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NATIONAL INCOME

National income is the total monetary value of all final goods and services produced in an economy out of the productive activities in a given period of time usually a year.

From this definition, we note the following;

a) National income is measured in money terms. However, we are interested in the value of goods produced and not money itself.
b) Only market prices of final goods and services are considered. This is intended to avoid double counting since production takes many stages before goods reach the final consumer.
c) We measure both goods and services. Services are also measured because they also satisfaction to consumers.
d) Income should be derived from goods and services arising out of productive activities. Therefore incomes received for no work done for example pocket money for students, pensions, unemployment benefits, bursaries, gifts from friends and organizations (transfer payments) should be excluded when estimating national income.
e) National income figures exclude incomes from illegal activities like prostitution and gambling.
f) National income is measured per period of time thus it is a flow variable and not a stock variable
g) Incomes should be from transactions of a particular current period. Those arising from periods other than the current period should be excluded.

CONCEPTS USED IN NATIONLA INCOME
DEFINITIONS OF KEY WORDS

CATEGORY A

S/N	WORD	LETTER	MEANING
1.	Product	P	Is the total monetary value of all final goods and services produced……in a given period of time usually year
2.	Domestic	D	Within the geographical/ territorial boundaries of a country (by both nationals and foreigners).
3.	National	N	By nationals living within and outside a country.
4.	Gross	G	Including the value of depreciation.
5.	Net	N	Excluding the value of depreciation.

QN

Define the following terms as used in national income.

- Gross Domestic Product (GDP)
- Gross National Product (GNP)
- Net Domestic Product (NDP)
- Net National Product (NNP)

Solutions (Define for them one)

1. **Gross Domestic Product (GDP).**
   This is the total monetary value of all final goods and services produced within the geographical/ territorial boundaries of the country by nationals and foreigners in a given period of time usually a year including the value of depreciation.
2. **Gross National Product (GNP)**

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This is the total monetary value of all final goods and services produced by nationals living within and outside the country in a given period of time usually a year including the value of depreciation.

3. **Net Domestic Product (NDP)**
   This is the total monetary value of all final goods and services produced within the geographical/ territorial boundaries of the country by nationals and foreigners in a given period of time usually a year excluding the value of depreciation.
4. **Net National Product (NNP)**
   This is the total monetary value of all final goods and services produced by nationals living within and outside the country in a given period of time usually a year excluding the value of depreciation.

CATEGORY B

S/N	WORD	LETTER	MEANING
1.	Factor cost	fc	Valued at prices of factors of production
2.	Market price	mp	Valued at current market prices of goods and services.

QN

Define the following terms as used in national income.

- Gross Domestic Product at factor cost (GDPfc)
- Gross Domestic Product at market price (GDPmp)
- Gross National Product at factor cost (GNPfc)
- Gross National Product at market price (GNPmp)
- Net Domestic Product at factor cost (NDPfc)
- Net Domestic Product at market price (NDPmp)
- Net National Product at factor cost (NNPfc)
- Net National Product at market price (NNPmp)

Solutions (Define for them any two)

5. **Gross Domestic Product at factor cost (GDPfc)**
   It refers to total monetary value of all final goods and services produced within the geographical/ territorial boundaries of the country by nationals and foreigners in a given period of time usually a year including the value of depreciation valued at prices of factors of production, it includes subsidies and excludes indirect taxes.
6. **Gross National Product at market prices (GNPmp)**
   It refers to the total monetary value of all final goods and services produced by nationals living within and outside the country in a given period of time usually a year including the value of depreciation valued at current market prices of goods and services, it includes indirect taxes and excludes subsidies.

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CATEGORY C

S/N	WORD		MEANING
1.	Nominal income	a) Individual	Refers to ones income expressed in monetary terms.
		b) Economy	Valued at current year prices
2.	Real income	a) Individual	Is the amount of goods and services that one's nominal income can buy Or Is the purchasing power of nominal income
		b) Economy	Valued at base year prices

QN

Define the following terms as used in national income

- Nominal income
- Real income
- Nominal national income
- Real national income
- Nominal Gross Domestic Product (GDP)
- Real Gross Domestic Product (GDP)
- Nominal Gross National Product (GNP)
- Real Gross National Product (GNP)
- Nominal income per capita
- Real income per capita

Solutions (Define for them any two)

7. **Nominal income**
   This is one's income expressed in monetary terms
8. **Real income**
   This is the quantity of goods and services that one's nominal income can buy.
   OR
   Real income is the purchasing power of nominal income.

9. **Nominal national income**
   This is the total monetary value of all final goods and services produced in an economy out of the productive activities in a given period of time usually a year valued at current year prices.
10. **Real national income**
    This is the total monetary value of all final goods and services produced in an economy out of the productive activities in a given period of time usually a year valued at base year prices.
11. **Nominal Gross Domestic Product (GDP)**

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This is the total monetary value of all final goods and services produced within the geographical/ territorial boundaries of the country by nationals and foreigners in a given period of time usually a year including the value of depreciation valued at current year prices

12. **Real Gross Domestic Product (GDP)**
    This is the total monetary value of all final goods and services produced within the geographical/ territorial boundaries of the country by nationals and foreigners in a given period of time usually a year including the value of depreciation valued at base year prices
13. **Nominal per capita income**
    This is the average income of the population in a country valued at current year prices
14. **Real per capita income**
    This is the average income of the population in a country valued at base year prices.

CATEGORY D

15. **Depreciation/ capital consumption**
    This is the loss in the value of capital assets through wear and tear arising out of their usage in the production process over a given period of time.
16. **Depreciation value/ Capital consumption allowance.**
    This is the amount of money set aside by an entrepreneur to cater for the wear and tear of capital assets of a firm.
17. **Personal income.**
    This is the total income received by individuals in a country from all sources before taxes and other compulsory payments are deducted in a given period of time usually a year.
18. **Disposable income.**
    This is the income available to individuals for spending or saving after personal income taxes and other compulsory payments like NSSF have been deducted.
19. **Transfer payments/ transfer income.**
    Refers to payments made to individuals without corresponding goods and/ or services rendered i.e. they are non-quid proquo payments.
    OR
    Refers to income received by an economic entity without anything given in return.
    Examples of transfer payments in Uganda include;
    - ♣ Grants/ donations
    - ♣ Old age pension
    - ♣ Students pocket money/ upkeep to spouses, relatives, etc
    - ♣ Bursaries
    - ♣ Sick relief/ benefits/ allowance and other forms of relief
    - ♣ Gifts

    Sources of transfer payments include:
    - ♣ Government. This includes the local, central and foreign governments.
    - ♣ Individuals or households.
    - ♣ Institutions like business funds and Non-Government Organizations (NGOs).
20. **Net income from abroad/ Net property income.**
    This is the difference between property incomes earned by nationals abroad and property incomes earned by foreigners in the country.
    Net income from abroad = Nationals' earnings (X) – Foreigners' earnings (M)
21. **Per capita income.**

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This is the average income of the population in a country in a given period of time usually a year.

It is obtained by dividing total national income by the total population.

$$Per\ capita\ income = \frac{National\ income}{Total\ population}$$

$$Per\ capita\ income = \frac{Gross\ Domestic\ Product\ (GDP)}{Total\ Population}$$

22. Income per factor.

This refers to the average income earned by a factor.

$$Income\ per\ factor = \frac{total\ national\ income}{total\ number\ of\ effective\ labour}$$

NOTE

Determinants of real income in an economy include;

- ♣ The size of nominal income
- ♣ The size of disposable income/ level of taxation
- ♣ The price level/ general price level/ rate of inflation/ cost of living
- ♣ The quantity of goods and services available.
- ♣ The size of the subsistence sector/ monetary sector

ADJUSTMENTS IN NATIONAL INCOME

1. a) From Gross to Net, subtract the value of depreciation
   b) From Net to Gross, add the value of depreciation
2. a) From Domestic to National, add net income from abroad
   b) From National to Domestic, subtract net income from abroad
3. a) From factor cost to market price, add indirect taxes and subtract subsidies
   b) From market price to factor cost, add subsidies add subtract indirect taxes.

Examples

1. Given GDP, obtain NDP.
2. Given GNP, obtain NNP.
3. Given GDPmp, obtain GDPfc.
4. Given GDPfc, obtain GDPmp.
5. Given GDP, obtain GNP.
6. Given GNP, obtain GDP.
7. Given GNP at factor cost, how would you derive GDP at market price? (02 marks)

Try

1. Given Gross Domestic Product at factor cost, what adjustments are required to obtain Net National Product at market prices? (02 marks)
2. Given NNPfc, what adjustments would be made to arrive at GDPmp?

WORKED EXAMPLES

1. Given that a country's GDP is Shs 400 billion, net income from abroad is Shs 40 billion and depreciation is Shs 20 billion. Calculate the Net National Product (NNP).
2. Given GDP at factor cost for country Y is 300 billion €, indirect taxes (on expenditure) is 100 billion €, subsidies is 150 billion €; calculate the country's GDP at market price.

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3. Given that a country's stock of machinery is valued at Ug. Shs 100 billion at the beginning of the year, the total output from the machinery during the year was Ug. Shs 500 billion, depreciation costs during the year were 20%. Calculate;
   a) Value of depreciation. (02 marks)
   b) Net output during the year. (02 marks)
4. Determine the per capita income of an economy whose GDP is Shs 10 billion and the total population is 80 million people.

Try

1. Given that the Gross National Income is Shs 275,000,000 million and the net income from abroad is Shs 15,000,000 million; calculate the Gross Domestic Income. (02 marks)
2. Given that GDP at market prices is £500 billion, indirect taxes amount to £155 billion and subsidies are £200 billion; calculate the GDP at factor cost. (02 marks)
3. Given that a country's stock of productive machinery is Shs 200 billion at the start of the year 2016; the total output generated by the machinery during the same year was Shs 800 billion; depreciation costs for the same period were 30%. Calculate;
   (i) Value of depreciation
   (ii) Net output during the year.
4. Study the table below showing the population and GNP of countries A and B and answer the questions that follow.

Country	GNP (Million $)	Population (Million people)
A	1,200	20
B	750	15

Calculate the per capita income of country A and country B. (02 marks)

DETERMINANTS OF THE LEVEL OF NATIONAL INCOME

1. **The government policy of taxation and subsidization.**
   The offering of subsidies to producers by the government reduces the cost of production and this encourages investors to produce more goods and services which creates high national income. However, heavy taxation discourages investors because it increases the cost of production which leads to low levels of output of goods and services leading to low national income.
2. **Rate of capital inflow and outflow.**
   High rate of capital inflow in form of incomes from nationals abroad, donations and grants increases funds available in the country for investment resulting into higher levels of output produced hence high level of national income. However, high rate of capital outflow in form of income and profit repatriation reduces the funds available for investment thereby limiting production of goods and services hence low level of national income.
3. **Level of entrepreneurial skills/ managerial skills/ the entrepreneurial ability.**
   High managerial skills lead to better organization of factors of production which leads to production of more goods and services which creates high national income. However, limited entrepreneurial skills result into poor organization of factors of production leading to low output of goods and services hence low national income.
4. **Availability and level of exploitation of natural resources.**

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Natural resources refer to all gifts of nature. They include minerals, water bodies, soil, etc. High level of resource exploitation results in high volume of goods and services produced leading to high national income while low levels of natural resource exploitation result in low output of goods and services leading to low national income.

