Kampala International University Uganda

BACHELOR OF COMMERCE

MODULE 9

MACROECONOMICS

By

Tindyebwa Wilberforce, PhD CANDIDATE,M.A ECON,BAE(Econ)

INTRODUCTION

The Business School/CODL's aim is to become a market leader in the cost-effective provision of quality business management education leading to awards of certificates, diplomas and degrees internationally recognized and professionally acceptable. Throughout its history the business school/CODL has run a series of programmes primarily focused on business and management, which has been consistently, reviewed every three to five years to meet the contemporary needs of the market. The latest review was carried out in 2011 when the current curriculum was launched for six programmes: Business Administration, Bachelor of Commerce,

Businesses in the 21st century are experiencing profound challenges, which include the need to seek new market opportunities, develop new products that meet the changing demands of customers globally. The rapid growth of businesses and increasing transformations in the global economy has led not only to an increasing demand for specialists in the various management fields, but also to the need of a caliber of managers who are able to constantly adjust and innovate in the increasingly complex and volatile international business environment. It is upon this background that a modular system of teaching has been adopted to cope-up with the competitive environment of service delivery highly emphasizing on the concept of value for money.

The module enables a student to appreciate the concepts and examines the functions and roles of business in an organization. It presents a general overview and analysis of the main principles as a foundation for the more crystallized detailed description of policies, processes and practices, for purposes of setting ground for grooming the students in preparation for the challenging and dynamic field at the end of the course. For instance, accounting options seeks to provide answers to the need of management to maintain high and professional levels of competence in tracking, managing the inflows and outflows of resources in this volatile environment. It answers to the scientific managerial need for ensuring effective, efficient and productive use of resources and the ethical need for accountability and transparency.

The module explores various functional areas with accounting and finance, marketing and human resource management and examines in detail both conceptual and methodological tools that managers use to inform their decision

making. Emphasis is placed on engaging with real life examples and applying course materials to specific familiar phenomena such as case studies. The main aims are to help students to understand the dynamics of today's business environment in the digital age.

Unit 1

The Nature and Scope of Macroeconomics

1.1   Introduction

The term "macro" was first used in economics by Ragner Frisch in 1933. But as a ethodological approach to economic problems, it originated with the Mercantilists in the 16th centuries. They were concerned with the economic system as a whole. In the 18th century the physiocrats adopted it in their Table Economique to show the 'circulation of wealth' (i.e., the net product) among the three classes represented by farmers, landowners and the sterile class. Malthus, Sismondi and Marx in the 19th century dealth with macroeconomic problems. Walras, Wicksell and Fisher were the modern contributors to the development of macroeconomic analysis before Keynes. Certain economists, like Cassel, Marshall,Pigou, Robertson, Hayek and Hawtrey, developed a theory of money and general prices in the decade following the First Word War. But credit goes to Keynes who finally developed a general theory of income, output and employment in the wake of the Great Depression.

1.2   Nature of Macroeconomics

Macroeconomics is the study of aggregates or averages covering the entire economy, such as total employment, national income, national output, total investment, total consumption, total savings, aggregate supply, aggregate demand, and general price level, wage level and cost structure. In other words, it is aggregative economics which examines the interrelations among the various aggregates, their determination and causes of fluctuations in them. Thus in the words of Professor Ackley: "Macroeconomics deals with economic affairs 'in the large', it concerns the overall dimensions of economic life. It looks at the total size and shape and functioning of the "element" of economic experience, rather than working of articulation or dimensions of the individual parts. It studies the character of the forest independently of the trees which compose it".

Macroeconomics is also known as the theory of income and employment, or simply income analysis. It is concerned with the problems of unemployment, economic fluctuations, inflation or deflation, international trade and economic growth. It is the study of the causes of unemployment, and the various determinants of employment. In the field of business cycles, it concerns itself with the effect of investment on total output, total income, and aggregate employment. In the monetary sphere it studies the effect of the total quantity of money on the general price level. In international trade, the problems of balance of payments and foreign aid fall within the purview of macroeconomic analysis. Above all, macroeconomic theory discusses the problems of determination of the total income of a country and causes of its fluctuations. Finally, it studies the factors that retard growth and those which bring the economy on the path of economic development.

The obverse of macroeconomics is microeconomics. Microeconomics is the study of economic actions of individuals and small groups of individuals – the "study of particular firms, particular households, individual prices, wages, incomes, individual industries, particular commodities." But macroeconomics "deals with aggregates of

these quantities; not with individual incomes but with the national income, not with individual prices but with the price levels, not with individual output but with the national output". Microeconomics, according to Ackley, "deals with the division of total output among industries, products, and firms, and the allocation of resources among competing uses. It considers problems of income distribution. Its interest in relative prices of particular goods and services". Macroeconomics, on the other hand, "concerns itself with such variables as the aggregate volume of output of an economy, with the extent to which its resources are employed, with the size of the national income, with the "general price level".

Both microeconomics and macroeconomics involve the study of aggregates. But aggregation in microeconomics is different from that in macroeconomics. In microeconomics the interrelationships of individual households, individual firms and individual industries, to each other deal with aggregation. "The concept of "industry", for example, aggregate numerous firms or even products. Consumer demand for shoes is an aggregate of the demands of many households, and the supply of shoes is an aggregate of the production of many firms. The demand and supply of labour in a locality are clearly aggregate concepts". However, the aggregates of microeconomic theory, according to Professor Bilas, "do not deal with the behaviour of the billions of dollars of consumer expenditures, business investments, and government expenditures. These are in the realm of microeconomics. Thus the scope of microeconomics to aggregate relates to the economy as a whole, "together with sub-aggregate which (a) cross product and industry lines (such as the total production of consumer goods, or total production of capital goods), and which (b) add up to an aggregate for the whole economy (as total production of consumer goods and of capital goods add up to total production of the economy; or as total wage income and property income add up to national income). Thus microeconomics uses aggregates relating to individual households, firms and industries, while macroeconomics uses aggregate which relate them to the "economy wide total".

1.3   Scope and Importance of Macroeconomics

As a method of economic analysis macroeconomics is of much theoretical and practical importance.

To understand the working of the economy. The study of macroeconomic variables is indispensable for understanding the working of the economy. Our main economic problems are related to the behaviour of total income, output, employment and the general price level in the economy. These variables are statistically measurable, thereby facilitating the possibilities of analyzing the effects on the functioning of the economy. As Tinbergen observes, macroeconomic concepts help in "making the elimination process understandable and transparent". For instance, one may not agree on the best method of measuring different prices, but the general price level if helpful in understanding the nature of the economy.

In Economic Policies. Macroeconomics is extremely useful from the point of view of economic policy. Modern governments, especially of the underdeveloped economies, are confronted with innumerable national problems. They are the problems of overpopulation, inflation, balance of payments, general underproduction, etc. The main responsibility of these governments rests in the regulation and control of overpopulation, general prices, general volume of trade, general outputs, etc. Tinbergen says: "Working with macroeconomic concepts is a bare necessity in order to contribute to the solutions of the great problems of our times". No government solve these problems in terms of individual behaviour. Let us analyze the use of macroeconomic study in the solution of certain complex economic problems.

In General Unemployment. The Keynesian theory of employment is an exercise in microeconomics. The general level of employment in an economy depends upon effective demand which in turn depends on aggregate demand and aggregate functions. Unemployment is thus caused by deficiency of effective demand. In order to eliminate it, effective demand should be raised by increasing total investment, total output, total income and total consumption. Thus, macroeconomics has special significance in studying the causes, effects and remedies of general unemployment.

In National Income. The study of macroeconomics is very important for evaluating the overall performance of the economy in terms of national income. With the advent of the Great Depression of the 1930s, it became necessary to analyze the causes of general overproduction and general unemployment. This led to the construction of the data on national income. National income data help in forecasting the level of economic activity and to understand the distribution of income among different groups of people in the economy.

In Economic Growth. The economics of growth is also a study in macroeconomics. It is on the basis of macroeconomics that the resources and capabilities of an economy are evaluated. Plans for the overall increase in national income, output, employment are framed and implemented so as to raise the level of economic development of the economy as a whole.

In Monetary Problems. It is in term of macroeconomics that monetary problems can be analyzed and understood properly. Frequent changes in the value of money – inflation or deflation – affect the economy adversely. They can be counteracted by adopting monetary, fiscal and direct control measures for the economy as a whole.

In Business Cycles. Further macroeconomics as an approach to economic problems started after the Great Depression. Thus its importance lies in analyzing the causes of economic fluctuations and in providing remedies.

For Understanding the Behaviour of Individual Units. Last but not the least, for understanding the behaviour of individual units the study of macroeconomics is imperative. Demand for individual products depends upon aggregate demand in the economy. Unless the causes of deficiency in aggregate demand are analyzed, it is

not possible to understand fully the reasons for a fall in the demand of individual products. The reasons for increase in costs of a particular firm or industry cannot be analyzed without knowing the average cost conditions of the whole economy. Thus, the study of individual units is not possible without macroeconomics.

We may conclude that macroeconomics enriches our knowledge of the functioning of an economy by studying the behaviour of national income, output, investment, saving and consumption. Moreover, it throws much light in solving problems of unemployment, inflation, economic instability and economic growth.

1.4   Limitations of macroeconomics

1.5   Macro statics, macro dynamics, and comparative statics

1.6   Difference between microeconomics and macroeconomics

1.

Unit 2
National Income
2.1   Introduction
Definition of Basic Terms
National Income: This is the monetary sum of the flow of goods and services in an economy per period of time usually one year.

Gross Domestic Product (GDP): This is the total Monetary value of current production of final goods and services produced within the national territory during a given period of time. If GDP is adjusted for the effects of price changes we get real GDP - shows, agricultural products, medical care, education etc.

Gross National Product (GNP)
This is the total monetary value of goods and services produced by nationals of a certain country irrespective of where they produce from. They may produce from home or outside the national boundaries. This therefore excludes production by foreigners producing in the country.

GNP - GDP + Net income received by domestic factors of production such as labour and capital from outside the economy.

Net Factor Payments (NFP)
This is the difference between incomes received by domestic production factors abroad and incomes received by foreign production factors in the country. This is economics given that, LDC's are characterized by capital controls. The only source of such income would be the sale of labour as a factor of production this is also inhibited by migration laws in the more developed countries.

Net National Product
This is GNP minus depreciation. It measures the net output produced for an economy less the amount necessary for replacing the capital worn out in the production process.

Disposable Income
It refers to the amount of income available for an individual or house hold to spend. It is given by

$$Yd = Y - T + TR$$

Where   Yd   -   disposable income
         T   -   Taxes
         TR   -   Transfer payments
         Y   -   Income.

1.2   Measuring National Income

There are different methods that can be used to measure national income,
- The value added approach.
- Income approach
- Expenditure approach.

The Value Added Approach

With this method we add the net value of goods and services produced at market prices. It is difficult to use this method because it is hard to trace the intermediate stages. For that matter it's only the value of the final product (goods and services) and not intermediate goods that are included.

An example in the production of a shirt:

ITEM	VALUE	VALUE ADDED
Raw cotton	70	30
Lint	100	30
Fabric	130	30
Shirt	160	30

This means therefore that 70 + 30 + 30 + 30 = 160 is the total value added by all production process.

Income Approach

In this case the net incomes received by all citizens factors of production during the accounting year are added up together. We only consider the net incomes that accrue to the factors of production. All payments to the factors of production by way of rent, wages, interest and profit.

Incomes that are received in form of transfer payments such as pocket money for students are not included. In Uganda data pertaining to income can be obtained from the income tax department (UR.A).

Expenditure Approach

In this method total expenditure incurred by citizens in the accounting year is added together. This comprises of personal consumption expenditure, investment expenditure, government expenditure on goods and services and the net foreign investment.

NY   =   C + I + G + (x-m)

This concept is based on the assumption that national income is equal to the national expenditure. This method cannot easily be applied in LDCs because the statistics departments are still in infant stages.

This means the method adds output for each firm together to get the total value of the nations output. The output can be grouped into aggregated categories such as industrial sector, agricultural sector or any other category as desired.

2.3   Problems of Measuring National Income

- **Definition:** Definitions try to exclude certain incomes, certain groups of incomes such as gifts, pocket money to students, unemployment benefits etc. This problem is practical when we are using the income approach.

- **Double Counting:** This may be caused by the lifespan of the commodity or it may be due to difficulties in differentiating between intermediate goods and final goods. This is applicable to the value added (product approach) to avoid this we only consider the market value of the final product, and neglect the intermediate stages.

- Errors of Omission: Due to insufficient statistical data, these errors are committed. Many activities in LDCs are not marketed especially in the rural areas, activities such as work done by the house wives, leisure foregone, output for subsistence etc.

- **Errors of Commission:** There are some activities which are ignored due to their negative contribution to national income figures such as pollution. The resource exploitation rate is usually not included in the National Income Statistics. Resource and environmental economists are pushing for these environmental and resource issues to be included in the accounts procedure. Therefore the rate of depreciation of the natural resources should be included.

- Some transactions are not properly recorded because they are informal in nature. In Uganda in particular, during the period 1970-1989, most of business transactions went to the informal market e.g sampling, gambling and prostitution.

2.4   Importance of National Income Statistics

- The national policy analysis. Policies on employment for example can be based on the level of output, investment etc. Policies on inflation, taxation can also be based on NY statistics.

- For comparison purposes. They are used for international comparisons to see the status of the economy at that particular time.

- Determination of per capita income (GDP). They are used in measuring per capita income, which is a good indicator of either an improvement or a decline in the standards of living.

- Helps to show the distribution of income among the various sectors of the economy.

2.5 Limitations in Using National Income Figures as a Measure of Standard of Living

Time and again, international comparison is made among living standards in various countries e.g which country is richer than the other? How large is the gap between the rich and the poor countries? However these questions seem to be much more tricky and interest than seems to be the case at first glance, because of a number of factors elaborate upon,

- It does not consider the type of goods produced. Some commodities may not have direct welfare improvement e.g production of five arm.

- Expenditure figures may be magnified in countries where there is wars, pollution etc. and this may not necessarily improve the welfare of the people.

- The national income statistics does not include the income distribution pattern since its just an average.

- The national income figures must be adjusted for differences in exchange rate and prices. The differences in relative prices can cause important distortions in the basic measurement of real income and real living standards. These differences can be adjusted using the purchasing power parity (PPP) i.e by adjusting the dolor price values in the different countries for their parch.... power.

- The national income figures improve the cost of living in the different countries. The percapita income of$ 320 in Uganda can buy a lost mere goods in Uganda at Uganda prices than it would in the United states, like in the previous case, we need to correct Uganda's income not in actual dollars but in corrected for the purchasing power

2.6 Sectors of the Economy
- **Consumer Sector or Household Sector (C)**

The role of the sector include the supply of labour services to other factors of production and also the payment of taxes to the government for the provision of services. The excess income (Disposable) is spent on consumer goods. It is a basic decision making unit in the economy.
- **Business Sector (I)**

Includes all production units and aims at profit maximization. The role of the business sector include the provision of goods and services and payment of taxes to the government.

- **Government sector (G)**

In economics government is treated as an economic agent and its roles include taxation and transfer payments. Otherwise known as its distribution function. Provision of goods and services especially those that cannot. be provided by the private sector such as national defence, schools, police, roads etc which is known as allocation function.

The stabilization function where the government tries to influence the level of economic activities by making use of fiscal and monetary policies. In this function, government is meant to stabilize prices, exchange rate, employment etc.

- **External or Foreign Sector (X - M)**

This comes in through international trade and international capital flow. It includes both export and imports. In this sector we analyze what determines the gap between exports and imports. This is commonly known as the trade balance. As already noted no much discussion will be directed towards capital flows because of capital controls in LDC's.

2.7 Two Sector Model

(Two sectors in the economy i.e., Business sector and Household sectors).

Assumptions

   (i) The business sector is the sole supplier of goods and services.
   (ii) The business sector does not retain any of its output.
   (iii)   The business sector depends on the household sector for the supply of factors of production.
   (iv)   The only source of income for the household sector is through the sale of FOP.
   (v) The household sector spends all the entire income received from the sale of factors of production.

O = Y   C   PAYMENT FOR GOODS &   SSg + s   S3 OF EOP   PAYMENT FOR FOP   I   E = Y

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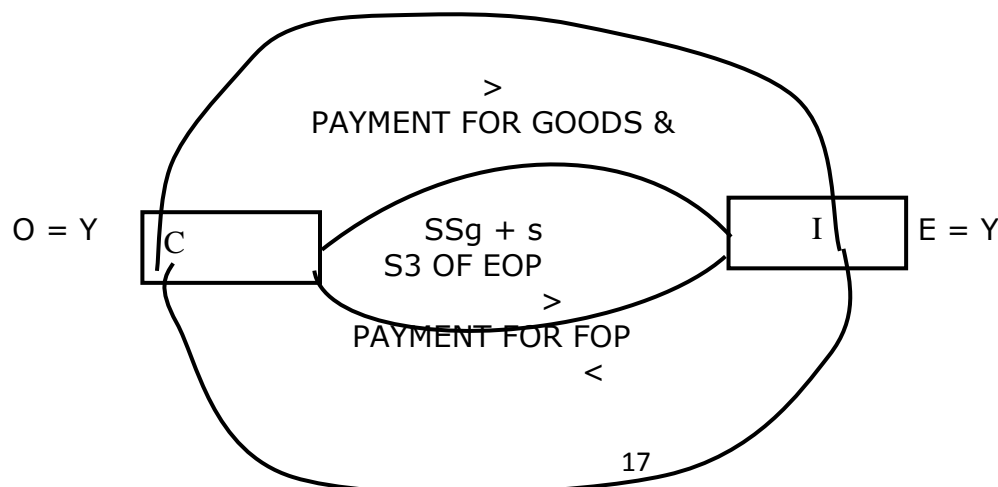
Figure x 1

Determination of Equilibrium Output.
This level of output is determined by the forces of demand and supply also known as market forces. From the above model, we note that the amount of money received by the households must be equal to the amount of money spent by the business and when we put all the assumptions into consideration, then we get the triple equality E^0 0^0 Y.

2.8   Aggregate Demand Curve
The demand curve for an economy should indicate the total spending by all sectors in a two sector model, total expenditure/aggregate demand is given by total consumption plus total investment ie E = CYD but consumption is assumed to be a function of income ie depends on income C = C(Y) is implicit form and CZQ + bY in explicit form. Where a is consumption at zero income (autonomous consumption and b in the marginal propensity to consume (PUPC). These terms are explained in more details later in this chapter. Thus

Figure 9.2

Consumptions

C = a + bY

a

Y = 0
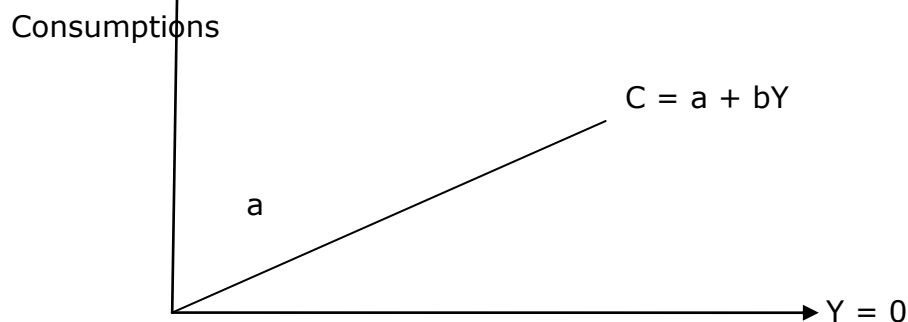
On the other hand, investment is assumed to be constant, see figure X.2. Therefore, Aggregate demand would be

Figure 9.3
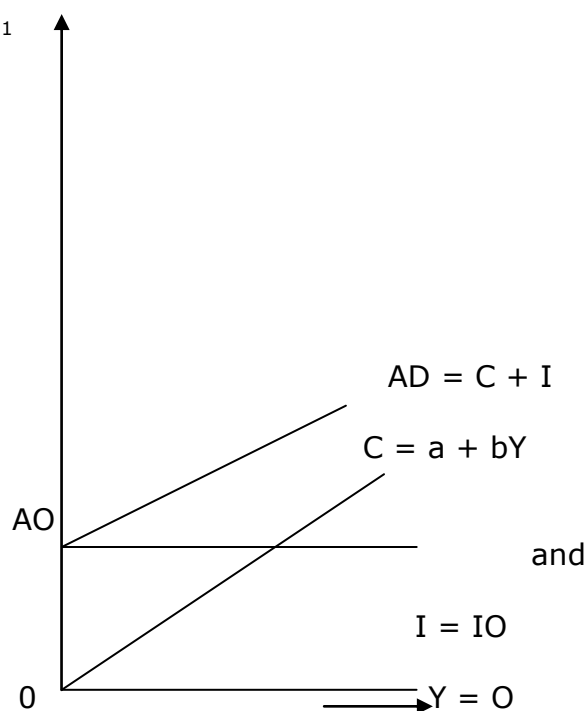
Fig x-2
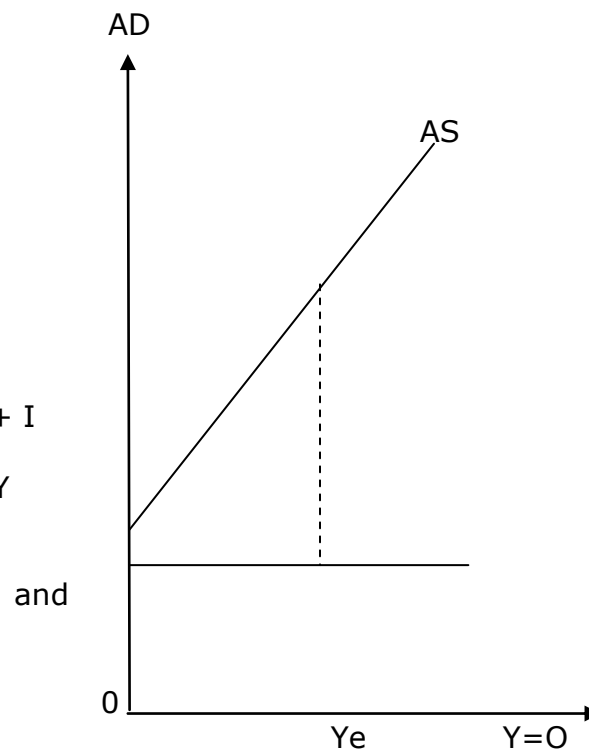
Fig x-3

This according to the Keynesian approach, the equilibrium output is determined at a point where AD = AS see figure X-3.

