buy in their respective commodities i.e. the purchasing power of the currencies may not be the same as those reflected in the exchange rate.

viii. *Difference in Price Structures:* Differences in the relative prices of different kinds of goods, due to differences in their availability, mean that people can increase their welfare if they are willing to alter their consumption in the direction of cheaper goods. The people in poor countries probably are not nearly as badly off as national income statistics would suggest, because the basic foodstuffs, which form an important part of their total consumption, are actually priced very low.

ix. *Income in relation to Effort:* The first conceptual problem in calculating income per head is to look at goods and services produced in relation to the human effort that has gone into producing them. Obviously if people work harder, they will be able to get more goods; but they may prefer the extra leisure. Indeed, the amount of leisure that people want depends in part on their level of income. Strictly, therefore, we should take income per unit of labour applied. It is largely because this would be statistically awkward that economists prefer to take real income per head.

x. *Differences in size:* A problem which is both conceptual and statistical is due to the transport factor. If two countries are of different sizes, the large country may devote a large proportion of its resources in developing transport and communication facilities to connect the different parts of the country. This will be reflected in its national income, but the standard of living of its people will not necessarily be higher than that of smaller country, which does not need these facilities to the same extent.

xi. *Differences in Taste:* Another formidable difficulty is that tastes are not the

same in all countries. Also in different countries the society and the culture may be completely different thus complicating comparisons of material welfare in two countries. Expensive tastes are to some extent artificial and their absence in poor countries need not mean a corresponding lack of welfare. Tastes also differ as regards the emphasis on leisure as against the employment of the fruit of labour: if in some societies people prefer leisure and contemplation, who is to say this reduces their welfare as compared to those involved in the hurly-burly of life and labour in modern industry?

xii. *Different climatic zones:* If one country is in a cold climate, it will devote a substantial proportion of its resources to providing warming facilities, e.g. warm clothing and central heating. These will be reflected in its national income, but this does not necessarily mean that its people are better off than those in a country with a warm climate.

xiii. *Income per head as index of economic welfare:* We cannot measure material welfare on an arithmetic scale in the same way as we measure real income per head. For instance, if per capita income increases, material welfare will increase; but we cannot say by how much it has increased, and certainly that it has increased in proportion.

1.8 Consumption, Saving and Investment

Aggregate Demand
This refers to the total planned or desired spending in the economy as a whole in a given period. It is made up of consumption demand by individuals, planned investment demand, government demand and demand by foreigners of the nations output.

i. The Consumption Function
The consumption function is the relationship expressed in mathematical or diagrammatic form] between planned consumption and other independent variables, particularly income.
The consumption function is one of the most important relations in Macro-economics. Consumption is the largest single component of aggregate expenditure and if we are to predict the effects of income and employment of variations in private investment and in government spending, we must know how consumption varies in response to changes in income. Thus it is important to take a closer look at the consumption.

Other Determinants

1. *Rate of Interest* Is contained in the argument of the classified economists who argued that rational consumers will save more and consume less if the rate of interest is high.

2. *Relative Prices* Influences the aggregate consumption. If relative prices are high, the level of consumption will be low

3. *Capital Gains* Keynes observed that there is a possibility of windfall gains or losses influencing consumption. He says consumption of the wealth owning group

may be extremely susceptible to unforeseen changes in the money value of their wealth. This is true of the stock minded speculative economy.

4. *Wealth* The possession of liquid assets influences the amount that you have to save. It stems from the Diminishing Marginal Utility of Wealth. The larger the stock of wealth, the lower its Marginal Utility and consequently the weaker the desire to add to future wealth by curtailing present consumption. In this case, the more wealth an individual has, the weaker will be the desire to accumulate still more savings at that particular time.

5. *Money Stock or Liquid Assets:* Possession of liquid assets boosts consumption in that they can be changed into cash and thus consumed.

6. *Availability of Consumer Credit:* Normally influences spending of the consumer of durables.

7. *Attitudes and Expectations of the Consumer* A change in the consumer attitudes will affect consumer behaviour. The expectations attained by the consumer about income increases will affect the consumer behaviour. If in the face of price increases they expect further price increases; they shall increase their purchases further. N/B. These things might be true of an individual, but not the [aggregate] society.

8. *The money Illusion* Some people look at money at the face value. Consumption will be affected if customers are subject to money illusion. The phenomenon of Money illusion occurs when despite proportional changes in the prices of goods and services and then their money incomes which keeps real incomes unchanged, consumers make a change in their real consumption pattern. It is know as Pigou Effect which talks of real balance. With a change in nominal income, people behave in the same way as though their real income has gone up.

Suppose price and Money Income increases by 10%, for the families which regard their real income unchanged and do not suffer from money illusion they would take their real incomes as unchanged and would only increase their consumption by 10%.

9. *Distribution of Income* If the Marginal Propensity to consume among the poor is high, then redistribution of wealth from the rich to the poor leads to higher consumption.

10. *Composition of the Population:* In sex and age.

1.9 The Keynesian Theory of Consumption Function

The theory was developed during the Great Depression which plagued Europe and America. During this time, there was excess capacity and idle resources and no effective demand i.e. people were unemployed and had no purchasing power. The determination of aggregate demand, then, was of crucial significance in Keynes analysis.

Definitions

i. Average Propensity to Consume:

The average Propensity to Consume [APC] is defined as the fraction of aggregate

national income which is devoted to consumption. If consumption is denoted by C and income by Y, then:

$$APC = \frac{C}{Y}$$

The Average Propensity to Consume decreases in Keynes model as income increases.

ii. Average Propensity to save The Average Propensity to Save [APS] is defined as the fraction of aggregate national income which is devoted to savings. Thus if S denotes savings then,

$$APS = \frac{S}{Y}$$

In a closed ungoverned economy, where income is spent or saved, APC = APS = 1

iii. Marginal Propensity to Save
The Marginal Propensity to Save is the fraction of an increase in income that is saved. Thus, if ΔS denoted changes in savings, and ΔY change in income, then,

$$MPC = {}^{\Delta C}/_{\Delta y}$$

An increase in income is partly consumed and partly saved. Thus

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

Dividing through by ΔY, we get

$${}^{\Delta c}/_{\Delta Y} + {}^{\Delta S}/_{\Delta Y} = 1$$

Therefore ΔC + ΔS = 1, and

$$S = 1 - C$$

ii. Investment

Investment is the process of increasing the productive capital stock of a country, or can be defined as the production of goods not for immediate consumption. The investment function is the relationship [expressed in mathematical or diagrammatic form] between planned investment and the real interest rate.

Definitions
Induced Expenditure Also called endogenous expenditure is any expenditure that is determined by, and thus varies with, economic variables within our theory.

Autonomous Expenditure: Also called exogenous expenditure, is any expenditure that is taken as a constant or unaffected by any economic variables within our theory. For instance, in the simple theory of the determination of national income, investment is assumed to vary directly with national income.

Actual income and full employment income: Full employment income (Also called

Potential National) is the national income that could be produced when the country's factors of production are fully employed. This concept is given the symbol YF. Actual national income, symbolized by Y, can be below or equal to YF and, by working resources overtime and otherwise harder than normal, it can occasionally rise above YF.

Intended or planned Investment: Expenditure on investment depends on business expectations on the chance of making profits and on the availability of funds for the purchase of producer goods. Although business expectations re complex in nature, a rough approximation is that the expectations on profits rise or fall in direct response to movements in the GNP this year increases businessmen expect an increase in planned consumption expenditures, and hence profits to increase next year.

iii. The Multiplier In his theory Keynes asserted that consumption is a function of income, and so it follows that a change in investment, which we may call ΔI, meaning an increment in I will change Y by more than ΔI. For while the initial increase in Y, ΔY, will equal ΔI, this change in Y itself produce a change in C, which will increase Y still further. The final increase in income thus exceeds the initial increase in investment expenditure which is therefore magnified or "multiplied". This process is called the *multiplier process.*

The Operation of the "Multiplier"

The multiplier can be defined as the coefficient (or ratio) relating a change in GDP to the change in autonomous expenditure that brought it about. This is because the Multiplier can be defined as the coefficient (or ratio) relating a change in GDP to the change in autonomous expenditure that brought it about. This is because a change in expenditure, whatever its source, will cause a change in national income that is greater than the initial change in expenditure.

For example, suppose there is an autonomous increase in investment which comes about as a result of decisions by businessmen in the construction industry to increase the rate of house building by, say, 100 houses, each costing £1,000 to build, investment will increase by £100,000. Now this will be paid out as income to workers of all kinds in the building industry, to workers in industries which supply materials to the building industry, and others who contribute labour or capital or enterprises to the building of the houses; these people will in turn wish to spend these incomes on a wide range of consumer goods, and so on. There will thus be a series of further rounds of expenditure, or *Secondary Spending*, in addition to the initial *primary spending*, which constitutes further increases in GDP.

This is because those people whose incomes are increased by the primary increase in autonomous expenditure will, through their propensity to consume, spend part of their increase in their incomes. GDP increases through the Expenditure – Income – Expenditure cycle.

How and where does the Multiplier Stop?

The multiplier concept can erroneously give the impression that an initial increase in autonomous spending would lead to an indefinite increase in GDP. This does not happen because each secondary round of increased expenditure gets progressively smaller, which is explained by the fact that the Marginal Propensity to spend the national income is less than one. This is the ratio which scales down each

successive round of expenditure and causes the GDP to converge to a new equilibrium level.

Suppose in our example, an average of three fifths of any increase in income is spent by the people receiving it:

The Marginal Propensity to consume or save will be $^{3}/_{5}$ or $^{2}/_{5}$ respectively. Since $\Delta I = 1000{,}000$, the increase in Y converge at the level 250,000. This is because for any value z between 0 and 1, the series

$1 + z + z^2\ z^3 \ldots$..
tends to the value $^{1}/_{1-z.}$ In our example we have the series (in thousands)

$100 + 60 + 36 + 21.6 + \ldots.$

Or

$100\ \{ 1 + (3/5) + (3/5) + \ldots..\}$

which thus equals:

$$100 = \frac{1}{1 - {}^{3}/_{5}} = 100 \frac{1}{{}^{2}/_{5}} = 250$$

This result can be generalized, using our notation, as

$$\Delta 1 \frac{1}{1 - {}^{\Delta c}/_{\Delta Y}} = \Delta 1 \frac{1}{{}^{\Delta s}/_{\Delta Y}} = \Delta Y$$

Dividing by ΔI, we obtain

$$\frac{\Delta Y}{\Delta I} = \frac{1}{1 - {}^{\Delta c}/_{\Delta Y}} = \frac{1}{{}^{\Delta s}/_{\Delta Y}}$$

The ratio, $\Delta Y/\Delta I$, of the total increase in income to the increase in investment which produce it, is known as the MULTIPLIER, K. If we write c for $\Delta C/\Delta T$ and s for $\Delta S/\Delta Y$, we have

$$k = \frac{\Delta Y}{\Delta I} = \frac{1}{1 - c} = \frac{1}{s}$$

The multiplier is thus the reciprocal of the MPS (marginal propensity to save).

Relevance of Multiplier
The Keynesian Model of the Multiplier however is a Short Run Model, which puts more emphasis on consumption than on savings. It is not a long run model of growth since savings are the source of investment funds for growth. It is appropriate for

mature capitalist economies where there is excess capacity and idle resources, and it is aimed at solving the unemployment problem under those conditions – (i.e. problem of demand deficiency with the level of investment too low, because of lack of business confidence, to absorb the high level of savings at full employment incomes).

It is not a suitable model for a developing economy because:

i. In less developed economies exports rather than investment are the key injections of autonomous spending.

ii. The size of the export multiplier itself will be affected by the economies dependence on two or three export commodities.

iii. In poor but open economies the savings leakage is likely to be very much smaller, and the import leakage much greater than in developed countries.

iv. The difference, and a fundamental one, in less developed countries is in the impact of the multiplier on real output, employment and prices as a result of inelastic supply.

The Acceleration Principle

Suppose that there is a given ratio between the level of output Y_t at any time t, and the capital stock required to produce it K_t and that this ratio is equal to α, hence:

$$K_t = \alpha Y_t$$

The coefficient is the capital-output ratio, $\alpha, = {}^{K}/_{Y}$ and is called the *accelerator coefficient.*

If there is an *autonomous* increase in investment, ΔI this through the multiplier process will lead to increased employment resulting in an overall increase in income**,** ΔY. This may lead to further investment called *Induced Investment* in the production of goods and services. This process is called *acceleration.*

The ratio of induced investment to the increase in income resulting from an initial autonomous increase in investment is called the *accelerator*. Thus, if the included investment is denoted by ΔI^1 and the accelerator by β, then:

$$\frac{\Delta I^1}{\Delta Y} = \beta, \Delta I^1 = \beta \Delta Y$$

Thus another way of looking at the accelerator is as the factor by which the increase in income resulting from an initial autonomous increase in investment is multiplied by the induced investment.

From the Keynesian model $\Delta Y = \Delta 1 .{}^{1}/_{s}$ we c an write

$$\Delta 1^1 = \beta, \Delta 1^1 .{}^{1}/_{s}$$

Thus, the higher the multiplier and the higher the accelerator, the higher will be the

level of induced investment from an initial autonomous increase.

1.10 Determination of Equilibrium National Income

National income is said to be in equilibrium when there is no tendency for it either to increase or for it to decrease. The actual National Income achieved at that point is referred to as the equilibrium National Income.

For there to be equilibrium, firm spending must be equal to firm's receipts. If this were not the case, the firms will receive less and lose money until there is no more money in the system. Hence, for there to be equilibrium:

Factor Incomes = Consumer Spending

Income Models

1) The Spendthrift Economy: This assumes a circular flow of income in a closed economy with no Government sector and no foreign trade. It also assumes the existence of *two sectors*, namely the sector of *households* and the sector of *firms.* Firms make the commodities that households consume. They purchase the services of factors of production from the household that own them, paying wages, rent, interest and profits in return, and then use the factors to make commodities.

It is assumed firms sell all of their output to households and receive money in return. All of the money received is in turn *paid out to households*. Part goes to households that sell factor services to firms, and the rest is profit paid out as Dividends to the owners of the firm. In short, neither households nor firms save anything in the spendthrift economy; everything that one group receives goes to buy goods and services from the other group. *Expenditure is the rule of the day!*

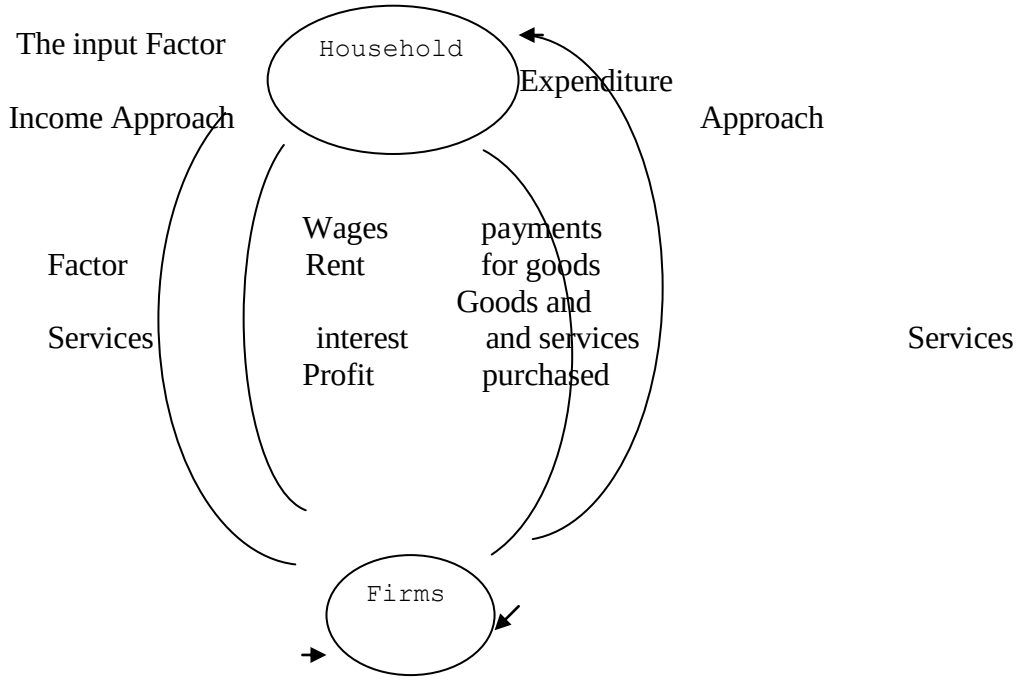

Figure 1.2 The Spendthrift Economy

Now, suppose we wish to calculate the Total Value of the economy's output. We can do this based on either side of the circular flow shown in the figure above. The output-expenditure approach uses calculations based on the flows on the right hand side of the figure, while the input-factor income approach uses calculations based on the flows on the left-hand side of the figure.

2) The Frugal Economy: In the Frugal economy, households and firms look to the future, and as a result undertake both Saving and *Investment.*

Saving is income not spent on goods and services for current consumption. Both households and firms can save. Households save when they elect not to spend part of their current income on goods and services for consumption. Firms save when they elect not to pay out to their owners some of the profits that they have earned. *Distributed profits* are profits actually paid out to the owners of firms, and *undistributed profits* are profits held back by firms for their own uses.

Investment is defined as the production of goods not for immediate consumption. All such goods a are called *investment goods.* They are produced by firms and they may be bought either by firms or by households. Most investment is done by firms, and firms can invest either in *capital goods,* such as plant and equipment, or *inventories.*

The total investment that occurs in the economy is called *Gross Investment*. The amount necessary for replacement is called the *Capital consumption Allowance* and is often loosely referred to as *depreciation*. The remainder is called *net investment.*

The current production of final commodities in the frugal economy can be divided into two sorts of output. First, there are consumption goods and services actually sold to households. Second, there are investment goods that consist of capital goods plus inventories of semi-finished commodities still in the hands of firms. The symbols C and I can be used to stand for *currently produced consumption goods* and *currently produced investment goods respectively.*
In an economy that uses capital goods, as does the Frugal economy, it is helpful to distinguish between two concepts of National Income (or National Product).

Gross National Income (or Gross National Product, GNP); It is the sum of the values of all final goods produced for consumption and investment, and thus it is also the sum of all factor incomes earned in the process of producing the National output.

Net National Income (or Net National Product, NNP) is GNP minus the capital consumption allowance. NPP is thus a measure of the Net output of the economy after deducting from gross output an amount necessary to maintain the existing stock of capital intact.

Equilibrium National Income in a Frugal Economy
Saving and investment are examples of two categories of expenditure called withdrawals and injections. A *withdrawal* is any income that is not passed on in the circular flow. Thus if households can earn income and not spend it on domestically produced goods and services, this is a withdrawal from the circular flow. Similarly, if firms receive money from the sale of goods and do not distribute it as payments to factors, this is a withdrawal from the circular flow.

An *injection* is an addition to the incomes of domestic firms that does not arise from the expenditure of domestic households or arise from the spending of domestic firms.

The effects of withdrawals and injections is to interfere with Equilibrium income. Withdrawals by reducing expenditure exert a contractionary force on national income. If, for example, households decide to increase their savings and correspondingly reduce the amount they used to spend buying consumption goods from firms, this reduces the incomes of firms, and reduces the payments they will make to factors of production. Injections, by raising expenditure, exert an expansionary force on national income. If, for example, firms sell machines to other firms, their incomes and payments to household for factor services will rise without there having been an increase in household expenditure.

Thus for equilibrium National Income to exist, firm spending should be equal to firm receipts. Thus, denoting consumption by **C**, saving by **S** and Investment by **I**, there is equilibrium if:

$$C + S = C + I$$

Or

$$S = I$$

i.e. there is equilibrium when savings are equal to investments.

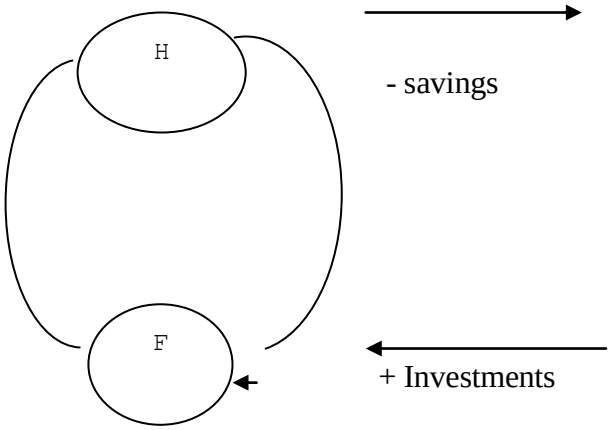

Figure 1.3 Equilibrium National Income in a Frugal Economy

To measure the national income in a frugal economy, through the output and Expenditure approach, the National Income Accountant includes production of goods for inventories as part of total expenditure since the firm certainly spends money on the factor services necessary to produce goods for its own inventories. The accountant calculates the economy's total output as the actual expenditure on final goods and services sold, plus the market value of final commodities currently produced and added inventories. This definition makes total expenditure the same thing as the value of all final commodities produced and thus ensures that the measured value of expenditure is identical with the value of total output in any economy.

3) *The Governed Economy:* The governed economy contains central authorities often simply called "the government" – who levy taxes on firms and households and which

engages in numerous activities such as defending the country, making and enforcing the laws, building roads, running schools, and predicting weather.

When the government produces goods and services that households desire such as roads and air traffic control, it is obviously engaged in a useful activity and is obviously adding to the sum total of valuable output. The national income statistician count as part of the GNP every government expenditure on goods and services, whether it is to build *a scud missile to promote police protection, or to pay a civil servant to file and re-file papers from a now defunct ministry.*

Definitions:
Transfer Payments: Are any payments made to households by the government that are not made in return for the services of factors of production i.e. there is no Quid pro Quo. Such payments do not lead directly to any increase in output and for this reason they are not included in the nation GNP.

Disposable Income: This is the income which households actually have available to spend or to save. To calculate disposal income, which is indicated by Ya, the statistician must make several adjustments to GNP.

First, all those elements of the value of output that are not paid out to households must be *deducted:* business savings represent receipts by firms from the sale of output that are withheld by firms for their own uses, and corporation taxes are receipts by firms from the sale of output that are paid over to the government. Secondly, personal income taxes must be *deducted* from the income paid to households in order to obtain the amount households actually have available to spend or save. Finally, it is necessary to *add* government transfer payments to households. Although these are not themselves a part of GNP, they are made available to households to spend and save, and are thus a part of disposable Income. Thus disposal income is:

GNP minus any part of it that is not actually paid over to households, minus the personal income taxes paid by households, plus transfer payments received by households.

Real and nominal measures
Output, Expenditure and Income can be valued at current market price in which case we speak, for example, of *money or Nominal NNP, or NNP* valued at current prices. Changes from one year to another are then a compound of changes in physical quantities and prices. Output, Expenditure and Income can also be valued at the prices ruling in some base year. In this case,

each year's quantity is priced at its base-year prices and then summed. We then speak, for example, of GDP at constant prices, or REAL GDP. Changes in constant-price GDP give a measure of real or quantity changes in total output.

Equilibrium Income
In this model, aggregate desired expenditure has three components: Consumption, Investment and Government Expenditure:

$$E = C + I + G$$

However, in the Governed Economy, taxes levied by the government are a second withdrawal. If the government taxes firms, some of what firms earn is not available to be passed on to households. If the government taxes households, some of what households earn is not available to be passed on firms. Whatever subsequently happens to money raised, taxes withdraw expenditure from the circular flow.

In the Governed Economy, however, government expenditure is a second injection. Such expenditure creates income for a firm that does not arise from the spending of households, and it creates income for a household that does not arise from the spending of firms. Whatever the source of funds, government spending injects expenditure into the circular flow.

Letting G stand for Government Expenditure, T for Taxes, J for injections and **W** for withdrawals, we can say the National Income is in equilibrium when total withdrawals, savings plus taxes, is equal to *total injections, investment plus government expenditure.* The equilibrium condition for national income can thus be written as:

$$W = J, \text{ or } S + T = G + I$$

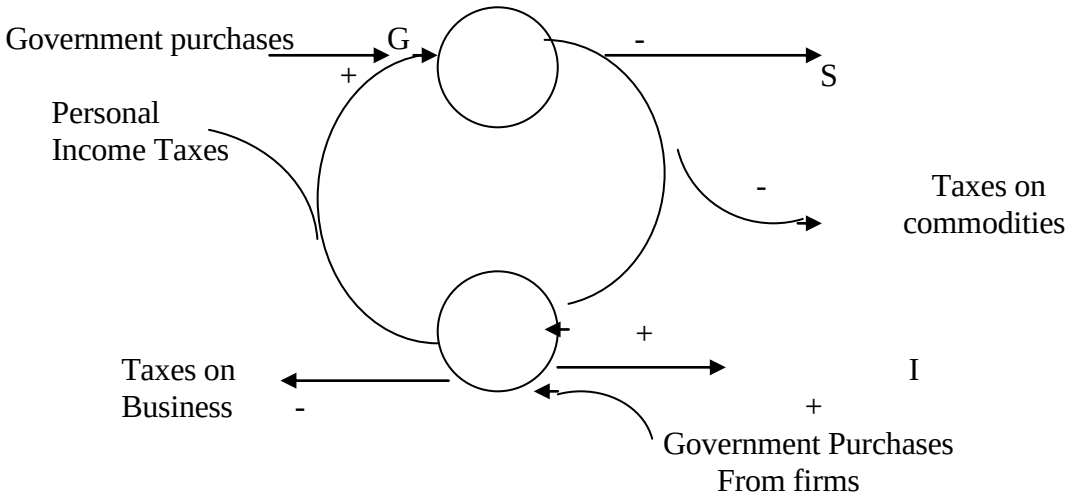

Figure 1.4 The equilibrium for national income

Open Economy: None of the three economies considered so far are engaged in trade with Foreign Countries. Such economies are often referred to as Closed Economies. In contrast, open economies engage in significant amounts of foreign trade, so that some of the goods produced at home are sold a broad while some of the goods sold at home are produced abroad. The model is more applicable in real life.