5. **The level of technology used in production.**
   Use of advanced and modern technology in form of capital intensive techniques of production brings about massive production of goods and services which creates high national income. However, use of poor technology limits exploitation of resources which results into low output levels thereby creating low national income.

6. **Political climate/ atmosphere**
   A favourable political atmosphere characterised by peace and stability gives confidence to investors thus making it possible to produce more goods and services which creates high national income. However, political instability creates fear of loss of life and property among investors leading to low output of goods and services hence low national income.
7. **Level of monetisation of the economy/ the size of the subsistence sector.**
   A big monetary creates greater volume of marketed output and this brings about high national income. However, a large subsistence sector creates low volume of marketed output and this brings about lo national income.
8. **The level of accountability/rate of corruption.**
   Low level of corruption (high level of accountability) among government officials avails funds that are used to promote investment for instance provision of subsidies to producers and this leads to production of more goods and services which creates high national income. However, high level of corruption (low level of accountability) among government officials reduces funds available for promoting investment activities and thus fewer goods and services are produced which creates low national income
9. **Size and quality of the labour force.**
   A big number of highly skilled workers is associated with efficiency and high output of goods and services which creates high national income. However, a small and unskilled labour force is associated with inefficiency and low output of goods and services hence low national income.
10. **Market size/ level of demand**
    A large market size encourages investors to produce more goods and services and this creates high national income. However a small market size makes investors to produce few goods and services due to fear of making losses hence leading to low national income.
11. **The level of savings.**
    High level of savings leads to high level of investment which encourages production of more goods and services and this leads to high national income. However low levels of savings lead to low levels of investment and this reduces the amount of goods and services produced which gives rise low national income.

12. **Size of the capital stock.**

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Capital stock of a country includes industrial machines, factories, private and social capital which is used to produce other goods.

A large capital stock enables producers to produce more goods and services which create high national income. However, a small capital stock causes low output of goods and services and this brings about low national income.

13. **Level of development of infrastructures.**

Well developed infrastructure in form of better roads and communication facilities encourages investors to produce more goods and services which creates high national income. However poor infrastructures in form of poor roads reduce the level of investment and fewer goods and services are produced hence creating low national income.

14. **Level of planning and plan implementation.**

Proper planning and implementation of projects encourages resource exploitation which increases the level of production of goods and services thereby leading to high national income. However, poor planning and implementation of projects lowers the level of resource exploitation which leads to low productivity hence leading to low national income.

15. **Population growth rate.**

A high population growth rate increases the dependence burden which reduces the level of savings of the working class and hence low investment and low production of goods and services which creates low national income. However, a low and stable population growth rate increases the level of savings and investment which leads to production of more goods and services which creates high national income.

16. **Economic climate/ rate of inflation.**

Stable prices encourage producers to invest and produce more goods and services which creates high national income. However, a high rate of inflation discourages producers due increase in the cost of production incurred hence low output of goods and services produced which creates low national income.

17. **The existing land tenure system.**

Private ownership of land encourages investors to set up economic ventures and more goods and services are produced which creates high national income. However, customary and freehold systems of land ownership discourage investment and thus less goods and services are produced which creates as a small size of national income.

18. **The terms of trade.**

Favorable terms of trade promote production of more goods and services for export hence leading to high level of national income. However, unfavorable terms of trade discourage production of goods and services for export and this leads to low level of national income.

19. **Attitude of people towards work.**

Positive attitude towards work by the people enables them to undertake risks and therefore more goods and services are produced which creates high national income. However negative attitude towards work creates laziness among the people and this leads to low output of goods and services which gives rise to low national income.

20. **The degree or level of conservatism.**

A high degree of conservatism among people limits adoption of new and better methods of production and this leads to low output of goods and services produced which creates low national income. However, a low level of conservatism among people makes it possible for them to adopt new and better methods of production which increases the output of goods and services produced which creates high national income.

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GREAT PSALMS KIPPILTAC

G – Government policy
R – Rate of capital inflow and outflow
E – Entrepreneurial ability
A – Availability and level of exploitation of natural resources
T – Technology
P – Political climate
S – Subsistence sector
A – Accountability
L – Labour force
M – Market size
S – Savings
K – Capital stock
I – Infrastructure
P – Planning
P – Population growth rate
I – Inflation
L – Land tenure system
T – Terms of trade
A – Attitude of people towards work
C – Conservatism

DISCUSSION QUESTIONS

1. Why is the GNP of USA higher than that of Uganda?
2. Explain the benefits associated with an increase in the countries size of national income.
3. Account for the low levels of Gross Domestic Product in developing countries.
4. Suggest measures that should be taken to increase the size of national income in Uganda.
5. Discuss the measures being taken to increase national income in Uganda.
6. Explain the measures that have been taken to increase national income in Uganda.

SOLUTIONS

1. The following are the reasons why USA has higher GNP than Uganda.
   - **USA has a higher level of political will and incentives than Uganda.** This leads to production of more goods and services in USA than in Uganda.
   - **USA has a higher level of entrepreneurial ability than Uganda.** This leads to proper and better organisation of other factors of production hence production of more goods and services in USA than in Uganda.
   - **USA has a higher level of resource exploitation than Uganda due to possession of the necessary skills and technology.** This leads to production of more goods and services in USA than in Uganda.
   - **USA has higher levels of technology due to advancement in science and research unlike Uganda with backward techniques.** This leads to production of more goods and services in USA than in Uganda.
   - **USA is more politically stable than Uganda.** This gives confidence to people in USA to engage in income generating activities unlike in Uganda where people have fear for loss of their lives and property.
   - **USA has a larger monetary sector than Uganda.** This leads to greater volume of marketed output in USA than in Uganda with a large subsistence sector.

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- **USA has a higher level of accountability than Uganda.** This avails more funds that are used to promote investment hence production of more goods and services unlike Uganda with a low level of accountability.
- **USA higher a higher level of labour skills than Uganda due to higher level of education and training.** This leads to production of more goods and services in USA than in Uganda which has a big pool of unskilled labour.
- **USA higher a larger market size than Uganda.** USA produces high quality goods and services that highly demanded in USA and other parts of the world unlike Uganda that produces poor quality goods and services that fetch low prices especially on the world market.
- **USA has a larger of capital stock than Uganda.** This enables it to venture in large scale industrial production that Uganda cannot afford.
- **USA has better infrastructure than Uganda.** USA has a better road network and communication systems that facilitate smooth running of production activities unlike Uganda with a poor road network that discourages investment.
- **USA has a lower population growth rate than Uganda.** This enables individuals to save and accumulate more capital necessary for production of more goods and services than Uganda.
- **Prices in USA are relatively more stable than in Uganda.** This encourages production of more goods and services in USA than in Uganda where prices are ever changing.
- **USA has better terms of trade than Uganda.** This is because USA is more industrialised and thus produces better quality goods that command higher prices on the world market than the poor quality goods produced by Uganda.
- **People in USA have a more positive attitude towards work than those in Uganda.** This enables them to undertake risks and produce more goods and services unlike in Uganda where many people especially the youth are lazy and have more time for gambling than doing productive work.
- **USA is associated with less cultural rigidities than Uganda.** People in USA easily adopt new and better production techniques which lead to production of more goods and services unlike in Uganda where people have continued to use poor methods of production that yield low output levels.

CAUSES OF LOW LEVELS OF NATIONAL INCOME IN LDCS

1. **Low levels of natural resources and exploitation.**
   This results in low output of goods and services leading to low levels of national income.
2. **Low level of existing stock of capital/ inadequate capital.**
   This limits exploitation of natural resources and production of goods and services leading to low national income.
3. **Low level of technology.**
   This leads to underutilization of natural resources leading to reduced volume of goods and services produced hence low national income.
4. **Small size of the market, both local and foreign.**
   This makes investors to produce few goods and services due to fear of making losses hence leading to low national income.
5. **Low levels of skills of labour.**

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There is a problem of low levels of skills of labour due to low levels of training and the poor education system in the country which leads to low levels productivity and efficiency and this gives rise to low levels national income.

6. **Poor political climate/ political instability.**
   This creates uncertainty (fear) among investors leading to low level of output of goods and services and hence low national income.
7. **Low levels of infrastructural development.**
   This is in form of poor roads which reduce the level of investment and fewer goods and services are produced hence creating a small size of the national income.
8. **Low levels of entrepreneurial ability.**
   This results into poor organization of factors of production leading to low output of goods and services hence low national income.
9. **Existence of a large subsistence sector/ low levels of monetization of the economy.**
   There is a large subsistence sector in developing countries whereby individuals produce for own consumption which creates a low volume marketable output hence low levels of national income.
10. **Negative attitude towards work.**
    This creates laziness among the people and this leads to low output of goods and services which gives rise to low national income.
11. **High rates of inflation.**
    High rates of inflation discourage producers due to high costs of production incurred hence low output of goods and services which creates a small size of national income.
12. **Low levels of savings.**
    This is mainly due to poverty among the nationals thereby limiting the level of investment and causing production of low levels of output which give rise to low levels of national income.
13. **Unfavourable government policy on investment e.g. high levels of taxation.**
    Heavy taxation discourages investors because it increases the cost of production which leads to low levels of output of goods and services leading to low national income.
14. **Cultural factors e.g. conservatism.**
    There is a high degree of conservatism among a number of people who do not want to adapt new methods of production hence there is low output of goods and services produced leading to low level of national income.
15. **High population growth rates.**
    This increases the dependence burden which reduces the level of savings of the working class and hence low investment and low production of goods and services which create a low level of national income.
16. **Poor land tenure systems.**
    There is a growing class of landless people hence discouraging investments and less goods and services are produced which results into low level of national income.
17. **Unfavourable natural factors e.g. floods, drought, etc.**
    These mainly affect agricultural production leading to low levels of output of agricultural products hence low level of national income.
18. **High levels of corruption (low levels of accountability)**
    There is a high level of corruption among many government officials who tend to misuse investment funds for personal needs thereby limiting the level of investment hence low levels of output of goods and services which gives rise to low levels of national income.