2.9 Aggregate demand approach (Keynesian approach)

Aggregate demand is the amount that firms and households are willing to spend on goods and services at each level of income.

We assume that investment expenditure is given and fixed implying that it's autonomous or exogenously determined. This means that it is determined by a policy option and not within the model. This means that for any given level of output, investment is given. See figure X2.

Figure 9.4
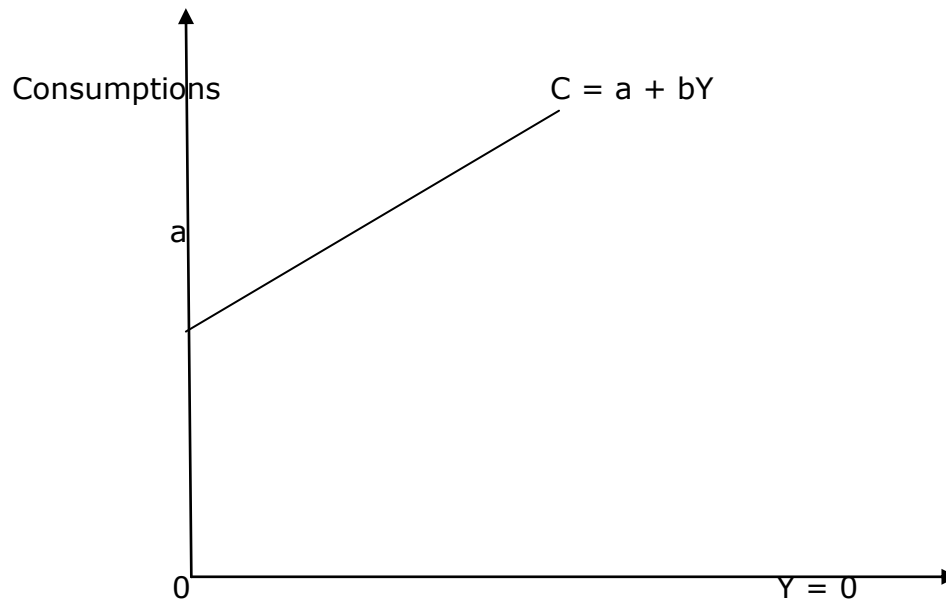
Aggregate demand will be the sum of expenditure in the household and business sectors Agg DD = C + I. In the short run, equilibrium will be attained when aggregate demand is equal to aggregate supply. See figure X.3.

In the two sector model there is no government and foreign sectors implying that national income, gross domestic product, Gross National Product and personal disposable income are all equal, i.e., Y = O = E

Example 1
Given that consumption expenditure is 80% of income and the level of investment is Ushs. 20 million. Find the equilibrium level of output.

Solution
At equilibrium, Aggregate demand must be equal to aggregate supply. Thus
        Add dd   =   C + I and Y = C + I
Where Y is national income, C – is consumption expenditure and I is investment expenditure.

$$C \quad = \quad \frac{80}{100}Y, \ I = 20m$$

$$Y \ = \ 0.8Y + 20$$
collecting like term together,
$$Y - 0.8Y \quad = \quad 20$$
$$Y \quad = \quad \frac{20}{0.2} = 100$$

$$Y = \frac{20x10}{0.2x10}$$

$$Ye = \frac{200}{2} = 100$$

Equilibrium level of output is equal to Ushs. 100 million.

Example 2
Given that the amount of investment that firms wish to spend is $22.000.000 and the consumption function. C = 8 + 0.7Y in millions of Us dollars.

Note: Investment is autonomous i.e it is not influenced by factors within the model.

Find the equilibrium level of output.

Solutions
AD = Y = C + I
C = 8 + 0.7Y   I = 22.000.000
Y = 8 + 0.7Y + 22m, collecting like terms,
            Y – 0.7Y = 30

$$0.3Y = 30 \quad Y = \frac{30}{0.3} = 100$$

The equilibrium level of income is $ 100m.

Example 3
Given that C = 0.75Y, I = 20, find the equilibrium level of output of that economy.

Solution
Note at equilibrium, AS = AD

y = C + I
Y = 0.75Y + 20
Y – 0.75Y = 20
Y (1-0.75) = 20

$$Y = \frac{20}{0.25} = 80 \text{ million.}$$

Figure 5
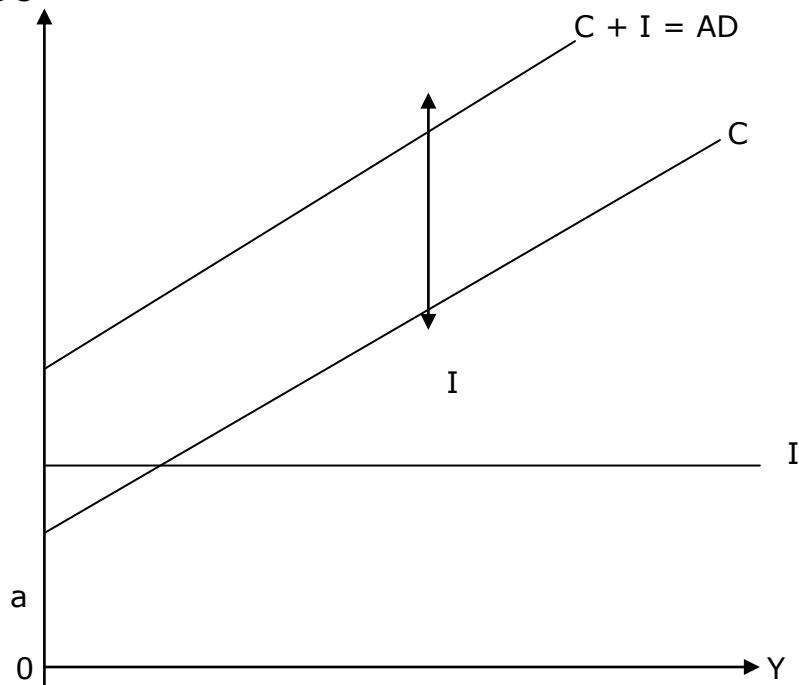
Figure 6
Investment Saving Approach
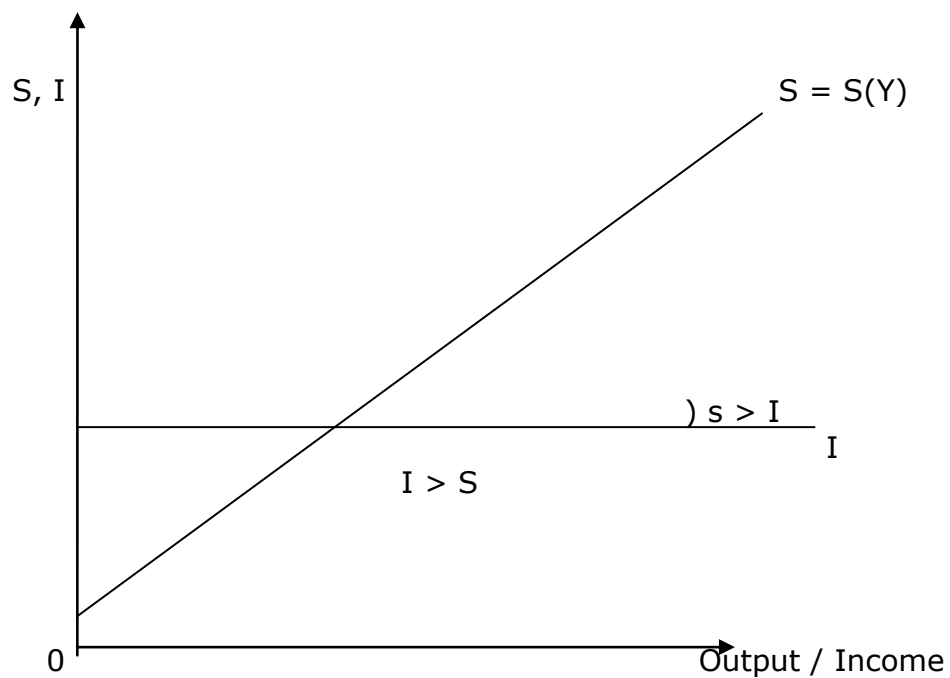
Figure 5

In the circular flow of income, investments are referred to as injections and savings as leakage's (withdrawal). In this kind of situation, consumers are allowed to save and the businessmen allowed to retain some of their output. When injections are equal to leakage's (withdrawals). In a two sector model therefore, equilibrium will be attained when savings are equal to investments.

Proof
Given   Y = C + I .... (i)
=   I = Y – C .... (ii) but in two sector model with no government sector,
=   Y – C = S .... (iii)
            S = I

This proof holds for only a closed economy with no government sector. It becomes more complex with an open economy since firms and individuals can borrow to invest and in this case savings will not be the same as investment.

Example 4
Given that consumption, C = 8 + 0.7Y in million Uganda S   hillings.   Find   the equilibrium level of income that makes planned saving = planned investment given that investment expenditure is equal to Ushs 22 million.

S	=	Y – C, substituting for C
S	=	Y – (8 + 0.7Y)
S	=	(Y – 0.7Y) – 8
S	=	-8 + Y -0.7Y
S	=	-8 + 0.3Y but S = I, then
S	=	-8 + 0.3Y = 22
		0.3Y = 30
		$Y = \dfrac{30}{0.3}$
		Y = 100

2.10 Three Sector Model
Aggregate demand approach
In this sector we consider the household, the business and the government sectors. By introducing the government sector the following allowances have to be made.

- The effect of consumption on investment.
- The effect of taxes on household and business sector.
- Assume taxes are a function of Y such that T = f(Y)
- AGG DD = C + I + G

- The equilibrium is attained when AD = AS. We assume government expenditure is autonomous.

Figure 7
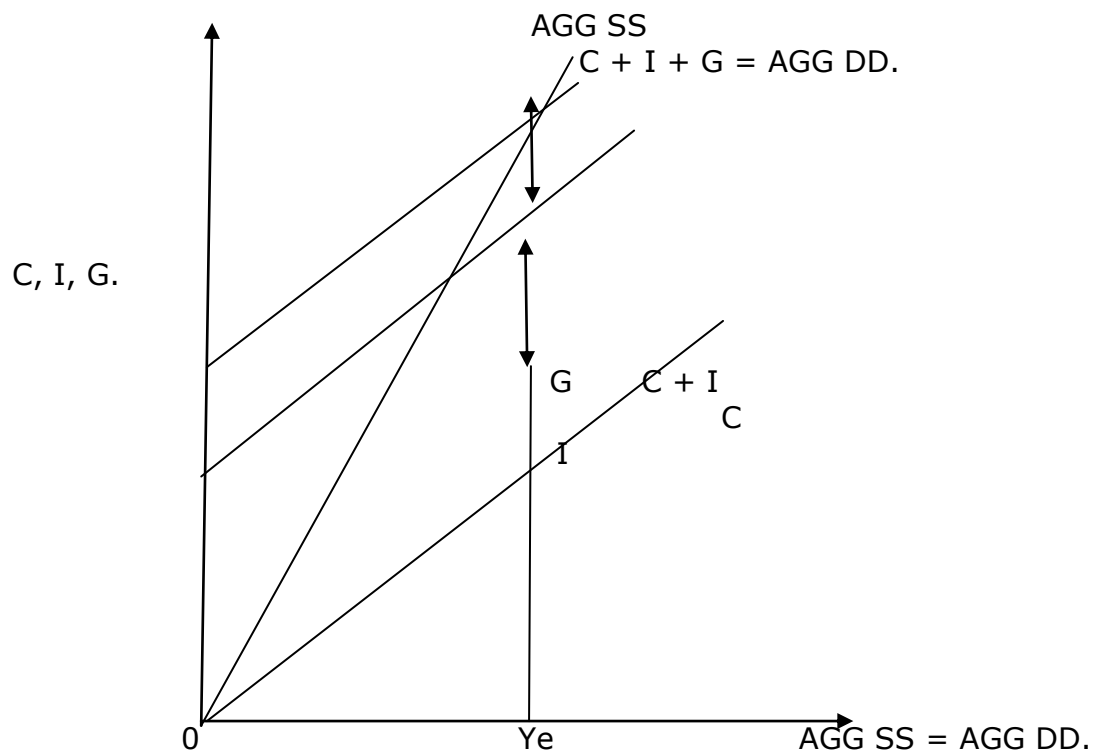
This kind of economy is called a closed economy.
Suppose the equilibrium output in a closed economy is 1000 units consumption 800 units and investment is 80 units
(a) What is the level of government spending on goods and services.
(b) Suppose investment rises by 50 units and the marginal propensity to consume out of income is 0.8. What is the new equilibrium level of output.

Investment Saving
In this model investment expenditure and government expenditure are injections where as savings and taxes are leakages. (Withdrawals). In this approach equilibrium will occur when injections are equal to leakages.

Figure 8
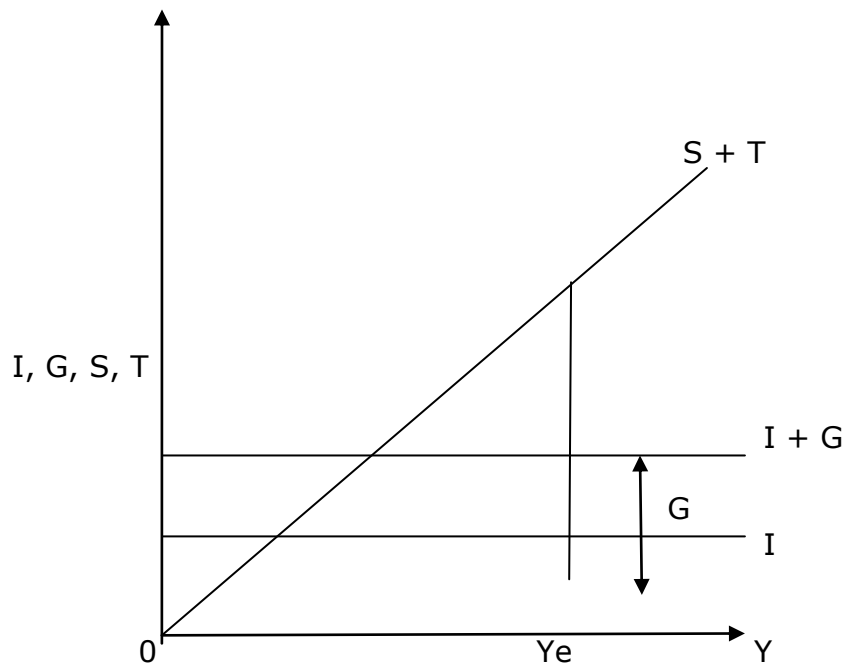
2.11 Four Customer Model

In this model the external sector (foreign sector) is introduced to the household, the business and the government sectors. This kind of an economy is called an open economy.

Assumptions
- Part of the output is sold to other countries.
- Exports are exogenously determined.
- Part of the goods and services that are consumed in the domestic economy come from outside countries (imports).
- The amount of imports depends on the level of income i.e. $m = f(Y)$.

Aggregate demand approach
Agg dd = $C + I + G + (x - M)$

Figure 9.9
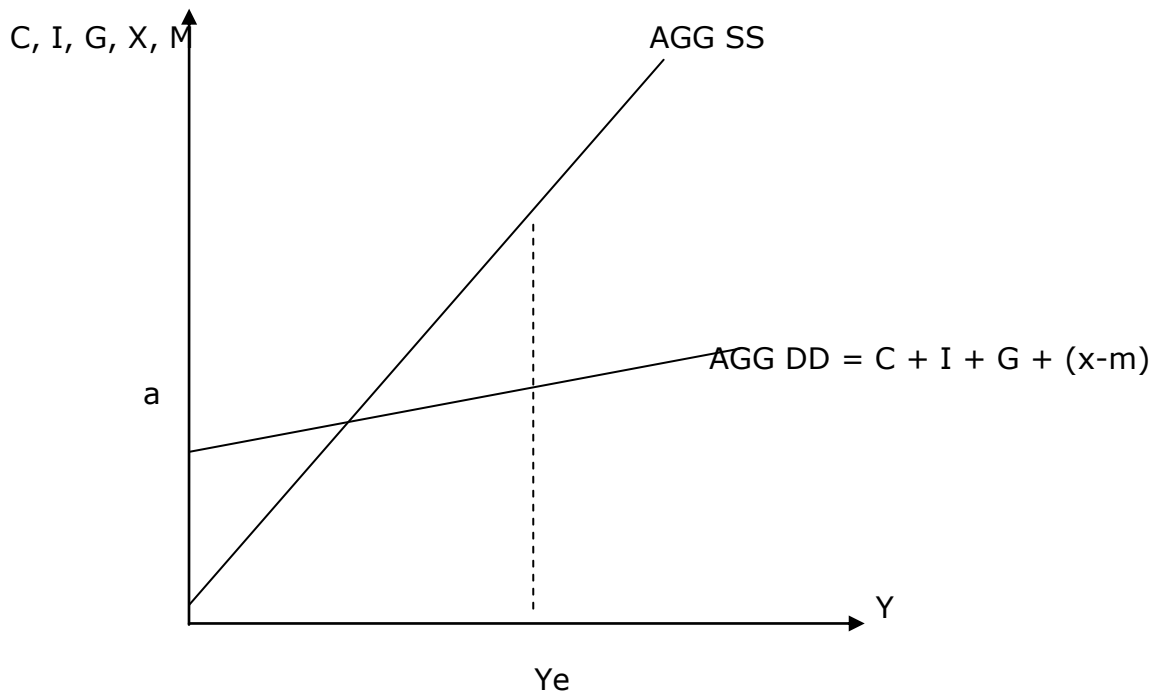
Savings Investment approach
In this case exports are injections and imports are leakages I, G and X are regarded as exogenous so that their combined graphs will be horizontal straight line.

Figure 10

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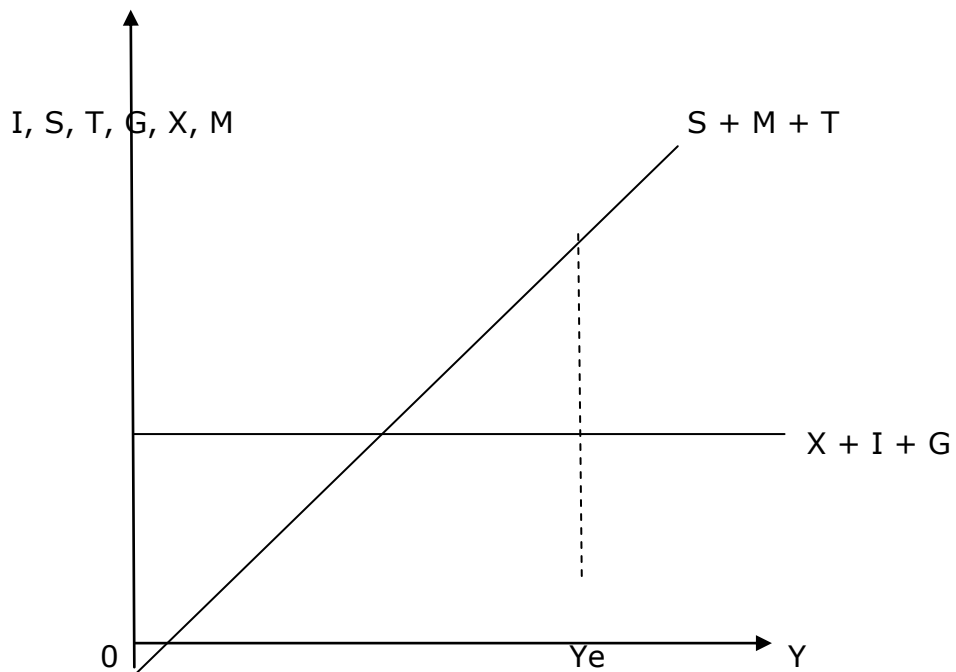
This implies therefore, that equilibrium will be attained when S + M + T X + I + G and this is when the injections are equal to withdrawals (leakages).

2.12 Per capita income and the estimation of national income

2.13 Income determination

2.14 Equilibrium level of income

2.15 Business cycles & stabilization policy

Review Questions

1.

Unit 3
Consumption and Savings
3.1   Consumption
Consumption expenditure is incurred by the household sector on goods and services produced by other sectors of the economy. Consumption may be on durable and or non durable goods.

Factors governing consumption expenditure
- Level of income i.e., $C = f(Y)$; The higher the level of income, the greater the consumption expenditure.
- Rate of inflation; high rate of inflation makes money loose value and this encourages consumption especially for durable commodities.
- Rate of taxation.
  $Yd = (Y - T)$ Yd - disposable Y.
  when Y is income, T is tax level.

If tax rate increases disposable income is reduced which reduces level of Y available for consumption and thus reduces consumption.