A mathematical approach to national income equilibrium.
Equilibrium analysis also has applications in the area of national income. A simple Keynesian national income model may be expressed as follows:

$$Y = C + I_O + G_O \quad \text{..... (i)}$$

$$C = a + bY \quad \text{..... (ii)}$$

$$(a > o,\ o < b < 1)$$

Y and C are both endogenous variables since they are determined within the model. I_o And $G_{o,}$ on the other hand, represent exogenously determined investment and government expenditure respectively. Exogenously determined variables are those whose values are not determined within the model. C = a + b Y represents a consumption function where a and b stand for autonomous consumption and the marginal propensity to consume, respectively.

If we substitute equation (ii) into (i) we obtain:

$$Y = a + bY + I_o + G_o$$

$$(1 - b)\ Y = a + I_o + G_o$$

Equilibrium national income is represented by $\bar{Y}$.

$$\bar{Y} = \frac{a + I_o + G_o}{1 - b} \quad \text{..... (iii)}$$

The equilibrium level of consumption can be obtained by substituting equation (iii) into equation (ii).

$$\bar{C} = a + b\bar{Y} = a + \frac{b\,(a + I_o + G_o)}{1 - b}$$

$$= \frac{a\,(1 - b) + b\,(a + I_o + G_o)}{1 - b}$$

A numerical example

Assume a simple two sector model where Y = C + I C = a + bY and I = I_o. Assume in addition, that a = 85, b = 0.45 and Io = 55. This implies that Y = a + bY + I_o = 85 + 0.45Y + 55

$$Y - 0.45Y = 140$$
$$0.55Y = 140$$
$$Y = 255$$

This simple model can be extended to include government expenditure and foreign trade. It may take the following general form:

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

Where C = a +bY

And $M = m_o + mY$

M_o represents autonomous imports and m represents induced imports (imports dependent on _the level of income). Equilibrium national income in this case is represented by

$$Y = \frac{a + I_o + G_o + X_o - M_o}{1 - b + m_o}$$

Numerical example.
Assume that $I_o = 360$, $G_o = 260$, $X_o = 320$, $M_o = 120$, $a = 210$, $b = 0.8$ and $m = 0.2$

The equilibrium level of national income can be computed as follows:

$$Y = \frac{360 + 260 + 320 + 210 - 120}{1 - 0.8 + 0.2} = 2{,}575$$

1.11 Fluctuations in National Income and the Business Cycles

Business Cycles The business cycle is the tendency for output and employment to fluctuate around their long-term trends. The figure below presents a stylised description of the business cycle. The continuous line shows the steady growth in trend output over time, while the broken line indicate the actual output over the time period.

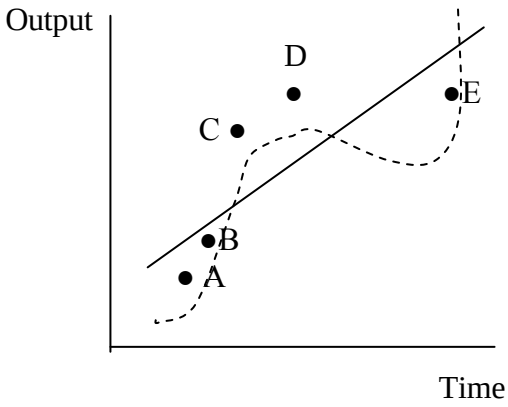

Figure 1. 5 Business Cycles

Point A represents a slump, the bottom of a business cycle while point B suggests the economy has entered the recovery phase of the cycle. As recovery proceeds the output rises to a point C above the trend path; we call this a boom. Then as the line dips via D towards the trend line with output growing less quickly during the recovery and least quickly (perhaps even falling), during a recession.

Causes: There are a number of explanations of the business cycle but changes in the level of investment seem to be the most likely. In the simplest Keynesian model an increase in investment leads to a larger increase in income and output in the short run. Higher investment not only adds directly to aggregate demand but by increasing income adds indirectly to consumption demand. A process known as the multiplier. The reasons for change in investment may be explained as follows. Firms invest when their existing capital stock is smaller than the capital stock they would like to hold. When they are holding the optimal capital stock, the marginal cost of another unit of capital just equals its marginal benefit, this is the present operating profits to which it

is expected to give rise over its lifetime. This present value can be increased either by a fall in interest rates at which the stream of expected profits is discounted or by an increase in the future profit expected. In practice, it is generally believed that changes in expectations about future profits are more important than interest rate changes. If real interest rates and real wages change only slowly, the most important source of short term changes in beliefs about future profits is likely to be beliefs about future levels of sales and real output. Other things being equal, higher expected future output is likely to raise expected future profits and increase the benefits from a marginal addition to the current capital stock. This kind of explanation is known as the *accelerator model of investment.* In this theory it is assumed that firms estimate future profits by *extrapolation* of past growth of output. While constant output growth leads to a constant rate of growth of capital stock, it takes accelerating output growth to increase the desired level of investment. Though the accelerator model is acknowledged to be a simplification of a complex process its usefulness has been confirmed by empirical research.

Just how firms respond to changes in output will depend on a number of things including the extent to which firms believe that current growth in output will be maintained in the future and the cost of quickly adjusting investment plans. The more costly it is to adjust quickly, the more likely are firms to spread investment over a long time period.

The underlying idea of the multiplier-accelerator model is that it takes an accelerating output growth to keep increasing investment, but it must be noted that once output growth settles to a constant level investment also becomes constant. Finally if output falls then the level of investment must fall also.

The limits of the fluctuations around the trend path of output are referred to as ceilings and floors. If we assume that the circular flow of income is in equilibrium at less than full employment and there is an increase in investment, the effect of this will be to raise national income by more than an equivalent amount because of the effect of the multiplier. This will in turn produce a more than proportionate increase in investment because of the effect of the accelerator which will produce a more than proportionate rise in incomes and so on. This cumulative growth of income will continue until the economy's full employment ceiling is reached. The process then goes into reverse with an accelerated decline in the absolute level of net investment, followed by a multiplied reduction in income and so on. The bottom of 'floor', of the recession will come when withdrawals once more equal the reduced level of injections.

It is argued that modern economies do not fluctuate as much as they did in the past because of *built in stabilizers* which operate automatically and the use of *discretionary measures* which are available to governments. *The taxation system* is said to act as a stabilizer that operates automatically and the use of discretionary measures which are available to governments. The taxation system is said to act as a stabilizer in the following way: As income rises a progressive taxation system takes larger and larger proportions of that increased income; when income falls revenue drops more than proportionately. Other built-in stabilizers are *unemployment benefits* and *welfare payments* because expenditures on these rise and fall with the unemployment rate. Despite these built-in stabilizers and the actions of government in their use of discretionary measures to stabilize the economy, the cycle is still with us as recent experience has demonstrated.

In conclusion, it must be added that the causation of business cycles is a complex matter and the above is only one of a number of possible explanations.

1.12 Review Questions:

1. A hypothetical closed economy has a national income model of the form y = C + I + G where C = 30 + 0.8Y and I and G and private investment and government expenditure are exogenously determined t 50 and 80 units respectively. Compute the national equilibrium level of income for this economy using aggregate income equals aggregate expenditure and withdrawals and equal injection methods.
2. What are some of the limitations using Gross National Product as a measure of economic performance?
3. With the help of a diagram explain the circular flow of income and expenditure
4. Briefly explain the following concepts
    i) Gross domestic product
    ii) Gross national product
    iii) Net national product
    iv) Nominal gross national product
    v) Real gross national product
    vi) National income accounting
5. Explain the approaches to measuring national income
6. Explain the difficulties in measuring national income
7. Describe factors affecting the size of a national income
8. Explain the problems of using per capita income to compare standard of living over time
9. Briefly explain the Keynesian Theory of Consumption
10. Briefly define the following economic terms
    i) Propensity to consume
    ii) Marginal propensity to save
    iii) Investment
    iv) Actual income and full employment income
    v) Autonomous Expenditure
    vi) The Multiplier

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CHAPTER TWO: MONEY AND BANKING

Learning Objectives

At the end of the lesson the student should be able to:

- Explain why money is considered a dynamic force in modern economies.
- State clearly the functions of a central bank and commercial banks.
- Explain fully the process of credit creation by commercial banks.
- Explain fully the meaning of monetary policy and instruments of monetary policy.
- Explain the various theories that explain the demand for money.
- Explain the various theories of interest rate determination.

2.1 Money

The nature and function of money

The development of money was necessitated by specialization and exchange. Money was needed to overcome the shortcomings and frustrations of the barter system which is system where goods and services are exchanged for other goods and services.

Disadvantages of Barter Trade

- It is impossible to barter unless A has what B wants, and A wants what B has. This is called double *coincidence* of wants and is difficult to fulfill in practice.

- Even when each party wants what the other has, it does not follow they can agree on a fair exchange. A good deal of time can be wasted sorting out equations of value.

- The indivisibility of large items is another problem. For instance if a cow is worth two sacks of wheat, what is one sack of wheat worth? Once again we may need to carry over part of the transaction to a later period of time.

- It is possible to confuse the *use value* and *exchange value* of goods and services in a barter economy. Such confusion precludes a rational allocation of resources and promotion of economic efficiency.

- When exchange takes place over time in an economy, it is necessary to store goods for future exchange. If such goods are perishable by nature, then the system will break down.

- The development of industrial economies usually depends on a division of labour, specialization and allocation of resources on the basis of choices and preferences. Economic efficiency is achieved by economizing on the use of the most scarce resources. Without a common medium of exchange and a common unit of account which is acceptable to both consumers and producers, it is very difficult to achieve an efficient allocation of resources to satisfy consumer preferences.

For these reasons the barter system is discarded by societies which develop beyond *autarky* to more specialized methods of production. For such peoples a money system is essential.

Money may be defined as anything generally acceptable in the settlement of debts.

The Historical development of money
For the early forms of money, the intrinsic value of the commodities provided the basis for general *acceptability:* For instance, corn, salt, tobacco, or cloth was widely used because they had obvious value themselves. These could be regarded as *commodity money***.**

Commodity money had uses other than as a medium of exchange (e.g. salt could be used to preserve meat, as well as in exchange). But money commodities were not particularly convenient to use as money. Some were difficult to *transport,* some *deteriorated overtime*, some *could not be easily divided and some were valued differently by different cultures.*

As the trade developed between different cultures, many chose *precious metal's* mainly gold or silver as their commodity money. These had the advantage of being *easily recognizable, portable, indestructible and scarce* (which meant it preserved its value over time).

The value of the metal was in terms of weight. Thus each time a transaction was made, the metal was weighed and payment made. Due to the inconvenience of weighing each time a transaction was made, this led to the development of coin money. The state took over the *minting* of coins by stamping each as being a particular weight and purity (e.g. one pound of silver). They were later given a rough edge so that people could guard against being cheated by an unscrupulous trade filling the edge down.

It became readily apparent, however, that what was important was public confidence in the "currency" of money, its ability to run from hand to hand and circulate freely, rather than its intrinsic value. As a result there was deliberately reduced below the face value of the coinage.

Any person receiving such a coin could afford not to mind, so long as he was confident that anyone to whom he passed on the coin would also "*not mind".* Debasement represents an early form of fiduciary issue, i.e. issuing of money dependent on the "faith of the public" and was resorted to because it permitted the extension of the supply of money beyond the availability of gold and silver.

Paper Money
Due to the risk of theft, members of the public who owned such metal money would deposit them for safe keeping with *goldsmiths* and other *reliable merchants* who would issue a receipt to the depositor. The metal could not be withdrawn without production of the receipt signed by the depositor. Each time a transaction was made, the required amount of the metal would be withdrawn and payment made.

It was later discovered that as long as the person being paid was convinced the person paying had gold and the reputation of the goldsmith was sufficient to ensure

acceptability of his promise to pay, it became convenient for the depositor to pass on the goldsmith's receipt and the person being paid will withdraw the gold himself. Initially, the gold would be withdrawn immediately after the transaction was made. But eventually it was discovered that so long as each time a transaction was made the person being paid was convinced that there was gold, the signed receipt could change hands more than once. Eventually, the receipts were made payable to the bearer (rather than the depositor) and started to circulate as a means of payment themselves, without the coins having to leave the vaults. This led to the development of *paper money,* which had the added advantage of lightness.

Initially, paper money was backed by precious metal and convertible into precious metal on demand. However, the goldsmiths or early bankers discovered that not all the gold they held was claimed at the same time and that more gold kept on coming in (gold later became the only accepted form of money). Consequently they started to issue more bank notes than they had gold to back them, and the extra money created was lent out as loans on which interest was charged. This became lucrative business, so much so that in the 18^{th} and 19^{th} centuries there was a bank crisis in England when the banks failed to honour their obligations to their depositors, i.e. there were more demands than there was gold to meet them. This caused the government to intervene into the baking system so as to restore confidence. Initially each bank was allowed to issue its own currency and to issue more currency than it had gold to back it. This is called *fractional backing,* but the Bank of England put restrictions on how much money could be issued.

Eventually, the role of issuing currency was completely taken over by the Central Bank for effective control. Initially, the money issued by the Central Bank was backed by gold (fractionally), i.e. the holder had the right to claim gold from the Central Bank. However, since money is essentially needed for purchase of goods and services, present day money is not backed by gold, but it is based on the level of production, the higher the output, the higher is the money supply. Thus, present day money is called *token money* i.e. money backed by the level of output.

Over time, therefore, it became clear that for an item to act as money it must possess the following characteristics.

- *Acceptability* If money is to be used as medium of exchange for goods and services, then it must be generally accepted as having value in exchange. This was true of metallic money in the past because it was in high and stable demand for its ornamental value. It is true of paper money, due to the good name of the note-issuing authority.

- *Portability* If an item is to be used as money, it must be easily portable, so that it is a convenient means of exchange.

- *Scarcity* If money is to be used in exchange for scarce goods and services, then it is important that money is in scarce supply. For an item to be acceptable as money, it must be scarce.

- *Divisibility* It is essential that any asset which is used as money is divisible into small units, so that it can be used in exchange for items of low value.

- *Durability* Money has to pass through many different hands during its working life. Precious metals became popular because they do not deteriorate rapidly in use. Any asset which is to be used as money must be durable. It must not depreciate over time so that it can be used as a store of wealth.

- *Homogeneity* It is desirable that money should be as uniform as possible.

Functions of money

a. *Medium of exchange:* Money facilitates the exchange of goods and services in the economy. Workers accept money for their wages because they know that money can be exchanged for all the different things they will need. Use of money as an intermediary in transactions therefore, removes the requirement for double coincidence of wants between transactions. Without money, the world's complicated economic systems which are based on specialization and the division of labour would be impossible. The use of money enables a person who receives payment for services in money to obtain an exchange for it, the assortment of goods and services from the particular amount of expenditure which will give maximum satisfaction.

b. *Unit of account:* Money is a means by which the prices of goods and services are quoted and accounts kept. The use of money for accounting purposes makes possible the operation of the price system and automatically provides the basis for keeping accounts, calculating profit and loss, costing etc. It facilitates the evaluation of performance and forward planning. It also allows for the comparison of the relative values of goods and services even without an intention of actually spending (money) on them e.g. "window shopping".

c. *Store of Wealth/value:* The use of money makes it possible to separate the act of sale from the act of purchase. Money is the most convenient way of keeping any form of property which is surplus to immediate use; thus in particular, money is a store of value of which all assets/property can be converted. By refraining from spending a portion of one's current income for some time, it becomes possible to set up a large sum of money to spend later (of course subject to the time value of money). Less durable or otherwise perishable goods tend to depreciate considerably over time, and owners of such goods avoid loss by converting them into money.

d. *Standard of deferred payment:* Many transactions involve future payment, e.g. hire purchase, mortgages, long term construction works and bank credit facilities. Money thus provides the unit in which, given the stability in its value, loans are advanced/made and future contracts fixed. Borrowers never want money for its own sake, but only for the command it gives over real resources. The use of money again allows a firm to borrow for the payment of wages, purchase of raw materials or generally to offset outstanding debt obligations; with money borrowing and lending become much easier, convenient and satisfying. It's about making commerce and industry more viable.

Only money, of all possible assets, can be converted into other goods immediately and without cost.

The Determination of the Value Money

Since money is primarily a medium of exchange, the value of money means what money will buy. If at one time a certain amount of money buys fewer things than at a previous time, it can be said that the value of money has fallen. Since money itself is used as unit of account and a means of measuring the "value" of other things, its own value can be seen only through the prices of other things. Changes in the value of money, therefore, are shown through changes in prices.

2.2 The Quantity Theory of Money

In the 17th Century it was noticed that there was a connection between the quantity of money and the general level of prices, and this led to the formulation of the Quantity Theory of Money. In its crudest form is stated that an increase in the quantity of money would bring about an appropriate rise in prices. If the quantity of money was doubled, prices would double and so on. Algebraically, this could be stated as:

$$P = a\,M$$

Where a is constant, P the price level, and M the supply of money. If the supply of money doubled, to 2M, the new price level P will equal

$$a(2m) = 2(aM) = 2P$$

that is, double the old price level.

After being long discarded, the theory was revived in the 1920s by Professor Irving Fisher, who took into account the volume of transactions, that is to say, the amount of "work" that the money supply had to do as a medium of exchange. That is the velocity
of circulation. Money circulated from hand to hand. If one unit of money is made to serve four transactions, this is equivalent to four units of money, each being used in only one transaction.

As modified by Irving Fisher, the quantity theory came to be expressed by the equation
of exchange.

$$MV = PT$$

The symbol M represents the total amount of money in existence – bank notes etc, and bank deposits.

The symbol V represents the velocity of circulation, i.e. the number of times during the period each unit of money passes from hand to hand in order to affect a transaction. Thus if the amount of money in the hands of the public during the year was an average $1,000,000 and each dollar on average was used five times, the total value of transactions carried out during the year must have been $5,000,000.

MV therefore represents the amount of money used in a period.

On another side of the equation, P stands for the general price level, a sort of average of the price or all kinds of commodities-producers' goods as well s consumer's goods and services. The symbol T is the total of all transactions that have taken place for money during the year.

The equation of exchange shows us that the price level, and, therefore, the value of money, can be influenced not only by the quality of money but also by:

i. the rate at which money circulates, and
ii. the output of goods and services.

Thus prices may rise without any change taking place in the quantity of money if a rise occurred in the velocity of circulation. On the other hand, prices might remain stable in spite of an increase in the quantity of money if there was corresponding increase in the output of goods and services.

Even in its revised form, however, the Quantity Theory has been subjected to the following criticisms:

a. It is not a theory at all, but simply a convenient method of showing that there is certain relationship between four variable quantities – M, V, P and T. it shows that only the total quantity of money, as determined by the actual amount of money in existence the velocity of circulation, is equal to the value of total trade transactions multiplied by their average price. As such it is obviously a truism, since the amount of money spent on purchases is obviously a truism, since the amount of money spent on purchases is obviously equal to the amount received from sales. Not only must MV be equal to PT, but MV is PT, since they are only two different ways of looking at the same thing.

b. Even if the equation of exchange is only a truism, it would not be quite correct to say that it demonstrates nothing. For example, it shows that it is possible for there to be an increase in the quantity o f money without a general rise in prices. It informs us, too, that if there is to be a change in one or more of the variables of the equation, there must be a change in one or more of the other variables. Cleary, it would be wrong to read into it more than this.

c. The four variables, M, V, P and T, are not independent of one another as the equation of exchange implies. For example, a change in M is likely of itself to bring a change in V or T or both. It is probable that a rise in pries will follow an increase in the quantity of money, but this will most likely be brought about because the increase in the quantity of money stimulates demand and production.

d. A serious defect is to allow the symbol P to represent the general price level. Price changes do not keep in step with one another. In its original form the equation was criticized because it implied that an increase in the quantity would automatically bring about a proportionate increase in all prices. A study of price changes shows that some prices increased by many times while others by fewer times. Clearly, then, there is no general price level, but instead, as the index of Retail Price shows, a number of sectional price levels, one for food, another for clothing, another for fuel and light, and so on.

e. The Quantity Theory only attempts to explain changes in the value of money, and does not show how the value of money is in the first place determined.

f. The Quantity Theory approaches the question of the value of money entirely from the supply perspective.

2.3 The demand for and supply of money

i. Demand for money The demand for money is a more difficult concept than the demand for goods and services. It refers to the desire to *hold one's assets as money rather than as income-earning assets (or stocks).*

Holding money therefore involves a loss of the interest it might otherwise have earned. There are two schools of thought to explain the demand for money, namely the Keynesian Theory and the Monetarist Theory.

The demand for money and saving The demand for money and saving are quite different things. Saving is simply that part of income which is not spent. It adds to a person's wealth. Liquidity preference is concerned with the form in which that wealth is held. The motives for liquidity preference explain why there is desire to hold some wealth in the form of cash rather than in goods affording utility or in securities. (See pp 18 – 26)

ii. The supply of money Refers to the total amount of money in the economy.

Most countries of the world have two measures of the money stock – *broad money supply* and *narrow money supply*. Narrow money supply consists of all the purchasing power that is immediately available for spending. Two narrow measures are recognized by many countries. The first, M_0 (or monetary base), consists of notes and coins in circulation and the commercial banks' deposits of cash with the central banks.

The other measure is M_2 which consists of notes and coins in circulation and the NIB (non-interest-bearing) bank deposits – particularly current accounts. Also in the M_2 definition are the other interest-bearing retail deposits of building societies. Retail deposits are the deposits of the private sector which can be withdrawn easily. Since all this money is readily available for spending it is sometimes referred to as the "transaction balance".

Any bank deposit which can be withdrawn without incurring (a loss of) interest penalty is referred to as a "sight deposit".

The broad measure of the money supply includes most of bank deposits (both sight and time), most building society deposits and some money-market deposits such as CDs (certificates of deposit).

Legal Tender Legal tender is anything which must be by law accepted in settlement of a debt.

Determinants of the money supply Two extreme situations are imaginable. In the first situation, the money supply can be determined at exactly the amount decided on by the Central Bank. In such a case, economists say that the money supply is exogenous and speak of *an exogenous money supply.*

In the other extreme situation, the money supply is completely determined by things that are happening in the economy such as the level of business activity and rates of interest and is wholly out of the control of the Central Bank. In such a case economists would say that there was an Endogenous money supply, which means that the size of the money supply is not imposed from outside by the decisions of the Central Bank, but is determined by what is happening within the economy.

In practice, the money supply is partly endogenous, because commercial banks are able to change it in response to economic incentives, and partly exogenous, because the Central Bank is able to set limits beyond which the commercial banks are unable to increase the money supply.

Measurement of changes in the value of money
Goods and services are valued in terms of money. Their prices indicate their relative value. When prices go up, the amount which can be bought with a given sum of money goes down; when prices fall, the value of money rises; and when prices rise, the value of money falls. The economist is interested in measuring these changes in the value of money.

The usual method adapted to measure changes in the value of money is by means of an index number of prices i.e. *a statistical device used to express price changes as percentage of prices in a base year or at a base date.*

Preparation of Index Numbers
A group of commodities is selected, their prices noted in some particular year which becomes the base year for the index number and to which the number 100 is given. If the prices of these commodities rise by 1 per cent during the ensuing twelve months the index number next year will be 101. Examples of Index Number are Cost-of Living-Index, Retail Price Index, Wholesale Price Index, Export Prices Index, etc.

Problems of Index Numbers
The construction of Index Numbers presents some very serious problems and, as they cannot be ideally solved, the index numbers by themselves are limited in their value and reliability as a measurement of changes in the level of prices. The problems are:

a) The problems of weighting
The greatest difficulty facing the compiler of index number is to decide on how much of each commodity to select. This is the problem of weighting. Different "weights" will yield different results, as the following example illustrates. Assume that there are only three commodities, A, B, C and the prices of which are Kshs.50/=, Kshs.20/= and Kshs.10/=, respectively. By taking one unit of each that is, without any weighting – the index number for the base year constructed as follows:-

Base Year

Commodity	Price	Weight	Index
		Kshs.	
A	50	1	100
B	20	1	100
C	10	1	100
		3	300

Assume that one year later the price of A is Kshs.45/=, B Kshs.25/= and C Kshs. 15/=.