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19. **Low level of productivity of labour and other co-operant factors.**
20. **High levels of dependence on foreign aid/ other countries/ negative foreign influence.**
21. **Low levels of industrial development.**

STEPS THAT SHOULD BE TAKEN TO INCREASE THE LEVEL OF NATIONAL INCOME IN UGANDA

1. **There should be increase in the level of exploitation of natural resources.**
   The government should encourage more exploitation of natural resources like minerals. This can lead to increase in output of goods and services resulting into increase in national income.
2. **Improve technology.**
   The government should encourage the use of capital intensive technology in order to ensure massive production of goods and services thereby leading to increase in national income.
3. **Labour should be equipped with appropriate/ necessary skills with greater emphasis on specialization.**
   Labour should be trained and given the necessary skills which are in line with Uganda's development needs. With greater skills, labour force is able to participate in production and produce more goods and services hence an increase in the level of national income.
4. **Improve on infrastructure.**
   The government should improve on infrastructures such as roads so as to increase access to raw materials and market centres. This stimulates investment and leads to production of more goods and services leading to an increase in national income.
5. **Provide investment incentives.**
   The government should provide investment incentives such as subsidies, tax holidays to potential investors. Such incentives attract more investors to Uganda and this leads to production of more goods and services hence increasing the size of national income.
6. **Undertake entrepreneurial training/ man power planning.**
   The government should embark on improving entrepreneurial skills in the country for example through organizing seminars and workshops so as to increase on the number of entrepreneurs who can mobilize and organize factors of production and bear risks. This increases the output of goods and services thereby increasing the size of national income.
7. **Improve economic planning and management.**
   The sectors in the economy should be properly planned for and well managed. This leads to production of more goods and services thereby increasing the size of national income.
8. **Undertake further privatization.**
   The government should encourage private investors to take up most of the collapsing enterprises with the aim of increasing the production of goods and services thereby increasing the size of national income.
9. **Modernization of agriculture.**
   The government should encourage irrigation and the application of modern farm equipments by the farmers. This is aimed at increasing agricultural output thereby leading to an increase in national income.
10. **Expansion of markets both local and foreign should be encouraged.**
    The government should continue with the policy of identifying new markets and expanding on the existing ones. A widened market promotes investment leading to production of more goods and services thereby increasing the size of national income.
11. **Ensure economic stability.**

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The government should ensure economic stability in form of stable prices of goods and services. This is achieved through setting up a maximum price and maintaining it for a reasonable period of time. Stable prices encourage investments leading to production of more goods and services thereby increasing the size of national income.

12. **Ensure political stability.**
    This is aimed at giving confidence to investors thereby making it possible to produce more goods and services hence increasing the size of national income.
13. **Further diversification of the economy should be promoted.**
    This can be done through development of tourism, expansion of industry and the service sector. This can reduce dependence on one economic activity (agriculture). This can result into increased production and increase in national income.
14. **Further trade liberalization can be implemented.**
    This should be done by removing government controls on trade. Therefore producers are able produce more goods and with a large measure of freedom hence increasing national income.

MEASUREMENT OF NATIONAL INCOME

IMPORTANCE OF COMPUTING NATIONAL INCOME

1. **National income figures are useful for economic analysis and planning.**
   National income statistics provide useful information to the government which can be used for current and future economic planning. For example national income figures are used when preparing the national budget and perspective (long term) plans.
2. **It is used to determine the standard of living of the people in a country.**
   Total National Income is divided by the total population in a country to obtain per capita income. Per capita income indicates the level of economic welfare of the people in the country.
3. **It is used to compare welfare in a country over time. (For comparison purposes over time)**
   The per capita income figures of the different years are compared to enable the government identify the year in which peoples' welfare was better.
4. **National income figures are used to compare the standard of living between countries (for international comparison).**
   National income figures are computed to compare the GDP, GNP or per capita income of different countries. For example the per capita income of Uganda can be compared to that of Kenya to find out whether an average Ugandan is better off than an average Kenyan.
5. **It is used to determine whether an economy is growing, stagnant or declining.**
   If national income increases over time, it means that the economy is growing. If national income remains more or less the same over time, it indicates that the economy is stagnant. If the national income is falling over time, it indicates that the economy is deteriorating. If the economy is growing, the economic growth rate can be determined by measuring the rate of increase in national income.
6. **It is used to show income distribution.**

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National income figures show how income is distributed among the various factors of production and the different sectors of an economy. This helps the government to design appropriate policies to ensure a more equitable distribution of income.

7. **It helps to show the expenditure patterns within a country.**
   National income figures reveal public and private sector expenditure when the expenditure approach is used. For instance it is possible to identify how much money government spends on services like education, health care, transport, defence and security.
8. **It is used to identify the leading and lagging sectors.**
   National income figures show the economic performance of different sectors of an economy. This enables the government to identify the sectors that are growing at a fast rate and those that are growing at a slow rate such that measures are taken to uplift performance in the lagging sectors and at the same time maintain growth of the leading sectors.
9. **It is used to request for foreign aid.**
   Donors always need information about national income so that they can select appropriate sectors that they can give assistance.
10. **National income figures show the extent of dependence in an economy.**
    National income figures assist the government to identify the sectors on which the country largely depends. The sector with the highest contribution to Gross Domestic product (GDP) is the one upon which the country greatly relies.
11. **National income figures are useful when carrying out research.**
    Research scholars of economics make use of data pertaining to a country's input, output, income, savings, consumption, investment, employment etc which is obtained from net national income and net national expenditure.
12. **National income figures show the level of resource exploitation.**
    A high level of national income indicates increased and better utilisation of a country's available resources while a low level of national income indicates underutilisation of a country's available resources.
13. **National income figures are used for taxation purposes.**

ASSIGNMENT

Why do countries compile national income statistics?

METHODS/ APPROACHES OF MEASURING/ CALCULATING/ ESTIMATING NATIONAL INCOME

There are three methods used to estimate national income. These are;

- ♣ The income approach
- ♣ The expenditure approach
- ♣ The output/ product/ value added approach.

THE INCOME APPROACH

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This involves adding up all incomes received by persons and enterprises for rendering productive services in an economy in a given year.
Under this approach, National income = Wages + Interest + Rent + Profit – Transfer incomes

NB

Transfer incomes are excluded when estimating national income using the income approach so as to avoid double counting.

PROBLEMS ASSOCIATED WITH THIS METHOD

1. **Inadequate information.**
   Individuals have different sources of income which are not known to the government. Many people are self employed and are not willing to declare their income in fear of high taxation. As a result, the national income figures in this circumstance are either under estimated or over estimated.
2. **Difficulty in identifying transfer payments.**
   Being non-quid proquo, such payments should be excluded when calculating national income figures otherwise double counting may arise. However, it may not be easy to identify the transfer payments hence a problem of double counting and over estimation of national income figures.
3. **Inability to identify incomes from abroad.**
   Income from employment of labour abroad is in most cases excluded when computing national income figures. This is because it is very difficult to collect such data.
4. **Difficulty in identifying capital gains.**
   Capital assets tend to appreciate in value as a result of an increase in market prices of such assets. Therefore capital gains are received by the owners of such assets but they do not correspond to output of goods and services and therefore they should not be included in national income figures. However, sometimes capital gains are included leading to over estimation of national income.
5. **Difficulty in identifying income from illegal activities.**
   Income got from illegal activities such as prostitution and gambling should not be included in national income figures because it is not got out of productive activities. However in most cases such incomes are not excluded and this leads to over estimation of national income.
6. **Difficulty in identifying income from unpaid for services.**
   Some services are rendered but they are not paid for e.g. family labour, house wife services, etc. Since these services are not paid for and they are productive, national income is underestimated.

THE EXPENDITURE APPROACH

This involves adding up the total amount of money spent on final goods and services by private consumers/ households (C), business firms (I), government (G) and the foreign trade sector/ external sector (X – M) in a given year.
Under this approach, National income (NY) = C + I + G + (X – M).

PROBLEMS ASSOCIATED WITH THIS METHOD

1. **Difficulty in distinguishing between final and intermediate expenditure.**
   It is only expenditure on final goods and services that must be included in national income estimation. Expenditure on intermediate goods must be excluded in order to avoid double counting. However, it is difficult to distinguish between expenditure on intermediate goods and final goods. This leads to overestimation of national income figures.
2. **Inadequate information.**

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In most cases, it is very hard to obtain information on expenditure especially on personal expenditure, private investment expenditure, government expenditure, etc. This is because many people do not keep records of their expenditure. This leads to underestimation of national income figures.

3. **Difficulty in estimating expenditure on imports.**
   These should be excluded from the national income statistics. However, there are many people involved in international trade and it is very hard to get information regarding expenditure on imports. This leads to under estimation or over estimation of national income figures.
4. **Difficulty in identifying expenditure on transfer payments.**
   These should be excluded from national income. However, private people and government are not willing to reveal such information.

OUTPUT/ VALUE ADDED APPROACH

This involves adding up the total money value added to the output at each stage of the production process in a given year.

PROBLEMS ASSOCIATED WITH THIS METHOD

1. **Inadequate information.**
   Under this approach, it is very hard to establish how much has been produced by all enterprises in a given year. This causes either under estimation or over estimation of national income.
2. **Difficulty in identifying final and intermediate goods.**
   Only final goods should be considered under the output approach. However, it is not always clear whether the commodity is an intermediate one or final one hence double counting leading to over estimation of national income.
3. **Difficulty in identifying inventories in work in progress.**
   These are goods that are produced but not used immediately. Some goods are produced in the course of the year but are sold in the following year. The problem arises whether to include the value of inventories in the current period or in the next period.
4. **Difficulty in determining the value of subsistence output.**
   Subsistence output refers to one for the producer's own consumption (non-marketed output). There is a problem of attaching value to output that does not pass through the market.

THE MOST APPROPRIATE APPROACH IN MEASURING NATIONAL INCOME IN DEVELOPING COUNTRIES

The most suitable method for computing national income statistics in developing countries is the value added/ output approach because of the following reasons;

1. Data on output is more available as compared to data on income and expenditure. This is because individuals are more than willing to reveal information on output than on income and expenditure. The information concerning output is available at the production centres e.g. factories.
2. It eliminates double counting since only the value added at each stage of production is considered.
3. The approach is not affected by transfer payments as the case is for the income and expenditure approaches.
4. It automatically eliminates illegal activities like prostitution and gambling.

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5. It reveals the goods and services produced by each sector and they are valued at factor price or market price.
6. It is only the output approach that takes into account the subsistence sector. Since Uganda has a large subsistence sector, the output approach is most appropriate for computing the monetary equivalence of the contribution of the sectors to national income.

PROBLEMS ENCOUNTERED WHEN COMPILING NATIONAL INCOME DEVELOPING COUNTRIES

The problems encountered when compiling national income can be categorized into two i.e. conceptual and statistical problems.