- Tastes and preferences when tastes and preferences change in favour of a commodity, then consumption's expenditure increases.
- Rate of interest; if the interest rate offered by the banking institutions is high, it encourages savings and hence would reduce consumption. However it should be noted that income may increase in the long run due to the accumulations of interest. So consumption may increase in the long run.

Others include: -   Dependency ration.
                   -    Availability of credit terms.
                   -    Existing stock of durable commodities.

3.2   Keysian Theory of Consumption
According to Keynes, consumption is a function of income such that $C = +(Y)$ or $C = bY$ but this is modified to cater for those who consume yet their incomes are zero i.e $C = a + bY$
where a is consumption at zero Y.
when $Y = O$, $C = a$

The equation is a line4r function where b is the slope of the function
$a > O$
$O < b < l$

Figure 11

C = a + bY

C = a + bY
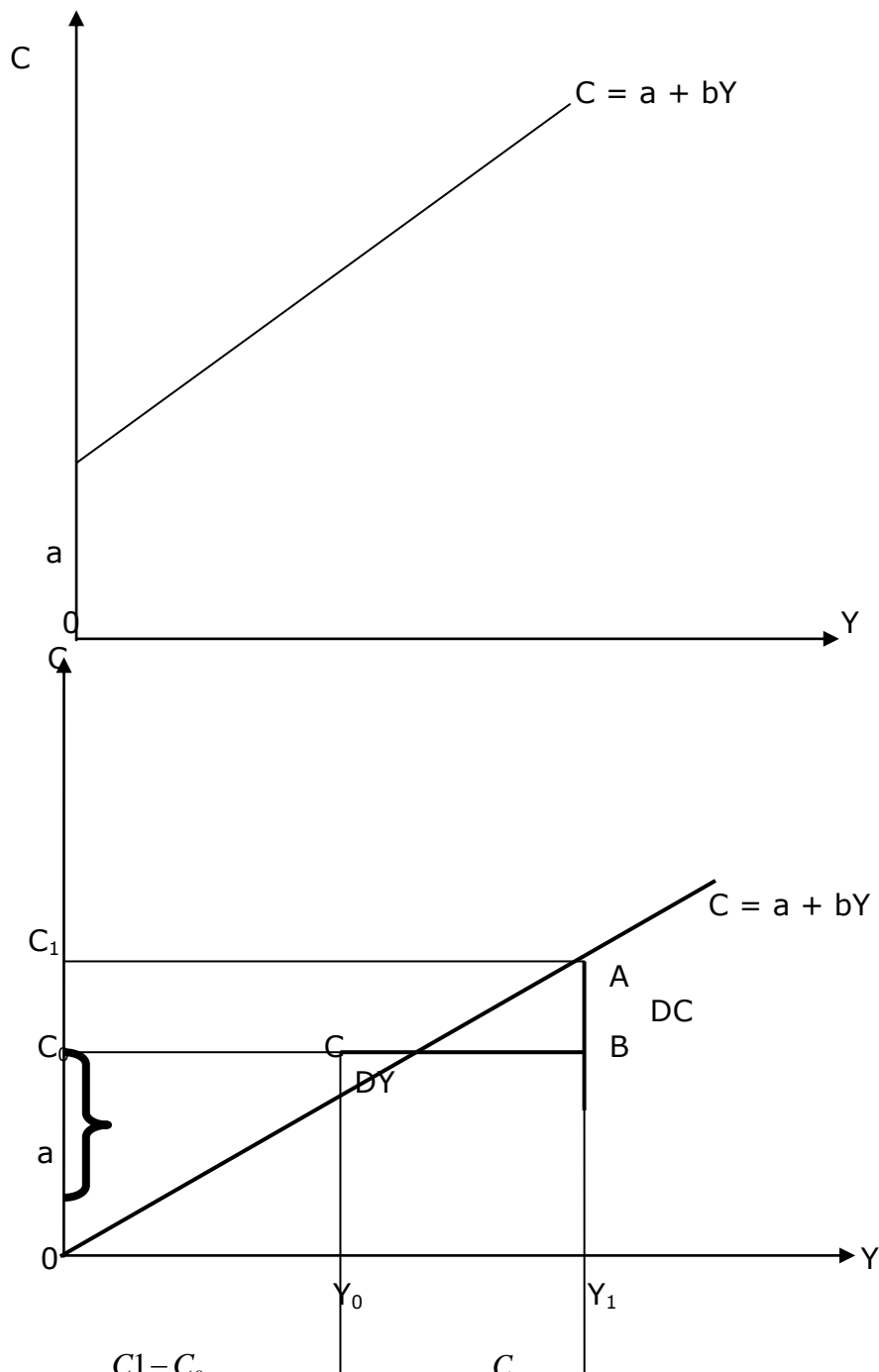
$$b \quad = \quad \frac{C1 - C_0}{Y - Y_0} \quad = \quad \frac{C}{Y}$$

The slope b is called the marginal propensity to consume (MPC).
Figure 12
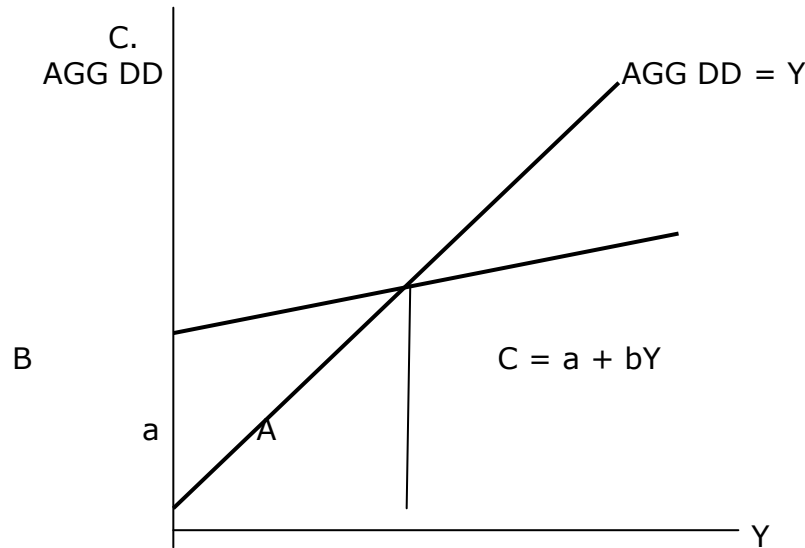
In area A consumption level is higher that the level of income. In area B the level of income in higher than the consumption level. In area A you have to borrow and therefore dis-savings and area B there is saving.

The slope of the consumption function is known as Marginal propensity to consume (MPC) and this represents an absolute-increase in consumption expenditure due to a unit increase in income.

C = a + by.

Slope = $\dfrac{dc}{dy}$ consumption depends on change in Y.

$\dfrac{dc}{dy}$ = b.

In other words MPC is the proportion consumed out of the additional income. It is normally less than 1 but greater than zero. 0 < MPC < 1

3.3   Average Propensity to Consume (APC)
It is the proportion of the disposable income that is spent on consumption. It therefore looks at total income and total consumption. APC = C/Y

Figure 9.13
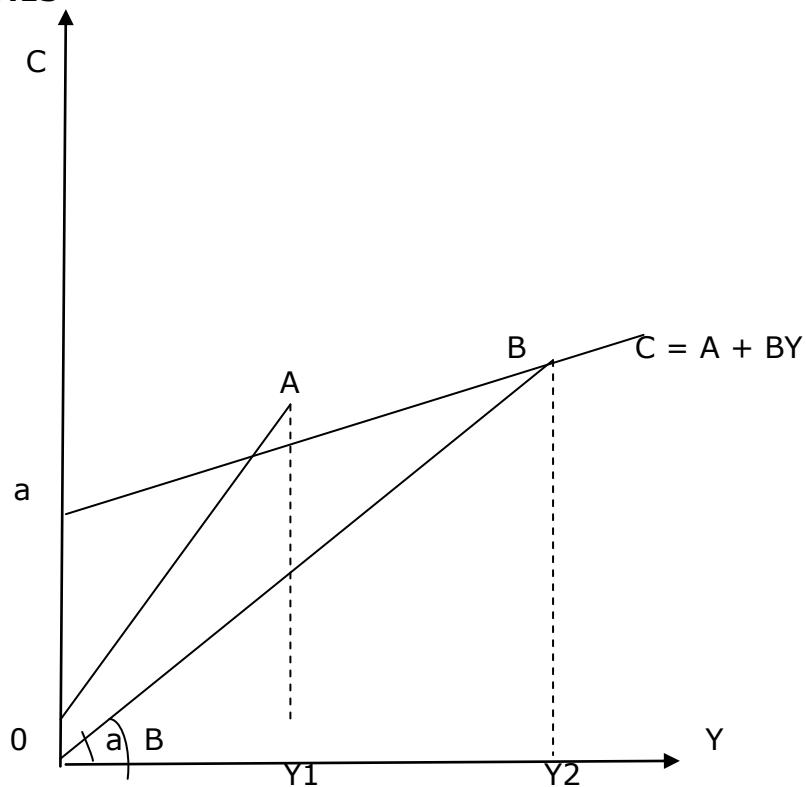
APC at point A is given by $\dfrac{AY_1}{OY_1}$ = tan a

APC at point B is given by $\dfrac{By_2}{Oy_2}$ = tan β

Given a consumption function, APC is always greater than MPC i.e. APC > MPC

Proof: c = A + by   MPC = $\dfrac{Dc}{DY}$ = b

and   APC   =   C = $\dfrac{a+bY}{Y}$

APC   = $\dfrac{a}{Y}$ + B but b = $\dfrac{MPC}{Y}$

APC   = $\dfrac{a}{Y}$ + MPC source

a and Y are greater than zero then APC > MPC.

Savings function or planned Savings

Savings is that income that is not consumed. Savings is a function of a number of factors S = S(y, r, T, P ……) as explained below.

3.4   Determinants of Savings

- Level of income; the more you have the more likely you will have something to save. Households with low incomes with nothing to save are usually referred to as liquidity constraint households.
- Interest rates ie High interest rates encourages households to deposite money to the sector and thus high savings. However it should be noted, that in most LDC's the interest rates are very low and do not give any incentive to deposit money. In the real sense in most case all interest rates are negative.
- Level of development of financial institutions.
- Inflation rate; when inflation rate is high, money losses value and thus reduces savings.
- Political instability.
- Illiteracy or level of education and the cultural set up.
- Dependency ratio.
- Patterns of consumption.

3.5   Level of Income, MPC and MPS

$$S = f(Y)$$
$$Y = S + C$$
$$Y = S(Y) + C(Y)$$
$$C(Y) = C = a + bY.$$
$$.. \; Y = S(Y) + a + bY.$$
$$S(Y) = Y - (a + bY)$$
$$S(Y) = Y - a - bY.$$
$$S(Y) = -a + Y - bY.$$
$$S(Y) = -a + Y(1-b).$$

(1 - b) slope of the savings function.

-a is the intercept.

$$b = MPC$$
$$1 - B = slope$$
$$= 1 - MPC = MPs.$$

Figure 14
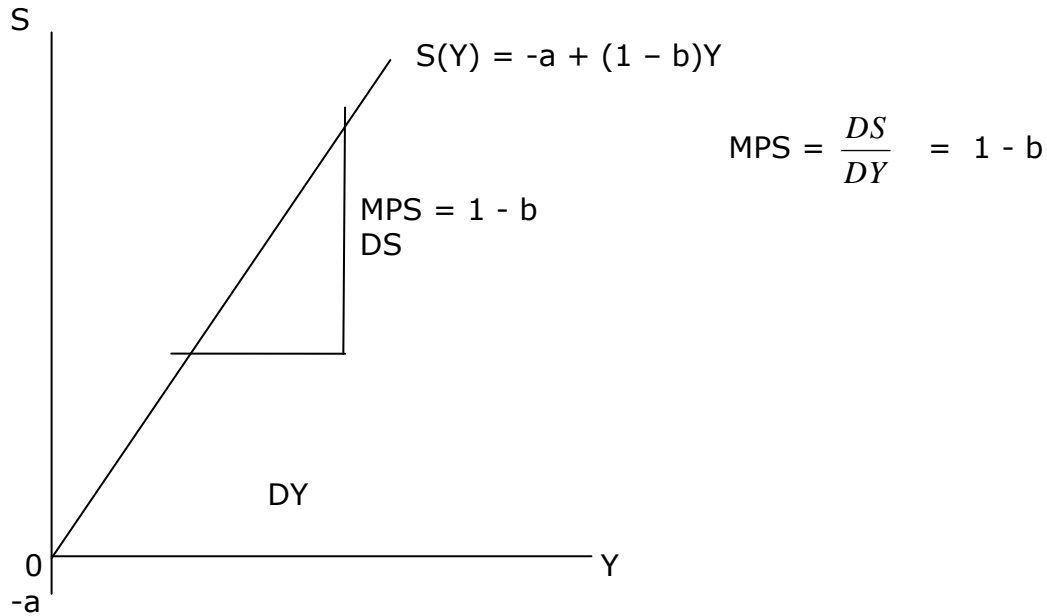
Positive a means that even at 0 level of income you save on borrowing which is called disaving (1 − b) − slope of the savings function which is normally referred to as Marginal Propensity to save (MPS). MPS is the proportion that is saved out of additional income.

MPS $\quad = \quad \dfrac{S}{Y}$

Average propensity to save (APS) is the proportion of total income that is actually saved.

APS − S

MPc + MPs = b + (1 − b) = 1

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

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

by definition,

APC + APS $= \dfrac{C}{Y} + \dfrac{S}{Y}$

but $= \dfrac{C+S}{Y}$ $\qquad$ C + S = Y since S = I,

$$= \text{APC} + \text{APS} \qquad = = \quad \frac{Y}{Y} \qquad = \qquad 1$$

. . APC + APS = 1

Examples

Given that consumption C = 100 + 0.8Y

Calculate the agg level of NY

   (i) Using agg dd approach
   (ii) Using savings investment approach.

Solution
   (i) Aggregate demand approach
         APC   =   Slope =   0.8
         a   =   intercept
         Y   =   C + I
         Y = 100 + 0.8Y + 200
         0.2Y = 300
         Y = 1500

   (ii) Savings Investment approach
         S = I
         S = -a + (1 − b)Y
         MPC = b = 0.8
         a = 100

         S = -100 + (1 − 0.8)Y
         = -100 + 0.2Y
but   S = I   I = 200
         -100 + 0.2Y = 200

      0.2Y = 300
      Y = <u>1500</u>

Suppose   there is a change in investment by 100 units. What would be the equilibrium level of output.

I = 200
I = 100
= Y = C + I + I

Figure 15

I, C

AGG SS

AS

C + I + _1 = AD

I + C = AD

0

1500   ?

Y
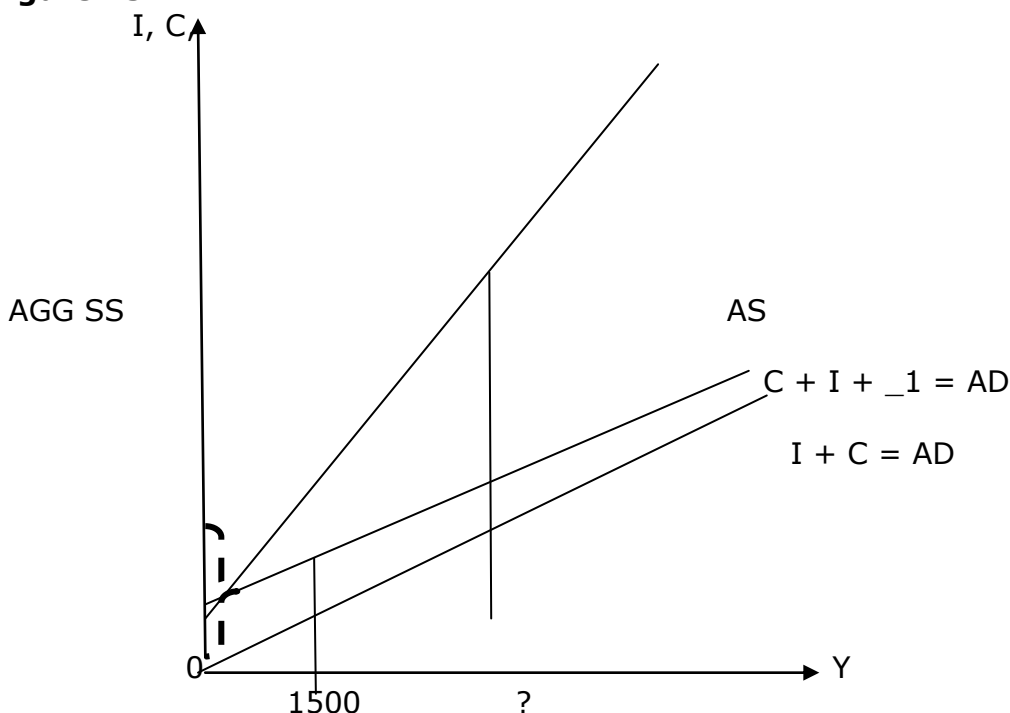
AGG DD = C + I + DI

Y   =   100 + 0.8Y + 200 + 100
Y - 0.8Y = 400
0.2Y = 400
Y = 2000

Where as the increase in investment is only 100 the change in income or equilibrium level of output is 500. Therefore equilibrium level of output has increased more proportionately than the increase in investment thus we have what is referred to as the Multiplier. By definition a multiplier simply refers to the number of times that an increase in investment expenditure will increase the equilibrium level of output.

$$m = \frac{Y}{I} = \frac{500}{100} = 5$$

Change in out put is 5 times the change in investment.

3.6 Consumption function/theory

3.7 Concepts under consumption theory

3.8 Determinants of consumption

3.9 Savings function/theory

3.10 Concepts under savings theory

3.11 Determinants of the level of savings

3.12 Investment function/theory

3.13 Concepts under the investment theory

3.14 Determinants of investment

1.

Unit 4
Multipliers
4.1 Introduction

In the previous example it is clearly explained that if investment increases by a unit, output increases by five times the increase in investment. However let us look at the following example for further illustration of the multiplier process. Suppose Mukwano Industries decides to spend an addition one billion to rehabilitate its factory, then the one billion expenditure goes to the construction workers as their wages or salaries and to the owners of the firm as their profit margin. The owners and workers of the contracted firm spend part of their additional income. Assuming the MPC of 0.8, in the Ugandan economy, thus their spending will be given by lbn x 0.8 = 800m. Thus 800m will be the net additional income to the countries demand for goods.

At this stage, this investment expenditure has pushed up national income or output by 1. 8bn. The construction workers and owners will spend money to shop keepers' and these people also spend 80% of 800m the process continues to implicity as illustrated below.

Stage Spending (in million's)   Cumulative National Income (millions)

Table 1

Stage	Spending (in millions)	Cumulative National Income (millions)
1	100m	1000
2	1000 x 0.8 = 800	1800
3	800 x 0.8 = 640	2440
4	640 x 0.8 = 512	2952
5	512 x 0.8 = 409.6	3361/6
…		5000

Total spending
$= 1000 + 800 + 640 + 512 + 4096 + … nth)$
$= 1000 (1 + 0.8 + 0.64 + 0.512 + … nth)$
$= 1000 (1 + (0.8) 1 + (0.8)^2 + (0.8)^3 + (0.8)^4 … nth)$
$= 1000 (1 + r + r^2 + r^3 + ….. rn)$
$= 100 \left(\dfrac{1}{1-r} \right)$
$= 1000 (1 = 1000 x 5 = 8000)$

the multiplier is given by $\dfrac{Y}{I} = \dfrac{5000}{1000} = 5$

4.2   Multiplier in a Two Sector Model (Simple Multiplier)

$$m \quad = \quad \frac{Y}{I} \quad = \quad I \quad = \quad \frac{Y}{m}$$

$Y \; = \; C + I \quad C= \qquad a + By, \; I = Io$

$Y = a + bY + Io$

$Y - By = a + Io$

$Y(1 - b) = a + Io$

$$Y = \frac{a + Io}{(1-b)} \qquad\qquad = \qquad \frac{a}{(1-b)} + \frac{Io}{(1-b)}$$

$$\frac{a}{(1-b)} \qquad\qquad - \qquad \text{Intercept}$$

$$\frac{a}{(1-b)} \qquad\qquad + \qquad \frac{1}{(1-b)}(I)$$

Therefore $\dfrac{I}{1-b}$ is the slope or gradient

$$\frac{Y}{I} \qquad\qquad = \qquad \frac{1}{1-b}$$

But; MPC = b

$$\frac{Y}{I} \quad = \quad \frac{1}{1-MPC} \qquad\qquad \text{but we know that MPS = 1 – MPC}$$

$$M \quad = \quad \frac{Y}{I} \qquad\qquad = \qquad \frac{1}{MPS}$$

This implies therefore that the multiplier is the reciprocal of the MPs.

Example
Given the MPC of 0.75 and a change in investment of 2.000.000 units. Find the new equilibrium level of income when the original level was 1500 units.

Solution

MPc = 0.75 $\qquad\qquad$ I = 2.000.000 $\qquad\qquad$ Yo = 1500

$$\frac{Y}{I} \quad = \quad \frac{1}{1-MPC} \quad = \quad \frac{1}{MPS} \quad = \quad MPS \quad = \quad 1\text{-MPC}$$

MPS = 1 – 0.75
MPS = 0.25

$$\frac{Y}{I} = \frac{1}{0.25}$$

$$Y = \frac{1}{0.25} \quad \times \quad I$$

$$= \frac{1}{0.25} \quad \times \quad 2.000.000$$

= 8.000.000
Ye = Yo + Y
= 1500m + 8m
= 1508m.