Base Year

Commodity	Price	Weight	Index	
		Kshs.		
A		45	1	90
B		25	1	125
C		15	1	150
			3	365

index for all items = 121.6

The index number in the second year is 121.6, showing an increase in price of 21.6 per cent over the base year. If the commodities A, B, C are all differently weighted a different result will be obtained. For example, suppose that one will then be compiled as follows:-

Base Year

Commodity	Price	Weight	Index
		Kshs.	
A	50	1	100
B	20	4	400
C	10	20	2,000
		25	2,500

Index for all items = 100

Second Year

Commodity	Price	Weight	Index	
	Kshs.			
A	50	1	90	
B	20	4	500	
C	10	20	3,000	
			25	3,590

Index for all items 143

By weighting C heavily this index shows a rise in prices of 43.6 per cent, although individual prices show only the same change as before. By weighting commodity A

more heavily, an index number can actually be compiled from the same date to show a fall in prices.

b) The next problem is to decide what grades and quantities to take into account. By including more than one grade an attempt is made to make a representative selection. An even greater difficulty occurs when the prices of a commodity remain unchanged, although the quantity has declined.

c) The choice of the base year. This would preferably be a year when prices are reasonably steady, and so years during periods either of severe inflation or deflation are to be avoided.

d) Index numbers are of limited value for comparisons over long periods of time because:

- New commodities come on the market.
- Changes in taste or fashion reduce the demand for some commodities and increase the demand for others.
- The composition of the community is likely to change.
- Changes may occur in the distribution of the population among the various age groups.
- The rise in the Standard of living.

e) Changes in the taxation of goods and services affect the index.

2.4 The Banking System

Consists of all those institutions which determine the supply of money. The main element of the Banking System is the Commercial Bank (in Kenya). The second main element of Banking System is the Central Bank and finally most Banking Systems also have a variety of other specialized institutions often called Financial Intermediaries.

The Central Bank

These are usually owned and operated by governments and their functions are:

i. *Government's banker:* Government's need to hold their funds in an account into which they can make deposits and against which they can draw cheques. Such accounts are usually held by the Central Bank

ii *Banker's Bank:* Commercial banks need a place to deposit their funds; they need to be able to transfer their funds among themselves; and they need to be able to borrow money when they are short of cash. The Central Bank accepts deposits from the commercial banks and will on order transfer these deposits among the commercial banks. Consider any two banks A and B. On any given day, there will be cheques drawn on A for B and on B for A. If the person paying and the person being paid bank with the same bank, there will be a transfer of money from the account or deposit of the payee. If the two people

do not bank with the same bank, such cheques end up in the central bank. In such cases, they cancel each other out. But if there is an outstanding balance, say in favour of A, then A's deposit with the central bank will go up, and B's deposit will go down. Thus the central bank acts as the Clearing House of commercial banks.

iii. *Issue of notes and coins:* In most countries the central bank has the sole power to issue and control notes and coins. This is a function it took over from the commercial banks for effective control and to ensure maintenance of confidence in the banking system.

iv. *Lender of last resort:* Commercial banks often have sudden needs for cash and one way of getting it is to borrow from the central bank. If all other sources failed, the central bank would lend money to commercial banks with good investments but in temporary need of cash. To discourage banks from over-lending, the central bank will normally lend to the commercial banks at a high rate of interest which the commercial bank passes on to the borrowers at an even higher rate. For this reason, commercial banks borrow from the central bank as the lender of the last resort.

v. *Managing national debt:* It is responsible for the sale of Government Securities or Treasury Bills, the payment of interests on them and their redeeming when they mature.

vi. *Banking supervision:* In liberalized economy, central banks usually have a major role to play in policing the economy.

Vii *Operating monetary policy:* Monetary policy is the regulation of the economy through the control of the quantity of money available and through the price of money i.e. the rate of interest borrowers will have to pay. Expanding the quantity of money and lowering the rate of interest should stimulate spending in the economy and is thus expansionary, or inflationary. Conversely, restricting the quantity of money and raising the rate of interest should have a restraining, or deflationary effect upon the economy.

a) *Open Market Operations:* The Central Bank holds government securities. It can sell some of these, or buy more, on the open market, buying or selling through a stock exchange or money market. When the bank sells securities to be bought by members of the public, the buyers will pay by writing cheques on their accounts with commercial banks. This means a cash drain for these banks to the central bank, represented by a fall in the item "bankers" deposits' at the central bank, which forms part of the commercial banks' reserve assets. Since the banks maintain a fixed liquidity (or cash) ratio, the loss of these reserves will bring about multiple contraction of bank loans and deposits.

By going into the market as a buyer of securities, the central bank can reverse the process, increasing the liquidity of commercial banks, causing them to expand bank credit, always assuming a ready supply of credit-worthy borrowers.

Conversely, if the central bank wanted to pursue an expansionary monetary policy by making more credit available to the public, it would buy bonds from the public. It would pay sellers by cheques drawn on itself, the sellers would then deposit these with commercial banks, who would deposit them again with the central bank. This increase in cash and reserve assets would permit them to carry out a multiple expansion of bank deposits, increasing advances and the money supply together.

b) *Discount Rate (Bank Rate)* This is the rate on central bank advances and is also called official discount rate or "minimum lending rate". When commercial banks find themselves short of cash they may, instead of contracting bank deposits, go to the central bank, which can make additional cash available in its capacity as "lender of last resort", to help the banks out of their difficulties. The Central Bank can make cash available on a short-term basis in either of two ways; by lending cash directly, charging a rate of interest which is referred to as the official "discount rate", or by buying approved short-term securities from the commercial banks. The central bank exercises regulatory powers as a lender of last resort by making this help both more expensive to get and more difficult to get. It can do the former by charging a very high "penal" rate of interest, well above other short-term rates ruling in the money market. Similarly, when it makes cash available by buying approved short-term securities, it can charge a high effective rate of interest by buying them at low prices. The effective rate of interest charged when central bank buys securities (supplying cash) is in fact a re-discount rate, since the bank is buying securities which are already on the market but at a discount.

The significance of this rate of interest charged by the central bank in one way or the other to commercial banks, as a lender of last resort, is that if this rate goes up the commercial banks, who find that their costs of borrowing have increased, are likely to raise the rates of interest on their lending to businessman and other borrowers. Other interest rates such as those charged by building societies on house mortgages are then also likely to be pulled up.

c) *Variable Reserve Requirement (Cash and Liquidity Ratios)*

The Central Bank controls the creation of credit by commercial banks by dictating cash and liquidity ratios. The cash ratio is:

$$\frac{\text{Cash Reserves}}{\text{Deposits}}$$

The Central Bank might require the commercial banks to maintain a certain ratio, say 1/10. Hence:

$$\frac{\text{Cash Reserves}}{\text{Deposits}} = \frac{1}{10}$$

Deposits = 10 x Cash Reserves

This means that the banks can create deposits exceeding 8 times the value of its liquid assets. The liquidity ratio can be rewritten as:

$$\frac{\text{Cash + Reserves Assets}}{\text{Deposits}} = \frac{\text{Cash}}{\text{Deposits}} + \frac{\text{Reserves Assets}}{\text{Deposits}}$$

$$= \text{Cash Ratio} + \text{Reserve Assets Ratio}$$

If the liquidity ratio is 12.5, then:

$$\frac{\text{Cash}}{\text{Deposits}} + \frac{\text{Reserved Assets}}{\text{Deposits}} = \frac{1}{8}$$

$$\text{Deposits} = 10 \times \text{cash} + 2.5 \times \text{Reserve Assets.}$$

In most countries the Central Bank requires that commercial banks maintain a certain level of Liquidity Ratio i.e. Cash reserves (in their own vaults and on deposit with the Central Bank) well in excess of what normal prudence would dictate. This level shall be varied by the Central Bank depending on whether they want to increase money supply or decrease it.

This is potentially the most effective instrument of monetary control in less developed countries because the method is direct rather than via sales of securities or holding bank loans and advances. The effects are immediate. This method moreover does not require the existence of a capital market and a variety of financial assets. However, increased liquidity requirements may still be offset in part if the banks have access to credit from their parent companies. A further problem is that a variable reserve asset ratio is likely to be much more useful in restricting the expansion of credit and of the money supply than in expanding it: if there is a chronic shortage of credit-worthy borrowers, the desirable investment projects, reducing the required liquidity. Ratio of the banks may simply leave them with surplus liquidity and not cause them to expand credit. Finally, if the banks have substantial cash reserves the change in the legal ratio required may have to be very large:

d) Supplementary Reserve, Requirements/Special Deposit

If the Central Bank feels that there is too much money in circulation, it can in addition require commercial banks to maintain over and above cash or liquid assets some additional reserves in the form of Special Deposits. The commercial banks are asked to maintain additional deposits in their accounts at the central bank, deposits which cease to count among their reserve assets as cover for their liabilities.

e) Direct control and Moral Suasion

Without actually using the above weapons, the central bank can attempt simply to use "moral suasion" to persuade the commercial banks to restrict credit when they wish to limit monetary expansion. Its effectiveness depends on the co-operation of the commercial banks.

f) General and Selective Credit Control

These are imposed with the full apparatus of the law or informally using specific instructions to banks and other institutions. For instance, the central bank can dictate a ceiling value to the amount of deposits the bank can create. This is more effective in controlling bank lending than the cash and liquidity ratio. It can also encourage banks to lend more to a certain sector of the economy (e.g. agriculture) than in another (estate building). Selective controls are especially useful in less developed investment away from less important sectors such as the construction of buildings, the commercial sector, or speculative purchase of land, towards more important areas.

B. Commercial Banks

A Commercial Bank is a financial institution which undertakes all kinds of ordinary banking business like accepting deposits, advancing loans and is a member of the clearing house i.e. operates or has a current account with the Central Bank. They are sometimes known as Joint Stock Banks.

Functions of Commercial Banks

In modern economy, commercial banks have the following functions:

i. They provide a safe deposit for money and other valuables.

ii. They lend money to borrowers partly because they charge interest on the loans, which is a source of income for them, and partly because they usually lend to commercial enterprises and help in bringing about development.

iii. They provide safe and non-inflationary means for debt settlements through the use of cheques, in that no cash is actually handled. This is particularly important where large amounts of money are involved.

iv. They act as agents of the central banks in dealings involving foreign exchange on behalf of the central bank and issue travellers' cheques on instructions from the central bank.

v. They offer management advisory services especially to enterprises which borrow from them to ensure that their loans are properly utilized.

Some commercial banks offer insurance services to their customers e.g. The Standard Bank (Kenya) which offers insurance services to those who hold savings accounts with it.

Some commercial banks issue local travellers' cheques, e.g. the Barclays Bank (Kenya). This is useful in that it guards against loss and theft for if the cheques are lost or stolen; the lost or stolen numbers can be cancelled, which cannot easily be done with cash. This also safe if large amounts of money is involved.

Bank Deposit

Bank notes and coins together constitute the currency in circulation. But they form only a part of the total money supply. The larger part of the money supply in circulation today consists of bank deposits. Bank deposits can either be a current

account or deposit account. These are created by commercial banks and the process is called credit creation.

Credit Creation
The ability of banks to create deposit money depends on the fact that bank deposits need to be only fractionally backed by notes and coins. Because the bank does not need to keep 100 per cent reserves, it can use some of the money deposited to purchase income-yielding investments.

Illustration
i. A Single Monopoly Bank
Consider first a country with only one bank (with as many physical branches as is necessary) and assume that the bank has found from experience that it needs only to hold 10% of cash s a proportion of total deposits – proportion of transactions that customers prefer to settle by means of cash, rather than cheque. Now imagine the balance sheet of the bank look like this:

Initial Position of single bank

Liabilities	£1,000	Assets	£1,000
Deposits	1,000	Cash	100
		Loans	900
Total	1,000	Total	1,000

Deposits are shown as liabilities, since the bank can be called up to repay in cash any amounts credited to customers in this way. Assets consist of cash held by the bank, plus loans, which represents the obligations of borrowers towards the bank. The cash ratio is the ratio of cash held (£100,000) to its liabilities ((£1,000,000), and is 10 per cent in this case.

Suppose now a customer deposits (liabilities) in this initial position will be:

$$\frac{120}{1{,}020} \times 100 = 11.8\%$$

This is unnecessarily high, nearly 12 per cent compared to the conventional ratio of 10 per cent. The bank can therefore safely make additional interest-bearing loans. If it lends an extra £180,000, according deposits will rise from £1,020,000 to £1,200,000, so that the 10 per cent ratio of cash to deposit is restored. The final position is as shown below, and indicates that bank deposits have been created to the extent of ten times the new cash deposit.

Addition of cash deposit raises cash reserves and cash ratio

Liabilities	£1,000	Assets	£1,000
Deposits	1,020	Cash	120
		Loans	900
Total	1,020	Total	1,020

This is a stable position. Borrowers will make out cheques to other people in payment for goods and services supplied. But these others must be customers of the same bank, since there is only one bank. There will follow no more than a book transaction within one bank, the bank deposits being transferred from one customer to another. Total deposits, total cash, and the cash ratio will not be affected.

Comparing the initial position in the first table with the final position in the table below, we can see that the increase in bank deposits, which we can call ΔD is 200 and the increase in cash held by the banks, which we can write as ΔC, is 20. Thus ΔD is ten times ΔC, obviously because 1/r, where r is the cash ratio used, is 10.

Thus $\Delta D = \frac{\Delta C}{r}$

Restoration of conventional cash ratio by creation of additional bank deposits

Liabilities	£1,000	Assets	£1,000
Deposits	1,200	Cash	120
		Loans	1,080
Total	1,200	Total	1,200

ii. Many Banks

A single bank with a "monopoly" of credit creation is rarely found in real world. What is usually found is where the bank receiving the new deposit is one of several independent banks. In that case the bank will not seek immediately to expand deposits to the number of times the cash ratio, by extending loans. It will know that the borrowers will use the credit granted to them to pay for goods and services, or to repay debts; and that therefore they will be making cheques out to other individuals who by now have accounts in other banks. The bank can thus expect to lose cash to other banks. Either the borrowers will withdraw cash directly, with which to pay individuals who then deposit this cash with other banks, or if they pay by cheque these cheques will be deposited with other banks, and the other banks themselves will present them for cash at the first bank.

Suppose in our example above, (illustration 1), the bank made the extreme assumption that none of the borrowers' cheques would be paid to its own customers. It will create only a relatively small amount of extra deposits, just sufficient to restore its cash ratio. It will, in fact, make £18,000 worth of additional loans and retain cash of £2,000. That will restore its cash ratio as shown below.

Initial round of credit creation by first bank

Liabilities (£1,000) Assets (£1,000) Cash ratio

	Deposits		Cash	
	Loans	%		
Original position	1,000	100	900	10.0
Add cash deposit	+20	+20	-	- -

Second position		1,020		120		900		
11.8								
Increase loans	+18		-		+18		- -	
Cash drain by cheques		-18		-18		-		-
-								
Final position	1,020		102		918	10.0		
Net change	+20		+2		+18	- -		

However, the £18,000 lost in cash through cheques drawn by borrowers will be received by other banks who in turn will find themselves with excess cash reserves, and in turn create additional loans. There will thus be second generation of bank deposit creation, each bank again retaining only 10 per cent of the new cash received, and creating loans in the ratio of nine to one. This new drain of cash will generate more deposits, and so on, each new round being nine-tenths of the value of the previous one as follows (£'000s).

20 +18+ 16.20 + 14.85 + 13.12 + …
which can be written as

{1 + 9/10 + (9/10) 3 + (9/10) 4 +……..}

Each successive round of deposit creation is smaller than the previous one, so that the series converges. Mathematically, the series will eventually add up to converge to 200. This is because for any value of between 0 and 1 the series tends to the value $1/1_{-z}$.

In an example z = 9/10, which is between 0 and 1, so on the formula applies. Hence

$$20\{1 + 9/10) 2 + (9/10) 3 + ….\} = \{\frac{1}{1 - 9/10}\} = 200$$

if we use ΔD to refer to the final increase or increment in bank deposits, **ΔC** too the initial increase in cash received, and "r" to the cash ratio, then ΔD = 200, ΔC = 20, r = 1/10.

Since 1 – r = 1 – 1/10 = 9/10, we have
ΔD = ΔC {1 + (1 – r) + (1 – r) 2 + (1 + r) 3 + …..}

$$\Delta D = \frac{\Delta C}{1 - (1 - r)} = \frac{\Delta C}{r}$$

Given the increase in cash received, the additional deposits created will depend on the fraction of cash retained as backing. The ration ΔD/ΔC of deposits created to increase in cash is referred to as the *bank deposit multiplier.*

Limits on the process of bank deposit creation
On the *demand side*, there may be a lack of demand for loans, or at least of borrowers who are *sufficiently credit worthy*. On the supply side, the volume of bank deposits will not in general rise and fall as a result of changes in the amount of cash held or deposited by the public, since *the public's currency requirements tends to be fairly stable*, and roughly proportional to the volume of transactions.

2.5 Money Markets
The expression *"money markets"* is used to refer to the set of institutions and individuals who are engaged in the borrowing and lending of large sums of money for short periods of time (overnight to three months). The money market is not located in a place – it is rather a network of brokers, buyers and sellers.

Most money market transactions are concerned with the sale and purchase of near money assets such as bills of exchange and certificates of deposit.

Function of Money Markets
The money markets are the place where money is "wholesaled". As such the supply of money and interest rate which are of significance to the whole economy is determined there.

It is also used by the central bank to make its monetary policy effective.

2.6 Capital Markets
Markets in which financial resources (money, bonds, and stocks) are traded i.e. the provision of longer term finance – anything from bank loans to investment in permanent capital in the form of the purchase of shares. The capital market is very widespread. It can also be defined as the institution through which, together with financial intermediaries, savings in the economy are transferred to investor.

Interest and the Keynesian Liquidity Preference Theory
Interest is a factor income in that it is considered to be payment to or return on capital in the sense that it is payment to those who provide *loanable funds*, which are used for the purchase of capital assets. The payment of interest to the providers of loanable funds may be justified on the following grounds:

- The lender postpones present consumption and enjoyment and interest is paid as *persuasion* for him/her to make this sacrifice.

- There is risk of default in that the borrower may fail to pay back and interest is paid as persuasion for the lender to undertake this risk.

- There is loss of purchasing power due to increases in prices over time, and interest is paid as compensation for this loss.

- The borrower earns income from the investment, and the tender can justifiably claim a share in that income.

2.7 Theories of Interest Rates Determination

Interest rates, refers to payment, normally expressed as a percentage of the sum lent which is paid over a year, for the loan of money. There are many rates of interest depending on the *degree or risk involved, the term of the loan,* and the *costs of administration,* namely, real, nominal and pure rate of interest.

Pure rate of interest is one from which factors like *risk involved,* the *term of the loan* and the *cost of administration* has been removed. All rates of interest are related to each other and if one rate changes so will others.

There are two theories as to how the rate of interest is determined – the *loanable funds* and *the liquidity preference* theories.

a. *The Loanable Funds Theory*

Also called the classical theory of interest, was developed at the time of classical economists like Adam Smith, David Ricardo and Thomas Malthus, who held the view that economic activities were guided by some kind of invisible hand i.e. through the self interest motive and the price mechanism, and that Government interference was unnecessary and should be kept at minimum.

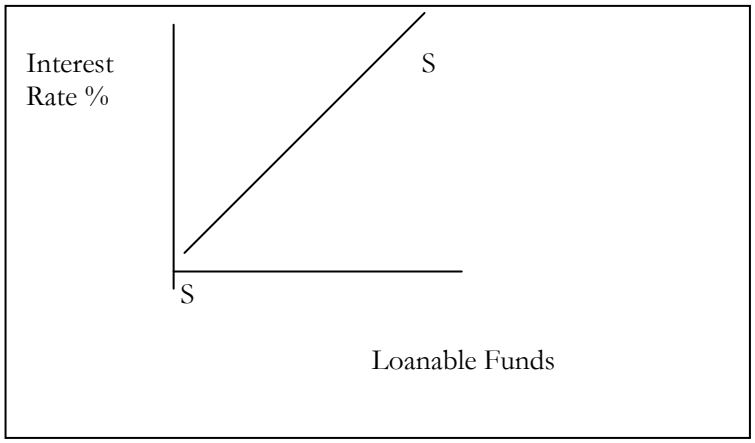


Figure 2.1 Interest Rates Vs Loanable Funds

They therefore explained the rate of interest in terms of the *demand* for money and *supply of loanable funds***.** The demand comes from firms wishing to invest. The lower the rate of interest the larger the number of projects which will be profitable. Thus, the demand curve for funds will slope downwards from left to right.

The supply of loanable funds comes from savings. If people are to save they will require a reward-interest – to compensate them for forgoing present consumption. If the interest rate is high, people will be encouraged to save and lend. If the interest rate is low, people will be discouraged from saving and lending. Hence, the supply curve of loanable funds slopes upwards.

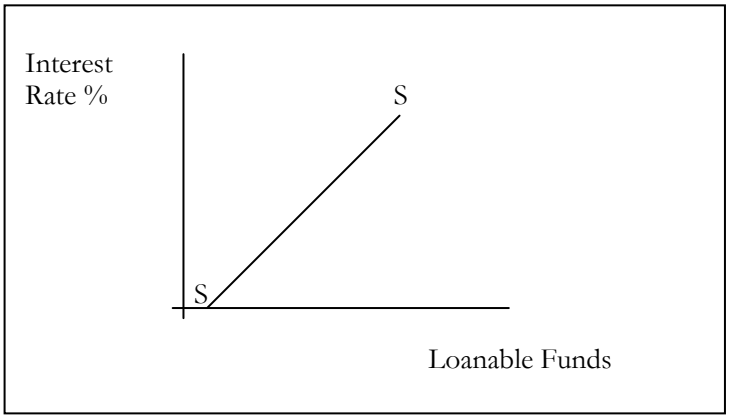


Figure 2.2Interest Rates Vs Loanable Funds

The market rate of interest is therefore determined where the demand for and supply of *loanable funds* are equal. Geometrically this corresponds to the point of intersection between the supply curve and the demand curve for loanable funds.

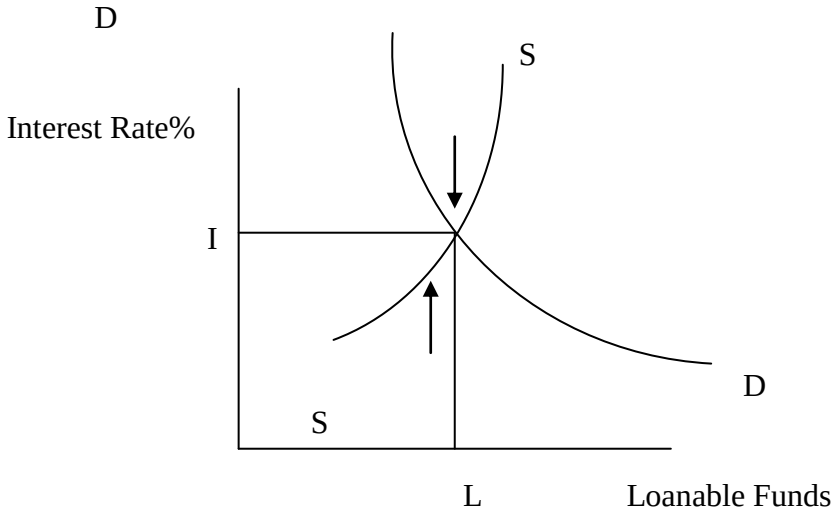


Figure 2.3Interest Rates Vs Loanable Funds

I is the equilibrium market rate of interest and L the equilibrium level of *loanable* funds. Above i, there is excess of supply over demand, and interest rates will be forced downwards. Below i there is excess of demand over supply and interest rates will be forced upwards.

Changes in demand or supply will cause shifts in the relevant curves and changes in the equilibrium rate of interest.

Although this theory has a certain amount of *validity***,** it has been criticized on the following grounds:

i. It assumes that money is borrowed entirely for the purchase of capital assets. This is not true because money can be borrowed for the purchase of consumer goods (e.g. cars or houses)

ii. It assumes that the decision to borrow and invest depends entirely on interest. This is not the case, for business expectations play more important role in the decision to invest. Thus if business expectations are high, investors will borrow and invest, even if the rate of interest is high and if business expectations are low investors will not borrow and invest even if the rate of interest is low.

iii. It assumes that the decision to save depends entirely on the rate of interest. This is not true for people can save for purposes other than earning interest, e.g. as precaution against expected future events like illness or in order to meet a certain target (this is called target savings) or simply out of habit.

b. *The Keynesian Theory*

Also called the *Monetary Theory of Interest*, was put forward by the Lord John Maynard Keynes in 1936. In the theory, he stated that the rate of interest is determined by the supply of money and the desire to hold money. He thus viewed money as a liquid asset, interest being the payment for the loss of that liquidity.

Keynes formulated derived from three motives for holding money, namely:

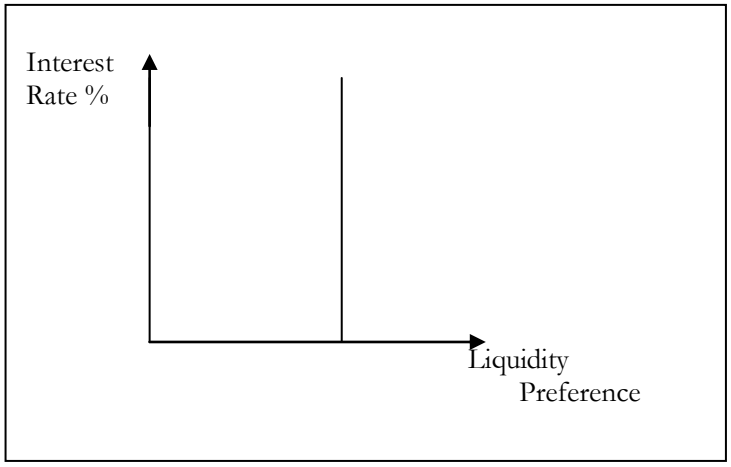
- Transactions;
- Precautionary; and
- Speculative.