CONCEPTUAL PROBLEMS

These are problems that arise due to failure among economists to have a uniform or universal understanding of the definition of national income. These problems originate due to failure by economist to agree about what to include or exclude when compiling national income. They include;

1. **Problem of defining the boundary of production.**
   This is concerned with which items to include or exclude when estimating national income. For example should child labour or the service of a house wife be included or excluded when compiling national income? Some activities regarded legal in one country are regarded as illegal in others. Therefore those who compute national income find a problem in selecting the activities to be included or excluded.
2. **Problem of subsistence output (non – marketed output)**
   It is difficult to know which activities to include in subsistence production when estimating national income since there are many small scale firms geographically dispersed that are engaged in production on a subsistence basis.
3. **Problem of unpaid for services.**
   Some services are rendered but they are not paid for example family labour and services of a house wife. Economists find it hard to decide whether such services should be included or not. As a result, such services may be excluded yet they are productive.
4. **Failure to distinguish between intermediate and final output.**
   Only final goods should be considered when compiling national income. However, it is not always clear whether a particular commodity is an intermediate or final one. For example sugar can be used as an intermediate good in the production of sweets as well as a final good for domestic use. As a result, the value of a good or service may be estimated more than once. This leads to double counting hence overestimation of national income.
5. **Problem of illegal activities.**
   Income earned through illegal activities such as gambling, smuggling and prostitution should be excluded when measuring national income. However, it is difficult to identify such incomes and activities considered illegal in one country may be legal in another.
6. **Problem of transfer payments.**
   During the course of the year, some individuals get income without corresponding goods produced or services rendered. These transfer payments should be excluded when measuring national income. However, they are sometimes included because it is difficult to differentiate them.
7. **Problem of timing production.**

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It is very difficult to determine the output produced in the country during a particular year. This is true especially for agricultural output in which it becomes hard whether to consider the time of production or the time of harvesting when estimating national income.

8. **Problem of inventories and work in progress.**
   This basically considers goods that are produced in one accounting period and sold in another accounting period. A problem arises whether to include the value of inventories in the current period or the next period.
9. **Difficulty in choosing the method of measuring national income.**
   Theoretically, the three methods are supposed to yield the same results. However in reality, these methods may not yield the same results especially where the necessary adjustments have not been correctly handled. Therefore those who compute national income statistics find a problem to agree upon the appropriate method to be use.

STATISTICAL PROBLEMS

These are problems to do with the collection and accuracy of national income figures. Here, we focus on challenges that are likely to make national income figures inaccurate or unreliable.

1. **Inadequate statistical data.**
   Developing countries have limited information on incomes, expenditure and output. This is mainly due to absence of proper record keeping by producers and consumers and unwillingness of people to disclose their incomes and expenditure for many reasons. This leads to misleading national income figures.
2. **Limited skilled manpower.**
   There are few statisticians, economists and accountants with the necessary skills required to compute with accuracy the national income statistics.
3. **Problem of price changes.**
   Where national income is valued at current market prices of goods and services, price changes affect the value of national income. An increase in the general price level of goods and services leads to increase in national income yet actual production might have fallen. On the contrary, a fall in the general price level of goods and services leads to a decrease in national income yet actual production might have increased. Therefore the national income figures computed under conditions of price changes are misleading.
4. **Problem of statistical errors.**
   The process of compiling national income statistics is subject to many errors such as errors of omission and commission which bring about wrong totals of national income figures.
5. **Difficulty in calculating the value of depreciation.**
   As capital assets are used in the production process, they wear out hence a loss in their value. The value of depreciation is subtracted from the total national income to obtain net national income. However, it is difficult to measure with accuracy the value of depreciation since different firms use different methods of calculating this value. Therefore this creates a statistical constraint as countries depend on gross instead of net national income.
6. **Problem of double counting.**
   This refers to estimating the value of an item more than once when compiling national income statistics. This arises due to failure to distinguish between intermediate and final goods and failure to identify transfer payments. This leads to exaggerated national income figures.
7. **Problem of estimating net income from abroad.**

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It is difficult to get information on the incomes earned by nationals working abroad and on incomes of foreigners living within the country. This leads to inaccurate national income figures.

8. **Inadequate facilities and equipments to use,** i.e. during collecting, organizing, summarizing, analyzing and interpreting data. For example there is shortage of funds and computers required to carry out the exercise successfully.
9. **Difficulty in determining government expenditure.**
   Where the expenditure approach is used, it is difficult to estimate government expenditure since government provides a number of services like education, health care, transport, police and military services among others.
10. **Problem of valuing subsistence output (non – marketed output)**
    It is difficult to estimate the monetary value of output produced for one's own consumption since it does not pass through the market.
10. **Problem of valuing inventories and work in progress.**
    All changes in inventories whether positive or negative are included during national income estimation. The value of changes in inventories is added or subtracted from the current production of the firm. However, it is also difficult to value the stock of unsold goods and work in progress when compiling national income statistics.
11. **Problem of valuing unpaid for services.**
    There is difficulty in attaching monetary value to services that are rendered but they are not paid for such as family labour and services of a house wife. As a result, such productive activities are ignored leading to underestimation of national income.

IDENTICAL RESULTS

Theoretically, the three methods are supposed to yield the same results i.e. **O≡E≡Y**
The identical results can be illustrated by the circular flow of income and expenditure.

THE CIRCULAR FLOW OF INCOME IN A TWO SECTOR – MODEL (CLOSED ECONOMY/AUTARKY)

The circular flow of income describes how income in a two sector model flows between households and business firms.
The households sector receives income from the business sector in return for the factor services provided.
The business sector receives income from the households sector in return for the goods and services produced.

ASSUMPTIONS OF THE CIRCULAR FLOW OF INCOME

- ♣ There are only two sectors in the economy, that is the households sector (consumers) and business sector (producers).
- ♣ The households sector is the only owner and supplier of factors of production.
- ♣ The business firms are the only producers and suppliers of goods and services.

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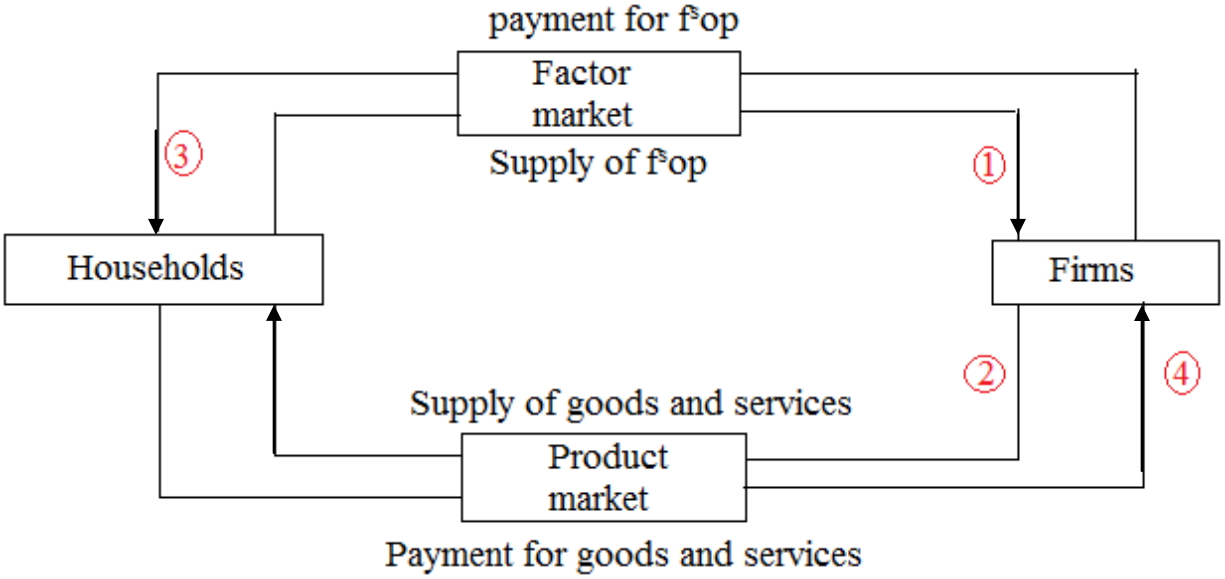
- ♣ All incomes received by households are spent on buying goods and services produced by the business firms
- ♣ All incomes earned by the business firms are spent on hiring factors of production provided by the households.
- ♣ All output produced by firms is sold in the market.
- ♣ The economy is assumed to be closed
- ♣ There is no government intervention.
- ♣ Technology is assumed to be constant.
- ♣ Tastes and preferences are constant.

Illustration of the circular flow of income in a two – sector model



- The diagram above indicates the two sectors and the interrelationship between them is indicated by the arrows.
- The household sector supplies factors of production to the business firms as indicated by arrow 1 (flow of productive resources)
- Arrow 2 shows the supply of goods and services by the business sector to the household sector (flow of commodities).
- Arrows 1 and 2 thus indicate real flow.
- Arrow 3 shows the expenditure by business firms on buying the factors of production from the household sector. This arrow represents the factor incomes to the household sector in form of wages, interest, rent and profits.
- Arrow 4 indicates the payment for goods and services by the household (money is moving from the household sector to the business sector).
- The receipts obtained by the business sector are equal to what the households have spent on these goods and services. Arrows 3 and 4 indicate monetary flows between households and the business sector.

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NOTE

In producing goods and services, business firms employ the services of factors of production supplied by the households. Whatever the firm spends on factor services should be the same as income got from selling goods and services produced using the factors of production thus output is identical income **(O≡Y).** This is based on the assumption that whatever is produced is sold to the households.

Expenditure by the households should be equal to what they obtain as factor incomes from the business firms thus **(E≡Y).** This is based on the assumption that whatever is earned by the household as income is spent on purchasing goods and services.

Therefore, it can be concluded that the three approaches of measuring national income (income, expenditure and product approach) should give the same figures unless there are errors in the calculations such as errors of omission.

Assignment

a) What is meant by autarky?
b) Outline three demerits of autarky.

INCOME DISTRIBUTION

Income distribution refers to how the total national income of an economy is divided among the total population. In many countries, income is unevenly distributed. There is always an economic gap between the rich and the poor in the society. This gap constitutes what we call **"income inequality or income disparity or uneven distribution of income."**

INCOME INEQUALITY

Income inequality refers to a state of imbalance in income distribution resulting into co-existence between the rich and the poor in the same social economic set up in a country.

TYPES OF INCOME INEQUALITY

1. **Regional/ geographical inequality.**
   This is inequality between different areas of an economy brought about by uneven distribution of resources, social and economic infrastructures.
2. **Sectoral inequality.**
   This is inequality between different sectors of an economy for example people employed in the industrial sector earn more than those in peasantry agriculture.
3. **Intra –sectoral inequality.**
   This is where within the same sector; some people are richer than others. For example with in the agricultural sector, there is commercial agriculture with high incomes and subsistence farming with low incomes.
4. **Individual inequality.**
   This is where some individuals have high incomes while others have low incomes due to differences in skills, talents, gender, nature of occupation, etc.

CAUSES OF INCOME INEQUALITY

1. **Uneven distribution of natural resources/ variation in the natural resource distribution.**
   People in areas with abundant natural resources such as fertile land, reliable climate and mineral resources use them to generate high incomes and become better off unlike those in areas with few resources who earn low incomes.
2. **Differences in the level of education and skills.**

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Highly trained and skilled people receive higher incomes from employment compared to those people with low levels of training who earn low incomes. This is because the highly educated and skilled people are more efficient than those who are not.