4.3   Multipliers in a Three Sector Model

As already noted, in a three sector model, we add the government sector to the other sectors (households and investment sectors). But it is clear that government spends on goods and services on top of the other two sectors, and will increase the equilibrium income. The general model in a three sector model is given by,

Y = C + I + a(1) C = a + bYd, Yd = Y-T,
I = G = Go and T = To + ty.
Y = a + By - + G + I, substituting for Yd, I & G,
Y = a + b (Y = T) + Go + Io but T = To + ty
Y = a + b (Y – To – Ty) + Go + Io
Y = a + b (bY – bTo – btY + Go + Io

Collecting like terms together,
Y – bY + btY = A – bTo + Go + Io
Y (1 – b + bt) = a – bTo + Go + Io

$$Y = \frac{a - bTo + Go + Io}{1 - b + bt}$$

Equation (3) represents the equilibrium level of income.
Investment Multiplier
An increase in investment expenditure I will lead to an increase in income.

$$Y + Y = \frac{Q - bTo + Io + I + Go}{(4)}$$

1 – b + bt
Subtract equation (3) from (4)

$$Y = \frac{I}{1-b+bt}$$

but by definition, $\dfrac{Y}{I}$ = multiplier $\dfrac{Y}{I} = \dfrac{1}{1-b+bt}$

Therefore equation (6) is the investment multiplier in a three sector model.

Government Multiplier
The increase in government spending G will generate a higher equilibrium income.

$$Y + Y = \frac{G-bTo+Io+Go+G}{1-b+bt}$$

subtracting equation (3) from 97), we get,

$$Y = \frac{G}{1-b+bt}$$

Therefore that $\qquad \dfrac{Y}{G} = \dfrac{1}{1=b+bt}$

10.3.3 The Tax Multiplier

$$Y + Y = \frac{a-b(To+T)++Io+Go}{1-b+bt}$$

This implies that $Y = \dfrac{-b}{1-b+bt}$

Thus equation (11) represents the tax multiplier. This tax multiplier shows the number of times income changes due to changes in tax. It's negative implying that an increase in tax rate will lead to a reduction in aggregate demand hence income by $\dfrac{-b}{1-b+bt}$

4.4   Demand Side Equilibrium and Full Employment
The term full employment, refers to a situation when all resources are being fully utilized.

By equilibrium output as already noted refers to a point when AD = AS. However the question of interest may be, whether the economy always achieve equilibrium at full employment without inflation or will there be unemployment.
When equilibrium output falls above full employment, the economy may be pluroged by inflation, see fig X.a On the other hand when equilibrium output falls below full employment, there will be unemployment and therefore a recession X.b.

Figure 10

Figure X = a

Figure X = b
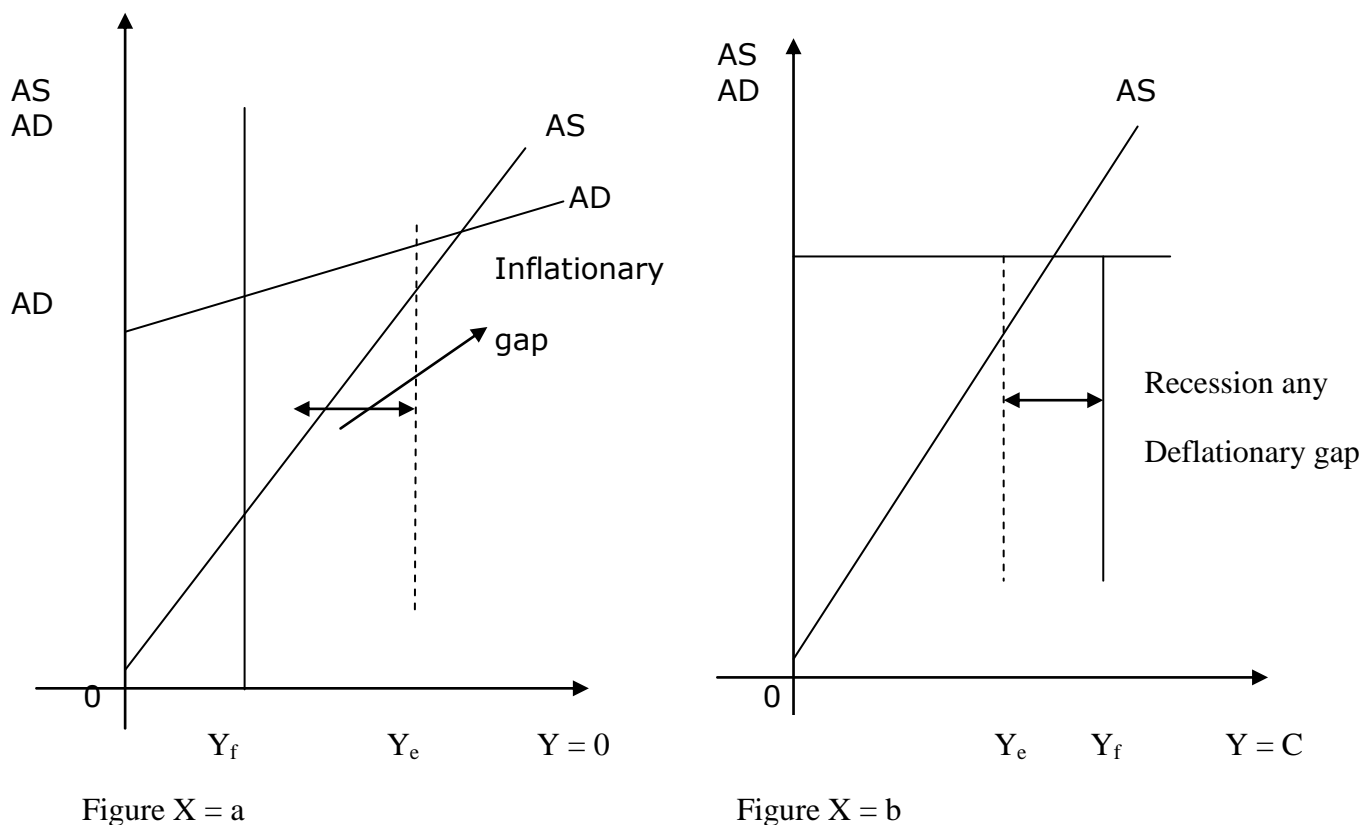
Suppose the full employment level of output (potential GDP/GNP) is 6000 million shillings while the level of aggregate demand or equilibrium output is 5000 shillings, this means we have a recessionary gap of 1000 million shillings. In this case AD is too low to lead to full employment. Such a situation may arise because the price level is too high thereby depressing the AD.

This implies that unemployment will occur because not enough output will be demanded to keep the entire resources utilized. We note therefore that the difference between equilibrium GDP and the full employment (potential GDP) may be deflationary or an inflationary gap. A Recessionary gap by definition, is the amount by which the equilibrium level of real GDP/GNP falls short of full employment GDP/GNP.

4.5 Elimination of an Inflationary GAP

When equilibrium GDP is above full employment (potential GDP), it means that there is great demand for the factors of production but their supply is limited. This could lead to rising wages and this will inform increase the production costs and thus the As curve shifts to the left. This will steadily reduce the size of the gap eventually leading to equilibrium full employment.

Examples

Qn. 1 In an economy, described by the following set of equations,
$$C = a + bY \quad I = Io \quad G = Go$$
$$T = To + ty$$
$$a = l00, b = 0.8, I = 200, G = Go$$
$$To = 50 \text{ and } t = 0.2$$

(i) From the above model, derive both the investment multiplier and the tax multiplier.

(ii) Calculate the value of both the investment multiplier and the tax multiplier and explain the meaning of your answers.

(iii) Calculate the equilibrium level of income of that economy.

Solution

(i) See text

(ii) Investment multiplier is given by
$$\frac{Y}{I} = \frac{1}{1-b+bt}$$

but b = 0.8 = MPC, t = 0.2

$$= \text{..M}_{\text{I}} \quad \frac{Y}{I} = \frac{1}{1-0.8+0.16} = \frac{1}{0.36}$$
$$= \underline{2.78}$$

Tax multiplier is given by,

$$\text{Mt} = \frac{-0.8}{1-0.8+0.16} = \frac{-b}{0.36}$$
$$= \underline{-2.2}$$

This means that a unit increase in the tax level will lead to a reduction in aggregate demand by 2.2 times.

The negative sign therefore shows that tax rate is inversely relates to aggregate demand.

(iii)   Y   = $\dfrac{a-bTo+Io+Go}{1-b+bt}$

Y   = $\dfrac{100-(0.8x50)+200+300}{1-0.8+0.16}$

= $\dfrac{620}{0.36}$ =   1722.2

Qn. 2   Given that C = 200 + 0.8Yd, T = 100 + 0.25Y,
             I = 600 and G = 500,
             (i)   Find the equilibrium level of income.
             (ii)   Find the level of autonomous spending.
             (iii) Comment of the government budget position.

Solution

(i) Y   = C + I + G
     Y   = a + b (y − T) + Io + Go
     Y   = a + By = BTo − btY + Io + Go
     Collect like terms together,
     Y − BY + BtY = a − bTo + Io + Go
     Y (1 = b + bt) = a − bTo + Io + Go

     Y = $\dfrac{a-bTo+Io+Go}{1-b+bt}$

     Y = $\dfrac{200-0.8(100)+600+500}{1-0.8+0.8(0.25)}$

            Y = 3050

(ii) Autonomous spending
      A = a − bTo + Io + Go = 1220

(iii)   T − G --- Government budget position
        T = 100 + 0.25 x 3050 = 862.5 and G = 500
        T − G − 862.5 − 500 = 362 surplus.

Review Questions

1. 1. Given that the GDP for 'the Uganda economy is Ushs. 3.1 billion and net factor payments is Ushs 100 million, the cost of replacing capital (ware and tare) is Ushs 500 m find the net national products.

2. (a) Explain the different methods used to measure National income.
   (b) What problems are usually associated with the different methods of National Income?
   (c) Explain the limitations of using National Income figures as a measure of standard of living.

3.   Briefly explain the following
   (i) Real GDP
   (ii) Net national product
   (iii) Disposable income
   (iv) Closed economy
   (v) Marginal propensity to consume
   (vi) Inflationary gap and deflationary Gap
   (vii) Percapita income
   (viii) National income at factor cost
   (ix) Average propensity to consume
   (x) Marginal propensity to save
   (xi) (xi) Multiplier

4.   In an economy described by the following set of equations,
   $C = 100 + 0.8\ Yd$, I2O0, $G = 360$
   $T = 100 + 1/3Y$
   (i) Find the equilibrium level of national income.
   (ii) Find the value of the government multiplier.

5(a) Clearly discuss different factors, affecting consumption expenditure and saving.
 (b) Given the following macroeconomics model of an economy. $= 200+ 0.8Yd3\ T = 100 + 0.25Y$, $I = 00$ and $G = 500$.
   (i) Find the equilibrium level of income.
   (ii) Find the value of the government multiplier.

6(a) Consider an economy in which government purchases, taxes and net exports are all zero, the consumption function, is $C = 300 + 0.75Y$ and investment spending I depends on the rate of interest (r) in the following way: $I = 5\ 800$, Find the equilibrium level of income when r is,
   (i) 5% (ii) 10% (iii) zero.

7.   Prove the following:
   (i) MPC + MPS = 1

(ii) Over simplified multiplier $= \dfrac{1}{1-b}$

(iii) Multiplier with Government $= \dfrac{1}{1-b(1-t)}$

(iv) Multiplier for fixed taxes $\dfrac{-b}{1-b(1-t)}$

8(a) Explain the concept of the multiplier and show how the multiplier works.
  (b) Given the following set of equations,
      $C = 10 + 0.9Yd$, $I = 200$, $G = 400$
      $X - M = 60$, $T = 100 + 1/3Y$
      (i) Find the equilibrium level of income.
      (ii) Find the multiplier for government purchases and for fixed taxes.
      (iii)   In your own opinion, explain the policy options available if government wants to lower equilibrium income by 100 units.

9.   Given $C = 120 + 0.8(Y-T)$, $I - 185$, $G = 415$
      $(X - M) = 80$, $T = 0.25Y$
      (i) Find equilibrium GNP and the budget deficit.
      (ii) Find the government multiplier.

10(a) Explain the identity between three measures of National income (Y_0 E_0 0).
  (b) Given the consumption function $C = a + bY$
      find the corresponding savings function.
  (c) Given $C = 200 + 0.8Y$, $I = 300$, find
      (i)   The equilibrium level of income.
      (ii)   Given a change in investment of 100 units.
      (iii)   Find the new equilibrium level of income and the corresponding multiplier.

11.   Consider an economy described by the following set of equations:
      $C = 100 + 0.8Yd$ $G = 360$
      $1 = 200$ $T = 50+0.2Y$
      Where Yd - disposable income.
      Find
      (i) The level of equilibrium output.
      (ii) The average propensity to save.
      (iii)   The level of the government budget position.
      (iv)   Derive and state the value of the investment multiplier.
      (v)   Explain the meaning of the value in (iv) above.

12.   Given the model,
      $Y = C + I + G$, $C = a + b\,Yd$, $Yd = Y - T + TR$, $T = tY$
      $a = 20$, $b = 0.8$, $t = 0.225$, $TR = 10$, $G = 30$, $I = 20$.
      (i) Calculate the equilibrium level of income.

(ii) Compute the government budget position.

(iii)   Compute the average propensity to consume.

13.   Given the 3 - sector model:

$Y = C + I + G$, $C = Co + b(Y-T)$, $T = To + tY$

$G = Go$, $I = Io$.

where $Co = 200$, Io - 500 Go - 500 To -200

$b = 0.7$ and $t = 0.3$

(i) Find the value of equilibrium income.

(ii) Find the value of the investment multiplier.

14(a) "Since planned injections must equal planned withdraw at equilibrium and that savings is a withdrawal (leakage) and I is an infection." savings must therefore equal investment at ° equilibrium would you agree? Give reasons.

(b)   A closed economy with no public sector is at full employment. $C = 1,000 + 0.6Y$ I 1,500m. What is the current level of national income? If autonomous consumption at all levels of National Income fell by 20%, what would be the new level of national income and how would this affect employment.

15(a) Given the savings function

$S = -a + (1-b)Y$, Find the corresponding consumption function.

(b)   Given an original income of Ushs. 20 million, MPS of 0.25, a change in Investment of Ushs. 2million.

Calculate

(i) The size of the multiplier.

(ii) The new equilibrium level of income.

(c) Explain why per capita GNP (real national income) figures are in appropriate for compensation of people's welfare between different countries.

Unit 5

Money and Banking

5.1 Introduction

Definition of Money: Money is anything commonly acceptable as an instrument of debt settlement and as an instrument of exchange. Most importantly its legal tender normally takes the form of paper notes or coins. It includes cash (coins and notes) and deposits with the financial institutions: Narrow money (M) refers to currency in circulation plus demand deposits ie Ml = C + D. For most developing countries, it's the definition used because of the high liquidity preference. While the broader definition (M2) refers to currency in circulation plus deposits which include fixed deposit accounts and other financial assets.

5.2 Functions of money

- Unit of account: This means that it is used as a unit of value for carrying out calculations and accounting procedures so as to effect business transactions.

- Standard measure of value: The relative. value or prices of goods and services are determined through the intermediary of money. It reflects the quantity and quality of goods and services bought in the market.

- Medium of exchange: It facilitates business transactions through space and time. The alternative to this function has been barter trade. Barter economy refers to the exchange of goods for goods. The condition for exchange in this market is usually the double coincidence of wants. This has been associated with but a number of disadvantages.

- The need for a face to face contact of business people. Double coincidence of wants. Costs of transport and storage. Indivisibility of commodities among others.

- Store of wealth: Some commodities could not perform this function because they are perishable and others are very bulky. For reasons of solvency at all times, business hold part of their assets in the form of money to be applied for any urgent business payments and other monetary obligations. Nevertheless, the value of money in the long run tends to change because of the Time Value of money and especially if there is inflation.

- Standard of deferred payments: It facilitates payments of debts and transactions at a future date. This function is remarkable in terms of the commodity "monies" of the barter system. Bank credits for consumption an investments purposes would not be possible without the intermediary of money. Money value must be stable if it is to perform this function.

5.3   Qualities of Good Money

- **Portability**

Money should be easy to carry. This makes it easy to be transmitted from one person to another and across distant markets. It helps in speeding up business transactions.

- **Divisibility**

Money should be divisible into smaller units without any loss of value. This makes markets transactions more convenient.

- **Homogeneity**

It must be homogenous for example, a unit of shilling should be worth another unit at all times in all places within a geographical area where it is legal tender.

- **Recognizable**

Genuine money should be easy to recognize. There have been several cases of counter feit bank notes and coins, but closer observation of a coin or note should reveal which is genuine money and which is counterfeit money.

- **Acceptability of value**

Money is accepted because a specific value has been conferred on it. Without this value, no money could be used as a medium of exchange. It should maintain this value. Though in this world of inflation it's hard to maintain this value.

5.4   The theory of Demand for Money

There are two basic theories on demand for money namely, classical and the Keynessian theories. According to the classical economists, money does not play any role in the determinations of employment and output. This means it has no impact on real variables in the economy. Basically the argument is based on Says law which states that "Supply creates its own demand". It is based on Adam Smith's invisible hand which explains how a perfect market will adjust when there is either excess demand or excess supply.

Irving Fisher's Quantity Theory

According to fisher, the value of sales in an economy must be equal to the value of receipts. Now the value of sales must be equal to the number of transactions conducted over any time period multiplied by the average price at which they take place. But the value, of purchases must be equal to the amount of money multiplied by the average number of times it changes hands over the same period hence MV = PT.

Where M is total money supply, V is velocity of circulation, P is the price level and T is the volume transactions in the economy. In this Fisher's model, T, and V are considered to be a constrant. Thus

$$MV = PT$$

On the commodity side, the number of transactions could be regarded as proportional to the level of real output Q. There is always a close and direct

relationship between number of transactions in a given period and the level of real income. Though not stated by fisher, the argument is that demand for money will always depend on the number of transactions conducted in an economy. For equilibrium in the money market, money supply must equal the money demand.

Md = MS

$$Md = \frac{PT}{V}$$

The 'naive" quantity theory of money seems to imply that there is a direct relationship between prices and money supply. It suggests that changes in money supply, M affects only the price level, P and has no effect on the level of real output, Q. The modem quantity theory suggests that changes in the supply of money can influence the level of real output as well as price. This was a restatement by the monetarists led by Milton Friedman. They recognize that velocity is not literally constant. They take inflation to be fairly predictable in the long run and the short run. It is also recognized that a number of factors such as rate of interest, expected price changes and efficiency in the payment mechanism affect the velocity of circulation. They argue that a raise in the rate of interest increases the opportunity cost of holding money rather than investing it on high yielding assets. Investing on high yields assets raises the level of investment activity in the economy thus increasing output and employment.

The Keynesian Theory
The Keynesian theory like the quantity looks at money as a medium of exchange. However, emphasizes the role of money as a store of wealth. According to this theory, demand for money is influenced by certain motives.

(i) Transactions motive.
(ii) Precautionary motive.
(iii) Speculative motive.

Transactions Motive
This arises from the fact that people need money to finance current transactions. Households and firms hold money balances to bridge the gap between the receipt and expenditures of income. Therefore money is demanded to fulfill the day today business or trade transactions. The amount of cash balances held for transactions purposes depend on the current price levels and is also a function of the level of income. The amount of cash balances also vary inversely to the rate of interest. High rates of interest offered by the banks encourage savings and reduces amount available for transactions purposes. The transaction demand for money depends on income. It is positively related to income.

Precautionary Motive
These are cash balances held to meet unforeseen circumstances. Households will keep money to cover the possibility that it will incur unexpected debts. The balances held for this motive depend on the level of income. Money demanded for this motive is a function of income (Md = f(Y). Like the transactions motive the

precautionary demand for money will vary, inversely with the rate of interest and directly with the level of income.

Speculative Demand for Money:
This motive emphasizes the role of money as a store of wealth. This is basically the desire to hold money in order to take advantage of the developments in the capital markets. This occurs when ever there is uncertainty about future events. An investor has to asses future market prospects before he commits his funds to any type of investment. This move is operated so as to ensure that the prospective investor does not incur capital loss in the bonds markets. The amount of cash balances kept for speculate motive will depend on the interest rate payable i.e $M = f(r)$ where r is the interest rate payable in the market. According to Keynes money pays a new rates of interest rate and therefore investment in high yielding assets such as bonds if the interest paid is high.

Many other models have thereafter been developed such as the Baumol-Tobm model which basically is an extension of the Keynesian model, however a detailed treatment of this model is beyond the scope of this book.

5.5 Determinants of Money Supply
Money supply refers to money in the hands of public plus demand deposits. Ml = C + D.

There are three types of operations more commonly used by the monetary authorities to change the stock of high - powered money namely; open market operations, rediscount operations and foreign - exchange operations.

Another factor may be financial accommodation of corporations. This is done by government borrowing from the Central Bank or instructing corporations to borrow directly from the central bank. This basically means printing more money and hence an increase in money supply.

Other determinants include;
- o The level of economic activity. If a country has policies of expanding economic activities for example industry, agriculture etc., they will he used for much money.

- o The level of credit creation – This is the process in which the commercial banks expand the volume of credit to the public. If the level of credit creation is high i.e. banks desiring to extend credit to the public, the supply of money will increase.

- o In flow of foreign capital – As foreigners enter a country they come with foreign exchange which has to be exchanged with local currency. As more come in, more money will be needed to exchange with the foreign exchange and hence the supply will increase.