Thus Keynes contended that an individual's aggregate demand for money in any given period will be the result of a single decision that would be a composite of those three motives.

a. Transactions demand for money

Keynes argued that holding money is a cost and the cost is equal to the interest rate foregone. People holding money as assets could also buy Government bonds to earn interest. But money's most important function is as medium of exchange. Consumers need money to purchase goods and services and firms need money to purchase raw materials and hire factor services. People therefore hold money because income and expenditure do not perfectly synchronize in time. People receive income either on monthly, weekly, or yearly basis but spend daily; therefore money is needed to bridge the time interval between *receipt of income* and its *disbursement over time.*

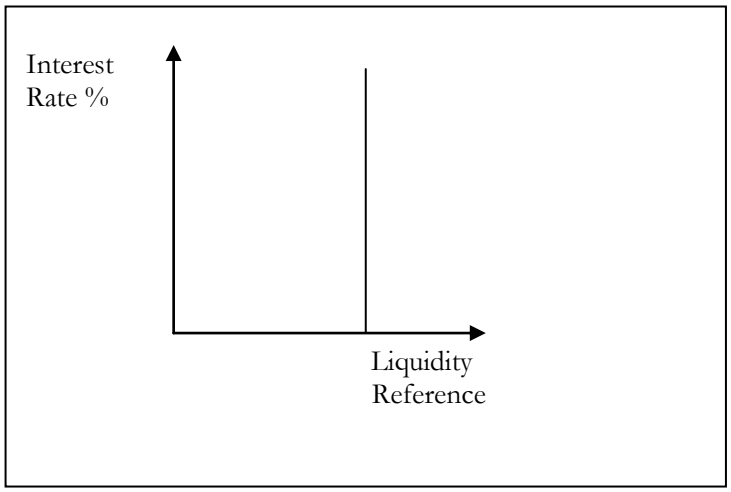
The amount of money that consumers need for transactions will depend on their *spending habits, time interval after which income is received* and *Income***.** Therefore holding habit and Interval Constant, the higher the income level the more the money you hold for transactions. Keynes thus concluded that transactions demand for money is Interest Inelastic.



b. Precautionary Demand for Money

Individuals and businessmen require money for unseen contingencies, Keynes hypothesized that individuals' demand and institutional factors in society to be considered in the short run.

Money demanded for these two motives is called active balances, because it is demanded to be put to specific purposes. The demand for active balances is independent of the rate of interest. Hence the demand curve for active balances is perfectly inelastic.



c. Speculative Demand for Money

Finally, money is demanded for speculative motives. This looks at money as a store of value i.e. money is held as an asset in preference to an income yielding asset such s government bond.

Keynes thus explained the Speculative motive in terms of the buying and selling of Government Securities or Treasury Bills on which the government pays a fixed rate of interest.

According to Keynes, securities can be bought and sold on the free market before the government redeems them, and the price at which they are sold does not have to be equal to their face value. It can be higher or lower than the face value depending on the level of demand for securities. He defined the market rate of interest as

$$\text{Market rate of Interest} = \frac{\text{fixed government rate of interest on securities}}{\text{Market price of securities}}$$

It follows therefore, that when the market price of securities is high the market interest rate will be low. Also if the market price of securities (high holders of securities) will sell them now and hold money. Hence the demand for money is high when the interest rate is low. On the other hand when the market price of securities is low, the market rate of interest will be high. Also if the market price of securities is low, it can be expected to rise. Hence people will buy securities at a low price, hoping to sell them at higher prices. In buying securities, people part with money. Hence the demand for money is low when interest rate is high. It follows, therefore, that the demand curve for money for the speculative motive slopes downwards as shown on the next page.

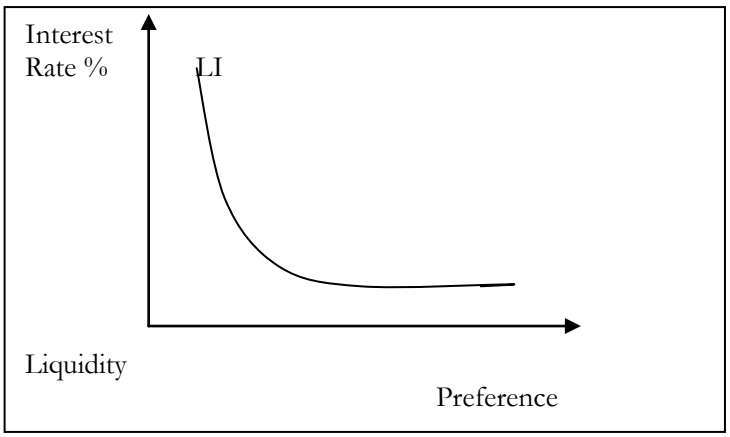
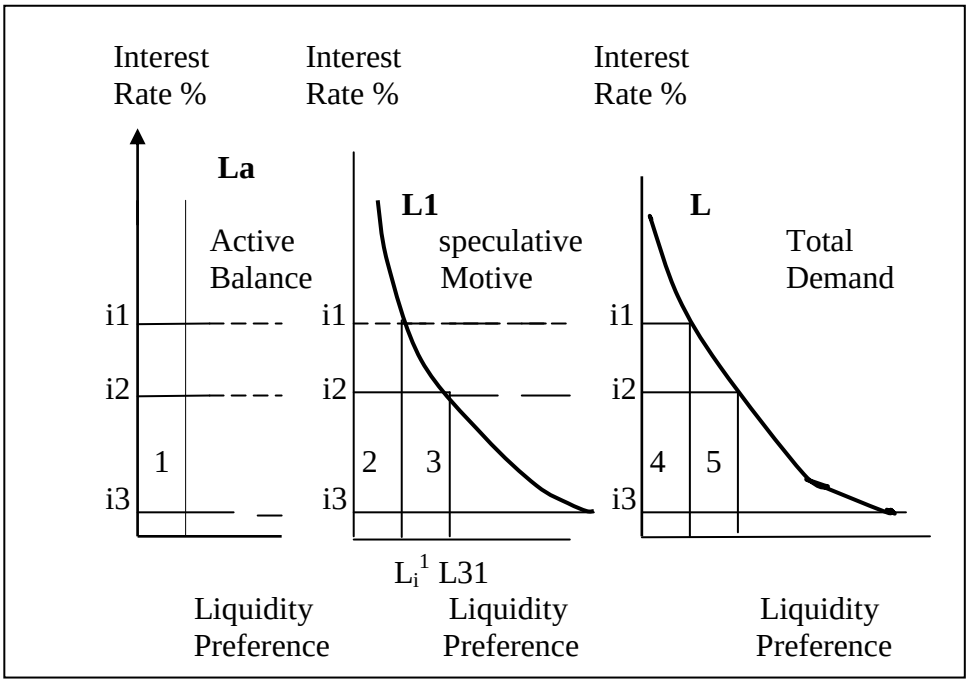


Figure 2.4 Interest Rates and Liquidity Preference

It flattens out at the lower end because there must be a minimum rate of interest payable to the people to persuade them to part with money. This perfectly elastic part is called *liquidity trap.*

The total demand for money at any given interest rte is the sum of the demands for the active balances and the speculative motive. Thus, the total demand curve for money is obtained by the horizontal summation of the two demand curves.



L_i^1 L31

1 + 2 = 4

Figure 2.5 Interest Rates and Liquidity

Note that the demand for money for active balances is constant at L^a at all rates of interest. At interest rate i_1, the demand for speculative motive is $L_i^{1.}$ Hence total demand is $(L_a + L_i^1)$

At the interest rate i_2 and the total demand is $(L^a + L_3^1)$ and so on. This gives rise to the total demand curve LL.

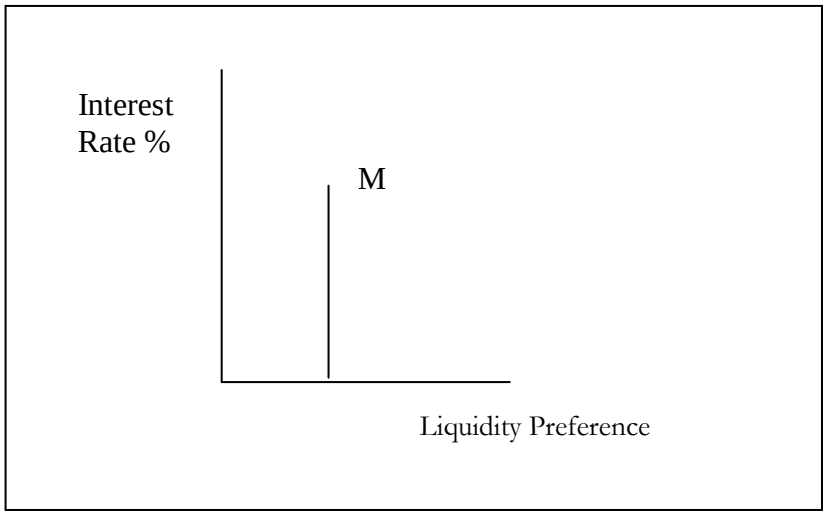


Figure 2.6 Interest rates and liquidity preference

At any given time, the supply of the money is fixed, as determined by the monetary authorities. Hence the supply of money is independent of the rate of interest and the supply curve of money is perfectly inelastic as shown above.

The equilibrium rate of interest is determined by the interaction of demand and supply forces, and this corresponds to the point of intersection between the demand curve and the supply curve.

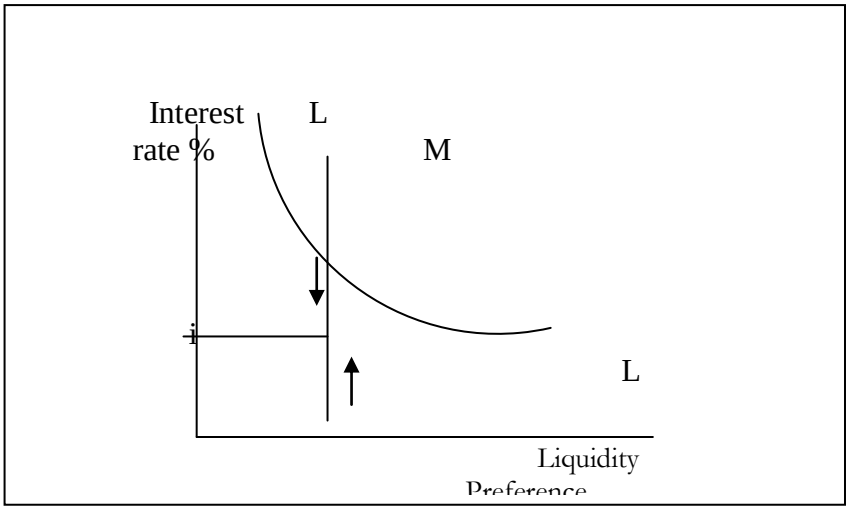


Figure 2.7 Interest rates and liquidity preference

i is the equilibrium rate of interest. Above it there is excess supply over demand and the interest rates will be forced downwards. Below it there will be excess demand over supply and interest rates will be forced upwards. An increase in the supply of money will cause interest rates to fall down because people will need less persuasion to part with money. An increase in supply is indicated by a shift to the right of the supply curve.

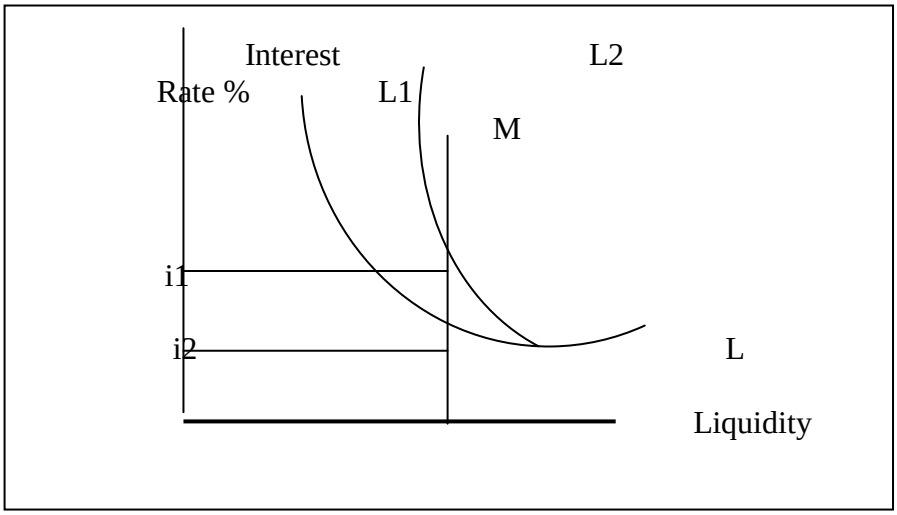


Figure 2.8 Interest rates and liquidity

When supply increases from M1 to M2, interest rates fall from i1 to i2. Conversely, fall in the supply of money (indicated by a shift to the left of the supply curve) causes interest rates to rise because people will need more persuasion to part with the money. Thus when supply falls from M2 to M1, interest rate will rise from i2 to i1.

An increase in the demand for money (indicated by an upward swing of the demand curve will cause interest rate to rise.

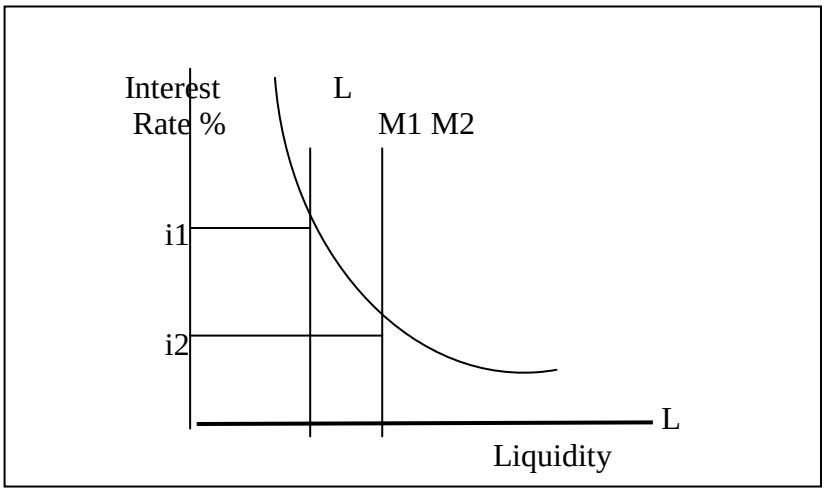


Figure 2.8 Interest rates and liquidity

An increase in demand from L1 to L2 causes interest rate to rise from i2 to i1. This is because at the initial rate of interest the increase in demand creates excess of demand over supply which causes interest rates to rise.

Conversely, when demand falls (indicated by downward swing of the demand curve) interest rate falls as at the initial rate of interest there will be excess of supply over demand. Thus, when demand falls from L2 to L1, interest rate falls form i1 to i2.

2.8 The IS – LM Model

IS – LM analysis aims to find the level of income and rate of interest at which both the commodity market and money market will be in equilibrium.

There IS curve is locus of points representing all the different combinations of interest rates and income levels consistent with equilibrium in the goods or commodity market.

The IS curve is shown in the diagram below:

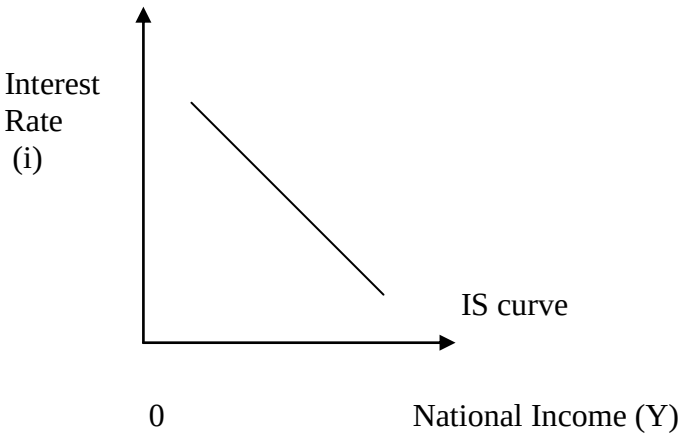


Figure2.9 The IS curve

The IS curve is a linear function in the two variables Yand I.

The LM curve is a locus of points representing all the different combinations of interest rates and income levels consistent with equilibrium in the money market. The LM curve is shown in the following diagram.

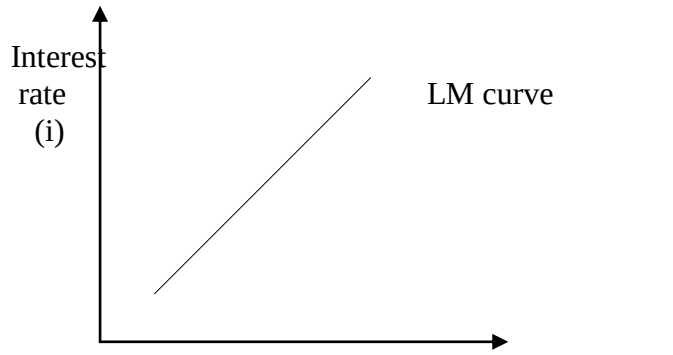


Figure2.10 The LM Curve

The LM curve is also a function which is linear in the two variables I and Y.

IS – LM analysis aims at obtaining simultaneous equilibrium in both the commodity and the money markets. Graphically, this situation can be represented as follows:

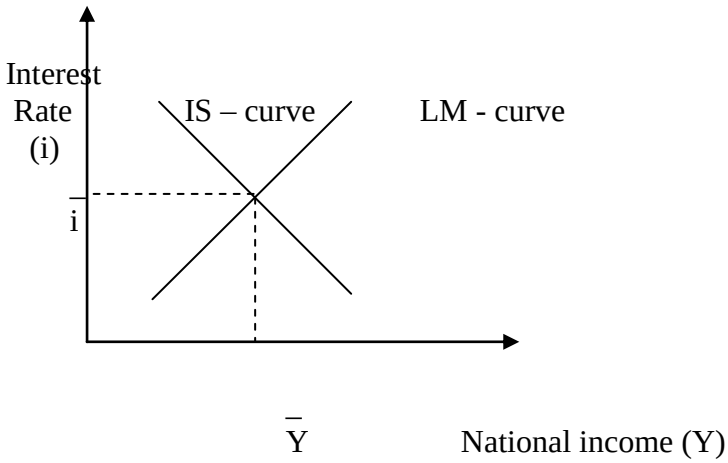


Figure2.11 Equilibrium in both the commodity and money markets.

The equilibrium in the two markets is represented graphically by the intersection of the IS and LM curves.

The commodity market for a simple two – sector economy is in equilibrium when $Y = C + I$. The money market, on the other hand, is in equilibrium when the supply of money (M_s) equals the demand for money (M_d). The demand for money is in turn made up of the transaction – precautionary demand (M_{DT}) and speculative demand for money (M_{DS}).

Numerical example.
Assume that:

$C = 178 + 0.6\ Y$

$I = 240 – 300\ i$

$M_S = 550$

$M_{DT} = 0.2\ Y$

$M_{DS} = 480 – 500i$

Commodity market equilibrium (IS) exists where;

$Y = C + I$

$= 178 + 0.6Y + 240 – 300i$

$Y – 0.6Y = 418 – 300\ i$

$0.4Y + 300\ i – 418 = 0$

Monetary equilibrium (LM) exists where

$M_S = M_{DT} + M_{DS}$

$550 = 0.2y + 480 – 500\ i$

$0.2Y – 500\ i – 70 = 0$

Simultaneous equilibrium in both markets requires that:

$0.4Y + 300\ i – 418 = 0$ …… (i)

$0.2Y + 500i – 70 = 0$ …… (ii)

Multiply (i) by 5 and (ii) by 3 in order to eliminate i.

$2\ Y + 1500\ i – 2{,}090 = 0$
$0.6Y + 1500\ i - 210 = 0$
$2.6Y = 2{,}300$
$Y = \frac{2{,}300}{}$

$= 885$

substitute Y = 885 into (i) or (ii)

$$0.4\,(885) + 300i - 418 = 0$$

$$354 + 300i - 418 = 0$$

$$300\,i = 64$$

$$i = 0.21$$

2. 9 Review Questions

1. State clearly the meaning of liquidity preference as applied to an individual and a commercial bank.
2. How does a commercial bank reconcile the need for security, liquidity profitability in distribution of the assets?
3. Briefly explain the historical development of money
4. Explain the quantity theory of money
5. Explain factors that determine the demand for and supply of money
6. Explain of the theories of interest rates determination
7. With the help of a diagram explain how equilibrium is achieved in IS- LM curves

2.10 References

William A. Mceachern (2008), *Macroeconomics: A Contemporary Introduction*, 8th Edition, South Western Educational Publishing

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CHAPTER THREE: PUBLIC FINANCE AND INFLATION

Learning Objectives:
At the end of the lesson the student should be able to:-

- State the various sources of government revenue
- State the various canons of a good tax system
- Discuss in detail the various functions of taxes
- Explain fully the various types of taxes and their merits and demerits
- See the effects of taxation on economic activities
- Explain how the tax system can be used to influence the direction the economy can take
- Explain why inflation should be of concern to national governments
- Discuss exhaustively the various types and causes of inflation
- Prescribe some of the remedies for inflation.

3.1 Objectives of Government

Government policies are required in market economies to achieve certain goals. There are broadly two types of government policies viz;

- Microeconomic policy objectives
- And macroeconomic policy objectives.

a. The Microeconomic objectives of government

These are the policies which are concerned with the allocation and distribution of resources to maximize social welfare.

i. Allocation policies

The major objective of government is to achieve *pareto efficiency* in resource allocation. An economy is said to be Pareto efficient when it must be impossible to increase the production of another, or to increase the consumption of one household without reducing the consumption of another. Such situation results when the following three conditions are satisfied:

a) The given stock of resources must be allocated in the production of goods and services in such a way that no re-location can increase the output of one good without decreasing the output of any other.

b) The combination of goods and the proportions in which they are produced must be in response to tastes and preferences of the community – i.e. the goods produced must be the ones that the community wants.

c) The distribution of goods and services must be in conformity with consumers' preferences, given their tastes and incomes.

ii. The distribution function /policy

The overriding aim of the strategy is to promote equity – that is to achieve a "fair" distribution of income and wealth. For this purpose, budgets are usually designed to impose higher rates of taxation on higher incomes and to try and secure a fair distribution of tax burdens in the community.

On the expenditure side of the budget, spending can be channelled into areas (such as health, education, and social security benefits), which directly benefit the lower income groups.

b. Macro-economic policy objectives

The major macro-economic policy objectives which the governments strive to achieve are:

i. Full employment

One of the main objectives of all governments is the control of employment or full employment. However economists are not agreed on what constitutes full employment. But we can say full employment exists when everyone who wants a job and is capable of doing a job is able to find one.

ii. The control of inflation

Since most monetarists believe that inflation has a negative effect upon economic growth as it increases uncertainty and discourages savings, maintaining stable prices usually is a major objectives of most governments.

These two foregoing objectives can be regarded as "good housekeeping".

iii. High Growth rates

For most people, economic growth remains the prime objective of policy as it allows everyone to enjoy a better standard of living.

iv. Balance of payments equilibrium

Most governments like to have an equilibrium position in the BOP accounts as there are problems associated with both sides of disequilibrium.

v. Equitable distribution of income

3.2 The Budget

The budget is a summary statement indicating the estimated amount of revenue that the government requires and hopes to raise. It also indicates the various sources from which the revenue will be raised and the projects on which the government intends to spend the revenue in a particular financial year. The budget in Kenya is presented to parliament by the Minister of Finance around mid June. In the budget the Minister REVIEW s government revenue and expenditure in the previous financial year. The minister presents tax *proposals* i.e. how he intends to raise the proposed revenue from taxation for parliament to approve.

Functions of the Budget
The budget fulfils three main functions:

- *To raise revenue to meet government expenditure*
  The government of a country provides certain services such as administration, defence, law and order, environmental services and economic services. Also it must meet the public debt. Sufficient revenue must be raised to pay for this.

- *It is a means of redistributing wealth*
  In many countries, a situation has arisen where a small proportion of the population own a more than proportionate share of the nations wealth, while the majority of the population own only a small proportion of it. One method of redressing such inequalities of wealth is through a progressive system of taxation on income and capital. A progressive system is one whereby the wealthy people do not only pay more tax than the poor, but also pay a greater proportion of their income or wealth.

- *To control the level of economic activity*
  The government uses the budget to implement fiscal policy, i.e. the regulation of the economy through governments expenditure and taxes.

Types of Budgets

1. Deficit budget If the proposed expenditure is greater than the planned revenue from taxation and miscellaneous receipts, this is a budget deficit. The excess of expenditure over revenue will be met through borrowing both internally through the sale of Treasury Bills and externally from other organisations.