3. **Differences in the quality of the output produced.**
   Individuals or business people who produce better quality products earn more income compared to those whose products are of a poor quality. This is because better quality products attract more customers who are willing to pay the price of the commodity.
4. **Differences in family / social back ground.**
   People from rich families have higher chances of inheriting wealth and using family influence to get well paying jobs as compared to their counter parts from poor families.
5. **Differences in talents and other natural abilities.**
   Individuals who are naturally talented e.g. musicians, footballers, etc tend to earn high incomes because they are capable of doing certain jobs or tasks which other people cannot do thus causing an income gap.
6. **Differences in experience of seniority or responsibility.**
   Workers with a high level of experience earn higher incomes than junior workers in the same organization e.g. senior army officers earn higher incomes than junior army officers.
   OR
   Workers who hold more responsibilities at places of work earn higher incomes than those who hold fewer responsibilities because they are more accountable to the authority. E.g. a head teacher earns more income than a classroom teacher in a school.
7. **Differences in the elasticity of labour supply.**
   Labour force which is inelastic in supply such as doctors and engineers earns more incomes than labour force which is elastic in supply for example sweepers. This is because it is not easy to limit entry of unskilled and semi-skilled labour into an occupation by specifying minimum entry requirements hence making it hard to negotiate for high incomes.
8. **Differences in the bargaining strength of trade unions.**
   Strong and well organized trade unions are in position to negotiate for a higher pay for their members compared to weak and disorganized trade unions.
9. **Differences in the bargaining strength of individuals.**
   Workers with strong bargaining power for incomes are paid highly than workers with weak bargaining power for incomes even when they have the same qualifications and do the same job hence causing income inequality.
10. **Variations in employer's ability and willingness to pay.**
    Workers in organizations with greater ability and willingness to pay earn more than those whose employers are unable and unwilling to meet their wage payments. E.g. People working in NGOs earn more than those in government.
11. **Discrimination in the labour market based on religion, race, sex, tribe, political affiliation, appearance etc.**
    Workers who are favoured because of their tribe, race etc earn higher incomes than those who are less favoured even when they have the same qualifications and are performing the same tasks.
12. **Variations in accessibility to developed infrastructures.**

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Places with well developed and maintained infrastructures like better roads attract investment opportunities from which people earn high incomes while areas with poor infrastructure have less investment activities and this leads to low incomes in such areas.

13. **Differences in the nature of occupation and risks.**
    Some jobs are more risky than others and people employed in more risky jobs such as mines and quarries tend to earn higher incomes than those in less risky jobs like office management. This is to compensate for the risk they are exposed to.
14. **Differences in the number of hours worked**.
    People who work for longer hours earn more than those who work for shorter hours where the time rate method of payment is used.
15. **Differences in the quantity of output produced.**
    People are hard working and produce large amounts of output earn higher incomes than those who are lazy and produce small amounts of output where the piece rate method of payment is used.
16. **Differences in the cost of living.**
    People who work in areas with high costs of living such as urban centres earn more than those in areas with low costs of living e.g. rural areas. This is because people living in areas with high costs of living need more money to survive than people who work in areas with low costs of living who need less money to survive.
17. **Differences in the political climate**.
    People who live in areas which are politically unstable earn lower incomes because they fear to effectively engage in production due to fear of loss of their lives and property while people who live in areas that are politically stable earn higher incomes because they engage in production on a large scale due to assured security of their lives and property.
18. **Political influence in the allocation of resources in favour of certain regions / sectors.**
    The government can deliberately plan to develop certain regions and sectors faster as compared to others. Therefore people who live in areas which are favoured become richer because they have access to national resources than people who live in areas which are not favoured and thus have little access to national resources.
19. **Non matching wage policies by the employers i.e. Wages are not uniform.**
    There are differences in the salary structure of civil servants. According to the government policy, some professions are paid more than others For example in Uganda, workers in the judiciary, KCCA, URA etc earn more than workers in the ministry of health and education.
20. **Differences in access to credit.**
    People who have more access to loans borrow money and invest in more profit making businesses and become richer than those people who have limited access to credit or loans.
    Also people who have more access to contracts earn more than those who have less access to contracts.

ADVANTAGES OF INCOME INEQUALITY

1. **Income inequality makes labour affordable.** Income inequality leads to provision of cheap labour to employers since the poor are willing to work at low wages hence encouraging investment/ production.

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2. Income inequality guarantees supply of cheap labour especially for **unattractive jobs** like sweeping and toilet cleaning since the poor are willing to work in any kind of employment so as to earn a living.
3. **It encourages labour to work in risky areas and enterprises such as mines and quarries.** This is because the poor are ready to work in any kind of employment so as to earn a living.
4. **Income inequality establishes a good relationship between employers and the employees**. This is because poor employees have respect for their rich employers because they fear to lose their jobs.
5. **Income inequality encourages hard work among the poor so as to attain a standard of living enjoyed by their rich counterparts.** This leads to more output produced in the long run.
6. **It encourages geographical mobility of labour.** The poor are ready and willing to move from one place to another in search for (better) employment opportunities.
7. **Income inequality awakens the government to its responsibilities.** Income inequality forces the government to design policies and come up with income generating activities to reduce inequality. Such include subsidizing the poor and distributing resources in the economy.
8. **Attracts international funding agencies to support the lagging sectors where majority of the disadvantaged are found.** International agencies usually give their assistance to lagging sectors to uplift their performance and ensure a fairer distribution of income in an economy.
9. **It encourages utilisation of resources in an economy where majority of the people are rich.** This results into production of more goods and services hence high rates of economic growth.
10. **High level of savings.** Where majority of the people are rich, savings are high because the rich have a high marginal propensity to save.
11. **Income inequality promotes investment in a country.** Where majority are rich, there are high levels of savings since the rich have a high marginal propensity to save. The savings are later invested and this increases employment opportunities and output levels hence economic growth and development.
12. **It generates a lot of revenue to the government.** Where the majority of the people are rich, government generates more revenue through the use of progressive taxation under which the rich are taxed highly so as to reduce their disposable income.
13. **High incomes earned by professionals encourage them to work within the country.** This reduces on brain drain and its negative effects on production in form of loss of human capital need for development.
14. **It provides market for goods of ostentation which are usually consumed by the rich.** Such goods are always demanded because they act us status symbols for the rich.

DISADVANTAGES OF INCOME INEQUALITY

1. **It leads to low aggregate demand in an economy in case majority of the people are poor** hence discouraging production of goods and services.
2. **It leads to unemployment and underutilization of resources**. This is a case where there are few people with incomes to engage in productive activities.
3. **It breeds apathy among the poor.** Income inequality reduces the morale among the poor causing disinterestedness in work. This leads to production of poor quality goods and low standards of living among the poor.
4. **It leads to low savings when majority are poor.** This discourages investment leading to a low economic growth rate.

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5. **Income inequality limits investment where majority of the people are poor.** Income inequality is associated with the vicious circle of poverty that is the low incomes lead to low savings which leads to capital accumulation and this finally leads to low investment.
6. **It leads to low government revenue generated.** This is the case when majority of the people in an economy are poor and thus have no incomes on which taxes can be levied.
7. **It leads to increase in social crimes like prostitution, murder, theft and children sacrifice.** Poor resort to such acts so as to earn a living. This increases government expenditure on eradication of such evils in an economy.
8. **Income inequality leads to emergence of monopolies** with their negative effects such as exploitation of consumers through over charging, production of poor quality goods and price discrimination among others.
9. **It leads to exploitation of the poor by the rich.** The rich employers pay low wages to the desperate poor employees.
10. **It encourages brain drain.** This is where the highly skilled manpower migrates to developed countries in search for greener pastures. This leads to manpower problems in developing countries.
11. **It strains the government budget.** The government incurs heavy expenditure in subsidizing the poor through provision of social services such as education and medical care.
12. **Government planning becomes difficult.** This is because income inequality creates a number of social and economic classes of people with diverse needs.
13. **Income inequality results into unpopularity of the government in power.** This is because the poor blame the government for the low standards of living in the economy. This increases political tension in the country.
14. **It encourages disunity among people resulting into social classes.** This increases social tension between the rich and the poor in the society making it difficult to mobilise all people for development purposes.
15. **It leads to rural urban migration.** The high incomes earned by people living in urban areas attract people to move from rural areas to towns. This leads to negative consequences such as congestion, high crime rate, gambling, slum development, etc
16. **Income inequality distorts resource allocation.** Productive resources are allocated to production of luxuries highly demanded by the rich and production of basic commodities needed by the majority who are the poor is neglected.
17. **It worsens a country's Balance of Payments (B.O.P) position**. This is due to increased importation of luxuries by the rich because they have a high marginal propensity to import hence increasing import expenditure while export earnings decline or remain fixed.
18. **It leads to income and profit repatriation especially when most of the rich individuals are foreigners.** This slows down the pace of economic growth and development.
19. **The rich indulge in excessive consumption which is unhealthy.** This greatly affects their welfare due to emergence "diseases of the rich."

MEASURES THAT SHOULD BE TAKEN TO CONTROL INCOME INEQUALITY IN UGANDA

1. **Carry out education reforms.**
   The government should change the education system so as to train job creators instead of job seekers. This can be achieved through having programmes that provide relevant training and

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practical skills required in the job market. Such skills include training in the fields of tailoring, carpentry, entrepreneurship skills, building and construction, etc.

2. **Carry out land tenure reforms.**
   The government should attempt to reform the land tenure system to allow the landless have access to land. This can be attained through making amendments in the Land act to outlaw eviction of squatters by landlords without compensation. This can encourage people to have long term income earning plans for land use. Land can also act as collateral security to acquire loans from financial institutions.
3. **Use of progressive taxation.**
   The government should tax highly the rich through Pay As You Earn (PAYE) and the income generated should be used to provide services to the poor for example provision of universal education. This can narrow the gap between the rich and the poor in an economy.
4. **Improving basic infrastructure.**
   The government should improve basic infrastructure like roads to ease transportation of raw materials to production centres and finished goods to market centres. This can encourage investment and as a result, more jobs may be created for the people.
5. **Undertake further liberalization of the economy.**
   The government should remove unnecessary restrictions on trade. This can increase the number of economic activities carried out in an economy. This can lead to creation of more employment opportunities for the people.
6. **Decentralise power.**
   The government should transfer economic decision making to the local governments. This may increase employment opportunities for the locals through increased projects to utilize local resources and placements in the local government administration.

7. **Control population growth rates.**
   The government should encourage the use of family planning methods to reduce the birth rates and consequently reduce the dependence burden. This can increase the level of savings in an economy which may lead to an increase in the level of investment.
8. **Modernise agriculture.**
   The government should undertake research so as to come up with varieties of crops that are resistant to pests and diseases in order to increase agricultural output in the country. This can improve the incomes of farmers thereby narrowing the gap between those engaged in agriculture and other occupations.
9. **Diversify the economy.**
   The government should develop many sectors in order to reduce dependence on only one sector. The government can encourage growth of sectors such as mining, industry, fishing and tourism in order to increase the rate of job creation.
10. **Provide tax incentives to investors.**
    The government should encourage foreign investment through provision of investment incentives to foreign investors in form of tax holidays and tax exemptions. This can lead to increase in investment and creation of income earning opportunities to the people.
11. **Providing credit facilities for example start-up capital especially to the poor.**
    The government should develop the service sector that is the microfinance institutions, commercial banks and other credit schemes such that soft loans can be provided to the poor

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to enable them establish income generating projects. This may lead to breakdown of the vicious cycle of poverty hence reducing income inequality among the people.