- Government policy towards the price level – If the policy is to reduce inflation, the supply of money will decrease.

- The size of monetary sector – The monetary sector is that part of the economy where money is used as a medium of exchange. The bigger the monetary sector, then the need for more money in circulation.

- Government method of financing her deficit. If a country has drawn a deficit budget where the expenditure is higher than income and the policy is to finance the deficit through printing more money.

- Discounting bills of exchange – If holders are paid before maturity date, the money supply will increase. Similarly when the bills of commercial banks are discounted by the central bank money supply will increase.

- B.O.P surplus – If a surplus on balance of payment is used domestically, supply of money will increase since it has to be exchanged for foreign currency.

- Financial accommodation – This is a process of printing more currency by the government in order to finance her expenditure when it runs short of money. It can be done when the government is extending relationship with a country which will affect its foreign exchange earnings for example present economic sanctions on Libya and Iraq by U.S.A.

- Protectionism – A country which buys other countries exports may impose protective measures in order to boost domestic producers, demand will fall and so are earnings.

- High population growth rates – High population puts a country on pressure to supply social services and other consumer goods. A country will spend too much on imports.

- Protectionism against goods from LDCs.

- Increase in foreign exchange rates.

Review Questions

1. "Monetary policy may be easy to explain in theory but seeing those ideas   tried in practice is quite a different story".

   (a) How may monetary policies be explained in "theory"?

   b) Why is it much more difficult to use it in practise?

2.   Discuss the traditional and development functions of a typical African Central Bank.

3.   (a) Outline the functions of a Commercial Bank.

(b) Explain the process of credit creation clearly highlighting the possible constraints to   the credit creating capacity of commercial banks.

4. (a) Briefly explain the following terms

(i) Money supply.

(ii) Money demand.

(iii)   Transactions motive.

(iv)   Credit creation.

(v) Capital market.

(vi)   Open market operations.

(vii) Bank rate.

(viii)   Monetary policy.

5.   (a) Explain the different uses of money in an economy.

(b) What are the basic advantages of a monetary economy over a   barter economy.

6.   Compare and contrast the Keynesian and monetarist theories of demand   for money.

7.   (a) Exp1an the terms "narrow money" and "broad money" as used in   monetary economics.

(b) What are the basic determinants of money supply in an economy.

8.   Briefly highlight the limitations of the "naive" Quantity theory of money and explain the restatement of the theory by Milton Friedman.

9.   (a) Explain the basic points that led to the establishment of Central Banks in   the World.

(b) Explain the applicability of Central Banks Monetary policy in LDC's.

Unit 6
Financial Intermediation
6.1   Introduction

Financial intermediaries bring together the surplus spending deposits with the borrowers spending units. The link between financial development and real development has been noticed historically and argued theoretically.

In these, we normally have banking financial intermediaries such as commercial banks, offering short term loans, maintaining demand deposit accounts, and non-bank financial intermediaries such as development banks, usually offering long-term loans, maintaining time or fixed deposit accounts.

In developing countries like Uganda, the financial system is still at a rudimentary stage. There is a narrow range of financial institutions, instruments and activities. In Uganda, the system is mainly dominated by government financial institutions such as Uganda Commercial Bank (UCB) with its branches. The economy still faces limited financial activity which is particularly biased to urban areas. Most of them are found in the urban city of Kampala. They also have limited number of financial instruments for the mobilization of savings deposits.

Financial intermediaries in Uganda are faced by a number of problems.

- Limited access to commercial banks. Over 86% of the population is on the rural areas yet most of the commercial banks are located in the urban centres.
- Low interest rate on deposits and relatively high inflation for the past three decades. This was therefore not a good environment for saving.
- Lack of confidence by the public in the banking system and a poor banking culture.
- Poor operational capacity of the central bank especially in controlling and monitoring of the commercial banks.
- Lack of appropriate financial instruments required by the potential savers.
- Poor distribution of financial intermediaries which reflect the low 1evels of financial widening.

Banking in the rural areas is very poor and in some cases does not exist. Probably the high currency ratio of about 50% in the Ugandan economy could be the sign of the failure of the part on the financial intermediaries to mobilize deposits.

Note: Currency ratio   = total currency not deposited
                                   total money supply in the economy.

This background will thus lead us to the discussions of different financial intermediaries especially commercial banks and central banks.

6.2   Commercial Banks

Functions of Commercial Banks
- Maintenance of different accounts on behalf of customers e.g current savings and time deposits.
- Offer loans and overdraft facilities to their customers.
- Issue of travelers cheques.
- Acceptance of precious or valuable articles and documents for safe custody on behalf of their customers.
- Discounting of bills for customers.

Credit Creation

Credit creation is defined as a process in which c3mmercial banks create new deposits for the customers without receiving any cash deposits (primary deposits) from the customers.

Cash ratio is the amount a commercial bank is supposed to reserve in cash form so as to meet the day to day requirements of their customers.

Assumptions
- Assume cash ratio of 20%.
- Assume deposit fixed at 1000/=
- Assume that as people get loans they deposit them in other banks.
- Assume that the public is able and willing to borrow money from commercial banks and banks are willing to lend.

BANK	NEW DEPOSIT	CASH RATIO	NEW LOANS
A	1000	200	800
B	800	160	640
C	640	128	512
D	512	102.4	409.6

Total deposits created are given by the formular,

$$\text{Total deposits} = \left\{ \frac{1-(1-r)}{r} \right\}$$

where a is the initial deposit
n – number of banks which participate in credit creation.
r – reserve ratio.

Total deposit created	=	$1000 + 80 + 640 + 512 \ldots\ldots\ldots\ldots$
	=	$1000 \left[1 + \frac{8}{10} + \frac{64}{100} + \frac{512}{1000} \ldots \right]$
	=	$1000 \times \dfrac{1}{1 - \frac{8}{10}}$
	=	1000×5
TDC	=	5000

Limitations to credit creation
1. The amounts of new deposits tends to vanish to zero and this will act as a limit to the ability of the banks to create credit.
2. General preference of the public to hold cash rather than to deposit it with the banks.
3. The Central Bank can raise the Bank rate or the minimum reserve requirements thus reducing the capacity of commercial banks to lend and therefore to create credit.
4. Low demand for loans because of poor investment climate e.g poor infrastructure, political instabilities etc.
5. General lack of savings given that in many LDC's and Uganda in particular many of the households are liquidity constrained.

6.3   Money Policy

Monetary policy is the management of demand and supply for money together with the rate of interest in order to, influence the level of economic activity. The basic objectives of monetary policy is the maintenance of monetary stability and the promotion of economic development.

Tools of Monetary Policy

1. The Bank Rate: This is sometimes called discount rate. Itis the rate at which commercial banks borrow from the central bank. The central bank will raise the discount rate or the bank rate if it aims at contracting the money supply; similarly, it will lower it if it wishes to pursue an expansionary monetary policy. This is because the interest rates in various money and financial markets will tend to follow the direction and magnitude of the bank rate. This tool is of limited importance in LDC's because of the people's willingness to hold money in cash. It can also be noted that in many LDC's, many Commercial Banks do not always discount their bills with the central bank. Many commercial banks in LDC's have excess liquidity. Under such circumstances, even if the bank rate is raised to squeeze the credit market commercial banks may not raise their interest rates and neither the cost nor the availability of credit will be affected. (Ghatak 1995). A Bank will only rediscount bills if it has exhausted its surplus funds or other loan sources such as inter Bank lendings.

2. Open Market Operations: The central bank normally sells or buys securities in the open market. The securities consist of treasury bills, bonds etc. Sales of securities by the central bank contracts the money supply in the economy while purchases will expand the money supply. In case of sales of securities the cheques drawn on the commercial banks by the public in order to purchase securities reduce the cash reserves of the commercial banks. This in turn reduce
the credit creating capacity of the banks. This tool is of limited importance in LDC's since many LDC's lack well developed securities market. This means the success of OMO by the central bank depends on the fact that the government securities

markets should be sufficiently large, active and diversified. In many central banks in LDC's there is a general lack of securities. In Uganda, the Treasury bill market exists but is known to a small section of society.

3. Selective Credit Control: In this case the central bank issues directives to all commercial banks and other financial institutions to direct more credit to certain sectors of the economy while credit to other sectors is either reduced or restricted. This reduces the number of sectors getting loans and hence reducing money supply.

4. Variable Reserve Ratio (minimum legal reserve requirement): By law, all commercial banks are supposed to deposit a given percentage of their deposits with the Central Bank. Therefore the Central Bank can use this ratio to manipulate the amount of money in circulation.
In order to reduce the money supply, the central bank raises the reserve ratio of commercial banks. This reduces the size of the credit available for commercial banks. Thus, the power of commercial bank to create credit reduces.

5. Moral Suasion: Instead of the central bank giving directives, it gives advice and appeal to commercial bank in the conduct of credit and lending policies. It is then a method to persuade bankers and business men to follow policies which the central bank believes are in the interest of the whole country. Moral suasion is a temporary device to influence economic decisions until more fundamental policy can be taken.

6. Special deposits where in addition to the minimum legal reserve requirement central banks directs commercial banks to deposit money with them above the legal reserve requirement which reduces money supply.

6.4   Central Banking

A Central Bank is a banking institution, with statutory powers or legal mandate to implement economic and monetary policies.

Factors that encouraged the establishment of Central Banks
These factors are compiled from different sources but more especially, Onoh (1982).
1. Need for orderly and systematic monetary management. With the expansion of the economies of different countries, money supply had to expand correspondingly in order to maintain economic growth and high levels of employment. It was therefore necessary to create a central monetary authority to manage these monetary obligations.

2. Growth of world trade or international trade; authority of national credits and liabilities arising from trade and settlement of such liabilities where they exceeded the credits such an accounting authority would also be equipped to initiate and carry out monetary policies, advise the government on national

and international economic policies and also collection of statistics for formation of economic policies.

3. Existence of fraud in the banking system. This was brought about by the fact that all commercial banks could issue currency notes in the economy. There was need therefore for a central currency issuing body.

4. Debt management, this is with regard to both domestic and international debts. This was mainly due to the growing rate of debt burden through out most of the developing countries. There was need for a central authority for proper debt management.

5. The international financial conference in Brussels which was held to discuss the international monetary corporation agreed upon the resolution of supporting the establishment of central bank for each country.

Functions of a Central Bank
The functions of a central bank may be grouped into four categories regulatory, control, financing and banking functions. But in LDCs they have acquired a special role of development.

FinanciI1g Function: The central bank is responsible for the issue and redemption of legal tender notes and coins. The Central Bank enables centralized issuing of notes in a controlled manner. Central banks came into existence after the abolition of Gold Standard Money. Central Banks are responsible for maintaining foreign exchange reserves which have now replaced the role played by Gold in the non-fiduciary note issue. In more developed economies it acts as a lender of last resort but in LDC's it serves as a lender of first resort because of lack of capital markets to rise funds.

Banking Function: Here the central bank acts as a banker to the government, commercial banks, international bodies like the IMF, UNDP etc but not to individuals. Provides advances to the government in exchange for government securities such as treasury bills. Central Banks also rediscounts bills for commercial banks and government. There is a statutory limit to the advances that the central bank can grant to the government.

Control Function: The Central bank controls the commercial banks through persuasion, directives, inspection and indirect control, in order to ensure that its monetary and economic policy is followed by the commercial banks. Through it selective credit control, the central is empowered to direct the commercial banks to make advances to certain sectors as determined to be useful in collaboration with government.

It also acts as an agent and advisor to the government. It is an agent of government both at home and abroad. The government assains to it certain

technical duties that are of a financial nature and the bank performs these duties on behalf of government.

At domestic level, a central bank issues or buys treasury bills and other government securities on behalf of government in an attempt to stabilize the monetary economy.

It also has the function of analyzing the domestic economy and advising the government on appropriate economic policy measures. The formulation of monetary policies is a major function of the central bank. The Central Bank chooses the appropriate monetary instruments to be applied in the economy from the range of instruments available in a particular economy e.g., Omo, Bank rate, Selective Credit control etc.

Regulatory Function: The Central Bank regulates the rates of interest by its rediscount rate or bank rate policy. The commercial banks have to follow the interest rates as laid down by the central bank.

Development function: This is a unique function which African Central banks have acquired by virtue of the accident of history. Before the emergence of the central banks in the more developed economies, the money and capital markets of these countries had been reasonably developed. However this was not the case for LDC's where the Central Banks have adopted the function of developing the financial infrastructures of their economies. They are directly involved in other development programs in their economies e.g Rural farmers scheme, export refinance scheme, export credit guarantee scheme,. development finance fund etc. These are examples of some of the schemes through which the central bank has been directly involved in the development process.

Review Questions

1. "Monetary policy may be easy to explain in theory but seeing those ideas tried in practice is quite a different story".
    (a) How may monetary policies be explained in "theory"?
    b) Why is it much more difficult to use it in practise?

2. Discuss the traditional and development functions of a typical African Central Bank.

3. (a) Outline the functions of a Commercial Bank.
    (b) Explain the process of credit creation clearly highlighting the possible constraints to   the credit creating capacity of commercial banks.

4. (a)   Briefly explain the following terms
    (i) Money supply.
    (ii) Money demand.
    (iii)   Transactions motive.
    (iv)   Credit creation.
    (v) Capital market.
    (vi)   Open market operations.
    (vii) Bank rate.
    (viii)   Monetary policy.

5. (a) Explain the different uses of money in an economy.
    (b) What are the basic advantages of a monetary economy over a barter economy.

6. Compare and contrast the Keynesian and monetarist theories of demand for money.

7. (a) Exp1an the terms "narrow money" and "broad money" as used in monetary economics.
    (b) What are the basic determinants of money supply in an economy.

8. Briefly highlight the limitations of the "naive" Quantity theory of money and explain the restatement of the theory by Milton Friedman.

9. (a) Explain the basic points that led to the establishment of Central Banks in the World.
    (b) Explain the applicability of Central Banks Monetary policy in LDC's.

7.0   Inflation
7.1   Introduction

Inflation is usually defined as the persistent increase in the general price level. The general price level in this case will be average of the prices of domestic and foreign goods. In practice, inflation is normally measured by the change in the consumer price index (CPI), the average price of the basket of goods and services consumed by a representative household. In Uganda, the CPI for five major towns of Mbale, Jinja, Kampala, Masaka and Mbarara is calculated every week.

In should also be noted here that their can be a once and for all price increases which can be as a result of certain shocks e.g increases world coffee prices and persistent price rises which may be due to serious economic problems such as breakdown in production, large and persistent budget deficit etc.

Inflation is sometimes classified according to its degree of intensity. It is important to classify inflation by its severity. In some countries the inflation rate is well below 10% per year such as Switzerland, Germany and Uganda after 1992 but in others such as pen, Brazil and Bolvia the rate is well above 50% per month annual rate of 13,000%).

7.2   Theories of Inflation

Economists continue to disagree on the causes of inflation. There are two major schools of thought on the subject, namely the structuralist and the monetarist. The structuralist such as (Lim 1987, Balbosa 1992, Smakel 1960, Hossain 1989, Argy I ')70) have emphasised market imperfections, rigidities and disequilibrium in different sectors of the economy as the causes of inflation. On the other hand, monetarists such as (Laidler 1975, Harberger 1963) consider inflation to be a monetary phenomenon resulting from money supply in excess of money demand also see Ndung'u 1993). However, these long established theories of inflation have come under attack as a result of recent developments such as the Rational expectations hypothesis.

Monetarists consider inflation to be purely and monetary phenomenons originating in and sustained by expansionary monetary and fiscal policies (expansionary government deficit financing, expansionary credit facilities, and expansionary exchange rate operations of central banks). On the other hand, the structuralist argue that there exist rigidities, for exchange constraints, and budget constraints within developing budget constraints within developing economies that create structural economies that create structural vulnerability to inflation, According to this school of thought, inflation is caused by cost push factors such as food prices, wage of exchange rate changes, and sustained by increases in money supply.

The classical theory emphasized the basic structure of the economy and the rigidities that ensued as major causes of inflationary pressure. The non-structural inflation theory has gone further to develop the interrelationship between the structural factors and propagating elements in the inflationary process.

```
                    ┌─────────────────────┐
                    │ Exogenous growth of │
                    │ the money stock     │
                    └─────────────────────┘
                              │
┌──────────────┐             │          ┌──────────────────┐
│ Real income  │─────────────┼──────────│ Expectations of  │
│ growth       │             │          │ Inflation        │
└──────────────┘             │          └──────────────────┘
                             │          ┌──────────────────┐
                             │          │ Lagged adjustment│
                             │◄─────────│ to earlier changes│
                             │          │ in the money stock│
                             │          └──────────────────┘
                    ┌─────────────────┐
                    │ Rate of inflation│
                    └─────────────────┘
```

(a) A monetarist model

```
┌───────────────────────┐
│ Autonomous disturbance│
│ e.g. rise in food prices│
└───────────────────────┘
        ┌────────────┐         ┌──────────────────┐
        │ Wages rises│─────────│ Increase in real │
        └────────────┘         │ budget deficit   │
    ┌────────────────┐         └──────────────────┘
    │ Induced money  │
    │ stock increase │
    ├────────────────┐
    │ Exogenous rate of│
    │ growth of money stock│
    └────────────────┘
┌──────────────────┐      ┌──────────────────┐
│ Real Income Growth│      │ Expectations of inflation│
└──────────────────┘      └──────────────────┘
                          ┌──────────────────────┐
                          │ Lagged adjustment to earlier│
                          │ changes in the money stock │
                          └──────────────────────┘
        ┌─────────────────┐
        │ Rate of inflation│
        └─────────────────┘
```

The monetarist model is predicted upon the existence of a stable demand functions for real money balances. These balance are demanded for transactions and precautionary purposes and their level is postulated to be a function of the level of real income in the economy of the opportunity- cost of holding money instead of other assets which could satisfy the precautionary and perhaps also the transactions motive.

The structuralist argue that food supply tends to lag behind the demand generated by the expansion of income in the non-agricultural sector, which is a necessity for economic development and this causes food prices to rise. It might be argued that if domestic food supply is elastic, then imports of food could prevent any continuous rise in the relative prices of food. However other structural characteristics may also introduced cause inflationary pressures such as foreign exchange constraints which makes it impossible to import enough food to prevent a rise in its relative price. In economics with strong trade unions, urban wage earners are likely to press for wage rises to compensate for their fall in real incomes. If granted, these result in a further increase in demand and a further increase in food prices. This important to realize that structuralist do not deny that an inflationary process will require an expansion of money supply. The other competing theories are the expectational hypotheses whose detailed discussion is above the scope of this book.

Policy Options Available to curb Inflation

- Monetary Policy: government through the central bank can use acontractionary monetary tools (already discussed) available to reduce on the growth rate of money supply in the economy.

- Fiscal Policy: This mainly refers to governments manipulations of its revenues (taxation) and expenditure to influence economic activities in case of inflation, taxes are increased which government expenditure is reduced. This is other wise known as the contractionary fiscal policy of the government. This will eventually push the prices down.

- Government may provide incentives to producers of essential commodities. This will increase the supply of the essential goods and services.

- Government through a number of policy options available, can try to minimize the structural in the economy. The government can improve on road infrastructures, storage facilities, etc as a way of reducing on some of these bottlenecks.

7.3 Effects of Inflation

- Inflation redistributes incomes as the fixed income earners (e.g Civil Servants, Creditors, pensioners etc) loose and others such as business men and debtors gains. People on contract jobs without cost of living adjustments stand to loose in case the inflation rate is above what is expected.

- Higher rates of inflation may destabilize the economy by inhibiting growth through discouraging of swamps and hence investment. This will thus have long run effects of growth.

- Inflation worsens the balance of payments (BOP) problem. In makes domestic products expensive in international markets hence rendering them

less computatives may countries would not be willing to buy from a country hit by inflation. On the other hand, imports continue flowing into the country and as result this worsens the BOP problem. This applies best in LDC s whose BOP position because of controlled capital accounts.

- The functioning efficiency of the price mechanism is reduced because the functioning of money as a store of wealth unit of account and as a measure of value is undermined, people therefore rush to spend their money as they get it because of the fear to loose value.

- Inflation may cause social and political disorders because it reduces peoples standard of living (SQL) and their purchasing power.

- Another effect of inflation is what is normally called the "menu costs". This is general term that describes the inconvenience of having to adjust certain prices to keep them in line with inflation. Real costs are therefore incurred in changing over vending machines, public phones etc when the nominal price level changes (Sachs 1993).

- Inflation may also lead to resource misallocation through the effects of inflation on the tax system. Suppose the marginal tax brackets are stated in nominal terms, as time goes by and nominal income rises, people are pushed into higher tax brackets, increasing their marginal tax rates. Fixed income earners therefore suffer increased tax liabilities.

- Inflation is a tax: It is a tax on the peoples incomes. It mainly refer to capital losses suffered by money holders as a result of inflation. It should however be noted that the amount of resources transferred by the inflation tax is a function of the rate of inflation and of the elasticity of demand for real cash balances.

7.4   Inflation in Uganda

It's on the above theoretical background that we will discuss the related empirical findings. The main cause of the liquidity injections in the Ugandan economy is the financing of the government budget deficit. This was mainly by borrowing from the central bank. This is said to have been one of the major cause of inflation prior to the ERP (see Elbadawi 1990, Mbiire 1992, Mbiire and Musinguzi 1994, Rudaheranwa 1995). As already noted, in Uganda after the implementation of the ERP, the policy has been to reduce the growth rate in money supply. The financing has changed (see table 2) to non-inflationary sources. Thus the domestically financed deficits which characterized the pre-ERP period and formed the basis of monetary growth have been replaced by externally financed deficits.