2. Balanced budget If the proposed expenditure is equal to the planned revenue from taxation and other miscellaneous receipts, this is a balanced budget. Usually, balanced budgets are not presented, unless the expenditure is very limited. It would mean the government would have to over-tax the population which can create disincentives. It is to avoid this that the tax revenue is supplemented by borrowing.

3. Surplus budgets
If the proposed expenditure is less than the planned revenue from taxation and other miscellaneous receipts, this is a surplus budget. Usually, surplus budgets are not presented for they are deflationary and can create unemployment as the government takes out of the economy more than it puts back.

Taxation is the process of imposing compulsory contribution on the private sector to meet the expenses which are incurred for a common good**.**

Functions or Purposes of Taxation
The functions of taxation can be discussed from the activities of the government it is meant to achieve.
These are:
a. Raise revenue The revenue is required to pay for the goods and services which the government provides. These goods are of two types – public and merit goods. Public goods, such as defence and police are consumed collectively and no one can be prevented from enjoying them if he wishes to do so. These goods have to be provided by governments. Merit goods, such as education and medical care, could

be, and often are, provided privately but not necessarily in the amounts considered socially desirable and hence governments may subsidize the production of certain goods. This may be done for a variety of reasons but mainly because the market may not reflect the real costs and benefits of the production of a good. Thus, the public may be subsidized because the market does not take account of all the costs and benefits of the public transport system.

b. Economic stability These are imposed to maintain economic stability in the country. During inflation, the government imposes more taxes in order to discourage the unnecessary expenditure of the individuals. During deflation, taxes are reduced in order to enable the individuals to spend more money. In this way, the increase or decrease helps to check the big fluctuations in the prices and maintain economic stability.

c. *Fair redistribution of income* A major function of taxation is to bring about some redistribution of income. First, tax revenue provides the lower income groups with benefits in cash and kind. Second, the higher income groups, through a system of progressive taxation, pay a higher proportion of their income in tax than the less well-off members of the society.

d**.** *Pay interest on National debt* Taxes are also levied by the government to pay interest on national debt.

e. Optimum allocation of resources Taxes are also imposed to allocate resources of the country for optimum use of these resources. The amounts collected by the Government from taxes are spent on more productive projects. It means the resources are allocated to achieve the maximum possible output in the given circumstances.

f. Protection policy Taxes are also imposed to give protection to those commodities which are produced in the country. The government thus imposes heavy taxes on the import of such commodities from the other countries. In the view of these taxes, the individuals are induced to buy local products.

g. Social welfare The government imposes taxes on the production of those commodities which are harmful to human health e.g. excise duty on wines, cigarettes, etc.

Principles of an Optimal Tax System
When taxes are imposed certain conditions must be fulfilled. These conditions are known as Principles or canons of taxation. According to Adam Smith who first studied the principles of taxation, these are equity, certainty, economy and convenience.

Classification of Taxes

Taxes can be classified on the basis of:

a. Impact of the taxes It means on whom the tax *is imposed***.** *On the other hand, incidence of the tax refers to who had to bear the burden* of the tax. In this case the taxes may be:

- Direct or
- Indirect

b. Rates of tax The rate of tax is the percentage of the tax base to be taken in each situation. In this case the taxes may be:

- progressive or
- proportional or
- regressive or
- digestive

Direct Taxes A direct tax is one where the *impact* and *incidence* of the Tax is on the same person e.g. Income Tax, death or estate duty, corporation taxes and capital gains taxes. It can also be defined as the tax paid by the person on whom it is legally imposed.

- *Impact of tax* This means on whom the tax is imposed.

- *Incidence of tax* This means who has to bear the burden of the tax, i.e. who finally pays the tax.

Merits of direct taxes

a. They satisfy the principle of equity as they are easily matched to the tax payers capacity to pay once assessed.

b. They satisfy the principles of certainty and convenience to tax payers as they know the time and manner of payment, and the amount to be paid in the case of these taxes. Similarly, the government is also certain as to the amount of money it shall receive from these taxes.

c. They satisfy the Canon Simplicity as they are easy to understand.

d. Because most of them are progressive, they tend to reduce income inequalities as the rich are taxed heavily through income tax, wealth tax, expenditure tax, excess profit, gift tax, etc. so long as they are alive; and through inheritance taxes or death duties when they die. The poor and the income groups which are below the minimum tax limit are exempted form these taxes. These taxes thus reduce income and wealth inequalities because of their progressive nature.

e. Because the public are paying taxes to the government, they take an interest in the activities of the state as to whether the public expenditure is incurred on public welfare or not. Such civic *consciousness* puts a check on the wastage of the public expenditure in a democratic country.

Demerits of direct taxes

a. Heavy direct taxation, especially when closely linked to current earnings, can act as a serious *check to productivity* by encouraging absenteeism and making men disinclined to work.

b. Heavy direct taxation will clearly reduce people's ability to save since it leaves them with less money to spend. Taxation may, therefore, act as a deterrent to saving. Heavy taxation of profits makes it more difficult for business to build up

reserves to cover replacement of obsolete or worn-out capital and thus *investment.*

c. Direct taxes possess an element of arbitrariness in them. They leave much to the discretion of the taxation authorities in fixing the rates and in interpreting them.

d. They are not imposed on all as incomes earned on *subsistence* and *non legal activities* are left out.

e. Cost of collection is generally high.

f. These taxes are *easily evaded* either by understating the source of income or by any other means. Such taxes thus cultivate *dishonesty* and there is loss of revenue to the state.

Indirect Taxes These are imposed on an individual mostly producers or traders but they can be passed on to be borne by others usually the final consumers. They can also be defined as taxes where the incidence is not on the person on whom it's legally imposed. They include excise duties, sales tax, Value Added Tax and others.

Advantages

a. They are *less costly* to administer because the producers and sellers themselves deposit them with the government.

b. If levied on goods with inelastic demand with respect to price rises, it will result in high revenue collection.

c. Indirect taxes *reach the pockets of all* income groups. Thus, they have a wide coverage, and every consumer pays to the state exchequer according to his ability to pay.

d. They can check on the consumption of *harmful goods* like wine, cigarettes and other toxicants.

e. Can be used as a *powerful tool for implementing economic policies* by the government. If the government wants to protect domestic industries from foreign competition, it can levy heavy import duties. This will help to develop domestic industries. If the government wants to encourage one industry on a priority basis, it may not levy any taxes on its products but continue the taxes imposed on other industries. The government may do so in order to encourage, a particular technology or employment in a particular industry.

Disadvantages

a. Most indirect taxes are *regressive* as they are based are not based on ability to pay. The rich and the poor are required to pay the same amount of tax on such commodities as matches, kerosene, toilet soap, washing soap, toothpaste, blades, shoes, etc.

b. They may lead to inflation as their imposition tends to raise the prices of commodities, thereby leading to higher costs, to higher wages, and again to higher prices. Thus a price-wage cost spiral sets in the economy

c. They sometimes have adverse effects on production of commodities, and even employment. When the price of a commodity increases with the levy of a tax, its demand falls. As a result, its production falls, and so employment.

d. The revenue from indirect taxes is uncertain because it is not possible to accurately estimate the effect of such taxes on the demand for products.

Progressive Tax A progressive income tax system is one where the higher the income, the greater the proportion paid in taxes. This is effected by dividing the taxpayers' incomes into bands (brackets) upon which different rates of tax are paid – the rates being higher and the band of income. For example, in Kenya, the bands are as follows:

Monthly Tax Rates

Income Bracket (K£ per month)	Tax (Kshs per Kshs 20)
1 – 325	2
326 – 650	3
651 – 975	4
976 – 1300	7
1301 – 1625	7
excess over 1625	7.50

Source: Income Tax Department, 1996

Examples of Progressive taxes in Kenya are Income Tax, Estate Duty, Wealth Tax and Gift Tax.

Advantages

a. It is more equitable. The broader shoulders are asked to carry the heavier burden.

b. It satisfies the canon of productivity as it yields much more than it would under proportional taxation.

c. It satisfies the canon of equity as it brings about an equality of sacrifice among the taxpayers.

d. To some extent it reduces inequalities of wealth distribution.

Disadvantages

- *The effect on incentives* High progressive tax makes work and extra effort become less valuable.

- *The effect on the willingness to accept risk* High marginal rates of tax are likely to make entrepreneurs less willing to undertake risks.

- *Effects on mobility* Some financial inducement is usually required if people are to be asked to change their location, or undergo training, or accept promotion.

Progressive taxation by reducing differentials is likely to have some effect on a person's willingness to any of the above.

- *Encourages tax avoidance and evasion.*
- *Outflow of high achievers to other countries with lower Marginal tax rates.*
- It can lead to *fiscal-drag* where wage and price inflation cause people to pay higher proportion of income as tax.

Proportional Tax Is where whatever the size of income, the same rate or same percentage is charged. Examples are commodity taxes like customs, excise duties and sales tax.

Its advantage is that it's much simpler than progressive taxation.

Regressive Tax A tax is said to be regressive when its burden falls more heavily on the poor than on the rich. No civilized government imposes a tax like this.

Digressive Tax A tax is called digressive when the higher incomes do not make a due contribution or when the burden imposed on them is relatively less.

Another way in which digressive tax may occur is when the highest percentage is set for that given type of income one which it is intended to exert most pressure; and from this point onwards, the rate is applied proportionally on higher incomes and decreasing on lower incomes, falling to zero on the lowest incomes.

Economic Effects of Taxation

a. *A deterrent to work* Heavy direct taxation, especially when closely linked to current earnings, can act as a serious check to production by encouraging absenteeism, and making men disinclined to work. However, indirect taxation may actually increase the incentive to work, since the more money is then required to satisfy the same wants, indirect taxes having made goods dearer than they were before.

b. A deterrent to saving

Taxation will clearly reduce people's ability to save since it leaves them with less money to spend. Taxation may, therefore, act as a deterrent to saving. However, this will not always be the case, as it will depend on the purpose for which people are saving.

c. **A** *deterrent to enterprise*

It is argued that entrepreneurs will embark upon risky undertakings only when there is a possibility of earning large profits if they are successful. Heavy taxation of profits, it is said, robs them of their possible reward without providing any compensation in the case of failure. As a result, production is checked and economic progress hindered. It may be, too, that full employment provides conditions under which even the less efficient firms cannot fail to make profits, and so there may be greater justification for taxation of profits, and so there may be greater justification for taxation of profits under such conditions.

d. Taxation may encourage inflation

Under full employment increased indirect taxation will lead to demand for higher wages, thereby encouraging inflation. A general increase in purchase taxes pushes up the Index of Retail Prices, and so brings in its train demands for wage increase.

e. Diversion of economic resources

Only if there are no hindrances to the free play of economic forces will resources be distributed among occupations in such a way as to yield that assortment of goods and services desired by consumers. Taxation of commodities is similar in effect to an increase in their cost of production. Thus, the influence of a change of supply has to be considered, effect depending on their elasticity of demand. In consequence of taxation, resources will more from heavily taxed to more lightly taxed forms of production. This result may, of course, be desired on Non-economic grounds.

3.3 Public Expenditure

The accounts of the central government are centered on two funds, the Consolidated Fund, which handles the revenues form taxation and other miscellaneous receipts such as broadcasting license fees, interest and dividends, and the *National Loans Fund* which conducts the bulk of the governments domestic borrowing and lending.

Each government ministry works out how much money it wants to spend in the coming Financial Year which, in Kenya starts on 1st July in each year and ends on 30th June on the following year. This is known as *preparing estimates.* There are two types of estimates, -estimates of *Capital Expenditure* and estimates of *Recurrent Expenditure***.**

Capital Expenditure refers to the money spent on government projects such as the construction *of roads, bridges, health facilities, educational institutions* and other *infrastructure facilities***.** Recurrent expenditure refers to money spent by the government on a *regular* basis throughout the Financial Year e.g. the salaries of all civil servants, or the cost of lighting a government building.

Government departments also have to prepare estimates for the next financial year for presentation to parliament. Any department which earns revenue for sales of goods or services to the public shows this as an *appropriations-in aid,* which is deducted from its estimated gross expenditure to show net expenditure, that is, the actual amount required of the Exchequer.

The estimates also include *Grants-in aid* i.e. grants made by the central government to local authorities to supplement their revenue from their levying of rates.

National Debt

Taxation does not often raise sufficient revenue for the Government Expenditure. So, governments resort to borrowing. This government borrowing is called Public debt or National debt, it thus refers to the government total outstanding debt. This debt increases whenever the government runs a deficit for then it has to borrow to pay for the excess of expenditure over taxes and other receipts.

Public Debt is undertaken basically for two reasons:

a. Given the scarcity of our resources, it is necessary for the government to borrow funds in order to speed up the process of economic development.

b. Export earnings of foreign exchange usually fall short of the needed outlays for imports. In order to cover this foreign exchange deficit on transactions, it is necessary for the government to borrow from abroad. In the short-run therefore, the external debt is incurred to finance balance of payment deficits. These deficits are incurred in the course of importing vital consumers and producer goods and services.

Types of Public Debt

Public debts can be classified according to the purpose for which the money was borrowed into;

a. *Reproductive Debt:* where a loan has been obtained to enable a government to purchase some real assets, or Deadweight Debt where the debt is not covered by any real assets.

b. *National Debt:* can also be classified into marketable and non-marketable debt. Marketable debt can be bought and sold on the money market or stock exchange. It can be divided into two types, short and long-term. The former consists of Treasury Bills and the latter of Government Bonds (Stocks). Non-marketable debt cannot be sold on the money market or stock exchange and includes such items as National Savings certificates, various types of Bonds, and deposits at the National Savings Bank.

Finally, National debt can also be classified into Domestic and external debt. Domestic public debt is owed by the state mainly to its citizens or to domestic institutions such as commercial companies, etc. It includes interest payments on domestic institutions such as commercial companies, etc. Interest payments on domestic debt are raised from the taxation of the community. Such interest payments are transfer payments since the total wealth is not affected, irrespective of the size of the debt. External debt is owed to foreign institutions and governments. Kenya's external debt is incurred with two types of lenders:

i. Bilateral Lenders

This is official lending between two governments. Chief among the lenders of Kenya in this category are the U. S. A., Britain and Japan.

ii. Multi-lateral Lenders

This is lending from organizations comprising of many governments. By for the leading lender is the World Bank (IBRD) – with two main lending affiliate bodies - the International Development Association (IDA) – the international Finance Corporation (IFC); and the International Monetary Fund, and since 1983, the African Development Bank (ABD).

Burden of the national debt
The extent of the burden on a nation of public debt, depends in the first place on whether it is an external or an internal debt. The burden of the national debt to the community can be approximated by the cost of serving it. The cost of servicing the public debt can be calculated:

i. Per head of the population, or
ii. As a percentage of government revenue, or
iii. As a percentage of the national income.

Whichever method used, the National debt shall have the following burden on society:

- If higher taxation is required to service a debt which might have disincentive effects resulting in a lower level of output, then this is a burden.

- If the debt is held by foreigners, goods will need to be exported to pay the interest and possible repayment of capital. This part of the debt will involve a great burden.

Public Sector Borrowing Requirement (PSBR)
Public Sector Borrowing Requirement (PSBR) is the amount which the government needs to borrow in any one year to finance an excess expenditure over income.

Effects of Government Borrowing on the Economy
If the government borrows from the general public, this may divert funds from more productive uses.

Firms also require finance and it may be that individuals and *financial institutions prefer to lend to the government* where the risk is less and possibly the returns are greater. Thus the public sector may "crowd out" the private sector. This is known as the "crowding out" effect.

A further harmful effect may occur. Government borrowing *will tend to raise the rate* of interest. This increase in interest rates will make certain capital investments less profitable *resulting in a fall in investment, slower economic growth and a reduction in the competitiveness of industries***.**

The increase in interest rates will also raise the cost of borrowing money for the purchase of houses and other goods hence an *increase in the cost of living* leading to *inflationary wage pressure***.**

To avoid the above adverse effects, the government would *borrow from the banking system the use of Treasury Bills;* But this would raise eligible reserve assets in the banking system and thereby the money supply and the resultant inflation: This puts the government in a dilemma.
The above pattern could be alleviated if the size of the PSBR was reduced. This could be done by:

Reducing government expenditures and/or increasing taxation: The first option is the trend in recent years but increased taxation is said to have the effect of reducing initiative and incentives.

Of late, employment has been put in the control of PSBR and ensuring that the growth of money did not exceed the growth of output.

i. *Fiscal policy* refers to the manipulation of government revenue and expenditure to achieve policy objectives associated with:

- Moderating resources allocation and adjusting price mechanisms in favour of the satisfaction of public wants by encouraging socially optimal investments as well as increasing rate of investments;
- Redistributing wealth income;
- Guiding the national economy in terms of growth and stability;
- Increasing employment opportunities;
- Counteracting inflation; and
- Improving the balance of payments.

The usefulness of fiscal policies if often limited by:

- Structural constraints in the economies; and

- Observed conflicts of objectives between long term growth and short term stability; social welfare and economic growth; income distribution and growth and personal freedom and social control.

Basically, fiscal policy can be applied in many ways to influence the economy. For example the government can increase its own expenditure which it can influence by raising taxes, by borrowing from non bank members of the public and/or borrowing from the Central and Commercial bank. Borrowing from non - bank members of the public often raises interest rates and reduces availability of credit to the private sector forcing a reduction in the sectors of consumption and investment expenditures. Borrowing from the Central Bank increases money supply and may give rise to inflation and balance of payments problems.

Taxes can be used to change the consumption of demand in the economy and to affect consumption of certain commodities.

ii. Monetary policies This is the direction of the economy through the variables of money supply and the price of money. Expanding the supply of money and lowering the rate of interest should have the effect of stimulating the economy, while a policy designed to reduce price and wage inflation by requesting voluntary restraint or by imposing statutory controls contracting the supply and raising the rate of interest should have a restraining effect upon the economy. (See Lesson 5)

iii. Direct intervention The government can also intervene directly in the economy to see that its wishes are carried out. This can be achieved thorough:

a. Price and incomes policy This is where the government takes measures to restrict the increase in wages (incomes) and prices thus can be statutory or voluntary.

b. Supply-side policies These are policies to influence the economy by the prod Liquidity uctivity of the free market economy. For instance unemployment can be controlled through supply side measures such as skills training, reducing social security payments, lessening the disincentives presented by taxation, facilitating the easier flow of finance to firms, removing firms, removing restrictive practices etc.

c. *Regional policies*
These are policies designed to help the less prosperous regions.

Policy conflicts
In their attempts to achieve the policy objectives, governments often face what are called conflict of objectives. These arise partly because unlike private individuals, governments strive to achieve a multiplicity of objectives.

For instance, a more equal income distribution certainly conflicts with efficiency in the economic system (which reduces, the total output available for everyone).

Secondly, a fiscal policy which is meant to control unemployment may cause inflation if it achieves full employment or policies to combat inflation might call for a cut in public expenditure which in the short-run may lead to a higher rate of unemployment and a less equitable distribution of income and wealth.

Also the policy of maintaining low council houses rents on equity grounds results in long waiting list; this may be undesirable on efficiency grounds as it acts as a barrier to labour mobility and this in turn may increase unemployment.

A fiscal policy meant to cure balance of payments may not just reduce demand for imports but also reduces demand for domestically produced goods. This in turn can have a knock on effect in the form of lower output and higher unemployment.

Difficulties in using fiscal policy
There are several problems involved in implementing fiscal policy. They include:

Theoretical problems
Monetarists and the Keynesians do not seem to agree on the efficacy of fiscal policy. Monetarists claim that budget deficits (or surpluses) will have little or no effect upon real national income while having adverse effect upon real national income while having adverse effects upon the interest rates and upon prices.

The net effects of the budget
Unlike the simple Keynesian view that various types of budgets have different effects, the empirical evidence is that the net effects of taxes and government expenditure are influenced by the marginal propensities to consume of those being taxed and governments expenditure.

The Inflexibility of government finances
Much of the government's finances are inflexible. One of the reasons for this is that the major portion of almost any departments budget is wages and salaries, and it is not possible to play around with these to suit the short-run needs of the government.

Discretionary and automatic changes
Discretionary changes are those which come about as a result of some conscious decision taken by the government, e.g. changes in tax rates or a change in the pattern of expenditure.

Automatic changes come about as a result of some changes in the economy, e.g. an increase in unemployment automatically increases government expenditure on unemployment benefits.

In fact it is the case that deficits tend to increase automatically in times of recession and decrease in times of recovery. (These fiscal weapons which automatically increase in times of recession and decrease in times of recovery are referred to as brick stabilizers). It is possible for a government to compound the effects of a recession by raising taxes in order to recover lost revenues. This, according to Keynesians, would cause a multiplier effect downwards on the level of economic activity.

Policy conflicts
When devising its fiscal policy, the government must attempt to reconcile conflicting objectives of policy. For example, there is commonly supposed to be a conflict between full employment and inflation, i.e. that the attainment of full employment may cause inflation.

Information
It is very difficult to assemble accurate information about the economy sufficiently quickly for it to be of use in the short-run management of the economy.

Time lag
It normally takes time for a government to appreciate the economic situation, to formulate a policy and them implement it. This leads to lagged responses some of which may be long and difficult to predict.

For instance, there is an inside lag which is the time interval between the recognition of an economic problem or the shock and the implementation of appropriate policy measures. This is the time it takes to recognize that the shock has taken place and then to formulate and implement an appropriate policy. In general, fiscal policy is thought to have a longer inside lag than monetary policy.

Finally, there is an outside lag when the time interval between the implementation of policy measures and the resultant effects on the intended targets.

3.4 The Neo-Classical View
The neo-classical view is that market forces are the best directors of the economy. Positive attempts by the government it is argued inevitably make things worse. The correct posture for fiscal policy, therefore, is simply to minimize the role of government, thus leaving the largest proportion of the economy possible to be run by

the market forces.

Problems of prices and Incomes policy

i. *Confrontation* The imposition of the prices and incomes policy, voluntary or statutory, risks the possibility of confrontation with trade unions.

ii. *Discrimination Incomes* policies often tend to be more effective in the public sector, thus restricting incomes then more than in the private sector.

iii. Distortion of market forces If all workers receive similar increases this will tend to distort market forces in the labour market. Expanding sectors will find it hard to attack labour while contracting sectors will hang on to labour for too long.

iv. Differentials Many incomes policies have been based on flat-rate increases, e.g. £4 per week maximum increases, this increases the wage rate of lower paid workers relatively more than those of the higher paid.

v. Wages drift This refers to the tendency for earnings to rise faster than wage rates. This is because earnings are the compound of wages, overtime, bonuses, etc. Incomes policy tends to worsen wages drift in those industries which are trying to attract labour, i.e. industry will be tempted to comply with the incomes policy by raising wage rates by only the stipulates account but increasing bonuses, fringe benefits and so on.

Monetary policy

- The problems concerning the ability of monetary policy to influence the economy, as for instance the doubts about the ability of lower interest rates to stimulate investment, and employment.

- Mechanistic problems which may prevent the instruments from being effective, as for example the existence of excess liquidity in the system preventing open market operations from being effective.

Interest rates

- Decreasing the rate of interest may not encourage investment but increasing the interest rate tends to lock up liquidity in the financial system.

- Governments may also be unwilling to put up interest rates because, as so many voters are house buyers, this is extremely unpopular.

- With a large national debt to service, governments are less willing to raise interests rates as this will raise their own expenditure.

- Finally, with so may foreign deposits in their monetary system (sector), each percentage rise in interest rates means a drain of foreign currency on the balance of payments.

Liquidity and Multiple Contractions of Deposits
Many of the instruments of monetary policy depend upon limiting liquidity, which has a multiple effect upon bank' deposits through their liquidity ratios. If however, banks keep surplus liquidity this will protect them against such measures as open market operations and special deposits.

The efficacy of open-market sales is also affected by who purchases the securities. For open-market sales to be effective it is necessary that sales to be the general public, if the securities are bought by the banks they will have little effect upon their liquidity since most of them count as liquid assets.

The Velocity of Circulation
Theoretically it is possible for decreases in the money stock (M) to be offset by rises in the velocity of circulation (V).

Other Problems
Funding may be effective in controlling liquidity, but it is expensive since the rate of interest on long-term debt is usually much higher than on short-term debt. Considerable funding of the debt might therefore have the undesirable consequences of increasing long-term interest rates.

3.5 Types and Causes of Inflation
Meaning
The word inflation has at least four meanings.

- A persistent rise in the general level of prices, or alternatively a persistent falls in the value of money.

- Any increase in the quantity of money, however small can be regarded as inflationary.

- Inflation can also be regarded to refer to a situation where the volume of purchasing power is persistently running ahead of the output of goods and services, so that there is a continuous tendency of prices – both of commodities and factors of production – to rise because the supply of goods and services and factors of production fails to keep pace with demand for them. This type of inflation can, therefore, be described as persistent/creeping inflation.

- Finally inflation can also mean runaway inflation or hyper-inflation or galloping inflation where a persistent inflation gets out of control and the value of money declines rapidly to a tiny fraction of its former value and eventually to almost nothing, so that a new currency has to be adopted.