12. **Improve the political atmosphere.**
    The government should create a peaceful political atmosphere in all parts of the country to reduce disruption of production activities, displacement of settled people and destruction of social and economic infrastructure. This can encourage investment hence an increase in income earning opportunities.
13. **Encourage development of small scale enterprises.**
    The government should encourage the setting up of small scale enterprises like grain milling industries, metal fabrication among others. Establishment of such industries may increase income earning opportunities in the country hence narrowing the gap between the rich and the poor.

14. **The government should come up with rural development policies.**
    Such policies may include rural electrification, development of small scale industries and improvement of social and economic infrastructure in rural areas. This can reduce the rural – urban imbalances.
15. **The government should empower the disadvantaged groups in the society especially the women and the physically handicapped.** This may be done through provision of special employment skills like shoe making, tailoring, crafts making to such groups and provision of affordable credit for them to start income generating projects that increase their income.
16. **Undertake minimum wage legislation**
    The government should fix the wage rate above the equilibrium wage to increase the wages of low income earners and it should constantly revise it in order to match price changes in the economy. A minimum wage can reduce the income gap between wage earners
17. **The government should ensure proper resource allocation and management of funds.**
    This can help to reduce corruption and embezzlement of government funds meant for creation of income earning opportunities.

NOTE

A soft loan one with very low interest rate and long repayment period*

GUIDING QUESTIONS

1. a) Define the term **income inequality.** (01 mark)
   b) Outline any **three** forms of income inequality. (03 marks)
2. a) Account for the uneven distribution of income in your country. (10 marks)
   b) What are the demerits of income inequality? (10 marks)
3. a) Why are there income variations among individuals in developing countries? (10 marks)
   b) Suggest measures that should be taken to reduce uneven income distribution in developing countries. (10 marks)

Assignment

1. What measures have been adopted to minimise uneven distribution of income in Uganda?
2. What measures are being taken to minimise uneven distribution of income in Uganda?
3. Why do some economists argue that income inequality may be desirable at early stages of development of an economy?

NATIONAL INCOME AND STANDARD OF LIVING

Standard of living is the measure of the socio-economic wellbeing of an individual/ society as represented by the basket of goods consumed.

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OR

Standard of living is the condition of life in which people live or hope to live.

NOTE

The term wellbeing (welfare) means the state of mind which reflects happiness and satisfaction of an individual. Therefore, welfare is taken to be part of standard of living.

DETERMINANTS/ INDICATORS OF STANDARD OF LIVING IN AN ECONOMY

1. **Income per capita**/ level of income
   High per capita income leads to improved standard of living since people have enough income to afford more goods and services thereby making life more comfortable and low per capita income limits the amount and quality of goods and services consumed thereby leading to low standard of living.
2. **Level of employment/ employment status.**
   High levels of employment increase peoples' income levels thereby increasing their standard of living in an economy while high levels of unemployment lead to low income levels and low standard of living.
3. **Degree of political freedom.**
   Economies characterized by high levels of political dictatorship tend to deny people their freedom e.g. exercising democracy, freedom of speech, worship and movement leading to low standard of living while economies where individuals enjoy a lot of freedom e.g. high levels of democracy, freedom of speech, worship and movement are associated with high living standard of the people.
4. **Prevailing political atmosphere/ climate.**
   Political stability enables individuals to enjoy comfortable lives because they have peace of mind and security hence high standard of living. On the other hand, political instability makes individuals to live uncomfortable lives full of misery, worry and suffering hence low standard of living.
   OR
   Political stability encourages high production of goods and services thereby improving living standards in an economy while political instability scares away investors resulting into low levels of production in an economy which lowers standard of living.
5. **The general price level in an economy/ rate of inflation.**
   Increase in the general price level lowers the quality and amount of goods and services consumed by people thereby lowering standard of living while a decrease in the general price level increases the amount of goods and services consumed by people which leads to better standard of living.
6. **Nature of goods produced i.e. capital goods or consumer goods.**
   Increased production of consumer goods leads to direct improvement of welfare of the people hence better living standard while increased production of capital goods leads to low levels of welfare of the people because capital goods do not provide direct satisfaction to consumers.
7. **Quality and quantity of goods produced.**
   Poor quality and low quantity of goods and services produced results into low standard of living while high quality and large amount of goods and services produced and consumed improves the peoples' standard of living.
8. **Level of environmental pollution.**

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High level of pollution creates a bad environment that affects peoples' health which lowers the welfare of people while low levels of pollution create a good environment which results into improved peoples' welfare.

9. **Availability of time for leisure.**
   More time spent at work make people to over work themselves and this lowers their standard of living while more time given for leisure increases peoples' welfare since people have some rest.
10. **Nature of income distribution.**
    High level of income inequality where the majority of the people are poor lowers the quality and the amount of goods and services consumed hence poor standard of living while fair distribution of income improves people's standard of living since majority of the people have access to goods and services.
11. **The government expenditure patterns.**
    High government expenditure on unproductive activities like buying cars for Members of Parliament (MPs) and Ministers limits the amount of goods and services in an economy thereby lowering living standard while proper allocation of resources to productive activities like health and education leads to large output of goods and services which improves the living standard.
12. **The working conditions/ occupational hazards.**
    Favourable working conditions like provision of welfare facilities results in improved standard of living while increased occupational hazards result into low standard of living since they put the workers' lives at risk.
13. **Level of education and skills.**
    High level of literacy results into large quantities of better quality goods and services produced and consumed which improves living standard in an economy while low levels of education and skills result into poor quality output which lowers living standard in an economy.
14. **Level of development of infrastructure.**
    Well developed infrastructure like better road network and communication systems encourage production of more goods and services hence improved social welfare of the people while poor infrastructure in form of poor road network and communication facilities discourage production of goods and services hence low social welfare of the people.
15. **Level of technology used.**
    Use of modern/ advanced technology in the production simplifies work, increases output and improves the quality of the output leads hence high standard of living while use of rudimentary technology leads to low quantity and quality of output produced hence low standard of living.

INDICATORS OF LOW STANDARD OF LIVING IN AN ECONOMY

- ♣ Low income per capita/ levels of income.
- ♣ High rate of unemployment/ low levels of employment
- ♣ Limited degree of political freedom/ political persecution
- ♣ Political instability.
- ♣ High price levels/ high rate of inflation
- ♣ Over production of capital goods at the expense of consumer goods.
- ♣ Poor quality and low quantity of goods produced.

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- ♣ High level of environmental degradation
- ♣ Limited leisure enjoyed
- ♣ Uneven/unfair income distribution
- ♣ High government expenditure on unproductive activities.
- ♣ Unfavourable working conditions/ high levels of occupational hazards.
- ♣ Low levels of education/ high rate of illiteracy
- ♣ Poor infrastructure
- ♣ Low levels of technology

PER CAPITA INCOME

Per capita income refers to income per person/ head.

OR

Is the average income of the population in the country in a given period of time.
It is obtained by dividing national income by the total population.

$Per\ capita\ income = \frac{GDP}{Total\ Population}$ Or $\frac{N.Y}{Total\ population}$

USES OF PER CAPITA INCOME

1. **Used as an indicator of standard of living within a country.**
   High per capita income implies high standards of living while low per capita income implies low standards of living.
2. **Used for comparing standard of living in a country over time** i.e. comparing whether the people were better off in one year as compared to another year within a country.
3. **Used for comparing standard of living between countries** e.g. determining whether an average Kenyan is better off than an average Ugandan.
4. **Used to indicate the average income per person within a country**.
   This helps to determine the number of individuals living below the international poverty line.
5. **Used to determine the rate of economic growth within a country.**
   High per capita income may be an indicator that an economy is growing.

NOTE

Although per capita income is used as an indicator of standard of living, it has quite a number of limitations.

REASONS WHY PER CAPITA INCOME MAY NOT BE A GOOD INDICATOR OF STANDARD OF LIVING/ LIMITATIONS OF USING PER CAPITA INCOME AS AN INDICATOR OF STANDARD OF LIVING

1. **It does not take into account the distribution of national income.**
   Per capita income figure may be high when there is a high degree of income inequality in the economy i.e. when incomes are concentrated in the hands of few individuals and majority of the population is poor.
2. **It does not take into account the pattern of expenditure in the country.**
   A country may be spending a large proportion of its budget on defence, military hardware and maintaining a large army. Therefore the standard of living of the people may remain low despite the high per capita income figures arising from government spending.
3. **It does not take into account the type of goods produced.**

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Per capita income figures may be high but when the economy is producing large volumes of capital goods at the expense of consumer goods yet capital goods do not directly improve peoples' welfare.

4. **It does not consider the amount of leisure foregone.**
   Per capita income figures may be high but when high output levels are as a result of over working labour which does not reflect a high standard of living.
5. **It does not take into account the working conditions of the people.**
   Individuals working in very risky places like mines are exposed to occupational hazards which are likely to reduce their welfare despite the high per capita income figure in the country.

6. **It does not consider the price levels/ rate of inflation.**
   Per capita income figures may be high as a result of high commodity prices in the economy. High prices reduce real income of the consumers hence reduced standard of living. For this matter, per capita income may not be a good indicator of standard of living.
7. **It does not take into account the political climate in the country.**
   Per capita income figures may be high but when some parts of the country are experiencing political instabilities and economic welfare is poor in such areas.
8. **It does not take into account the quality of goods produced.**
   Per capita income figures may be high but when the goods and services produced and consumed by the people in the economy are of poor quality. Poor quality goods and services reduce peoples' welfare hence per capita income may not be a good indicator of standard of living.
9. **It does not consider social costs like pollution.**
   Per capita incomes figure may be high but when the economy is exposed to negative externalities such as pollution (land, water, air and noise). Such negative externalities reduce peoples' welfare despite high per capita incomes.
10. **Per capita income does not reflect the level of unemployment in the country.**
    Per capita income figures may be high as a result of using capita intensive techniques of production. These techniques result into increased output but employ very few individuals. (Majority of the people go without jobs)
11. **Per capita income may be high as a result of overestimating national income figures and underestimating population figures.**
    This does not necessarily imply high standards of living.
12. **It does not consider the subsistence output.**
    Per capita income may be low due to the presence of a large subsistence sector. Output from the subsistence sector may not be included when estimating national income yet goods and services produced under this sector contribute to the welfare of the people.

REASONS WHY PER CAPITA INCOME FIGURE IS A POOR MEASURE OF STANDARD OF LIVING IN AN ECONOMY OVER TIME/ LIMITATIONS OF USING PER CAPITA INCOME TO MEASURE STANDARD OF LIVING IN AN ECONOMY OVER TIME

1. **It ignores changes in the boundary of production over time.**
   Over time, the boundary of production changes as new items appear on the market while others disappear due to changes in the pattern of demand. Because of such variations over

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time, the per capita income figure may change but when the standard of living might have not changed.