Supply Factors

Supply pressures have been important in explaining the inflationary process in many developing countries. In Uganda, inflationary peaks are usually preceded by output slumps. This is especially so with food production. The supply for transport

services have been mainly constrained by poor road conditions and inadequate transport vehicles. Increased prices of the petroleum products also affects the general price level in the economy. This can be evidenced by the high inflation figures in 1974 and 1979 the periods of the oil shock. Supply oriented factors in the 1970's and 1980's were important in explaining the causes of inflation in many LDC's and Uganda in particular. In Uganda lack of feeder roads at times caused food to rot in some areas while there were shortages in other parts of the country (Rudaheranwa 1995, Birungi 1995). As it is already noted, the breakdown in production during the periods of political instability (1972-1986) constrained the supply of most consumer goods further. The situation was made worse by the lack of foreign exchange which would have supplemented the domestic supply by importing some of the basic goods and services.

The situation has improved since road rehabilitation works started under the ERP. The lack of good roads in some areas may still be a source of variability of the inflation figures. Good investment climate has also improved the domestic output since most of the consumer goods are being produced domestically.

In early 1992, there was a drought (prolonged spell of hot, dry weather) with virtually no rain across the country until mid-march 1992, this reduced crop production, prompted fears of a major food shortage and led to rapid escalation of the prices of food crops in March 1992. This was responsible for the high inflation rate during this period (see figure 2).

Demand (monetary) pressures
Monetary growth has been a significant factor determining the trend of inflation in Uganda. During the ERP, money supply has continued to grow at an average rate of 40% . The major determinants of the rapid monetary growth and excessive liquidity under the Economic Recovery Period include capital inflows, revaluation losses, the budget deficit and crop finance. In Uganda inflationary peaks are usually preceded by expansion of money supply. Figure 2 shows a close relationship between money supply and inflation in the country.
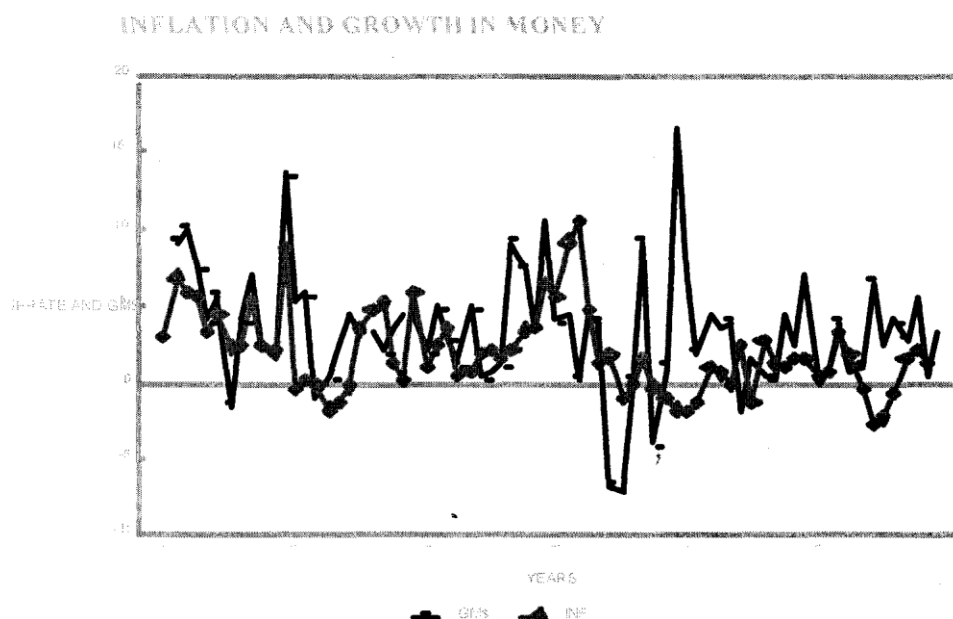
1 shows the growth in money supply and the inflation rate

The Economic Recovery Program has been characterized by a substantial inflow of external resources. The main inflows have come from the IMF as Balance of Payments support and the World Bank mainly as sectoral adjustment credits. Other inflows come from the multilateral donors. The external inflows have boosted the national reserves and thus its capacity to increase domestic liquidity. From mid 1994 to early 1995 Uganda experienced an increase in export earnings due to an increase in world coffee prices. There has been some efforts to sterilize its effects on the economy with the establishment of the coffee stabilization tax.

The primary determinant of money supply in Uganda is thought to be domestic credit expansion (see Elibadawi, 1990, Mbiire, 1992). In Uganda domestic credit is basically determined by the fiscal deficit and mainly crop finance requirements. In the late 1980's a combination of factors such as low interest rate and high premium in the black market, created conditions whereby the government could not sell bonds to finance the fiscal deficit and the commercial banks could not finance crop marketing due to low deposits. Given the dominance of agriculture in the economy, the impact of crop finance on the macro-economy is very significant.

Economic theory suggests that when the expectation of domestic exchange rate devaluations increases, there is a reduction in holdings of assets dominated in domestic currency, and a shift into assets denominated in foreign currency. From the early 1970's until 1987, the Ugandan Economy was operated under a - "controlled regime". During this period most commodity prices, exchange rates and rates of interest were fixed by government. During that period price expectations played very little role in the inflationary process. After the introduction of the ERP,

price controls were removed, interest rate and the exchange rate were liberalized. Expectations in the foreign exchange market seem to have influenced the price formation a great deal.

Exchange Rate Policy
The other major feature of the Ugandan economy is the significance of the parallel foreign exchange market in determining trends of economic variables. In the medium to the long-run, foreign exchange transactions in the parallel market are basically driven by excess demand for imported goods. In the short-run however, the parallel rate is basically market determined, and therefore directly influenced by unsustainable fiscal and monetary policy.

Economic theory would suggest that with a fixed overvalued exchange rate and a thriving parallel market for foreign exchange where the rate is determined by market forces, the relevant rate of exchange will be the parallel market rate since it will be the marginal cost of foreign exchange. In Uganda, the importance of the parallel market derives from the role played by the premium as a relative price signal and the failure to adjust the policy for the existence of the parallel market (also see Mbiire 1992). From table 4, it is clear that the exchange rate premium has been falling since the introduction of the Economic Recovery Program.

TABLE 4. EXCHANGE RATE MOVEMENT 1988-1 994.

YEAR	1988	1989	1990	1991	1992	1993	1994
MER	447	751	769	1184	1249	1186	926
OER	150	370	540	915	1214	1146	929
EXRPR	297	381	229	269	35	40	-3

Source Bank of Uganda. MER is the market exchange rate(Shillings per US dollar) which is the bureau/parallel exchange rate, QER is the official exchange rate and EXRPR is the exchange rate premium.

The discussion above has given some light on the major causes of inflation in Uganda as identified by the different empirical studies on the subject. This gives us the direction to discuss the available policy options and those that are already existing.

Policies to Curb Inflation
- Reduction of monetary growth so as to enable the control of inflation without inflicting on the overall economic growth.

- Unification of the exchange rate markets. An important policy reform in this line was the introduction of foreign exchange bureaux thereby legalizing the black market. On top of this there was the starting of forex auction system in Bank of Uganda in early 1992. All these aimed at the reduction of the exchange rate premium which was considered to be the price signal.

- Trade liberalization aimed at promoting external competitiveness were very instrumental in reducing inflation. The non-traditional exports were encouraged so as to broaden production and particularly the export sector of the country. As a result of this liberalization, there was no more need for crop finance and farm inputs were made available.

- There has also been the restructuring of the government revenue system mainly through improved tax administration and tax collection. This was done by introducing the Uganda Revenue Authority(URA) in 1990. This has enhanced the capacity of the government to collect more revenue to finance its budget other than depending on borrowing from the Central Bank.

- There has been attempts to encourage investors and help the rural poor in their production efforts. Production has improved for most consumer goods and capacity utilization has also greatly improved. However, there is still need to improve facilities such as buffer stock facilities that will help stabilize food supplies and hence food prices. This is very important given the seasonal variation impact on food prices and given the significance of food prices to the overall Consumer Price Index(CPI).

- As regards physical infrastructure, the road net work rehabilitation begun under the Economic Recovery Programme(ERP). This has reduced the problem of poor roads and the distributional costs of food and other consumer goods. The programme of road rehabilitation continues and each district under the decentralization process has been given a road maintenance unit. This has led to improved rehabilitation and management of the road infrastructure.

- There has been increased donor system of assistance through import support loans and grants. These have provided budgetary support by financing over 80% of the fiscal deficit. This donor assistance has also eased the supply pressures by providing foreign exchange to import more goods to compliment domestic production.

- In an attempt to reduce the fiscal deficit government has tried to cut down public expenditure through public service reforms, that is retrenchment of civil servants, rationalization of public enterprises to encourage efficiency, privatization and demobilization of the armed forces. All these are aimed at reducing government expenditure in order to have a manageable fiscal deficit.

7.5 Measurement Of Inflation In Uganda Computation Of The Consumer Price Index (Cpi)

-
- The index formula used is described as the Modified Laspeyers the basis of which is that the index value in the current month TTK" is equal to the index value in the previous month, multiplied by the price relative between the current month and the previous month. That is it is of the form $V_K = V_K^{-1}$ (P_K/PK-1).
-
- Modified Laspeyeres is preferred because of its operational ease of use particularly when it becomes necessary to replace selected items in the index.
-
- A composite index representing the overall trends of five urban centres ie Kampala (which
- include Entebbe), Jinja, Mbarara, Mbale and Masaka is calculated and becomes a
- representative of the National Consumer Price Index.
- From this national CPI, the official rate of inflation or annual percentage change in the index is calculated as;

$$\frac{CPI_t - CPI_{t-1}}{CPI_{t-1}} *$$

- This method has a limitation of using a composite CPI for the five urban centres as a representatives of national inflation which is a limited coverage. In 1990 census these urban centres comprise of about 12% of the total population. The rural population in Uganda is about 80% and it is not likely to face the same cost of living patterns as in these Urban centres.
-

Conclusion

The discussion above highlights the causes of inflation in Uganda in light of the theory on inflation. Evidence seems to suggest that inflation in Uganda is mainly cause by monetary factors as discussed in section 2.0 of this paper. It is however clear that structuralist factors are also very important as discussed in the same section of the paper.

On the policy perspective, a combination of the different policy options has been important and made it possible to keep inflation as low as possible.

It is however important to note that the political and economic environment has been good to allow these policies to operate. It should also be noted that good weather has helped a lot in maintaining increased agricultural production and therefore has stabilized food prices.

Review Questions

1. 1. (a) Compare and contrast the structuralist and monetarist views on inflation.
    (b) How relevant is the stucturalist and monetarists debate to the evolution of Uganda's inflation problem.

2. (a) Distinguish between demand - pull, cost -pull and structural inflation.
3. (a) Inflation in Uganda has been mainly a monetary phenomenon, discuss.
    (b) What policies have been employed to reduce the rate of inflation since 1986.
4. (a) Discuss the major causes of inflation in LDC's and suggest possible policy measures.
(b) What would be the impact of inflation in an economy?

Unit 8
International Trade
8.1   Introduction

International trade simply refers to trade between two or more countries. It arises because not all nations can satisfy all their requirements and that is because different countries are endowed with different resources.

Benefits from International Trade

Trade is beneficial through:

(i) Widening the extent of the market, induce motivation and increase productivity.

(ii) Vent for surplus. It leads to full utilization of resources.

At point E we have production for the local market but does not fully utilize the available resources when the economies opened up production takes place at point (B is produced) and the domestic market consumes at point A and difference between A and B is exported. E F more units is imported because it improves the consumers welfare by providing a variety of goods. (iii)It avails better quality and well priced products because of competition. (iv)Improves political, economic and social corporation between countries.

(v) Leads to educative effects in installing new wants, tastes and in transferring technology, skills and entrepreneurship.

In theory there is a preposition that a country should specialize in the production of those goods and services where it is endowed and buys from the rest of the world those goods and services that are based produced else where.

8.2   Basic Concepts in International Trade

1. Principle of absolute advantage. (PAA)
2. Law of cooperative advantage. (LCA)

PAA	WINE	CLOTHING
PORTUGAL	5	10
UK	1	5

The table shows that using a unit of a factor input Portugal can produce either 5 units of wine or 10 units of clothing. When UK uses 1 unit of a factor input it can produce 1 unit of wine or 5 units of clothing. It is clear that Portugal produces more units of both wine and clothings. This means that Portugal produces them at less input costs than UK. But this theory does not tell us much about the role of international trade.

Law of Comparative Advantage (LCA)
This law we utilize the concept of opportunity cost according to the law of CA a commonly will produce that commodity in which it incurs the least opportunity cost or real cost in comparison with another country.

	WINE	CLOTHING
Portugal		
UK	5/5 = 5	1/5

From the table in Portugal 2 units of are foregone in order to produce extra unit of clothing which UK foregoes 5 units thus since Portugal has the least opportunity cost in producing wine than it should be the one to produce it. Like wise UK incurs least opportunity cost in the production of clothing than Portugal thus should be the one to produce it and thus international trade.

Even if a country has an absolute advantage in the production of two or several goods
a country should produce that commodity where it incurs the least opportunity cost and import in which it would have otherwise incurred high opportunity cost and this is the basis for international trade.

From the table Portugal should go ahead and produce wine where it incurs the least opportunity cost and UK should go ahead and produce clothing where it incurs the least opportunity cost. This theory implies that production should be shifted from the poor producers (inefficient producers to the best or efficient producers).

8.3   Protectionism
This refers to artificial barriers created to restrict the international flow of goods and services. It takes several forms.
- Imposition of trainings: These may be customs fees paid to import certain goods into the country they may be so high (Prohibitive tariffs) if the importation of a certain commodity from another country is not required.

- Imposition of quotas: Direct restriction on the physical amount of the commodity which can be imported into a country.

- Total ban government stops completely the importation of a certain commodity.

- Manipulation of the exchange rate system development is supposed to encourage exports discourage imports.

Arguments for Protectionism
- Infant industry argument: Industries that are just taking off should be protected from competition until they reach a stage where they are large enough to enjoy economies of scale.

- Anti - dumping argument: This is intended to avoid the settling of goods below production costs. Which may be disastrous to the domestic economy.

- Employment argument: The growing industries absorb more local labour force to solve the unemployment problem.

- Leads to acceptable improvements in the BOP position because forex which would have been spent on imports is actually saved.

Arguments for free trade
- Factors of production would be optimally utilized because every country would specialize in the production of a commodity in which it enjoys maximum advantage. That implies that consumers would benefit because goods would be cheaper and a better quality as a result of large scale production and competition.
- It widens the market.
- Quality and costs will be influenced by the level of technology and competition.

8.4   Terms of Trade (Tot)

Barter or Commodity terms of trade
This is the ratio of the price index of exports to the price index of imports PX/PM.

If the barter terms of trade (TOT) ratio is greater than 1 it implies that 1 unit of exports buys more than I unit of imports and this is referred to as favourable terms of trade. In a situation when the ratio is less than 1 implies that 1 unit of X buys less than 1 unit of M and the referred to as unfavourable TOT.

8.5   **Balance of Payment (Bop)**

Bop of country is a systematic record of all economic transaction between the residents of the recording country and the residents of other countries during a given period of time usually one year.

Structural of Typical BOP
All payments from other countries are put under the credit column and all payments to other countries are put on the debited column and any transactions credited represents export. The Bop a/c is composed of the following:
- Current Account: This is an account on which imports and exports are recorded both visible and invisible. The sub total on the current account

gives' us the Bop of the country ie visible balance and invisible balance = Balance of Trade (BOT).

- Capital Account: This account is a record of capital inflow in form of foreign investments. Unilateral capital transfers like grants and gifts etc. This account records both capital inflow and capital out flow.

- Balancing Item Account: This is an account on which the amount of gold and international reserves of any country and short term official capital moults are recorded. If the credit side is greater than the debit side then there is a Bop surplus and when the debit side is greater than credit side there is Bop deficit.

Measures to correct BOP deficit

- Export promotion: This is to encourage the volume of exports to other countries i.e., by giving incentives to exporters such as tax holidays, subsidies, provision of export processing zones etc. It may also be done by devolving the local currency with makes the exports to be cheaper.

- Import Substitution: This is a policy to import machinery or capital goods for the production of goods formally imported.

- Adopting policies that are conducive to foreign capital inflow especially in the form of direct foreign investment eg foreign investment act of 1977; investment code etc.

- Negotiating for loans from multilateral and Bilateral Sources to invest such money in productive activities.

Review Questions

1. 1. (a) Explain the term "commodity terms of trade".
   (b) Account for the deteriorating "terms of trade" for third World Countries" giving examples where necessary.
2. Explain the causes of BOP deficits in Uganda clearly highlighting the Policy options the government has taken to improve its position.

3. Write brief notes on the following economic concepts.
   (i) Law of comparative advantage.
   (ii) Law of absolute advantage.
   (iii) Protectionism.
   (iv) Terms of Trade.
   (v) Current Account.
   (vi) Capital Account.
   (vii) Balancing item account

Unit 9
Theory of Exchange Rates

9.1 Introduction

The exchange rate is the price of domestic currency in terms of foreign currency. It is the number of the units of foreign currency that a unit of domestic currency can purchase or buy. A rise in the price of the domestic currency in terms of foreign currency is known as appreciation and a fall is depreciation. Depreciation increases the demand for exports and reduces the imports.

Definition of Terms

(i) Flexible exchange rate: This is where the exchange rate is determined by the forces of demand and supply with little or no government or central bank intervention.

A clean float is an exchange rate in which no official intervention occurs. A managed or dirty float is an exchange rate system in which the central bank intervene in the exchange rate in order to modify the movement of the exchange

(ii) Fixed Exchange Rate: Under a fixed exchange rate system the exchange rate is mainly determined by the monetary authority and the short run equilibrium will often depart from the fixed exchange rate. In order to maintain a fixed exchange rate, the central bank concerned will have to eliminate the excess supply of currencies by either purchasing or selling foreign currencies in exchange for their own currency.

Devaluation

This refers to the reduction in the value of the currency in terms of other currencies. This can only be done under a fixed exchange rate regime. It is usually aimed at increasing exports and reducing imports so as to attain a BOP equilibrium.

9.2 Exchange Rate Trends In Uganda

In an attempt to assess the trend of the exchange rate of Uganda, this study focuses on the period from 1966 to 1994. This is mainly because of lack of some information and data on earlier periods.

Fixed Exchange rate regime 1966-1981

Between 1966 and 1971, Uganda maintained a rate of 0,124414 grams of fine gold per Uganda shilling. This was an equivalent of U.Sh 17.1429 to one UK Pound sterling. This rate was maintained till the break down of the Bretton Woods Gold Standard in October 1971. The shilling was later pegged to the US Dollar at the rate of U.sh 7.14286 per US $. However, due to the volatility of the US dollar in the period 1971 to 1975, the peg was further changed to Special Drawing Rights (S.D.R), the rate was fixed at U sh 9.66 per SDRs1 and it remained in force up to 1981.

The fixed exchange rate regime faced a lot of problems, for instance, the oil price shocks in the early 1 970s which dramatically changed the terms of trade between the oil producing and non-oil producing countries. Most of the developed countries embarked on swift policy reforms, while on the other hand, policy reforms in most under-developed countries particularly Uganda were weak. This weak response resulted in an overvalued exchange rate, chronic shortages of foreign exchange (for instance in 1980, the level of foreign exchange fund position was U.S $ 16.8 million compared to U.S $ 318.1 million in 1994), and the emergence of a parallel foreign exchange (Kibanda) market. By 1980, while the official rate stood at U.sh 7.5 per US $, the parallel market rate was higher by a factor of over 30,(Kasekende and Ssemogerere, 1992), showing an overvalued official exchange rate.

The Managed Float 1981/82
In May 1981, a financial programme with the assistance of the IMF was launched.
According to Kasekende et al. (1994), the main objectives of the programme were;
      (i) To restore confidence in the shilling,
      (ii) To reduce price distortions, and
      (iii) To shift resources from speculative to productive activities.
At the beginning of June 1981, a managed float of the exchange rate was introduced. This led to the removal of the peg on the shilling. A money market committee was created and its major task was to determine the daily exchange rate of the Uganda shilling, basing their decisions on the recorded transactions, indications of the country's economic situation and on the movements in the rate of the dollar against other currencies.

This innovation made the exchange rate more competitive and also in1uenced the downward movement in the per dollar rate in the parallel (Kibanda) market. The shift in the demand for foreign exchange from the parallel to official market was facilitated by the increased availability of foreign exchange in the latter market, mainly from the IMF, and also the existence of a subsidy on the purchases of foreign exchange from the official channels.

The Dual Window rate 1982-1984
The introduction of the dual exchange rate in August 1982, was intended to improve on the allocation of foreign exchange and to promote non-traditional exports. In the dual exchange rate system, two windows were created to replace the float. Window one (W 1) was basically for financing priority imports like industrial raw materials, spare parts, machinery, seeds and fertilizers. A lower exchange rate was applied. The exchange rate was determined daily by a money market committee.

Transactions at W1 consisted of foreign exchange proceeds from traditional exports (mainly coffee), and public sector cash loans. And payments were limited to financing public debt service, debt arrears payments, contribution to international organizations and procurement of essential imports. The rest of the transactions were conducted at the W2 rate which was determined by weekly auctions and it

reflected supply and demand conditions for foreign exchange. The Government through Bank of Uganda provided an adequate amount of foreign exchange at W2 auction and it undertook I measures to ensure that the amount provided was sold. These measures included2:

- Abolition of "No Foreign Exchange Required" import licenses;
- Opening of external accounts for residents who had funds abroad;
- Abolition of 1% commission to Uganda Advisory Board of Trade and 5% of import deposit bond by the importer;
- Reduction in import duties;
- Processing of import licenses within five days;
- Floating of interest rates for bank advances to promote bank lending.