Measurement of Inflation
The rate of inflation is measured using the Retail Price Index. A retail Price Index aims to measure the change in the average price of a basket of goods and services that represents the consumption pattern of a typical household. It estimates the change in the cost to consumers of a range of commodities that they typically buy. It is usually prepared for different classes of consumers and for different areas. The index is measured as follows:

$$1 = \frac{\sum_{i=1}^{n} P\,1\,iQoi}{\sum_{i}^{n} 1\,PoiQoi}$$

Where: I- is the cost of living index
$\sum$ is the summation sign
n- is the number of commodities in the representative basket.
P1i - is the price of the commodity in the basket in the current period
Qoi- is the weight of the commodity in the consumer's basket.
Poi -is the price of the commodity I in the base period

The calculation of the index requires:

- Selection of commodities to be included in the consumers basket
- Selection of the base period weights for each commodity
- Date on prices of the commodities in the current period and in the base period

Such an index then estimates the cost of living or the purchasing power of incomes. If the index increases by 10% in a given period, wages would need to rise by 10% for purchasing power to remain constant. It is in this regard that trade unions and workers demand that wages should increase *pari-passu* with the cost of living index.

Causes of Inflation
At present three main explanations are put forward: cost-push, demand-pull, and monetary.

Cost-push inflation occurs when he increasing costs of production push up the general level of prices. It is therefore inflation from the supply side of the economy. It occurs as a result of increase in:

a. *Wage costs:* Powerful trade unions will demand higher wages without corresponding increases in productivity. Since wages are usually one of the most important costs of production, this has an important effect upon the price. The employers generally accede to these demands and pass the increased wage cost on to the consumer in terms of higher prices.

b. *Import prices:* A country carrying out foreign trade with another is likely to import the inflation of that country in the form of intermediate goods.

c. *Exchange rates:* It is estimated that each time a country devalues it's currency by 4 per cent, this will lead to a rise of 1 per cent in domestic inflation.

d. *Mark-up pricing:* Many large firms fix their prices on unit cost plus profit basis. This makes prices more sensitive to supply than to demand influences and can mean that they tend to go up automatically with rising costs, whatever the state of economy.

e. *Structural rigidity:* The theory assumes that resources do not move quickly from one use to another and that wages and prices can increase but not decrease. Given these conditions, when patterns of demand and cost change, real adjustments occur only very slowly. Shortages appear in potentially expanding sectors and prices rise because slow movement of resources prevent the sector and prices rise because of slow sectors keep factors of production on part-time employment or even full time employment because mobility is low in the economy. Because their prices are rigid, there is no deflation in these potentially contracting sectors. Thus the process of expanding sectors leads to price rises, and prices in contracting sectors stay the same. On average, therefore, prices rise.

f. *Expectational theory:* This depends on a general set of expectations of price and wage increases. Such expectations may have been generated by continuing demand inflation. Wage contracts may be made on a cost plus basis.

Demand-pull inflation is when aggregate demand exceeds the value of output (measured in constant prices) at full employment. The excess demand of goods and services cannot be met in real terms and therefore is met by rises in the prices of goods. Demand-pull inflation could be caused by:

- *Increases in general level of demand of goods and services.* A rise in aggregate demand in a situation of nearly full employment will create excess demand in may individual markets, and prices will be bid upward. The rise in demand for goods and services will cause a rise in demand for factors and their prices will be bid upward as will. Thus, inflation in the pries of both consumer goods and factors of production is caused by a rise in aggregate demand.

- *General shortage of goods and services.* If there is a general shortage of commodities e.g. in times of disasters like earthquakes, floods or wars, the general level of prices will rise because of excess demand over supply.

- *Government spending:* Hyper-inflation certainly rises as a result of government action. Government may finance spending though budget deficits; either resorting to the printing press to print money with which to pay bills or, what amounts to the same thing, borrowing from the central bank for this purpose. Many economists believe that all inflation is caused by increases in money supply.

Monetarist economists believe that "inflation is always and everywhere a monetary phenomenon in the sense that it can only be produced by a more rapid increase in the quantity of money than in output" as Friedman wrote in 1970.

The monetarist's theory is based upon the identity:

$$M \times V = P \times T$$

And thus this was turned into a theory by assuming that V and T are constant. Thus, we would obtain the formula

$$MV = PT$$

(See Lesson 5)

The Impact of Inflation and its Control Measures
Inflation has different effects on different economic activities on both micro and macro levels. Some of these problems are considered below:

i. During inflation money loses value. This implies that in the lending-borrowing process, lenders will be losing and borrowers will be gaining, at least to the extent of the time value of money. Cost of capital/credit will increase and the demand for funds is discouraged in the economy, limiting the availability of investable funds. Moreover, the limited funds available will be invested in physical facilities which appreciate in value over time. It's also impossible the diversion of investment portfolio into speculative activities away from directly productive ventures.

ii. Other things constant, during inflation more disposable incomes will be allocated to consumption since prices will be high and real incomes very low. In this way, marginal propensity to save will decline culminating in inadequate saved funds. This hinders the process of capital formation and thus the economic prosperity to the country.

iii. The effects of inflation on economic growth have inconclusive evidence. Some scholars and researchers have contended that inflation leads to an expansion in economic growth while others associate inflation to economic stagnation. Such kind of inflation if mild, will act as an incentive to producers to expand output and if the reverse happened, there will be a fall in production resulting into stagflation i.e. a situation where there is inflation and stagnation in production activities.

iv. When inflation implies that domestic commodity prices are higher than the world market prices, a country's exports fall while the import bill expands. This basically due to the increased domestic demand for imports much more than the foreign demand for domestic produced goods (exports). The effect is a deficit in international trade account causing balance of payment problems for the country that suffers inflation.

v. During inflation, income distribution in a country worsens. The low income strata get more affected especially where the basic line sustaining commodities' prices rise persistently. In fact such persistence accelerates the loss of purchasing power and the vicious cycle of poverty.

vi. Increased production
It is argued that if inflation is of the demand-pull type, this can lead to increased production if the high demand stimulates further investment. This is a positive

effect of inflation as it will lead to increased employment.

vii. Political instability
When inflation progresses to hyper-inflation, the unit of currency is destroyed and with it basis of a free contractual society.

viii. Inflation and Unemployment
For many years, it was believed that there was a trade-off between inflation and unemployment i.e. reducing inflation would cause more unemployment and vice versa.

Measures to control inflation
An inflationary situation can effectively be addressed/tackled if the cause is first and foremost identified. Governments have basically three policy measures to adopt in order to control inflation, namely:

Fiscal Policy: This policy is based on demand management in terms of either raising or lowering the level of aggregate demand. The government could attempt to influence one of the components C + I + G (X – M) of the aggregate demand by reducing government expenditure and raising taxes. This policy is effective only against demand-pull inflation.

Monetary Policy: For many years monetary policy was seen as only supplementary to fiscal policy. Neo-Keynesians contend that monetary policy works through the rate of interest while monetarists' viewpoint is to control money supply through setting targets for monetary growth. This could be achieved through what is known s medium term financial strategy (MTFs) which aims to gradually reducing the growth of money in line with the growth of real economy – the use of monetary policy instruments such as the bank rate, open market operations (OMO) and variable reserve requirement (cash & liquidity ratios).

Direct Intervention: Prices and incomes policy: Direct intervention involves fixing wages and prices to ensure there is almost equal rise in wages and other incomes alongside the improvements in productivity in the economy. Nevertheless, these policies become successful for a short period as they end up storing trouble further, once relaxed will lead to frequent price rises and wage fluctuations. Like direct intervention, fiscal and monetary policies may fail if they are relied upon as the only method of controlling inflation, and what is needed is a combination of policies.

3.6 Review Questions

1. a) Outline the functions of taxation .
   b) What are the possible disadvantages of a progressive income tax system?

2. State and explain Adam Smith's canons of taxation. Give local example as appropriate in each.

3. a) What is meant by inflation
   b) What are the major causes of inflation?

   c) Explain the economic problems that arise from a high rate of inflation.

4. Explain the microeconomic objectives of government

5. Explain three types of budgets

6. What are the economic effects of taxation?

7. Explain the meaning of the term Fiscal policy

8. Describe the role of government in controlling market forces under the neo-classical view

9. Breifly explain types and causes of inflation

3.7 References

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CHAPTER FOUR INTERNATIONAL TRADE AND FINANCE

Learning Objectives:
At the end of the lesson the student should be able to:-
Explain why countries engage in international trade,

- Understand how the theory of comparative advantage attempts to explain why countries gain from international trade and its limitation,
- Explain the problems encountered by nations when they attempt to individually maximize gains from trade through specialization,
- Enumerate the gains that accrue to a country from participating in international trade,
- Explain the reasons why countries put restrictions on international trade,
- Know the various methods a country can use to restrict international trade,
- Argue the case for free trade,

4.1 International Trade

Definition: It is the exchange of goods and services between one country and another. International Trade can be in goods, termed visibles or in services, termed invisibles e.g. trade in services such as tourism, shipping and insurance.

Reasons for the Development of International Trade

a. Some goods *cannot be produced* by the country at all. The country may simply not possess the raw materials that it requires; thus it has to buy them from other countries. The same would apply to many foodstuffs, where a different climate prevents their cultivation.

b. Some goods cannot be produced as *efficiently* as elsewhere. In many cases, a country could produce a particular good, but it would be much less efficient at it than another country.

c. It may be better for the country to give up the production of a good (and import it instead) in order to specialize in something else. This is in line with the *principle of comparative advantage.*

d. In a free market economy, a consumer is free to choose which goods to buy. A foreign good may be more to his or her liking. This is in line with the *principle of competitive forces* and the exercise *of choice.*

*e. Shortages***:** At a time of high domestic demand for a particular good, production may not meet this demand. In such a situation, imports tend to be bought to overcome the shortage.

4.2 Theory of Comparative Advantage

In his theory put forward in a book published in 1817, David Ricardo argued that what was needed for two countries to engage in international trade was comparative advantage. He believed that 2 countries can still gain, even if one country is more productive then the other in all lines of production. Using the Labour Theory Value, Ricardo's contribution was to show that a sufficient basis for trade was a difference, not in absolute costs. He illustrated his theory with 2 countries and two commodities, I and II and A and B respectively.

Country	Cost of Producing One Unit (in manhours)	
	A	B
I	8	9
II	12	10

We can observe that country I has complete absolute advantage in the production of both commodities since it can produce them with a lower level of resources. Country I is more efficient than country II.

Ricardo believed that even then there could still be a basis for trade, so long as country II is not equally less productive, in all lines of production. It still pays both countries to trade. What is important is the Comparative Advantage. A country is said to have comparative advantage in the production of a commodity if it can produce at relatively lower opportunity costs than another country. (The law of *comparative advantage* states that a nation should specialize in producing and exporting those commodities which it can produce at *relatively* lower costs, and that it should import those goods in which it is a relatively high cost producer). Ricardo demonstrated this by introducing the concept of *opportunity cost.*

The opportunity Cost of good A is the amount of other goods which have to be given up in order to produce one unit of the good. To produce a unit of good A in country I, you need 8 man hours and 9 man hours to produce good B in the same country. It is thus more expensive to produce good B then A. The opportunity costs of producing a unit of A is equivalent to 8/9 units of good B. One unit of B is equal to 9/8 units of A.

In country II, one unit of A is equal to 12/10 of B and one unit of B = 10/12 units of A. Therefore he felt that: -

Opportunity cost of producing one unit of:

	A	B
Country		
I	9/8 (1.25) B	8/9 (0.89) A
II	10/12 (0.83) B	12/10 (1.2) A

B is cheaper to produce in country II in terms of resources as opposed to producing it in country I. The opportunity costs are thus lower in country II than in country I.

Consider commodity A valued in terms of B. A cheaper in country I than country II.

A country has comparative advantage in producing commodity if the opportunity cost of producing it is lower than in other counties. Country I has a lower opportunity cost in producing A than B and II has a lower opportunity cost in the production of B than A. In country I, they should specialize in the production of A and Import B.

Limitations of Comparative advantage

This doctrine is valid in the case of a classical competitive market characterized by a large number of informed buyers and sellers and homogenous products in each market, with world market places serving as efficiency determinants for global allocation of resources to their most suitable uses. Unfortunately, world markets and their prices are largely inefficient showing influences of trade barriers, discrimination and market distortions.

Individual countries systematically aim at maximizing their potential gains from trade rather than with optimizing the allocation of world resources.

By pursuing gains from trade in the short run young nations may jeopardize long term development prospects because:

i) It is important to protect infant industries to acquire new skills, technology and home markets that are necessary in the early years of industrial development;

ii) Concentrating on short term comparative advantage may lead to internalizing wrong externalities e.g. promoting use of illiterate peasants and primary sector production;

iii) Long term movements in commodity terms of trade disfavour primary commodities as their prices rise more slowly than those of industrial manufactures (income elasticity of demand for primary commodities is lower than for manufactures and as world incomes rise demand for the latter rises more rapidly affecting their relative world prices).

Gains from International Trade

The gains from International trade are to make the participating countries better of than they would have otherwise been. This will be the result of a number of advantages which a country can derive from international trade, namely:

The vent-for-"surplus" product
Many countries have products which are surplus to their own requirements and it is only by exporting these that they have value at all. Thus, the plantations of coffee in Kenya are only of value because of the existence of international trade. Without it, the coffee would mainly be unused and remain unpicked.

Many of the primary products that are exported would be of no use to the country. Without trade, the land and the labour used for their production would be idle. Trade therefore gives the country the opportunity to sell these products and to make use of the available land and labour.

Importation of what cannot be produced
A country has to import what it cannot produce. Certain countries like Japan and Britain could not manufacture goods without the importation of most of the raw materials. There is thus necessity for international trade in respect of these essential materials.

Specialization according to absolute advantage
International trade allows a country to specialize in the production of commodities where it more efficient than other countries. For instance, if we take a situation in which each country in a simple two country model has an absolute advantage in producing either fruits or beef but is able to produce the other commodity only if required (for simplicity we assume constant returns to scale and full utilization of resources). Suppose that each country has equal resources and devotes half its limited resources to citrus fruit and half to beef and the production totals are:

	Units of Citrus fruits	Units of Beef
Country X	10	5
Country Y	5	10
World total	15	15

The relative or comparative costs of citrus production is lower in country X than in country Y, but the situation is reserved in the case of beef production. Country X has an absolute advantage in citrus fruit production and Y has an absolute advantage in beef production. If each country specializes in the production of the commodity in which it is most efficient and possesses absolute advantage, we get:

	Units of Citrus fruits	Units of Beef
Country X	20	0
Country Y	0	20
World total	20	20

The gains from trade are obvious with five units m ore of fruit and five more of beef – provided we assume that transport costs are not so enormous as to rule out gains made.

Specialization according to comparative advantage

Even if one country can produce the two goods more efficiently at a lower comparative cost than the other country, there could be gains to be made from International Trade. This possibility is explained by the theory of comparative advantage. Suppose that country X is more efficient in both citrus fruit and beef production. If each country devoted half its resources to each, let us imagine the production totals are:

	Units of Citrus fruits	Units of Beef
Country X	30	60
Country Y	20	10
World total	50	70

Country X possesses an absolute advantage in both industries but whereas X is only 50% more efficient in the citrus fruit production, it is six times more efficient in beef production. Even so, if country Y produces an extra unit of citrus fruit it need give up only half a unit of beef. In contrast, country X must give up two units of beef to increase production of citrus fruits by one unit. It is evident from this example that although a country may have absolute advantage in the production of all products, it is possible for a country such as Y to produce some products relatively cheaply at lower opportunity cost than its trading partner X. When this occurs as in the simple example above then economists describe X as possessing a comparative advantage in the production of citrus fruit.

If each country specializes completely in the activity in which it possesses a comparative advantage, the production totals are:

	Units of Citrus fruits	Units of Beef
Country X	0	120
Country Y	40	0
World total	40	120

What is evident from these last calculations is that although the overall production of beef has increased, the output of citrus fruit has fallen by ten units. Thus we cannot be sure without some knowledge of demand and the value placed on the consumption of citrus fruit and beef that a welfare system gain will result from specialization.

Competition

Trade stimulates competition. If foreign goods are coming into a country, this puts home producers on their toes and will force them to become more efficient.

Introduction of new ideas

International trade can introduce new ideas into a participating country; it can stimulate entrepreneurship and generate social change. This is especially the case in developing countries where the development of expert industries can lead to the emergence of a

commercial class desirous of change and opposed to any practice that hold back economic advancement.

Technological advances can also be introduced into a country as companies start to base their production in overseas countries.

Widening of choice to the consumer
It is undoubtedly a great benefit to be able to buy a wide range of goods that would not otherwise be available. International trade offers to the consumer a wider choice. This greater availability of goods may indeed prove to be of economic advantage. For in a country, producers may only be prepared to take risks and invest their time and money in a business if they can spend the resultant income on consumer goods. These may be imported, especially if the country lacks consumer goods industries – as in may developing countries. Thus, these imports of consumer goods provide the incentive for productive effort within the country.

Creation and maintenance of employment
Once a pattern of international trade has developed, and countries specialize in the production of certain goods for export, it follows not only has that trade created employment in those sectors, but that the maintenance of that trade is necessary to preserve that employment. In the modern world with its high degree of interdependence, a vast number of jobs depend upon international trade.

Restrictions on International Trade
Despite the arguments of the "classical" theory of free trade, the twentieth century has seen the gradual movement away from free trade, with governments increasingly imposing restrictions on trade and capital flows. All have adopted, to varying extents, various forms of restrictions to protect some of their industries or agriculture.

Reasons for Protection
Cheap Labour
It is often argued that the economy must be protected from imports which are produced with cheap, or 'sweated", labour. Some people argue that buying foreign imports from low wage countries amounts not only to unfair competition, but continues to encourage the exploitation of cheap labour in those countries as well as undermining the standard of living of those in high wage economies.

Infant Industry Argument
Advocates of this maintain that if an industry is just developing, with a good chance of success once it is established and reaping economies of sale, then is it necessary to protect it from competition temporarily until it reaches levels of producdton and cost which allow it to compete with established industries elsewhere, until it can "stand on its own feet". The argument is most commonly used to justify the high level of protection that surrounds the manufacturing industry in developing countries, as they attempt to replace foreign goods with those made in their own country ("import substitution").

Structural Unemployment
The decline of the highly localized industry due to international trade causes great problems of regional (structural) unemployment. If it would take a long time to re-locate the labour to other jobs, then this can put the government, under considerable political and humanitarian pressure, to restrict the imports that are causing the industry to decline.

Dumping
If goods are sold on a foreign market below their cost of production this is referred to as dumping. This may be undertaken either by a foreign monopolist, using high profits at home to subsidize exports for political or strategic reasons. Countries in which such products are "dumped" feel justified in protecting themselves. This is because dumping could result in the elimination of the home industry, and the country then becomes dependent on foreign goods which are not as cheap as they had appeared.

Balance of Payments
Perhaps the most immediate reason for bringing in protection is a balance of payment deficit. If a country had a persistent deficit in its balance of payments, it is unlikely to be able to finance these deficits from its limited reserves. If therefore becomes necessary for it adopt some form of restriction on imports (*e.g. tariffs, quotas, foreign exchange restrictions)* or some means of boosting its exports *(e.g. export subsidies).*

Danger of over-specialising
A country may feel that in its long-term interests it should not be too specialized.
A country may not wish to abandon production of certain key commodities even though the foreign product is more competitive, because it is then too dependent on imports of that good. In the future, its price or supplies may diminish. It is for this reason that countries wish to remain largely self-sufficient in food. An exporting country may not wish to become overspecialized in a particular product. Such over specialization may make sense now, but in the future, demand may fall and the country will suffer disproportionally. It is for this reason that many developing countries choose not to rely solely on their comparative advantage; they wish to diversify into other goods as an: insurance policy".

Strategic Reasons
For political or strategic reasons, a country may not wish to be dependent upon imports and so may protect a home industry even if it is inefficient. Many countries maintain industries for strategic reasons. The steel industry, energy industries, shipping, agriculture and others have used this strategic defence argument.

Bargaining
Even when a country can see no economic benefit in protection, it may find it useful to have tariffs and restrictions bargaining gambits in negotiating better terms with other nations.

Ways of Restricting International Trade
The most common means of restricting international trade is through import restrictions. The main forms are:

Tariffs
This is a tax on each unit imported. The effect of the tax is to raise the price of imported varieties of a product in relation to the domestically produced, so that the consumers are discouraged from buying foreign goods by means of the price mechanism. Such a tax may be *ad valorem*, representing a certain percentage of the import price, or *specific* that is, an absolute charge on the physical amount imported as, for example, five shillings a ton.

Quotas
The most direct way of offering protection is by limiting the physical quantity of a good which may be imported. This can be done by giving only a limited number of import licenses and fixing a quota on the total amount which may be brought in during the period. The quota may be imposed in terms of physical quantities or in terms of the value of foreign currency, so that a maximum of so many "shillings-worth" may be imported.

Foreign exchange restriction
Exchange controls work much the same way as physical controls. Foreign exchange is not made available for all desired imports. It can be severely restricted to whatever the government decides it wants to see imported. Alternatively, the exchange rate may be fixed in such a way as to "overprice" foreign currency (compared to what would have been the free market price), so that importers have to pay more for foreign currency (in terms of domestic currency). This makes all imports dearer and thus gives protection "across the board" to all domestic production for the home market.

Procurement policies by government
The government itself, together with state corporations, is an important purchaser of goods; in its "procurement" policies, therefore, it can either buy goods from the cheapest source, whether domestic or foreign, or it can give preference to domestic producers. This could amount to a substantial advantage, or protection.

Other restrictions
Governments can devise health or safety requirements that effectively discriminate against the foreign good. Also where the country has state import agencies they can choose not to import as much as their citizens would require. The government can also introduce cumbersome administrative procedures that make it almost impossible to import.

Arguments against protectionism
Most of the arguments for protectionism may be met with counter arguments, but underlying the economic arguments as opposed to the social, moral, political, strategic, etc, is the free trade argument.
Free trade argument

This, in brief, maintains that free trade allows all countries to specialize in producing commodities in which they have a comparative advantage. They can then produce and consume more of all commodities than would be available if specialization had not taken place. By implication, any quotas, tariffs, other forms of import control and/or export subsidies all interfere with the overall advantages from free trade and so make less efficient use of world resources than would otherwise be the case.

Reduced output argument
It has been said that import controls will protect jobs initially, but not in the longer run. If we in the home country limit imports, then other countries will have less of our currency with which to buy our exports.

This will lead to a decline in sales and a loss of jobs in export industries. The overall effect is likely to be a redistribution of jobs from those industries in which the country has a comparative advantage to those in which it has a comparative disadvantage. The net result will be that total employment is unchanged but total output is reduced.

The infant industries seldom grow up
The infant industry argument is sometimes met with the claim that infant industries seldom admit to growing up and cling to their protection when they are fully grown up. Most economists, however, appear to accept the infant industry argument as a valid case for protection provided it is temporary.

Gains from comparative advantage
The argument for protection against low wage foreign labour is partly a moral argument which is outside the scope of positive economics, but even the economic part of the argument that it will drag down the living standards of high wage economies can be shown to be invalid. It is true as noted above that the payment of low wages will allow a country to export their goods cheaply and so possibly undercut those of high wage countries. However, it must be noted that countries importing these cheap goods gain by virtue of their low cost in terms of the goods required to be exported in return. This again is another use of the comparative advantage argument.

No Validity in economics
The other arguments such as the need to avoid over dependence on particular industries and the defence argument are really strategic arguments which are valid in their own terms and for which economic science is largely irrelevant.

Retaliation
Advocates of free trade also believe that if one country imposes import restrictions, then those countries adversely affected will impose retaliatory restrictions on its exports, so it will not end up any better off. This could lead to a "beggar-my-neighbour" tariff war, which no one can benefit from, and which contracts the volume of world trade on which every country's international prosperity depends.

Inflation
If key foreign goods are not free to enter the country (or cost more), this will raise their prices and worsen the rate of inflation in the country.

Inefficiency
It is argued that if home industries are sheltered from foreign competition there is no guarantee that they will become more efficient and be able to compete in world markets.

4.4 Terms of Trade
The relation between the prices of a country's exports and the prices of its imports, represented arithmetically by taking the export index as a percentage of the import index. In the comparative cost model, terms of trade were, defined as the international exchange ratio between a country's export good and its import good. This is the barter terms of trade which measures the quantity of exports which have to be sacrificed to obtain a unit of imports and is easily calculated when there are just two goods traded. But in practice, countries trade hundreds of different goods and services and the concept of the terms of trade becomes more complex. Estimates of the terms of trade are usually made by calculating an index of import prices; this gives an index of the term of trade:

$$\text{Terms of trade index} = \frac{\text{Export Price Index}}{\text{Import Price Index}} \times 100$$

Thus, the price indices are essentially weighted averages of export and import pries. If these are set at 100 in the same base year, say, 1990, then the terms of trade index is also 100. If, for instance, import prices fall relative to export prices, the terms of trade will rise above 100, the terms of trade then being said to be more favourable to the country concerned since it means that it can obtain more goods from abroad than before in exchange for a given quantity of exports. On the other hand, if the terms of trade become unfavourable, the terms of trade index will fall below 100.