2. **It ignores changes in the price level in the country over time**
   Some years may experience high prices (inflation) while other years' prices may be low. In the years of high inflation, national income figures appear to be high but standard of living is low. In years when prices are low and stable, per capita income figures tend to be low yet the standard of living is high.
3. **It ignores changes in the levels of accuracy in data collection over time.**
   Over time, methods of collecting data improve. In such a case, per capita income figures tend to increase. However, this does not necessarily mean improved standards of living.
4. **It ignores changes in the size of the subsistence sector over time.**
   As the size of the subsistence sector reduces, the commercial sector expands. This leads to higher per capita income figures yet the standard of living may be low. When the subsistence sector is large, per capita income is low yet the standard of living may be high.
5. **It ignores changes in the distribution of income over time.**
   Over time, per capita income may be high but when there is wide spread income inequality which does not imply improvement in welfare.
6. **It ignores changes in the political climate prevailing in the country over time.**
   Over time, per capita income may be high but when there are political unrests in the country which makes people live uncomfortable lives full of misery, worry and suffering hence low standard of living.
7. **It ignores changes in the amount of leisure foregone over time.**
   Over time, per capita may be high yet the people are working for long hours. This does not imply improvement in welfare.
8. **It ignores changes in the quality of goods produced over time.**
   Over time, per capita income may be high but when people are purchasing poor quality goods leading to low standards of living.
9. **It ignores changes in the level of taxation over time.**
   Over time, per capita income may be high but when the government is charging high direct taxes that lower the income available for consumption hence low standard of living.
10. **It ignores changes in tastes and preferences over time.**
    With time, peoples' tastes and preferences for certain commodities may become favourable hence high per capita income figures yet with low standards of living.
11. **It ignores changes in the rate of unemployment over time.**
    Over time, per capita income may be low but when the rate of unemployment is low which implies improved welfare compared to a year when per capita income is high with high unemployment rates.
12. **It ignores changes in the nature/type of goods produced over time.**
    Over time, per capita income may be high yet there is increased production of capital goods which do not directly improve peoples' welfare.
13. **It ignores changes in the social costs e.g. pollution over time.**
    Over time, per capita income may be high but when society experiences high rates of pollution from the numerous economic activities which implies low levels of welfare.
14. **It ignores changes in the pattern of government expenditure over time.**
    Over time, per capita income may be high but when there is increased expenditure on military weapons rather than merit goods. This does not imply better standards of living within a country.

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15. **It ignores changes in the degree of freedom over time.**
    Over time, per capita income may be high but when the economy is characterized by high levels of political dictatorship that tend to deny people their freedom e.g. exercising democracy, freedom of speech, worship and movement leading to low standard of living.
16. **It ignores changes in working conditions or level of occupational hazards over time.**
    Over time, per capita income may be high but when workers are faced with increased occupational hazards hence poor welfare.

LIMITATIONS OF USING PER CAPITA INCOME FIGURES TO COMPARE STANDARDS OF LIVING BETWEEN COUNTRIES

1. **They do not consider differences in the boundary of production between countries.**
   Per capita income figures may be high in one country due to a more inclusive boundary of production where illegal activities are included yet in reality people are experiencing low standards of living.
2. **They do put into account differences in the levels of accuracy in data collection between countries.**
   Some countries have accurate and reliable statistical data while others have inaccurate and unreliable statistical data. Therefore it would be wrong to compare the welfare of different people in different countries using such statistical data.
3. **They do not consider differences in population figures between countries.**
   Per capita income figures in most countries especially LDCs are inaccurate due to inaccurate population and national income estimates. This makes a wrong basis for international comparison.
4. **They ignore differences in the methods used to measure national income between countries.**
   Most LDCs use the output approach while developed countries use income or expenditure approach. The per capita income figures may be high when the country uses the expenditure approach instead of the output approach. The high expenditures may be as a result high prices of goods and services which does not reflect high standards of living.
5. **They do not consider differences in price levels between countries.**
   Different countries experience different price levels. The per capita income figures of one country may be high when the general price level of goods and services in the country is high. This does not necessarily imply high standard of living but high cost of living.
6. **They ignore differences in political climate between countries.**
   Some countries are politically stable while others are politically unstable and thus comparing the two is hard since the unstable country may have high per capita income figures yet with low standard of living.
7. **They ignore differences in tastes and preferences between countries.**
   People in different countries tend to have different tastes and preferences. The per capita income of one country may be high when the goods and services produced in that country do not meet the tastes and preferences of consumers.
8. **They ignore differences in requirements between countries due to climatic differences.**
   Countries that experience severe climatic conditions such as winter spend highly on warm clothing (winter coats), heating equipments etc and this leads to high per capita income figures but this does not mean high standards of living as opposed to countries with tropical climate where people do not need such items.

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9. **They do not take into consideration differences in the size of the subsistence sector between countries.**
   Different countries have different sizes of the subsistence sector. Developing countries have a larger subsistence sector as compared to developed countries and thus have low per capita income figures simply because it is difficult to value the subsistence output. However, this does not necessarily imply low standard of living.
10. **They do not consider differences in production and transport costs between countries.**
    Countries experience different transport costs e.g. land locked countries always experience high transport costs. High transport costs raise the market price of commodities leading to high per capita income figures but this does not necessarily imply better standards of living of the people as compared to countries with low transport costs.
11. **They do not take into account differences in the nature of income distribution among the people between countries.**
    Per capita income figures may be high in one country but when income is unevenly distributed i.e. concentrated in a few hands with the majority of people being poor which does not reflect high standards of living yet in another country per capita income may be low but when income is fairly distributed and thus people are enjoying high standards of living.
12. **They do not consider differences in quality of goods produced between countries.**
    The quality of goods produced is not the same between countries. Per capita income figures may be high in one country yet there are poor quality goods produced which does not reflect high standards of living.
13. **They ignore differences in the amount of leisure enjoyed between different countries.**
    Per capita income figures may be high in a country where people over work and do not enjoy leisure which lowers their living standards. However, per capita income figures may be low in another country where people are having time to enjoy leisure and therefore their living standards are high.
14. **They do not consider differences in the levels of employment between countries.**
    Per capita income figures may be high in one country but when there are high rates of unemployment in that country due to use of capital intensive techniques of production. This does not imply better standards of living in that country.
15. **They do not consider differences in the value of currencies coupled with the problem of exchange rates between countries.**
    Per capita income figures are measured in monetary terms and countries use different currencies e.g. Uganda uses the shilling and Nigeria uses the naira. To compare per capita income figures of different countries, one common currency like the dollar should be used. However, the exchange rates are not the same and thus a comparison of living standards using per capita income figures becomes difficult.
16. **They do not consider differences in the nature/ type of goods produced between countries.**
    Per capita income figures may be high in a country due to production of mainly capital goods which do not directly improve peoples' standards of living and low in another where there is more production of consumer goods.
17. **They ignore differences in the nature of government expenditure between countries.**
    Per capita income figures may be high in a country that spends a lot on non-productive projects which do not contribute directly to peoples' welfare e.g. expenditure on military hardware. However, per capita income may be low in another country that spends more on merit goods like safe water, health care, education etc that improve on peoples' welfare.

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18. **They ignore differences in the levels of taxation between countries.**
    High levels of taxation lead to low standards of living despite high per capita income figures.
19. **They ignore differences in social costs between countries.**
    Per capita income figures may be high in a country where social costs such as pollution exist which does not imply better standards of living than where the social costs are low.

THE COST OF LIVING AND PRICE INDEX

Cost of living refers to the amount of money required by an individual to sustain a lifestyle he/she is accustomed to.

The cost of living is determined by the value of money.

Value of money is the amount of goods and services that a unit of money can purchase. The higher the quantity of goods and services that a unit of money can purchase, the higher the value of money and the reverse is true

The value of money depends in the price level in an economy. An increase in the price level leads to a fall in the value of money and vice versa. This is because as the price increases, a unit of money purchases less units of a commodity.

A change in the cost of living implies a change in the standard of living. An increase in the cost of living leads to a decline in the standard of living and the converse is true.

Changes in the cost of living are measured using price indices

PRICE INDEX

Price index is the figure which measures the relative changes in the prices of goods and services from one period which is the base year to another period which is the current year.

Consumer price index (cost of living index) is the measure of the relative changes in the price level in an economy in the current year as compared to the base year based on changes in the prices of selected consumer goods and services.

TERMS USED IN PRICE INDICES

1. **Base year.**
   This refers to the year in which prices are relatively stable as compared to other years. The base year is assigned an index of 100 which is a conventional figure that serves to indicate that prices were stable in that year.
2. **Current year.**
   This is a year selected for comparison with the base year.
3. **Basket of goods.**
   This is the collection of items or commodities to be used in the computation of the price index. The basket of goods consists of items that are consumed by majority of the individuals in an economy/ society under consideration. The items included in the basket are sampled from the market. For instance the basket of goods may comprise of food items like maize, rice, beans and cassava.
4. **Weight**.
   This refers to the relative importance customers attach to particular commodities in the selected basket. The commodities are given this importance using numerical values like 1, 2, 3, 4, … the most important commodity in the basket is assigned the weight of 1, the second important is assigned a weight of 2 and the sequence continues in that order.
5. **Price relative (simple price index)**
   This is a figure which measures the relative changes in the price of a single commodity between the base year and the current year.