The Auction period: 1984 - 1986
After the merging of the two windows, weekly auctions continued but amidst foreign exchange constraints, mainly due to the expiry of the three year stand-by arrangement with the IMF. As a result, the shilling depreciated fast both in the official and parallel V exchange rate markets. Between June 1984 and June 1985 the exchange rte rose from U.sh 307 to U.sh 600 per US $, (more than a 95 percent depreciation) just in one year. The auction was abandoned in February 1986 at a rate of U.sh 1,480 per US $.

In May 1986, government re-introduced the dual exchange rate but at fixed rates. The "Fixed Priority" rate replaced the W1 in the sense that commodities such as priority imports, traditional exports in excess of the quota, other service inflows and project funds were considered at that fixed priority rate, which stood at U.sh 1,400 per US $.

On the other hand, the "market rate" replaced W2. Under this rate, all other receipts, import requirements and services were transacted. The rate was U.sh 6,000 per US S.

The dual exchange rate was abandoned in August 1986 and replaced with a fixed exchange rate system, fixed at U.sh 1400 per unit US $. The major objective w allegedly to minimize inflationary pressures originating from devaluations. The inflation rate that stood at 138 percent per annum in August 1986 instead rose to ova 300 percent per annum by the end of May 1987. This was probably due to the fact that foreign exchange transactions that had been carried out at the relatively lower "near market" rate, could then be acquired at a higher parallel market rate.

Exchange rate Management 1987-1990
In May 1987, Government launched an economic rehabilitation and adjustment programme, aimed at stabilizing the economy and achieving economic recovery. The major distinguishing feature in the programme was the currency reform under which all outstanding currency and bank deposits were converted into new Uganda shi1Iiu at a rate of 100 old shillings to one new shilling, plus a conversion tax of 30%. The official exchange rate would have been IJ.sh 14 per US $ had it not been

for the immediate devaluation of about 77 percent, which put the rate at new U.sh 60 per US dollar. Thereafter the shilling was devalued five times putting the rate at U.sh 370 per US $ by November 1989.

Special Import Programme I (SIP 1)
Between the period January 1988 and November 1988, the Foreign Exchange Allocation and Import Licensing Committee (FEA &ILC) allocated US $ 53 6 million for imports. The initial allocation system however, proved inefficient because about half of the allocated total was not bought and such a development could have undermined the rehabilitation process. So another method based on "first come first served" was later adopted and this system later came to be known as the Special Import Programme 1 (SIP 1). The major objectives of the SIP 1 were to reduce both the excess demand of foreign exchange at the overvalued official rate and the premium on the official exchange rate in the parallel market.

Open General Licensing (O.G.L)
This system was established in 1988 with a purpose of availing foreign exchange on a priority basis to specific industrial sub-sectors considered essential to the development of the economy. In December 1989, the OGL sectoral coverage was expanded and by the end of the year, 63 firms had been issued with the OGL license. In this programme, foreign exchange was for the purchase of spare parts and raw materials sufficient enough to cover a three month's required stock. This policy favoured import-intensive industries, because foreign exchange was at concessional rates, and the possible acquisition of a three month's stock of raw materials and consumable spare parts, made imported material-availability more easy.

Special Import Programme 2 (SIP. 2)
Due to the increased growth in money supply originating mainly from the increased refinancing of commercial banks by the Central bank to enable them extend crop finance, Government in June 1989, launched another programme: the Special Import Programme 2 (SIP.2). During the programme, US $ 40 million was to be sold on the "first come first served" basis, but at a rate of U.sh. 400 per US $, which was twice that of the official rate of U.sh. 200 per US.S. Since the intervention was to limit monetary expansion, commercial banks were prohibited from lending for the purpose of purchasing SIP.2 funds. SIP.2 seemed to be successful because within just a period of one month i.e from June to July 1989 money supply (M2) fell from Ushs. 60.2 billion to Ush. 59.2 billion, (Kasekende and Ssemogerere, 1992). The programme was however, terminated in September 1989 due to lack of funds.

Crawling peg: 1989/90
In October 1989, Government adopted a policy of maintaining the real effective exchange rate constant so as to maintain the export competitiveness. The nominal exchange rate was adjusted on a monthly basis. The shilling was devalued several times with the major one being that of October 1989. This led to a depreciation of

the shilling by about 70 percent, resulting into a rise in the real value of the exchange rate and a dramatic fall in the exchange rate premium from 200% to about 86%.

Special Import Programme 3 (SIP.3)
In February 1990, Government re-introduced the SIP. Under this one, foreign exchange was sold at the official rate of U.sh 379 per US $. However, unlike SIP.2, the minimum allocation to any intending importer was US $ 5,000 and also importers were allowed to borrow from commercial banks to buy foreign exchange from SIP.3. The SIP.3 programme complimented the OGL in maintaining the flow of goods and services and reducing the rate of inflation. Also SIP complimented the crawling peg in reducing the foreign exchange premium. Foreign exchange allocation under SIP.3 amounted to US $ 89.8 million between February 1990 and June of the same year, while that under O.G.L was US $ 24.55 million in the same period.

Exchange rate Management (July 1990- April 1995)
Probably the most revolutionary step ever taken in Uganda's exchange rate policy was that of July 1990 when government liberalized the foreign exchange market, leading to the establishment of foreign exchange bureaux. The bureaux are permitted to buy and sell foreign exchange at rates freely determined by market forces.

Upon the inception, all foreign exchange retention account and foreign exchange earners except coffee exporters (not until November 1993), were allowed to open foreign exchange accounts to hold their export proceeds The policy has registered some levels of success particularly in the foreign exchange transactions and in reducing the rate of foreign exchange premium. For instance, at the time of the inception of the policy, (i.e July 1990), a total of US $ 2.14. million was purchased in that month by the bureaux. The figure rose to US. $ 48.51 million in September 1994, while monthly sales rose from US.$ 1.89 million to US.$ 47.32 million in the same period. Also there has been a drastic reduction in the Bank of Uganda exchange rate premium which fell from 44.86 percePt in July 1990 to 0.4 percent by December 1994. On average, the trend in the exchange rate premium has been falling (as shown by table 2.2).

Foreign Exchange Auction: (Jan. 1992- Oct.1993)
In a bid to fully liberalize and free the exchange rate market to forces of demand and supply for the purpose of unifying the two (official and bureau) exchange rates, Government on January 23 1992, instituted a weekly auction for foreign exchange. A Dutch auction system, where all bidders must pay their

Note: From January 1992 up to October 1993, the official rate was the marginal clearing of Bank of Uganda's Auction system at the last auction of the month. There after, the auction system was replaced by an inter-bank market.

Bid rates if successful, was employed. At the inception, the rate that exhausted the bid amount at the auction (i.e the marginal clearing rate), was adopted as the official rate until the following auction. To fund the auction, Government announced the availability of US.$ 200 million to finance eligible imports.

The rationale for foreign exchange auctioning was to divert some of the demand from bureaux to the official channels, so as to further unify the two rates. The outcome however, was disappointing, as auction sales were in most cases below what was predicted, and the auction exchange rate depreciated only slightly.

In an effort to encourage coffee exporters, Government in March 1992, adopted the weighted average bureau rate for traveler's cheques as the official exchange rate. In that month the official rate depreciated by 16 percent, while, the Bank of Uganda premium over the bureau rate dropped from 28.3 percent in January 1992 to 0.6 in October 1993.

One of the major threats in the exports sector of Uganda, was the appreciation of the of Uganda shilling during the 1994/95 financial period. Between December 1993 and December 1994, the shilling (weighted bureau average rate) appreciated by 21.4 percent on top of another appreciation of 18.9 percent in the same period, arising from the establishment of the inter-bank market on November 1st 19933 This scenario led to a reduction in the competitiveness of the export sector, but it favoured imports. The official exchange rate went up in value from U.sh 1,218 per US dollar in April 1993 to U.sh 920 per US.$ in November 1994. The causes of the appreciation were; the coffee boom, (a consequence of Brazil,s severe frost), increase in private investment, capital repatriation and perhaps existence of the American peace keepers in Rwanda, who were based in Uganda and had come along with a lot of foreign exchange.

To prevent any further appreciation in the shilling, Government intervened both fiscally and monetarily. One of the fiscal measures, was the introduction of the coffee stabilization tax. On the other hand, the major monetary measure that Bank of Uganda undertook was the purchase of US.$ 31 million. These measures stabilized the official exchange rate at around U.sh.925 per U.S.$. as shown by table 3. The purchase of the U.S.$ 31 million by Government from the foreign exchange bureaux, clearly meant an increase in money supply, which would prompt one to speculate that an increase in the rate of inflation is imminent. For that matter, to dampen any inflationary pressure that could arise from such an intervention, Bank of Uganda had to emphasize tight fiscal policy measures at the same time.

9.3   Unemployment and The Labour

This elaborate Chapter on unemployment and labour markets has been written by Cliphas Chekwoti a lecturer in the Department of Economics, Makerere University.

Unemployment refers to the all those workers that do not succeed to sell at the ongoing wagerate.

9.4   The Demand for Labour

In the foregoing analysis, we take a look at what factors lie behind the forces in the labour market. On the demand side, like other factors of production, labour service is demanded not for its own sake or as an intrinsic end by itself. The demand for labour is a derived demand - to assist in the production of other end-products or end-services. It follows that the smaller the relative contribution of labour as a factor of production to the output of a given product or service, the more inelastic is the demand for that labour likely to be to a given small change in its price(wage rate). Also, the more there are better or cheaper substitutes for labour the more elastic is the demand for that labour.

A brief consideration of the long run is needed in order to derive the short-run demand for labour. In the short-run, the stock of capital, the labourforce and the level of technical change are assumed constant.

The Long-Run Demand For Labour
In the long run the level of output that can be produced depends on the quantities of labour and capital and on the state of technical knowledge. This relationship is expressed in terms of an aggregate production function:

$$y = f(L, K, T) \quad (5.1)$$

Where y is the real output per period of time, L is the flow of labour services used per period of time K is the capital stock which yields a proportionate flow of capital where y is the real output per period of time, L is the flow of labour services used per services per period of time, and T is the state of technical knowledge.

In a growing economy equilibrium in the labour market can only be maintained at the current real wage if the stock of capital equipment grows in line with the expansion of the labour force. Unemployment will result if the labour force grows more rapidly than the stock of capital and if fact9r price adjustments fail to increase the demand for labour so that it matches the supply of labour. This kind of unemployment will not respond to increases in aggregate demand unless these are accompanied by a more rapid increase in the capital stock.

The Short-Run Demand For Labour
Since the stock of capital and the state of technology are regarded as fixed in the short run, output will vary with the quantity of labour employed. The short-run aggregate production function is therefore written as

$$y = f(L, K, T)$$

where K and T are constants.

The short-run demand for labour is derived from the short-run aggregate production function. It is normally assumed that a certain degree of substitutability between capital and labour does exist in the short run so that the proportions in which the two factors are used may be varied. The marginal product of labour is positive but declines as employment increases. An additional assumption is that the level of employment is not constrained by an insufficient stock of capital. Given that firms operate in perfectly competitive goods and labour markets, the price of goods and the wage rate will be unaffected by the amount of output produced by any single firm. The addition to marginal revenue from employing an extra unit of labour-the marginal revenue product of labour - is thus the marginal physical product of labour times the product price:

MPL x P = MRPL

At the aggregate level product price is replaced by a price index covering all goods and services. A profit-maximizing firm will hire labour until the marginal revenue product of labour is just equal to the marginal cost of that labour unit which is its; money wage rate, W. In symbols this statement is

$$MPL \times P = W$$

Dividing both sides by P we get

$$MPL = \frac{W}{P} = w = \text{the real wage rate}$$

The real wage rate per unit of labour is the money wage rate divided by the price of the product labour makes. It therefore measures the cost of labour in real terms since it is the number of physical units of output that can be exchanged for one time unit of work. When the additional units of output produced by hiring an extra unit of labour (MPL) exceed the marginal cost of labour in real terms (w) then a firm will make positive profit on the marginal labour unit. Thus a profit-maximizing firm will hire labour until the marginal product of labour equals the real wage rate. Given the assumption that the marginal product of labour is positive but declining as output increases in the short run, then the lower is the real wage, the greater will be firms' demand for labour. The demand for labour therefore varies inversely with the real wage rate and is aggregated over all firms in the economy.

9.5   The Supply Of Labour

In the long run the supply of labour is determined by such factors as population growth and the rate of participation of the population in the work-force. The latter has increased due to the greater proportion of married women seeking work. The supply of labour is not the total potential labour force; it is the amount of labour willing to work at a particular real wage rate. Like the demand for labour, the labour-supply function has a choice-theoretic basis. Each worker is assumed to

obtain utility from leisure time and from real income which can only be increased by forgoing leisure. The labour-supply decision for each individual involves maximizing the utility over some time horizon from leisure and work given a maximum number of possible

working hours and the real wage rate per hour that can be earned. The crucial question here is what will be the effect on labour supply of a rise in the real wage rate. A rise in the real wage rate increases the opportunity cost of leisure. Leisure becomes more expensive. The substitution effect of this relative price change is to reduce leisure time and increase work time. But an increased real wage rate raises the real income for a given work time. This income effect raises the demand for leisure.

Thus an increase in the real wage will increase the supply of labour hours per worker only if the substitution effect outweighs the income effect. Over the long run it is apparent that the income effect has been stronger. As real wages have risen over time so people's working hours per week have fallen. In the short run it is much less clear cut. A rise in real wages is likely to increase the labour supply by increasing the number of people who wish to participate in the labour force. Workers already in employment are induced to supply more labour by the payment of overtime rates. Some empirical studies have shown that women and teenagers have a more elastic supply of labour than adult males so that the proportion of the population participating in the labour force tends to increase when real wages rise, though the hours supplied by workers already employed tend to fall. Empirical work suggests that while the long-run labour-supply function is inelastic with respect to the real wage rate, over the short run the supply of labour does respond positively to increases in the real wage rate.

9.6   Neoclassical Labour-Market Equilibrium

In a neoclassical model the labour market is in equilibrium at that real wage rate which equates the demand for labour with the supply of labour, so that the labour market is cleared.
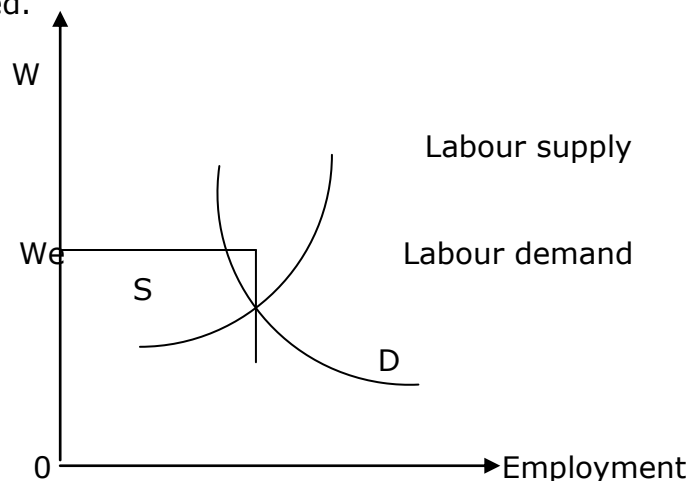
At an equilibrium real wage We and an equilibrium employment level of Le. Once Le is established the amount of output produced is read off from the short-run

production function. The equilibrium level of employment established at the market-clearing real wage rate is consistent with full employment. Nobody who is willing to work at the equilibrium real wage rate is unemployed, except while searching for a job.

9.6 Frictional Unemployment and Job Search

An equilibrium or full-employment level of employment does not imply a zero level of unemployment. Some positive amount of unemployment always exist. Despite there being some unemployment there are also job vacancies. We therefore need to show that equilibrium in the labour market is consistent with the existence of some unemployment and vacancies. The essence of this reconciliation is that because it takes time for workers to search for jobs and for employers to hire new workers there will always exist some frictional unemployment and some unfilled vacancies. The existence of frictional unemployment is explained in terms of the special characteristics of the labour market which distinguish it from most product or service markets. Transactions are conducted on a highly personal basis and involve individual contracts between worker and employer. This contrasts with ordinary product markets where retailers, who act as middlemen between buyer and seller, hold stocks of the product. Alternatively there are waiting-lists, which are a typical feature of purchasing services. Vacancies and unemployment serve the same functions as - inventories and waiting-list in other markets.

In any market buyers and sellers need to get information on the prices at which exchanges are likely to occur. The information is obtained by a process of search. In this context unemployment is explained to be the outcome of job search by both workers and employers in markets characterized by imperfect information which is costly to acquire. Because of their characteristics labour markets require a more extensive search than many other markets where prices are posted daily (as on stock or commodity markets) or are displayed by retailers. To obtain information about the going wage rate for ones labour services, personal applications are required to discover if the individual would in fact receive a job offer. Similarly, a firm needs to advertise vacancies and hold interviews in order to discover what quantity and quality of job acceptances it will get at the wage rates it offers.

When an unemployed worker obtains a job offer at a particular wage, he or she needs to estimate the relative costs and benefits of accepting the offer. The benefits will be the present value of extra income earned over future years in that job. The cost will be the expected value of additional income from searching longer and possibly obtaining a better job offer. The duration of unemployment will therefore be longer, the lower the opportunity cost of job search and the greater the expected income from longer job search. An unemployed worker has a reservation real wage below which he will not accept a job and is likely to revise the reservation downwards as the duration of unemployment lengthens.

9.7 Structural Unemployment

As structural changes occur in the economy some industries, some labour-skill categories and some regions of the country decline while others expand. This

results in disequilibrium with excess labour supply in contracting sectors while there is excess demand for labour in growing sectors.

Labour resources will move from declining sectors into expanding ones in response to wage differentials, but the adjustment takes time and may remain incomplete. The displaced workers gave different skills and live in different locations to the new job opportunities. Retraining takes time and some displaced workers may not be capable of being retrained. The mobility of workers will be restricted by difficulties with rehousing or strong preferences for their current location. This type of unemployment is known as structural unemployment. Technical change also contributes to structural unemployment, by altering the balance of demand and supply in specific product markets and more generally by improving labour productivity. The acquisition of labour-saving capital equipment will reduce firms' demand for specific types of labour and for labour in general unless demand growth keeps pace with the increase in labour productivity.

The distribution of unemployment and vacancies among individual industries and regions will determine their aggregate level of the economy as a whole. So long as some sectors experience an excess supply of labour, even if the majority 4diws have excess labour demand, there will be a positive level of unemployment.

In addition to the frictional and structural factors causing unemployment the is a proportion of the unemployed who for reasons of health, or work attitudes find it difficult to remain in steady employment. This category is usually subsumed under frictional unemployment.

Keynesian Unemployment
The distinguishing feature of Keynesian unemployment is that it is attributed to an insufficient level of aggregate demand Keynes assumed that workers are unwilling to accept a cut in money wages in order to secure more employment, even though they would accept an equivalent reduction in the real wage rate brought about by an increase in the price level while the money wage rate remained unchanged Keynes did not attribute this to irrationality on the part of workers but to a desire to preserve their wage relativities Workers are concerned with the real wage they receive and not just its money value Because the price level is not determined in any single labour market, workers can only bargain directly for money wages and not real wages. Hence workers are willing to accept a cut in real wages that stems from a rising price level but not one caused by a cut in money wages, because the former affects all workers more or less equally and does not alter relative real wages. In contrast a cut in money wages is seen as affecting only that particular group of workers and adversely affecting their real wage relative to other income groups.

In 'Keynes's analysis, when' the amount of labour willing to work at the existing money wage and price level exceeds the demand for labour, employment can be increased by policies which raise the demand for labour. This is done by raising the price level relative to the money wage rate.

Voluntary And Involuntary Unemployment

Keynesian unemployment is also termed, involuntary unemployment. Involuntary unemployment is often defined to exist when unemployed workers are willing to work at the current real wage but are unable to find jobs A more precise definition of involuntary unemployment by Keynes is that it exists if, following an increase in the price 'level with an unchanged money wage (that is, a fail in the real wage rate);

> (i) the supply of labour still exceeds the existing level of employment, and
> (ii) (ii) the demand for labour is greater than the current level of employment.

The distinction between voluntary and involuntary unemployment is not a particularly easy one to make, especially when the heterogeneity of the labour market is taken into account. For instance, is a doctor who cannot find a medical job involuntarily unemployed because he declines to work as a refuse 'collector? This is classified as a case of involuntary unemployment, but one can also argue that the refusal to work at a lower real wage implies voluntary unemployment becomes even harder to make.

What, then, is the point in making such a distinction in the first place? It is partly political, in that presenting unemployment as involuntary stresses the need for some alleviating government remedy. More important for economic analysis is that involuntary unemployment, unlike voluntary unemployment, could be reduced by government measures to increase aggregate demand. Completely different policies are required to reduce voluntary unemployment, such as decreasing unemployment benefit. This measure aims to increase the cost of job search and so reduce the amount of frictional unemployment.

9.8   Full Employment

The difficulty of distinguishing between voluntary and involuntary unemployment means that full employment, defined as e5ci sting when the aggregate labour market clears, is not easily measured in practice when we are dealing with the thousands of interrelated labour markets rather than a single homogeneous labour market. What aggregate amount of frictional and structural unemployment is consistent with overall labour-market equilibrium cannot be readily determined and it will change over time.