A rise in terms of trade index is usually described as an "improvement" or as "favourable" on the grounds that a rise in export prices relative to import prices theoretically means that a country can now buy the same quantity of imports for the sacrifice of less export (or it can have more imports for the same volume of exports). Similarly, a fall in the terms of trade index is a "deterioration" or is an "unfavourable" movement.

Factors affecting the long run trend of the Terms of Trade for developing countries
Most Third World countries have been faced by a fall in their terms of trade over the long run. There are a number of factors which contributed to this result, namely: -

The income-elasticity of demand for primary products
These countries export primary products like basic foodstuffs which may be considered to be "necessities" on which a decreasing proportion of income is likely to be spent as these incomes rise. Countries relying on basic foodstuffs and other primary product

exports may therefore find their exports growing more slowly than those of individual countries exporting manufactured goods.

The discovery of synthetic materials
Over a whole range of items, the substitution of synthetic man-made products has reduced the market for particular primary products. The long term trend in the market shares of natural and synthetic products is likely to be influenced by a "ratchet" effect. When prices of natural products are high, due to cyclical fluctuations or temporary shortages, research into possible synthetic substitutes will be encouraged. When prices of natural products revert to more normal levels, these products may have permanently lost a further part of the market.

Raw material – saving innovations
This is likely to apply to technical change aimed at economizing the use of raw material's in industry. Periodic high prices will stimulate the search for and application of raw material saving process. Technical change aimed at a progressive reduction in costs per unit of output directly by permitting industrial output (and thus income) to expand in greater proportion than the demand for materials.

Agricultural protection and import substitution in developed countries
The protectionist policies within the industrial countries which aim to raise the incomes of farmers and other primary producers like fishermen by placing tariffs or quotas on competing imports have also affected the terms of trade for developing countries. As a result, many industrial countries have become almost self-sufficient in producing grains, sugar (from beet), livestock products, and even tobacco and wines. Sometimes the policies have been directed at saving foreign exchange as well as maintaining domestic incomes and employment, and have not only been confined to primary products. Indeed, restrictions on access to markets for manufactured goods by developing countries at large, or potentially large, export industries like India's textiles have forced developed countries to sell more primary products instead. Thus even without tariffs or quotas, therefore, the expansion in primary product exports is likely to result in a decline in their commodity terms of trade in the many cases where the exports are likely to result in a decline in their commodity terms of trade in the many cases where the price-elasticity of demand in industrial countries is very low. When in addition, these primary products face tariff or quota restrictions, the deterioration in the terms of trade will be greater.

Diminishing returns in agriculture and limited natural resources
Whatever the income-elasticity of demand for primary products, continuous expansion of industrial output means a continually increasing requirement of raw materials. If the supply of land suitable for various agricultural products is limited, the law of diminishing returns may apply, leading to increasing scarcity of such products, and a rise in their prices.

Technical progress in manufacturing
Although technical progress in the industrialized countries should, through the market

mechanism, have been shared between the industrial producers and the producers of primary products, according to Raoul Presbich, this desirable development has been frustrated. On the one hand, industrial monopolistic practices and trade union action producing cost-push inflation in the developed countries have persistently raised money wages in these countries and, with these, the prices of manufactured goods. In contrast, competition among primary producers, and the ineffectiveness of trade unions in the agricultural sectors of these economies, has kept down the prices of raw materials. In fact the benefits of any cost-reducing innovation in these countries is likely to be passed on, as a result of competition, to industrial consumers in the form of reduced prices.

4.5 International Trade arrangements and Agreements

International Commodity Agreements (ICAS)

International Commodity Agreements (ICAS) represents attempts to modify the operation of the commodity markets so as to achieve various objectives such as price stabilization of price enhancement. Support for such intervention stems from apparent weaknesses in the operation of market forces in achieving an efficient allocation of resources, appropriate levels of privately held stocks in some commodities and an equitable distribution of income from their export as between exporters and importing countries. ICAS are to be distinguished from producers' or exporters' cartels by the feature of consumer agreement to the scheme and representation on the governing body.

Objectives of ICAs

Most schemes have as their main objective to stabilize and/or increase the world price of commodity, producers' incomes, foreign exchange earnings of exporting countries and governing revenues from taxes on the commodity. More stable prices are desired because wildly fluctuating prices may cause hardship and are likely to increase the costs of both producers and consumers through increasing uncertainty and producing exaggerated responses in production and consumption. Where these responses are lagged one or more seasons behind the price change they can be particularly damaging in producing 'cobweb' cycles. High current prices for coffee, for example, may stimulate planting of new coffee trees that will only bear fruit five or more years hence when the prices may become, as a result very depressed. More stable earnings for producers becomes a particularly important objective when the producers are small farmers with low incomes and little or no reserves, though most countries have national measures such as marketing boards which try to stabilize producers' earnings. Greater stability in export revenues should reduce uncertainty in economic planning and where taxes are geared to export revenues, as is the case for many primary exports, this objective is reinforced.

The aim of raising prices, incomes or export earnings above the levels that would prevail without intervention has to be seen as a form of disguised economic aid or as compensation for declining terms of trade. The charters of several ICAS also include the aim of expanding the markets for their primary products by developing new uses, reducing trade barriers and increasing sales promotion.

As is often the case in economics, many of these objectives are mutually incompatible. A

world price stabilized within narrow limits could cause greater instability in export earnings for some commodities, whereas a raised price may involve lower incomes and will certainly militate against expanded markets. Obviously these possibilities depend on assumptions about elasticities of demand and supply for specific commodities, but are in fact more than likely. For example, where demand shifts are the main cause of fluctuations but demand is price elastic, an export quota agreement will destabilize export earnings. Similarly, where supply variations are the basic cause, holding price stable though a buffer stock can destablise income if the price elasticity of demand is greater than 0.5. a stable price can also involve lower total export earnings. But recently research shows these results are less likely than was previously considered to be the case, particularly if the bank within which a buffer stock seeks to confine price movements is fairly wide. In practice the conflict between price stabilization and stabilization of export earnings for most countries' export earnings is unlikely.

The UN's Integrated Programme for Commodities

Most of the political pressure for ICAs comes from spokesmen for the developing countries. This is reflected in countless resolutions in UNCTAD and in the grandiloquent mid-70s demands for ' A New International Economic Order', basically a collection of old ideas in a fashionable package. Stabilization and support for primary commodity prices remains the main objective and ICAs the main mechanism for achieving it. The only novel features in the UNCTAD proposals for an integrated programme were the suggestion for a Common Fund for financing international stocks and the simultaneous negotiation of a broad group of ICAs. The UNCTAD report stressed, 'That years of studies, discussions and consultations in various forums have succeeded in establishing international arrangements for only a few commodities, hardly any of which have proved to be effective or durable.' Instead of drawing the conclusions that such a dismal record might indicate basic flaws in these forms of market intervention UNCTAD demanded urgent negotiations for creating a package of up to eighteen ICAs with buffer socks and a Common Fund without wasting further time in research or consultation.

But of these eighteen commodities three already had existing price control agreements (tin, coffee and cocoa); two had existing and successful producer price raising schemes (bauxite and phosphates); four were unsuitable for buffer stocks scheme either because of the absence of organised markets or perishability (iron ore, bauxite, meats, bananas). Price enhancement for copper, cotton, iron ore, vegetable oils and oil seeds, sugar and meats was unlikely and inequitable because developed countries produced a large proportion of them, and for rubber, jute, hard fibres and cotton because of the ready availability of synthetic substitutes. A rather similar appraisal can be found in Rangarajan's book where he says, of the 18 commodities in the list, "the stock mechanism is suitable for four, of which tow already have operating mechanisms and one does not need to be stocked in the near future… it is difficult to avoid the conclusion that the stock mechanism was first chosen as a saleable proposition and the Integrated Programme then fitted around it."

If it is accepted the ICAs are a good thing then there is a case for a simultaneous approach and for the creation of a common fund for stocks. The attraction of dealing

with a large group of commodities simultaneously is that it can have something in it for everyone. Countries which have interests in some commodities as consumers but in other as producers can offset gains from one agreement against losses on another. Against this can be set the sheer complexity of the task and tremendous demands that would be created for the simultaneous price increase (since that is the most likely effect of the start of the large number of stockpiles recommended) in a wide range of important imports in unlikely to raise much enthusiasm on their form for such proposals, it may be possible to give a little disguised aid in the form of an agreement on sugar or coffee without the electorate noticing what is afoot, but if similar transfers through raised prices are intended for ten or more commodities strong opposition form consumers is very likely.

A common fund for buffer socks offers several advantages. First, if the market behaviour for some commodities is out of phase with movements in prices of others, some buffer stocks could be selling at the same time as others buying. These offsetting movements could reduce the overall size of the required fund as compared with the aggregate of individual commodity funds required to achieve the same policy objectives. If, however, the main cause of instability was cyclical – fluctuations in demand which caused all commodity prices to rise and fall together –this economy in funds would be zero or negligible.

A large single fund might obtain finance on better terms than would several smaller ones. Lending risks would be pooled and reduced, and dealing in large sums of money would yield some economies of scale. UNCTAD envisages the buffer stocks as representing investments which could attract funds on a near commercial basis from OPEC members, but this is a very doubtful proposition. It depends on either rather wide swings between purchase and sale prices or very accurate predictions on the part of the stock managers. The combination of administrative, brokerage, storage and deterioration costs in stocks tends to absorb a very large part the gross margins between purchase and sale prices making it unlikely that the fund could support high interest charges.

Negotiations for a Common Fund (CF) were eventually concluded in1979. It was set up with ‘two windows’. The first is intended to help finance international buffer stocks and international buffer stocks and internationally co-ordinated national stocks. Its send window will finance such measures as research and development, marketing and diversification. The financial structure of the CF is envisaged as government contributions of $470 million of which $400 million is for the first, and $70 million for the second window. Of the $400 million, $150 million is to be contributed in cash, $150 million on call and $100 million as on call for backing the Fund’s borrowing. UNCTAD’s earlier estimate of $6 billion for stocking the ten ‘core’ commodities (thought by may to be an underestimate) may be directly comparable to this because of differences in the financial arrangements, but the obvious disparity in size is so huge as to suggest that the CF is unlikely to have any significant impact upon commodity trade instability.

In any case it has often been marked that the main obstacle to ICAs has seldom been lack

of finance. Negotiations have almost always broken down over the issues of the target price and the allocation of quotas. Even if they could be set up it is not known whether ICAs could succeed in moderating fluctuations in the export prices and revenues of developing countries. Past experience does not justify optimism. Nor does the evidence of theoretical and empirical research, including simulation studies, suggest that the task of keeping actual prices within, say, plus or minus 15 per cent of a target price which keeps in touch with long-term trends in supply and demand, is anything but extremely difficult in technical terms, let alone in the real world of clashing interests between producers and consumers and among producing nations.

Compensatory Financing

Two other schemes for alleviating the effects of commodity trade instability have been operating for a number of years. These are the IMF's Compensatory Financing Facility (CFF) started in 1963 and the EEC's STABEX scheme which was established by the Lome convention between the Community and forty-six African, Caribbean and compensating countries for shortfalls in export earnings which result from fluctuations in commodity markets. No attempt is made to intervene in the markets to influence shortfall and the loans normally have to be repaid within a few years. The IMF's CFF defines a shortfall as the gap between the current years's and forecasts for the subsequent years. Initially drawings were limited to 25 per cent of the member's quota in the IMF, were not additional to ordinary drawings and required the member to co-operate with Fund in finding a solution to its balance - of- payments difficulties. Partly because of these limitations and partly because the 1960s were a period of relative stability the CFF was little used. Over the years the scheme was liberalized. Major changes were made in1975 in the wake of the oil crisis. The limit on drawings was raised to 75 per cent of quota and could be additional to ordinary drawings. The permitted that the amount of outstanding drawings in any twelve-month period was raised from 25 to 50 per cent of quota. Because the calculation of the shortfall is necessarily delayed until after the end of the current year countries were permitted to draw on their ordinary quota in anticipation of a shortfall and then convert this to a CFF drawing at anytime up to eighteen months later. Up to eighteen months later. Shortfalls have to be for reasons outside the country's control and the member still has to co-operate with the IMF in finding a solution. A rule which prevented a country from borrowing if its current exports were 5 per cent or more than the average of the two previous years was eliminated. This proved crucial in the inflationary years of the 1970s.

After the 1975 reforms drawings shot up. In the subsequent sixteen months drawings by forty-nine member countries reached SDR2.4 billion or twice the amount in the previous thirteen years. By April 1980 the drawings by the non-oil Less Developed Countries (LDCs) had amounted to 4.6 billion SDRs and their net outstanding credits were 2.5 billion SDRs.

Nevertheless, it has been criticized for providing far too little assistance to the LDCs. UNCTAD secretariat calculations show that drawings against the CFF by the LDCs have on average not exceeded 12.5 per cent of shortfalls. Even in 1976 – the year of maximum drawings –it was only 12.7per cent.

It may well be time for the CFF to meet a much larger proportion of export shortfalls, and most suggested reforms point that way, but several factors should be borne in mind. First, the IMF assumes that most countries will use their own reserves, borrowing from other official sources and commercial sources as well as drawing upon the CFF. Secondly, the 1976 drawings were in relation to the shortfalls of 1975 which was a quite exceptional year. Primary commodities hit their peak in 1974 and their trough in 1975, recovering substantially in 1976 and 1977. Many LDCs should have accumulated reserves from the preceding commodity boom in 1973/4 and the IMF had created several emergency funds to assist in this world crisis. For example the Oil Facility and the Trust Fund. The NOLDCs did draw on these.

The CFF scheme is, in principle, a much easier system to operate than ICAs. It is much more comprehensive in that it covers all merchandise exports (and could easily include invisibles as well) and it is much less demanding of political necessity to obtain agreements. Or technical skill in forecasting future prices of individual commodities and designing optimal stocking policies than is the case for ICAs. CFF-type schemes emerge in favourable light from simulation exercises and, in practice, the IMF scheme seems to have worked in the right directions even if the amounts of compensation have seemed small in relation to the recent problems of the LDCs.

Increases the LDCs' Fund quotas, the inclusion of invisibles, and calculation of shortfalls in real terms (allowing for changes in the prices of imports) are all possible reforms which could increase the value the CFF to LDCs.

c. STABEX

The STABEX scheme was designed to stabilize earnings from exports of the African, Caribbean and Pacific (ACP) countries to the Community. It covered seventeen agricultural commodities and iron ore. The original forty-six ACP countries later rose to fifty-two so that it involves substantial number of developing countries, many of them rather small, poor and vulnerable. But the commodities whose earnings are intended to be stabilized amount to only 20 percent of the export earnings of the ACP countries. In 1976, its first year of operation, seventeen ACP countries drew SDDR 72 million. In the same year ACP counties drew SDR124 million from the IMF scheme and LDCs total drawings for 1976 were SDDR 1,575 million.

The total sum allocated to STABEX for the whole period 1976 – 80 was only about $420 million and conditions for eligibility were quite stringent. The exports had to be crude or in very elementary processed form. Individually they had to account for at least 7.5 percent of the country's total merchandise exports to all destinations. The shortfalls, calculated in nominal terms, had to be at least 7.5 percent below the average earnings from the product the ECC over the previous four years. For the least developed, land-locked or island economies these two conditions are dropped to 2.5 per cent.

The terms for repayment are liberal. Compensation payments to the least developed countries are in the form of grants and for the others the loans are interest free and

repayable as and when export earnings recover. The STABEX can be criticized for discriminating between ACP and other LDCs and for being too limited in coverage and funds. This has the effect of making it liable to political influence when decisions have to be made on rationing funds between intending borrowers. The idea of making compensation payments grants to the least developed countries is widely commended as an appropriate change for adoption by the IMF\CFF. But is it sensible to confuse transfers intended to promote development with assistance intended to deal with temporary financial imbalances? The criteria for allocating funds for each of these purposes should be quite different. Of course situations may arise where what was intended as a short-term loan has to be re-phased. Instead of exports rising in the next three years they may drop still further or there may be drop and still unforeseen events need special *ad hoc* arrangements and that basically is the attitude of the IMF.

A complementary facility for commodity-related shortfalls in export earnings

This is the most recent proposal of the Group of 77 at UNCTAD in June 1979. There they requested that the UNCTAD secretariat in consultation with the IMF staff carry out a detailed study for a complementary facility' to compensate for shortfalls in each commodity, taking account of its financial requirements, possible sources of financing, its financial feasibility, institutional arrangements and the modalities and considerations that would provide adequate compensation in real terms to developing countries …' it is intended that this should be additional to improvements in the CFF to the IMF and other IFC arrangements. Most of the OECD nations voted against this resolution or abstained.

If the major worry of the LDCs is fluctuations in their export earnings (and this is what has usually been maintained) the CFF approach offers much greater prospects of success. There is scope for reforming and expanding it, but not in the direction of turning it into a mechanism for long-term transfers of resources to LDCs. The criteria for long-term assistance out to differ significantly from the relatively automatic provision of short-term finance to meet balance-of-payments problems induced by export instability.

Economic integration

It refers to the merging to various degrees of the economies and economic policies of two or more countries in a given region.

- *Free Trade Area:*

Exist when a number of countries agree to abolish tariffs, quotas and any other physical barriers to trade between them, while retaining the right to impose unilaterally their own level of customs duty, etc, on trade with the rest of the world.

- *Customs Market*

Exists where a number of countries decide to permit free trade among themselves without tariff or other trade barriers, while establishing a common external tariff against imports from the rest of the world.

- *Common Market*

Exists when the countries, in addition to forming a custom union, decide to permit factors of production full mobility between them, so that citizens of one country are free to take up employment in the other, and capitalist are free to invest and to move their capital from one country to another.

- *Economic union*

Is where the countries set up joint economic institutions, involving a degree of supranational economic decision-making.

- *Common Monetary System*

Is where countries share a common currency, or ensure that each national currency can be exchanged freely at a fixed rate of exchange, and agree to keep any separate monetary policies roughly in line, to make this possible.

Benefits of integration

The formation of an economic integration could be beneficial in the light of the following aspects:

- Enlarged market size: Regional economic blocks provide larger markets than individual countries. Such increase in size of the market permits economies of scale, resulting in lower production costs and expansion of output. In fact, member countries are better placed to bargaining for better terms of trade with non-member countries.

- Industrialization: the size of the domestic market of one member country may not be sufficiently large to justify the setting up of an industry, whereas the market provided by many countries (regional market) is much more likely to be an incentive for establishment of new manufacturing industries, thus what economists consider as potentially derived industrial development.

- Infrastructural facilities: Jointly financed infrastructural facilities such as in the field of transport (e.g. railway systems, ports and habours, and airlines. The East African Co-operation (EAC), for instance, would reduce costs by setting up one Development Bank to serve all the three countries rather than each country maintaining its own.

- Specialisation: Each member country concentrates on production of those goods which it can produce more efficiently. Surpluses are exchanged and resources utilisation is increased - comparative advantage.

- Increased employment opportunities and subsequent reduction in income inequalities: Free mobility of labour leads to people moving from areas where incomes are low to areas of high labour incomes. This becomes even more beneficial if such incomes are invested back in respective countries. Furthermore, firms will have to pay highly in order to retain factor services (economic rent),

thereby enhancing productivity.

- Improvement of balance of payments (BOP): increased market implies more exports than before and given fairly low priced imports (from member countries) relative to imports from non-member countries, balance of payments position is most likely to improve. Foreign exchange savings also arise from this situation i.e. hard currencies such as the US dollar will only be required to import what cannot be produced from within the region.

- Competitive business environment: Absence of trade barriers allows for free flow of goods and services which develops an upward pressure on competition and the driving force for relatively lower prices for higher quality products. This helps reduce or even eliminate monopoly practices, since firms can only acquire and maintain a market base by producing as efficiently as possible. Overall, there is increased variety of goods and services their consumption of which enhances living standards/development.

- Indigenisation of economies: Regional governments play their part by creating the right incentives for the growth of the private sector which is the prime-mover of economic activities in liberalized situations. The private sector participation should not be limited to business activities but should extend to the formation of regional professional and business associations in order to advise on the influence future co-operation policies (e.g. the East African Business Council.) This creates more awareness among potential investors to take advantage of investment opportunities available within the region to create wealth. This way, over-reliance on private foreign investments and other forms of capital inflows (such as conditional Aid from IMF and World Banks) tends to be reduced.

The African continent regional integrations have not gone far in realizing the intended objectives due to:

Minimal or lack of practical commitment hence the low implementation of policies and agreements. Policy-induced factors such as inward looking policies of individual countries could result in the protection of less or uncompetitive domestic producers against imports irrespective of resources, and stringent trade and payments controls instituted to deal with the persistent balance of payments problems have adversely affected the volume of trade among African countries.

- Indispensable high capital import content: Most African countries are not in a position to sufficiently produce capital goods and other inputs for the production of goods hence continued vulnerability to foreign influence and dominance. This is traced to widespread poverty and minimal technical progress.

- Neo-colonialism and dependence mentality: The psychological influence arising from massive and persuasive advertising by the developed world has largely role-

modelled the consumption pattern (tastes and preferences) of the African People. Preference has been given to products which do not originate from within the region. This then forces regional member countries to import such products in order to meet their domestic demand.

- Trade-diversion: countries previously importing cheap goods from outside the region switch to importing the same goods from other member countries. This is brought about by the removal of tariffs and other trade restrictions on the movement of goods between member states, while the tariffs on goods from outside remain. Depending on price/cost difference(s) such expenditure – switching may increase production cost accompanied by negative welfare implications.

- Government loss of tax revenue: Removal of tariffs (import duties) leads to reduced tax revenue to the government. With free trade, in countries where import duties constituted a high proportion of tax revenue; the government's spending programmes will be distorted.

- Unequal distribution of trade benefits/gains: Although all countries gain to a certain extent, one member country may benefit more than the others. This often arises due to high subsidization of production so that one country may succeed in attracting a more than proportionate share of new industrial development. In particular, incomes and employment opportunities will increase more than proportionately due to the multiplier effect.

- Product similarity and duplication: Because of product similarity (especially primary products), regional member countries have not lived to substantial benefits as would be required; what one country produces is equally produced by others so that the overall relative market share remains distinctively small.

- Widespread internal conflicts and general political instabilities: the most immediate result of such an atmosphere is suspicion and increase of protectionist strategies which no doubt hinders the free movement of goods and people. This then negates the intention of an economic integration. Owing to the current political and economic reforms sweeping across the economies of the developing would, it's quite evident that much cannot be done without any form of collective effort. Economic integration aspect(s) could receive the seriousness deserved now or in the immediate future. In fact, some which had collapsed or remained insensitive are getting revived e.g. the East African Co-operation.

The disadvantages of economic integration

i. The "trade-diversion" effect has already been mentioned. Countries previously importing cheap goods from outside the free trade area switch to importing the same goods from other member countries. This is brought about by the removal of tariffs on goods moving between member states, while the

tariffs on goods from outside remain. The result is a less efficient use of resources. Further more, the goods produced in the other member states are often of inferior quality to those formerly imported from outside.

ii. Government suffer a loss of tax revenue from the setting up of a free trade area. Before a lot of tax revenue was received from import duties on goods brought into the country from overseas. If goods are imported from other member states when the free trade area is up, import duties are no longer payable and tax revenue, the effect on a government's spending programme will be substantial.

iii. The benefits arising from a free trade area may be unequally distributed. Even though all countries gain to a certain extent, one may benefit more than the others. If one country succeeds in attracting a more than proportionate share of new industrial development, it will enjoy more than proportionate economic benefits. In particular, incomes and employment opportunities will increase more than proportionately because of the multiplier effect.

4.6 Balance of Payments

The Balance of Payments of a country is a record of all financial transactions between residents of that country and residents of foreign countries. (Residents in this sense does not just refer to individuals, but would also include companies, corporations and the government). Thus all transactions are recorded whether they derive from trade in goods and services or transfer of capital.

Like all balance sheets, the balance of payments is bound to balance. For if the country has "overspent", then it must have acquired the finance for this **"***overspending"* from somewhere (either by running up debts or using its reserves), and when this item is included in the accounts they will balance. It follows therefore that when reference is made to a balance of payments "deficit" or "surplus", this only looks at a part of the total transactions, e.g. that part involving trade in goods and services, which is termed the "Balance of Payments on the *current account"*

If the value of exports exceed the value of imports the balance of payments is said to be in *Trade Surplus.* This is regarded as a favourable position because a persistent trade surplus means lower international debts. Also, a trade surplus is regarded as a sign of success in the country's trade with other countries and is, therefore, politically desirable.

On the other hand, if the value of imports exceed the value of exports, the balance of payments is in *trade deficit.* This is an unfavourable position because a persistent balance of payment trade deficit means the country's foreign exchange reserves are being run down and so is its ability to pay for its imports and settle its international debt. Also persistent balance of payments trade deficit is regarded as a sign of failure in the country's trade with other countries and is therefore politically undesirable

Structure of the Balance of Payments

The balance of payments is divided into three accounts:

a. *The Current Account*
This records all transactions involving the exchange of currently produced goods and services and is subdivided into

i *Visibles:*
A record of all receipts from abroad the export of goods and all expenditures abroad on the import of goods. When these are compared, this is known as the **"***balance of trade"* (though it would be properly called the "balance of visible trade").

ii. *Invisibles:*
A record of all receipts from abroad in return for *services rendered* and all expenditure abroad for foreign services. It also includes receipts of *profits* and *interest* earned by investments abroad, and similarly profits and interest paid abroad to foreign owners of capital in the country are included in Expenditure. The comparison of all the debits (Expenditure abroad) and credits (receipts from abroad) arising from visibles and invisibles is known as the *"balance of payments on current account"* and is the best indicator of the country's trading position.

If the value of exports exceeds the value of imports the balance of payments is said to be in *trade surplus.* This is regarded as a favourable position because a persistent trade surplus means the country's foreign exchange reserves are rising and so its ability to pay for its imports and settle its international debts. Also a trade surplus is regarded as a sign of success in the country's trade with other countries and is, therefore, politically desirable.

On the other hand, if the value of imports exceeds the value of exports, the balance of payments is in *trade deficit.* This is an unfavourable position because a persistent balance of payments trade deficit means that the country's foreign exchange reserves are being run down and so is its ability to pay for its imports and settle its international debts. Also a persistent balance of payments trade deficit is regarded as a sign of failure in the country's trade with other countries and is therefore politically undesirable.

b. *Capital account*
This records all transactions arising from capital movements into and out of the country. There are a variety of such capital flows recorded, namely:

i. *Long term capital:*
This consists of:
a. Government to Government borrowing and lending
b. Government borrowing from international organizations

c. Investment by foreigners at home in such projects as factories, mines and plantations and by nationals abroad in similar projects.
d. The buying of shares by foreigners in home companies and by nationals in foreign companies.

ii. Short term capital ("hot money")

Refers to changes in bank balances held by foreigners in home banks and by nationals in foreign banks.

If money comes into the country (e.g. deliberate borrowing abroad by a domestic company or foreign investment in the country), it is recorded as a credit item, while investments abroad etc is recorded as a debit item.

When the current account and the capital account are combined, and we compare the total debits and credits, this is termed the balance for official financing (it used to be termed the "total currency flow"). This shows the final net outflow, or inflow arising from current and capital transactions.

c. The Monetary account

Also called official financing, this comprises the financial transactions of the government (handled by the central bank) needed to offset any net outflow of money on the current and capital accounts i.e. total currency flow. It comprises of:

i. Use of the foreign exchange reserves, i.e. increasing or decreasing them.

ii. Borrowing from the IMF i.e. borrowing or paying back.

iii. Central bank transactions with other countries central banks i.e. borrowing or lending.

d. The balancing item

Since for ever position entry in the current and capital accounts there is a corresponding negative entry in the monetary account, and for every negative entry in the first two accounts there is a corresponding positive entry in the monetary account, it follows that the balance of payments must balance i.e. the sum of the balances of all the three accounts must add up to zero.

In practice, this is usually not the case because there are so many transactions that take place, and due to human errors some may be recorded correctly in one account but incorrect in another account with the result that the sum of the tree balances may not be zero. The actual discrepancy in the records can be calculated. The balancing item represents the sum of all errors and omissions. If it is positive, it means that there have been unrecorded net exports while a negative entry means that there have been unrecorded net imports.

Equilibrium and disequilibrium in the balance of payments
If on the *current account*, the value of exports is equal to the value of imports, the balance of payments is said to be equilibrium. If the two values are not equal, the balance of payments is in disequilibrium. This could be due to a trade surplus with the value of exports exceeding that of imports or due to a trade deficit with the value of imports exceeding that of exports.

In either case, balance of payments disequilibrium cannot last indefinitely. For if this is due to a trade deficit, the country will try and move it. This is because a persistent trade deficit i.e. *a fundamental disequilibrium* poses several problems for an economy, namely:

- In short run a deficit allows a country's peoples to enjoy higher standard of living form the additional imports that would not be possible from that country's output alone in the longer term the decline of the country's industries in the face of international competition will inevitably result in lower living standards.

- A persistent trade deficit means that the country's foreign exchange reserves are being run down and so it its ability to pay for its imports and settle international debts.

- Also, a persistent balance of payments trade deficit is regarded as a sign of failure in the country's trade with other countries, and is therefore not politically desirable.

Policies to cure balance of payment deficits
The measures available to tackle balance of payments deficits include short term measures such as *deflation, import controls, devaluation* of a fixed exchange rate or a managed downward float of the exchange rate in the short-run and foreign exchange controls and long term measures such as Export promotion and Import Substitution.

Short-term policies

Deflation is a policy of reducing expenditure with the intention of curing a deficit by reducing the demand for imports. This reduction of expenditure may be achieved by the use of either *fiscal* or *monetary* policy. In addition to reducing demand for imports however, deflationary measures may also have expenditure switching effect upon the balance of payments. The depression of demand may cause the domestic inflation rate to fall relative to that of competitor countries and thus increase the price competitiveness of exports. Consumers in other countries may then switch their demand towards the country's exports, whilst its own residents switch away from imports, preferring instead to buy home produced substitutes. The difficulty posed by deflation is that it not only reduces demand for imports but also reduces demand for domestically produced goods. This in turn can have a knock on effect in the form of lower output and higher unemployment.

Import controls have immediate effect on the balance of payments. *Quotas* and *embargos* directly prevent or reduce expenditure on imports, while import duties or tariffs discourage expenditure by raising the price of imports, while import duties or tariffs discourage expenditure by raising the price of imports. Import controls also have their limitations and problems. They do not tackle the underlying cause of this disequilibrium i.e. the lack of competitiveness of a country's industry and what is more they are likely to invite retaliation to the long-term detriment of themselves as well as their trading partners. It is also the case that trade agreements such as GATT limit the opportunities for member countries to make use of import controls and the use of subsidies to encourage exports.

A third option is that of *devaluation*. Devaluation of a fixed exchange rate or the downward float of a managed exchange rate is mainly expenditure switching in its effect. The cure works in a similar manner to the freely floating adjustment mechanism under a floating exchange rate system. In the case of a fixed exchange rate system devaluation consists of an administered reduction in the value of the currency against other currencies. In a managed system the authorities can engineer a downward float by temporarily reducing their support. In both cases the effect is to increase the price of imports relative to the price of exports and so switch domestic demand away from imports and towards home produced goods.

Certain conditions have to be met for devaluation to have this effect on boosting exports/curbing imports. They are:

a. Competing countries must not devalue at the same time, otherwise there would be no competitive advantage gained (exports would not become any cheaper in comparison with products of those countries).

b. The demand for exports (or for imports) must be price elastic, i.e. the sales must be affected by the change in price. Thus, when the domestic currency falls in value, the demand for exports should rise by a larger proportion in order to earn more foreign exchange.

c. There must be appropriate domestic policy.

i. The extra exports must be available. If there were full employment in the economy, the home demand would have to be curbed to make room for the extra export production.

ii. Inflation must not be allowed to erode the competitive advantage secured by devaluation.

A devaluation of the currency is not a soft option. There are a number of problems that will be involved, and these must be outlined:

a. To the extent that home demand has to be cured to make room for the extra exports, the domestic standard of living is reduced. This is only because, before it took place, the country was "living beyond its means", but it does come as a shock to find the domestic "squeeze" accompanying devaluation. Yet if it does not take place, then the strategy will not have worked; the exports may not rise to meet the higher demand from abroad.

b. The larger cost of importing goods raises the domestic cost of living. This is not just inflationary in itself, but can trigger off pay claims which if settled will further worsen inflation.

c. It does not boost exports immediately. There is a period during which the balance of payments gets worse as the country faces a higher import bill. It is only when exports start rising (and there is a considerable time lag involved) that the situation improves.

d. It does not tackle the long-run problem of why exports were not doing well. The problem may be more in inefficiency and other non-price factors than in the price of the exports themselves. In which case devaluation would make little difference to the basic problem.

A fourth option is to use *exchange control.* When this is used to deny foreign exchange to would be importers, its effects are identical to those of the various import restricdtions already discussed. There are various forms of exchange control that can be imposed by a government and enforced by legislation. They all involve restrictions on the actions of holders of its currencies and residents of the country who may hold foreign currency.

ii. Long-term policies

One long term option of tackling balance of payments deficit is *export promotion.* In the long run this is the best method of improving a balance of payments. If the general level of efficiency in an economy can be raised, then exports will benefit. Efficiency can be promoted by mergers in exporting firms (thereby reaping economies of scale), research and economic growth – for it is felt that once an economy is growing it is generating the necessary dynamism and technological improvement that will feed through into a better export performance.

A second long-term option is *import substitution.* The replacement of imports by home products can be achieved by economic planning. If the defects of home products can be analysed, and the likely future trends in demand can be forecast, then domestic firms can take the necessary action both to improve their product and to expand their capacity. Government support for certain industries can also be helpful here.

4.7 International Liquidity

International liquidity is the name given to the *assets which central banks* use to influence the external value of their currencies. It can also be defined as the means

available for settling international indebtedness. There are five main types of international liquidity:

- Gold
- Convertible national currencies
- Borrowing facilities
- International reserve assets
- Currency swaps

Gold
Although currently no country uses gold as its national currency, gold has a long history of use as commodity money and has almost universal acceptability. Gold is still regarded as money in international transactions and is an international reserve currency i.e. countries can hold their foreign exchange reserves in terms of gold and it is acceptable in international payments and is convertible.

The great advantage of gold as an international currency is the confidence people have in its ability to maintain its exchange value. This stems mainly from the knowledge that world supplies of gold cannot easily and quickly be augmented.

Nevertheless, it is clearly wasteful to employ vast resources of men and capital to produce gold merely in order to store it away in central banks. Besides, it is scarce i.e. not each country has it.

Convertible National Currencies
Currencies are convertible when holders can freely exchange them for other currencies. There are several advantages in using a particular national currency as an international standard of value and as an international reserve asset. Unlike gold its costs of production and storage are negligible and the reserve asset is in the same form as the currency used by traders and investors. The supply can easily be increased or diminished to meet the needs of world trade.

The problem with this facility is that for the other countries to hold convertible currency, the country to which it belongs must be in constant trade deficit because it must import form other countries and pay them in its currency. But a prolonged deficit will cast doubt on the ability of that country to maintain the exchange value of its currency. Another problem is that if the country to which the currency belongs devalues the currency, the other countries holding it will lose purchasing power in international transactions.

Borrowing Facilities
If a country's currency is not convertible, it can borrow from countries whose currencies are convertible and use the convertible currencies to make its international payments. The difference from gold and national convertible currencies is that they are conditional – they have to be repaid. Borrowing facilities as a source of liquidity have the advantage that they can be expanded to meet the growing demands. However, the draw-back is that

it makes the borrowing country indebted to the lending country, which is sometimes politically undesirable because of the "strings" which may be attached to the loans.

Special Drawing Rights (SDR)
These are international reserve currencies created by the International Monetary Fund (IMF) to overcome the problems of using gold and national currency reserve. These represent an entirely new form of reserve assets. The SDR are simply entries in the books of the IMF and do not require expenditure of resources to create them unlike gold. Also their use does not put any country under strain unlike the use of national reserve currencies. Initially, the unit of the SDR was pegged to the American dollar, but when the dollar was *floated* the unit of SDR became a weighted basket of 16 currencies of the world's major trading nations, the weight used in each case being the proportion of World Trade taken up by that country. Later the unit of SDR was reduced to a weighted basket of the exchange values of five major currencies (the US dollar, the Deutschemark, the French franc the Japanese yen and the Pound sterling). The value obtained is then expressed in dollars.

SDRs are issued by the IMF to member countries in proportion to their *quotas* and represent claims or rights which are honoured by other members and by the IMF itself. By joining the scheme, a member accepts an obligation to provide currency, when designated by the Fund, to other participants in exchange for SDRs. It cannot, however, be obliged to accept SDRs to a greater total value than three times its own allocation.

Participants whose holdings are less than their allocation *pay interest* on the difference between their allocation and their actual holdings, and members holding SDRs in excess of their allocation receive interest.

Each member of the IMF is entitled to an allocation of SDR, which it can use to pay for its imports or settle international debts. If both the paying country and the country being paid are members of the IMF, then in the books to IMF, the allocation of the paying country will go down and that of the country being paid will go up. If the country being paid is not a member of IMF, then the country paying can use its allocation of SDR to purchase gold or convertible currency from the IMF or another member of the IMF, whose allocation of SDR will correspondingly increase.

Currency Swaps
If the currency of one country is not convertible, the central banks o f the two countries can exchange their currencies, and the country with the non-convertible currency can use the convertible currency of the other country. These are called currency swaps. The country with the non-convertible currency will later purchase back its own currency using gold or convertible currency.

Foreign Exchange Markets
It is the place where buyers and sellers meet to negotiate the exchange of different currencies e.g. forex bureaus.

Exchange Rates

These are the rates at which one currency can be exchanged for another or the price of one currency in terms of another

Factors determining the Exchange Rates

The exchange rate for any particular country is basically the result of the interaction of export demand and import supply.

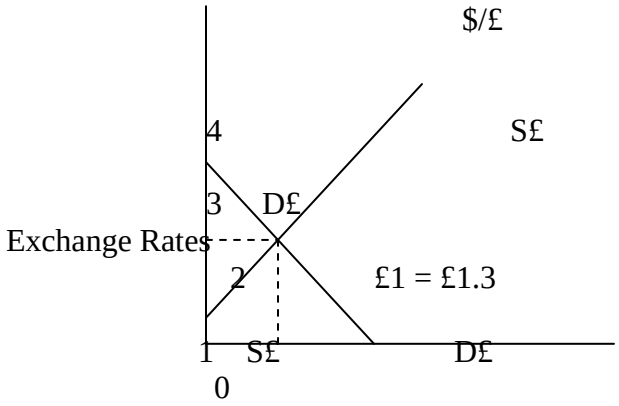

Figure 4.1 Quantity of £s traded on Foreign Exchange Market

The demand curve lies has the USA desire to buy U.K. exports. Below the supply curve is the UK desire to buy USA's export. An increase in demand for UK exports will mean foreigners are now offering more money so that demand for increases. The price of foreign currency will decline and the pound will have to appreciate.

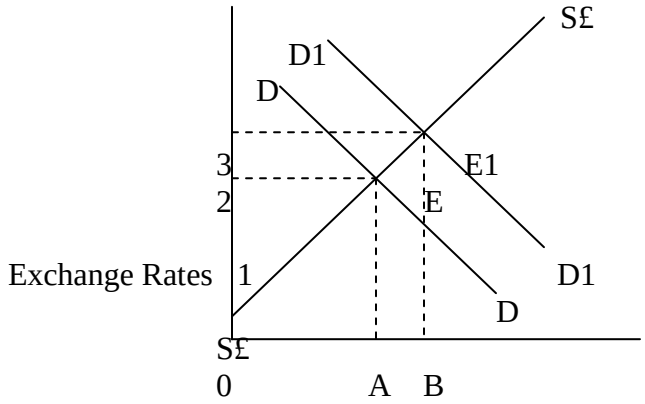

Figure 4.2 Quantity of £s traded on Foreign Exchange Market

An appreciation in the exchange rate cold be caused by either:-

a. an increase in demand for exports
b. a decrease in demand for imports

If foreign currency becomes more expensive, the domestic currency is said to have depreciated. Depreciation is the rate of exchange could be caused by;

a. An increased demand for imports;
b. A decreased foreign demand for exports

Other factors influencing Exchange Rates

i. *Inflation:* Other things being equal, a country experiencing a high rate of inflation will experience a lower demand for its goods while its trading partners goods whose rate of inflation is low will now appear cheaper to citizens who will thus buy more. Thus demand for its currency will decrease while the demand for its trading partners' currencies will increase, and both the factors will cause depreciation in the external value of its currency. If on the other hand, a domestic rate of inflation is lower than that of its trading partners these factors will be expected to work in reverse.

ii. *Non-trading factors:* Exchange rates re also influenced by invisible trade, interest rates, capital movement speculation and government activities.

iii. *Confidence:* A vital factor in determining the exchange rate is confidence that most large companies "buy forward" i.e. they buy foreign currency ahead of their needs. They are thus very sensitive to factors which may influence future acts such as inflation and government policy.

Thus, the exchange rate at any particular moment is more likely to reflect the anticipated situation on country rather than the present one.

Effects of Fluctuations in Exchange Rates
When a country's currency depreciates, exporting firms may have competitive advantage but businesses which rely on imports for raw materials or components will find costs rising. This may make them less competitive on both domestic and foreign markets.

If the domestic currency appreciates then imports will become cheaper to domestic customers and exports more expensive to foreign customers. this will result in a full demand for the businesses goods abroad and increase competition from imports in the home markets.

4.8 International Financial Institutions
In July 1944, a conference took place at Bretton Woods in New Hampshire to try to establish the pattern of post-war international monetary transactions. The aim was to try to achieve free convertibility, improve international liquidity and avoid the economic nationalism which had characterized the inter war period.

The result was that two institutions were established: in 1946, the International Bank for Reconstruction and Development (IBRD); and in 1947 the International Monetary Fund.

The International Monetary Fund

The International Monetary Fund is a kind of an embryo World Central Bank. Its objectives are:

i. To work towards the full convertibility of currencies by encouraging the growth of world trade.

ii. To stabilize exchange rates between currencies.

iii. To give short-term assistance to countries having balance of payments problems.

To achieve these objectives, the following conditions would have to be fulfilled: -

i. Countries should not impose restrictions in their trade with each other. This should encourage the growth of world trade and lead to full convertibility of currencies.

ii. Countries should adopt the *peg system* of exchange rates, in which each country quotes the exchange rate of its currency in gold and thus the exchange rates between currencies can be determined. The quoted exchanged rate is allowed to fluctuate to within 1% up and down, and the country can devalue or revalue its currency by up to 10%. This was meant to stabilize exchange rates between currencies.

iii. Each member state of the I.M.F should contribute to a fund to enable the I.M.F to give short-term assistance to countries having balance of payments problems. The quota contribution of the member state depends on the size of its G.D.P and its share of world trade. The member state contributed 25% of its quota in gold or convertible currency and the remaining 75% in its own currency.

iv. A member state in balance of payments problems can borrow from the I.M.F on a short-term basis. 25% of the country's quota contribution is automatically available to it as stand-by credits. Beyond this the country can borrow on terms dictated by the I. M. F. the country borrows by purchasing gold or convertible currency using it own currency. The country's borrowing facility expires when the I.M.F. holds the country's currency twice the value of its quota contribution. In paying back to the I.M.F. the country will repurchase back its currency using gold or convertible currency until the I.M.F holds 75% of the country's quota contribution in the country's currency.

v. The I.M.F. reserves the right to dictate to the country borrowing from it how to govern its economy.

To what extent has the IMF achieved its objectives?

The objective of achieving full convertibility of currencies has not been achieved. In the first place countries impose restrictions in their trade with each other, and this has not helped the growth of world trade. Secondly, the export capabilities of different countries are different and it is difficult for all currencies to be convertible in particular the range of

exports for developing countries very limited and so is the demand for them. This makes their currencies weak and unconvertible.

The objective of stabilizing exchange rates has not been achieved. This is because outside the stated limits the adjustable peg system of exchange rates has the same limitations as the gold standard in that it is deflationary and can put strains on the country's foreign exchange reserves in times of a trade deficit and it is inflationary in times of a trade surplus.

While the IMF does give short-term assistance to member states in balance of payments problems, it is strictly on a short-term basis and it does not go to the root cause of the deficit. A more useful form of assistance would be one that would go into projects that would increase the productive potential of the country, making it less dependent on imports and increasing its export potential. Such assistance would have to be on long-term basis, but this is not within the objectives of the I.M.F., which gives assistance to finance a prevailing deficit.

External Debt Problem

External debt refers to debt owing by one country to another. External debt is a more serious problem than internal debt because the payment of interest and repayment of the capital sum form debit items in the balance of payments.

The cause of third world debt is the unwise borrowing and lending during the 1970s. The oil crisis made conditions extremely difficult for many third world countries. For the same reason the Euro currency markets were awash with money and real interest rates were low. Therefore poor countries need to borrow and banks were anxious to lend where they could get better return than on the domestic market. The bulk of this lending was by commercial banks and not by international institutions such as the IMF and World Bank. This has the consequence that, while the international institutions could write-off the debt, it is very difficult for commercial ones to do so.

The problem turned into a crisis in the early 1980s. As the world fell into recession this hit the debtor nations particularly hard. Many developing economies are highly dependent on the export of primary products and the price of these dropped dramatically. At the same time real interest rates rose sharply and most of the debt was at variable interest. The debtor nations were caught in a vice between falling income and rising costs. When this happened the banks which had been so anxious to lend in the 1970s were no longer willing to do so.

This meant that the debtor nations had to turn to international agencies for help. However, the international agencies do not have sufficient funds to substantially affect the situation. For such help as they were able to give, they demanded very stringent conditions. These deflationary conditions have often impoverished further the debtor nations.

Much of the money that was borrowed was not used for development purposes but simply balance the books for the nations' overseas payments. Little found its way into the sort of projects which development economies would suggest.

Many measures have been suggested for instance by the World Bank. Among them has been suggestion for reducing interest rates on non-concessional debt, rescheduling with longer grace periods and maturities or outright conversion of bilateral loans to grants. International Development Association (IDA) has converted its repayments to be used to reduce International Bank for Reconstruction and Development (IBRD) debt owed by low income third world countries.

4.9 Review Questions

1. What problems do African regional integration bodies /organizations face?

2. What factors affect the long-run trend of the terms of trade for developing countries?

3. Explain reasons for the development of international trade

4. Explain the theory of comparative advantage and its limitations

5. Explain the reasons for protectionism policy

6. Describe ways of restricting international trade

7. What are the benefits of integration?

8. Describe five main types of international liquidity
9. Explain the following terms as used in international trade
    i) Economic integration
    ii) Free trade area
    iii) Customs market
    iv) Common market
    v) Economic union
    vi) Common monetary system

4.10 References

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Rob Tisisnai et al. (1999), *Introduction to Macroeconomics: mastering The Global Community*, University Access

Sample Paper 1

Mt Kenya University

SCHOOL OF APPLIED SOCIAL SCIENCES 2010/2011
DEPARTMENT OF BUSINESS & SOCIAL STUDIES

UNIT NAME: INTRODUCTION TO MACROECONOMICS

2 HRS

Answer question **One** which is **compulsory** and any other **Two** questions**.**

QUESTION ONE

a) State the canons of public expenditure (4marks)
b) What are the determinants of consumption (4marks)
c) State any two reasons why macroeconomics is important (4marks)
d) 'Inflation is such a bad disease that any country would wish to rid off'. Explain (4marks)
e) State and explain any two factors that cause the shifts in the balance of payments curve. (4marks)
f) What are the policies that can be used to curb unemployment in Kenya (5marks)
g) State the functions of money (5marks)

(30 marks)

QUESTION TWO

a) National income accounting is very paramount to any country that is conscious a bout its growth and development. Discuss the national income difficulties in estimation of national income (10marks)
b) Discuss some of the options that can be used by Kenyan government in dealing with excess money in circulation (10 marks)

QUESTION THREE

a) State and explain the methods that can be used by a country to correct the trade deficit (10 marks)
b) Some times countries that are developing can resort to taking up measures to protect their young industries against foreign multinational. Discuss the forms of protection that can be used by such a country (10marks)

QUESTION FOUR

a) State and explain the types of investments that can be witnessed in any economy like Kenya (10 marks)
b) What are the determinants of investments (10 marks)

QUESTION FIVE

a) Briefly explain the main components of balance of payments (10 marks)
b) What are the roles of central bank to any country like Uganda (10marks)

Sample Paper 2

Mt Kenya University

SCHOOL OF APPLIED SOCIAL SCIENCES 2010/2011
DEPARTMENT OF BUSINESS & SOCIAL STUDIES

UNIT CODE: UNIT NAME: INTRODUCTION TO MACROECONOMICS

2 HRS

Answer question **One** which is **compulsory** and any other **Two** questions**.**

QUESTION ONE

a) Investment is very important for any country that wants to move forward what are the determinants of investments. (4 marks)

b) National income accounting is very important to a country like Kenya but it's not a good measure of material will being. Explain. (4 marks)

c) Explain in detail the Keynesian's transactions native for demand for money. (3 marks)

d) State the assumptions of the multiplier formula. (3 marks)

e) What are the sources of public revenue for a country? (4 marks)

f) A developing country like Kenya must protect the local industries against competition against from multi-naturals. What are the forms of protection that can be used (8 marks)

g) State the goals of macroeconomic policy (4 marks)

(30 marks)

QUESTION TWO

a) Discuss any two approaches of measuring the national income (10 marks)

b) What are the uses of national income statistics (10 marks)

QUESTION THREE

(a) Discuss the Keynesian theory of demand for money (15 marks)

(b) State the principles of taxation (5 marks)

QUESTION FOUR

In the recent years Kenya has been experiencing inflation tendencies that have eroded the value of money thereby making people worse off.

(i) Discuss by use of examples the various types of inflation. (10 marks)

(ii) Any country that fails to control inflation is doomed to fail. What are the remedies that can be recommended for any economy to apply and bring inflation under control (10 marks)

QUESTION FIVE

(i) With the examples, explain the causes of unemployment (5marks)

(ii) Compare and contrast between free trade and protectionism (10 marks)

(iii) Economic will carry out the operations under either micro-economics or macro-economics. What is the difference between the two? (5 marks)