The operational problems associated with defining full employment as existing when the level of unemployment is consistent with overall labour-market equilibrium have led to other definitions of full employment. Some have defined it in terms of an arbitrary percentage of unemployment which obtained in the past, while others have described it in terms of a level of unemployment which is deemed to be desirable if not feasible. We shall stick to equating full employment with equality between the demand for and supply of labour, allowing for frictional unemployment and vacancies.

Un Employment Problem

Unemployment is the under or no use of recourses. Labour is the measuring load of unemployment because when it is unemployed means that resources employed. In simpler terms, Unemployment is defined as a situation where labour that is willing to work in all prevailing market conditions to find fail to find jobs. However this definition excludes voluntary unemployment where labour fails to work even though jobs are there. Therefore the first definition serves better.

Unemployment is classified into two forms namely; voluntary and involuntary unemployment.

Voluntary Employment

This is the situation where jobs are available but labour is unwilling to work. This may be caused by the following;

- Having accumulated enough income, labour may decide to stop work if the income is enough to meet its targets.
- Maintenance of status where some people decide not to work on a job which is of low status or inferior for example university graduate to work as a sweeper or office messenger.
- At times the wage available may be low and labour may reject to be underpaid.
- Some people may remain unemployed after reaching the retirement age.
- Housewives may decide to remain unemployed in order to look after their families.
- Some people may reject risky jobs.
- High importance attached to leisure such that labour may decide to leave work in order to have leisure time.

Involuntary Unemployment

This occurs when people who are willing and able to work fail to get jobs. This situation is the major concern in a society than voluntary unemployment.

Under Employment

This is the situation where labour is employed but its capacity is not fully utilized. This happens under the following conditions;
- When one works for a short time or few hours than he could have done.
- When labour is less efficient due to bad health or sheer lazyness.
- When labour is over crowded on a fixed factor for example land and physical capital. This leads to disguised unemployment.
- When one is engaged in petty activities like car washing, roadside trading, hawkers, etc.
- When one does a job that he did not qualify for.
- When labour uses inefficient tools or machines.

Full Employment
This is the situation where all productive resources are fully employed. The only form of unemployment is frictional unemployment since it may take time or hours for labour to switch from one job to another. It is always assumed that at full employment level of income aggregate demand is equal to aggregate supply. However, Keynese asserted that at full employment aggregate demand may be equal to aggregate supply or not. This is when the two situations of inflationary and deflationary gaps do occur.

9.9 Types of Unemployment

1. Disguised Unemployment

This is a situation where people are employed but are less productive. Labour seems to be performing some kind of work and it produces an output which is not equal to the capacity of labour. During this situation labour is not fully utilized to its capacity such that average product diminishes as more labour is employed. Therefore when some units of labour are removed, it may not affect the original product or average product. Disguised unemployment is caused by;

- Over population. This reduced the proportion of labour to other factor of production such that there is over crowding. The diminishing returns will set in and marginal product will diminish.
- Lack of natural resources for example land it is highly experienced in agriculture where land is adequate such that labour remains under utilized.

- Lack of cooperate factors for example capital where capital is less labour becomes less productive and hence disguisedly unemployed.

- Lack of appropriate skills. These are skills that can enable labour to work in an occupation or in any type of job, lack of skill make labour engage in society but un economically productive activities for example hawkers, street traders selling petty goods like sweets, cigarettes.

N.B: Disguised unemployment is similar to under employment.

Solutions
The solution to this unemployment is to make labour to become productive fully employed, this can be done through;
- Expenditure switching policy – this is the policy to the government of injecting more money in circulation in form of expenditure so as to accelerate the rate of investment. More jobs are created and more people are employed.
- Proper manpower planning – labour should be trained according to the available jobs.
- Rural to rural migration – people should be moved from over populated areas to les or sparsely populated areas.

- Subsidization policy – a subsidy is a government payment to producers to enable them to produce at low costs and charge low prices.

Open Unemployment

This is unemployment of labour in urban areas. It is usually called open urban unemployment because the unemployed labour is actively looking for jobs that are not there. This type of unemployment originates from rural urban migration which is the movement of labour from rural areas to urban areas. It should be noted that the cause of rural urban migration are the causes of unemployment.

It is caused by the following;

- The urban rural wage differential – It is always expected that the urban areas have high rates than rural areas. The probability of setting a job in urban areas is expected to be high but it is actually low. It is this probability that pulls labour from rural areas but reaching in urban areas they find the actual wage not real or not there and they remain unemployed.
    - N.B: The actual wage in urban wage = urban wage + the probability of getting a job – the rural wage.

- Population pressure on land in rural areas – This is a push factor. It makes people move from rural areas to urban areas in order to reduce on pressure. Similarly the population growth rate in urban areas is high and if added to rural population leads to over population in urban areas hence unemployment.

- Cultural factors – This is a pull factor and is influenced by extended families. Rural people desire to move to urban areas to live with their relatives as a result they end up living there.

- Un equal distribution of economic and social facilities between rural and urban areas – there is regional inequality between rural and urban areas and this difference pushes and pulls rural people.

- High rate of job creation than in rural areas – In urban areas there is a large non agriculture sector for example industrial sector, commercial and service sectors. People expect to be employed to these services which are which collar jobs.

- Form and inappropriate education systems – The education system in low developing countries is biased towards agriculture and other technical work and the educated look for white collar jobs which are readily available in urban areas. This makes the educated to remain in urban areas.

- Social problem for example fear of witch craft, circumcision, insecurity, crimes – urban areas are seen as hide outs for such people.

- Unequal distribution of rural income – urban wage differentials, cultural.

Solutions

The solution to rural urban migration are solutions to urban unemployment because the urban unemployment can not be solved without solving the cause which is rural urban migration.

1. Go back to land policy – This is a policy of encouraging people to move from urban areas to rural areas to work on land.

The following are required for the implementation of the policy;
- Provision of farm inputs for example tractors, fertilizers, etc.
- Agriculture modernization that is use of modern methods of farming that will use the fields and make agriculture attractive.
- Development of infrastructure in rural areas for example good roads, power and other social amenities.
- Provision of loans to those going back to land.
- Fixing high prices for agriculture out that will enable people to earn high income.
- Provision of land to the land less through land reforms.
- Coassive measures – use of force to repatriate people to rural areas.

2. Rural development policy – This is a policy of developing rural areas by transforming them into town boards, expanding infrastructure and encouraging small scale industries.

3. Education policy – There should be changes in education system by emphasizing agricultural studies, technical and science subjects, labour should be job creators and not job seekers.

4. Labour intensive methods should be used in the activities established in rural areas.

5. Rural to rural migration – Areas with high population should realize its population to move to less populated areas.

6. Population policies – These are policies for reducing population pressure and both should apply in rural and urban areas, by regulating the number of people in rural areas. The pressure on land is reduced and the number of people in rural areas reduce.

7. Income policy – The urban rural differentials should be reduced by emphasizing wage legislation and reducing the inter-play of forces of demand and supply to determine wage.

8. Job opportunities should be expanded – Agriculture should be encouraged, industry emphasized and self employment is promoted.

9. The mobility of labour should be reduced.

10. Labour should be discouraged to move to urban areas.

Structural Unemployment

This is unemployment that come about due to structural changes in an economy. The changes come about when the economy is being transformed from backwardness to modern. As development advances, some workers may be unable to work in the modern sectors for example due to poor skills. Modernity also leads to changes in tastes and preferences where some firms or industries may fail to adjust to time to produce what is demanded. Some firms will lose market and consequently close down.

Causes

1. A long time decline in demand for output produced by industries or other means of production. This is the change which the aggregate demand for the output, it may be due to;
    - Competition from substitutes – new firms may produce substitutes which may be better than the old produced goods. The old firms will loose demand because consumers are buying the new substitutes.
    - Changes in the consumers tastes and preferences – this is brought about by new fashions, design and quality. For example consumers may prefer leather shoes to plastic shoes. The industry, producing plastic shoes will loose market, reduces production and in the end out off some workers.
    - New producers may enter the market – This may out-compete the old producers by lowering the prices and improving the quality.

2. Mi-mach between the available skills and available jobs due to structural transformation new techniques in production are introduced such that the new jobs created require the modern skills. Labour that may have inappropriate skills may fail to be employed in the modern sector that requires the modern skills. Such labour becomes unemployed, similarly due to poor education systems. Labour may be trained for jobs that are not there. If such labour fails to get jobs for which it was trained for it structurally unemployed.

3. Exhaustion of natural resources.

4. Immobility of labour – This is an ability of labour to move from place to place in search for jobs or from job to job for better employment.

Solutions

1. Workers should be trained in different skills that is there should be diversification in training. In this way those who may fail to catch up with the skills in one occupation can be employed in other occupations.

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2. Re-fresher courses should be encouraged – These keep labour with up to date skills.
3. Mobility of labour should be increased – Labour that may be unable to move should be provided with the easy condition of movement for example reducing the transport costs, introduction of employment magazines and job banks.
4. Diversification of the economy – This expands the employment opportunities in different sectors. Small scale industries should be introduced in rural areas labour intensive techniques should be used in these industries so as to provide different job opportunities.

Frictional Unemployment
This is unemployment that occurs during the time when labour leaves a job up to when a new one is got. This type of unemployment can not be avoided and may occur at full employment levels of an economy, since labour is expected to switch from one job to another. The friction on a job that make delay and become unemployed include;
  - Interviews, applications, documentation, endorsement, approvals, and general bureaucracy.

Frictional unemployment at times is called Normal or Transitional unemployment.

Causes Of Frictional Unemployment
1. A short term decline in demand for commodities due to;
   - Changes in tastes and preferences.
   - Competition from substitutes.
   - Entry of new producers.
2. Changes in techniques of production such that labour that does not possess the required skills is laid off.
3. Ignorance of workers about the availability of new jobs.
4. Intermittent employment where labour is employed temporarily.

Solutions
1. There should be expanded job information through magazines, news papers, radio, television, etc.
2. A job bank should be introduced where employers can deposit jobs and workers can search for jobs.
3. There should be diversification of the economy so as to create more jobs opportunities.
4. There should be a reduction in bureaucracy in employment procedures so as to smoothen the employment process.

Seasonal Unemployment
This is unemployment that comes about due to changes in the seasons of production. It affects the sectors which produce according to the seasons for example agriculture, tourism, construction, etc. In cases of agriculture more people are employed during harvesting and planting seasons. In case of tourism workers

are demanded during the winter season while less are employed during the summer season. In MDCS, Seasonal unemployment comes during the winter season.

Causes
1. Changes in the climatic conditions that determine different activities.
2. Lack of diversified skills that can enable workers to do different activities.
3. Dependence on agriculture that is usually highly affected by seasonal changes.

Solutions To Seasonal Unemployment
1. Diversification of agriculture where different crops are grown at different intervals so as not fall in the same season.
2. Industrialization should be encouraged so as to provide short term employment.
3. Workers should be trained for a variety of jobs.
4. There should be land irrigation policy so that agriculture is through out the year.

Classical Unemployment
This is the type of unemployment which was postulated by the classical economists like Richard Ricardo, J.A. Smith and Thomas Malthus. Their emphasis was on capital accumulation as the engine of growth and therefore away of providing more job opportunities. If there is no capital accumulation in the economy, unemployment is bound to occur.

Classical unemployment therefore is the type of unemployment that comes about due to lack of comperant factors of production especially land and capital. This type of unemployment is typical of LDCs where land and capital are lacking due to lack of proper technology to increase it.

Solutions To Classical Unemployment
The solution to this unemployment is to increase the supply of land and capital. Capital can be increased through the following means;
(a) Through capital accumulation by;
  - increasing the savings
  - expanding the tax base
  - borrowing internally and externally
  - postponement of consumption
  - investing in industries that produce machinery.
(b) Exports should be encouraged so as to earn foreign exchange that can be used to import capital.
(c) Improving on the indigenous technology both intermediate and purely local one.

Land can be increased through;
  - through land reclamation
  - use of fertilizers

- encouraging intensive agriculture
- land irrigation.

Keynese Type Of Unemployment
This is the type of unemployment that was formulated by an economists called Lord Kynese. The unemployment arise due to a fluctuation in aggregate demand. Aggregate demand refers to the total demand to the economy. It is composed of C + I + G + X – M. If all are added together they give rise to total spending (aggregate expenditure).

A fall in aggregate demand according to Keynese leads to unemployment in the following ways;

If there is a fall in aggregate demand, there will be a corresponding reduction in output since producers can not expand production when demand has fallen that is (decrease aggregate demand leads to a decrease in output).

A reduction in output will bring a reduction in investment decisions since production capacity can not expand due to a fall in aggregate demand (decrease aggregate demand – decrease op –I).

Since employment is related to the level of investment, a reduction in investment is related to the level of employment (decrease aggregate demand – decrease op – decrease I – decrease E).

A reduction in investment and employment entails a reduction a number of workers and consequently unemployment will occur referred to as Keynesian type of unemployment (decrease aggregate dd – decrease in output – decrease I – decrease in E = UE).

This type of unemployment is only confined to M.D.Cs due to the following reasons;

1. There is a high level of investment in more developed countries for example in industry where the majority are employed. When aggregate demand falls it affects their decisions and leads to national income.

2. A high degree of linkage between sectors in more developed countries industry is linked to agriculture and to the commercial and international sectors. When there is a fall in aggregate demand in one sector, the other sectors are affected. Since they are closely linked for example if industry is linked in agriculture, a fall in demand for industrial output will affect agriculture since the former will not buy inputs from the seller.

3. In more developed countries, there is a high aggregate demand for goods and services due to the marginal income of people. The aggregate demand is the determination of the level of investment in these economies. This means that if aggregate demand falls, it will have an effect on the economy.

4. There are frequent changes in tastes and preferences cause a fall in aggregate demand. There is a tendency in more developed countries of desiring ne fashions, designs and better quality output. These changes have an impact on the level of investment. Any change may lead to a fall in demand and OE.

5. The employment level in more developed countries is in tertiary sectors and less in secondary sectors. Since many people are employed in industry and service sectors, the changes in aggregate demand will affect them than when they would be employed in primary sectors.

Limitations Of Keynesian Theory Of Unemployment
The theory is irrelevant to the economics of low developing countries due to the following;
1. The theory suggests unemployment to the originating from demand supply. But in low developing countries the unemployment is from the supply deficit. There is little supply or resources which are essential in expanding jobs in industries, agriculture and other sectors.

2. Keynes suggests to increase aggregate expenditure (C + I + G + X – M) so as to rise the aggregate demand which in the end will rise the level of investment and consequently expand the job opportunities. However, this is only possible in more developed countries attempt to increase the aggregate expenditure would lead to inflation.

3. Attempts to increase the aggregate expenditure in industries as a way to expand jobs would lead to localization of industries in urban areas in case of low developed countries.

4. An expansion of aggregate expenditure in industries in low developed countries may not solve unemployment as Keynes suggested. This is because capital intensive techniques are being used as a modern method because capital intensive techniques are being used as a modern method of production. However, these methods is labour saving and hence encourage unemployment.

5. The exports of low developed countries are in primary form and this means that many people are employed in primary sector. If there is an increase in aggregate expenditure, employment in tertiary and secondary sector may not expand employment more in primary sector.

6. In low developed countries, there is less desire to invest or spend money. People like to keep money in liquid form than investing it. This is due to poor investment climate, insecurity, ignorance, inflation, etc. If there is an increase in government spending, the aggregate demand may not increase

but the same amount of money injecting in the economy. Aggregate demand, therefore, will remain low despite increased in aggregate expenditure and this will not have an effect on the investment.

7. Keynes did not consider structural problems in low developed countries in this theory for example lack of transport, poor land tenure system, illiteracy, etc. All of which limit production and expansion of jobs.

8. Increased expenditure in agriculture may not expand jobs. The education system in low developed countries is biased against working on land. People are not trained to participate in agriculture but only for white collar jobs. Therefore, despite an increase in aggregate expenditure, the unemployment remains.

9. The theory does not consider the existence of the other types of unemployment in low developed countries for example seasonal, structural, disguised, etc. If the theory is applied in low developed countries and some unemployment, theses types of unemployment not be solved. In this theory, it assumed the non existence of any other type of unemployment but low developed countries have a diversity of them.

10. Low developed countries are faced with the problems of balance of payment problem and a vicious circle of poverty. These countries don't have enough funds to inject in the economy so as to rise the aggregate demand if at all it falls.

Solutions To Demand Deficit Unemployment
Keynesian theory of unemployment can be solved by rising the aggregate demand to original level. In order to rise the aggregate demand the following policies can be applied;

1. Fiscal policy – This is a policy that deals with government income and expenditure within a specific period of time. Using this policy to solve unemployment by rising the aggregate demand the government can reduce on taxes so as to increase the deposit income. The disposable income will rise the aggregate demand since people have enough money to spend. In addition, the government expenditure can be increased for example using the wages, salaries, allowances and direct spending in investment.

2. Monetary policy – Keynes suggested that in order to rise aggregate demand they should be an expansionary monetary policy. This is the policy of expanding their income of money in evasion. The expansionary monetary policy use the following tools;
    - Lowering the bank rate
    - Selecting credit control
    - Open market operation

3. Trade policy – This is the policy of rising the level of exports so as to rise the level of earning. This can be through diversification. Improving the quality of exports, making trade agreements, etc. An increase in export earnings will lead to an increase in the level of domestic income and consequently rising the aggregate demand.

4. An improvement in the investment climate through reducing taxes, for foreign exchange rate and increasing subsidies and loans. As the level of investment increases, employment opportunities increases also leading to an increase in income and hence increase in aggregate demand.

5. Reliance on foreign resources for example borrowing from other countries and other financial institutions. This increases the volume of funds in any country and hence rising the aggregate demand.

Other Types Of Unemployment
1. Casual Unemployment. These are people who are employed on irregular basis such that the jobs they do depend upon the demand for their services, they become unemployed when there is less demand for the services for example private doctors, brokers, hosue girls, car washers, etc. This type of unemployment in short term and it fluctuates due to a fluctuation in demand. Its hard to some but the following can be used;
   - Serious training of workers in order to get jobs on permanent terms.
   - Establishment of better employment opportunities
   - Expansion of industries.

2. Residual unemployment – These are people who are employed due to disturbances, physical weakness. They are unemployed not because the jobs are not there but because they are physically and mentally unable to work. This type of unemployment is hard to solve since employment requires physical and mental efforts which are lacking. However, some technical training especially to the physically disabled can avail employment for example hand crafts.

3. Technological unemployment – This is an employment that comes about due to changes in technology where machines (capital) replaces labour. Labour becomes unemployed because capital is better that is it is more efficient in terms of quality and time, the costs are fixed in that there are no dangers of strikes, etc. This type of unemployment is becoming an increasingly in more developed countries and less developed countries. In more developed countries there has been an introduction of computerization, automation, robots and if low developed countries import their labour becomes unemployed. In order to solve this unemployment, more industries and other investment projects must increase at high rate so as to absorb many people despite the use of machines.

4. Speculative or precautionary unemployment – This is a situation where people refused to work at a certain wage rate with a hope of getting better jobs. It normally appears in a time when better employment opportunities are expected.

5. Cyclical unemployment – This is an employment during certain phases of the business skills. This unemployment appears during a depression and recession again labour is unemployed.

6. Transitional unemployment – This is the type of unemployment that comes about when labour takes a long time to get new jobs. That long time is referred to as transitional unemployment where as in frictional unemployment labour takes a short time when unemployed to get new jobs.

General Causes Of Unemployment
1. Poor education system – This makes people job seekers but not job creators.
2. Lack of cooperate factors to use in production so as to expand employment.
3. High population growth rate that leads to high pressure on resources for example land.
4. Dependence on agriculture which is heavily affects by seasonal changes.
5. Use of capital intensive methods as the modern technology.
6. Lack of proper man-power planning where labour is trained for the jobs that are not there.
7. Rural-urban migration.
8. Dependence on primary exports that do not expand jobs in tertiary and secondary sectors.
9. Immobility of labour due to high transport costs.
10. Vicious circle of poverty where people are subsistence producers and cannot expand jobs.
11. Structural and institutional problems for example poor leadership, political instability and mis-management of resources.
12. Discrimination in the labour market on basis of tribe, colour, political parties, etc.
13. Poor investment climate that does not encourage investors to increase on jobs.
14. Influence of colonialism and non-colonial where jobs are reserved for the foreigners.
15. Nature of educational system where people are not given skills but are trained for white collar jobs.

General Solutions Of Unemployment
1. Use of labour intensive techniques.
2. Encourage self employment through mechanization and modernization.
3. Fundamental changes in the educational system.
4. Population policies that geared to reducing population to a sizeable.

5. Expanding the industrial sector.
6. Diversification of the economy.
7. Income and price policies that can encourage people to invest.
8. Rural transformation policies that can discourage rural-urban migration.
9. Rural to rural migration should be encouraged.
10. Improving the investment climate.
11. Serious and proper manpower planning.
12. Ease the mobility of labour.
13. Improving the investment climate like reducing the taxes, political stability, privatization and liberalization of the economy, etc.

Effects Of Unemployment In A Country
1. There is a decrease in the standards of living.
2. There is an increase in poverty among those who don't earn.
3. Some less economic activities are encouraged for example gambling, prostitution, smuggling and petty jobs.
4. There is social instability.
5. There is decrease in input since many people are redundant.
6. There is decrease in aggregate demand since many have no income to consume.
7. There is wastage of resources for example labour that would have been productive.
8. Income inequality is encouraged.
9. It also encourages rural urban migration where some people may hope to get jobs in urban centers.
10. It encourages brain drain where the unemployed go to other countries to get better employment or get employed.
11. There is increase in government expenditure in providing unemployment benefits.

Review Questions
1.

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