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PROCEDURE FOR COMPUTING PRICE INDICES (COST OF LIVING INDEX)

1. Selection of a base year in which prices of goods were relatively stable, giving the base year an index of 100.
2. Selection of a basket of goods and services consumed by a typical family.
3. Getting prices of goods in the basket both in the base year and current year.
4. Calculation of price relatives for each commodity (simple price index) using the formula;

$$Price\ relative\ (simple\ price\ index) = \frac{Current\ year\ price}{Base\ year\ price} \times 100$$

5. Calculating the average price relative/ average simple price index using the formula;

$$\text{A. S. P. I} = \frac{\text{Summation of price relatives}}{\text{Number of commodities}}$$

6. Attachment of weights to each commodity in the basket. The weight simply indicates the relative importance that consumers attach to the commodities.
7. Calculation of the weighted index for each commodity using the formula;

$$Weighted\ index = Price\ relative \times Weight$$

8. Calculation of the average weighted index for the year using the formula;

$$\text{A. W. I} = \frac{\text{Summation of weighted index}}{\text{Summation of weights}}$$

WORKED EXAMPLE

1. Study the table below and answer the questions that follow;

Commodity	Base year prices (2005)	Base year indices	Prices (2006)	Weights
P	200	100	150	4
Q	250	100	300	1
R	150	100	240	3
S	400	100	400	5
T	300	100	450	2

Calculate the

i. Price relative for each commodity in 2006 (05 marks)
ii. Weighted index for each commodity (05 marks)
iii. Simple price index for 2006 (02 marks)
iv. Weighted index for 2006 (02 marks)

TRIAL QUESTIONS

1. Study the table below showing commodity prices for selected items (2000 and 2004) and answer questions that follow.

Commodity	Average price index 2000 (Ug.shs)	Simple index (2000)	Average price 2000 (Ug.shs)	Weight index (2004)
A	1000	100	1200	2
B	800	100	1000	4
C	400	100	650	3
D	750	100	900	5
E	1500	100	1800	1

Calculate;

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i. The simple index for 2004 (06 marks)
ii. Weighted index for 2004 (06 marks)

2. Study the table below showing a country's price indices and answer the questions which follow;

Commodity Kg/ litres	1998 Average price (shs)	1998 Simple price index	1995 Average price (shs)	1995 Simple Price index	Weight	Weighted index
Sugar (kg)	800	100	1000	-	3	-
Salt (kg)	450	100	600	-	5	-
Maize (kg)	220	100	400	-	6	-
Meat (kg)	700	100	1200	-	2	-
Fuel (l)	550	100	950	-	5	-

Calculate;
i. The simple price index for 1995 (03 marks)
ii. Weighted price index for 1995 (03 marks)
iii. Average weighted price index for 1995 (02 marks)

3. Study the table below and answer the questions that follow;

commodity	Base year Prices 2010	Base year Simple index	Current year prices	Weight
Sugar (kg)	1500	100	2100	4
Beans (kg)	300	100	450	3
Rice (kg)	1200	100	1500	2
Bread (kg)	1200	100	1500	1

Calculate;
i. Simple price index (04 marks)
ii. Average price index (02 marks)
iii. Weighted price index for the year 2013 (02 marks)

USES/ IMPORTANCE OF COMPUTING PRICE INDICES IN AN ECONOMY

1. **They are used in measuring changes in the value of money i.e. whether there was inflation or deflation.** An increase in price indices indicates rising prices of commodities hence there is a fall in the value of money. A decrease in the price indices indicates a decrease in price of commodities and this shows an increase in the value of money.
2. **They are used to determine the cost of living.** A price index which is above 100 indicates a rise in the cost of living. However, a price index which is below 100 indicates a fall in the cost of living.
3. They help in comparing the cost of living of the people in a country over time.
4. They help in comparing the cost of living between countries.
5. **They are used in wage determination as wages may vary with the cost of living index.** Certain organizations determine their wages according to the cost of living index. An increase in price indices (above 100) indicates a rise in the cost of living. This compels the employers to increase the wages of the workers to cope with the rising cost of living.

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6. **They are used in determining tax rates.** As price indices increase, the cost of living also increases. The government may reduce direct taxes to increase disposable incomes of the people. This is intended to enable people survive during the period of rising cost of living. However, as price indices decrease, direct taxes can be increased since there is a fall in the cost of living.
7. They are used to measure the terms of trade of a country.
8. They are used in determination of interest rate i.e. the interest rates charged depend on the rate of inflation.
9. **They help in deflation/ adjustment of nominal national income so as to obtain real national income.** Inflation always increases the national income figures. A price index can be used to eliminate the increase in the nominal value of goods and services.
   To change nominal GDP to real GDP, we use a special index known as GDP deflator given as;

$$Real\ GDP = \frac{Nominal\ GDP}{GDP\ Deflator} \times 100$$
$$= \frac{Nominal\ GDP}{Price\ index} \times 100$$

Example

Given nominal GDP of shs 100m and a price index of 144, calculate the real GDP.

Solution

$$Real\ GDP = \frac{Nominal\ GDP}{Price\ index} \times 100$$
$$= shs\ \left(\frac{100}{144} \times 100\right) m$$
$$= shs\ 69.4m$$

Exercise

Given that nominal Gross Domestic Product is shs 150,000,000,000 and the consumer price index is 105, calculate the real Gross Domestic Product.

PROBLEMS ENCOUNTERED WHEN MEASURING CONSUMER PRICE INDEX IN UGANDA

1. **Difficulty in getting a suitable base year where prices are relatively stable.** Prices of commodities are ever changing making it difficult to get a reliable base year which can be used in computing the price index.
2. **Difficulty in selecting a representative basket of goods.** Individuals consume different commodities. Therefore it becomes difficult to select a range of goods consumed by all people. As a result, the price index computed using such a basket does not indicate valid cost of living index for the general population.
3. **Difficulty in attaching weights to goods in the basket.** Consumers attach different degrees of importance to different commodities. Similar commodities may be given different weights depending on the consumers' tastes and preferences. This complicates the process of compiling price indices.
4. **Changes in tastes and preferences.** Consumers' tastes and preferences change over time due to changes in certain conditions in Uganda. This creates a problem because the basket of goods has to be changed from time to time. It also changes the weights to be attached to the selected goods.

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5. **Problem of price changes within the year.** These changes are due to change in the quality of the commodities, changes in the cost of production among others. This makes it difficult to have uniform prices to be used in the computation of price indices for the selected basket of goods.
6. **Differences in prices of goods in different areas/ regions.** The prices of the commodities selected are not the same in all areas in Uganda. This is due to differences in bargaining, price discrimination among others. Therefore, it becomes difficult to get prices of the commodities both in the base year and the current hence complicating the process of compiling price indices.
7. **Appearance and disappearance of products from the market.** With passing of time, new products are put on the market while old ones disappear from the market. This means that the basket of goods must be changed from time to time which complicates the computation of price indices.
8. **Limited data/ information.** There is limited information about prices, new products on the market and consumers' expenditure. For example new products on the market are on high demand but are not included in the basket of goods. This leads to misleading statistical data and the price indices computed are not realistic.
9. **Limited personnel with appropriate skills needed for compiling relevant information.** There are few trained people who are skilled in the work of collecting information on prices of goods and consumption habits of the people. This results into computation of wrong price indices which do not reflect a true cost of living index.
10. **Limited facilities for collecting, resourcing and storing data.** The equipment needed to electronically process and store data are in limited supply. This is because the equipment is expensive. This makes it difficult to store the data collected and thus data is sometimes lost.
11. **Absence of standardized weights and measures for quantifying goods**. Different commodities are sold using different weights and measures. Some people use heaps, others tins and baskets. As a result, different prices are charged for the different units of measurements. This complicates the process of getting a standard price to be used in computing price indices.
12. Sampling is done in a few areas; the whole country is not covered.
13. Commodities are usually sampled and not all commodities are included.
14. Difficulty in valuing goods exchanged through barter.

NATIONAL INCOME EQUILIBRIUM

The equilibrium level of national income is reached when there are no economic forces operating to change the level of national income.

In the short run, national income is in equilibrium when injections are equal to leakages.

INJECTIONS AND LEAKAGES IN AN OPEN ECONOMY

Injections are elements/items that add to the circular flow of income.

Examples of injections

- Investments (I)
- Government expenditure (G)
- Exports (X)
- Capital inflows

Leakages (withdrawals) are elements/items that reduce the circular flow of income.

Examples of leakages

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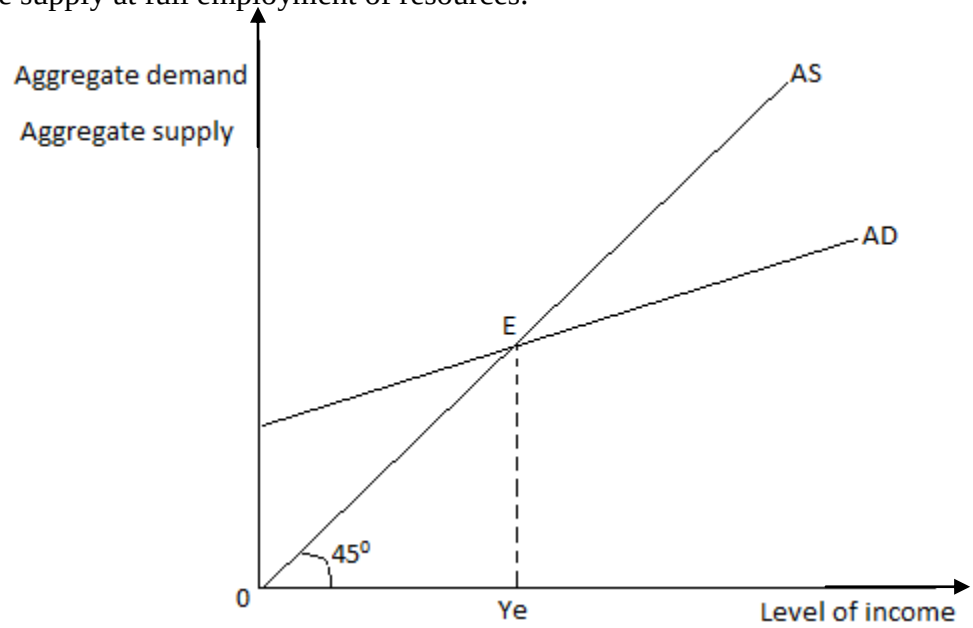
- ♣ Savings (S)
- ♣ Taxation (T)
- ♣ Imports (M)
- ♣ Capital outflows

NOTE

National income is in equilibrium when injections = leakages. That is;

I + G + X = S + T + M

In the long run, national income is in equilibrium when aggregate demand is equal to aggregate supply at full employment of resources.



E = Equilibrium point
Ye = Equilibrium level of income.

AGGREGATE DEMAND

Aggregate demand is the total demand for goods and services in an economy at a given period of time.

OR

Aggregate demand is the total amount of expenditure on goods and services by all sectors in the economy.

Components of aggregate demand in an open economy

- ♣ Consumption expenditure by households on consumer goods I
- ♣ Expenditure on investment by firms (I)
- ♣ Government expenditure (G)
- ♣ Net expenditure in the foreign sector (X – M)

Determinants of aggregate demand

- ♣ General price level.
- ♣ Level of income.
- ♣ The size of the population.

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- Level of taxation and subsidisation.
- The existing stock of capital.
- The available stock of consumer goods and services.
- The distribution of income.
- The level of money supply.

AGGREGATE SUPPLY

Aggregate supply refers to the total quantity of all goods produced by all firms in an economy at different price levels during a given time.

Determinants of aggregate supply

- The general price level.
- The techniques of production.
- The level of taxation/ subsidisation/ the availability of incentives to producers.
- The level of utilisation of existing natural resources.
- The skills of labour.
- The number of firms/ industries in the country.
- The market size/ the aggregate demand.
- The level of monetisation of the economy/ the size of the subsistence sector.
- The level of infrastructural development.
- The entrepreneurial ability.
- The degree of liberalisation of the economy.
- The political atmosphere.
- The cost of production.
- The availability of raw materials.

NATIONAL INCOME DISEQUILIBRIUM

According to Lord Keynes, it is possible to have all the resources employed but when aggregate demand exceeds aggregate supply at full employment level of resources. He called this situation an **inflationary gap.**

It is also possible to have all resources employed but when aggregate supply exceeds aggregate supply. He called this situation a **deflationary gap.**

AN INFLATIONARY GAP (NEGATIVE OUTPUT GAP)

An inflationary gap is an economic situation where aggregate demand exceeds aggregate supply at full employment level of resources (income)

Illustration

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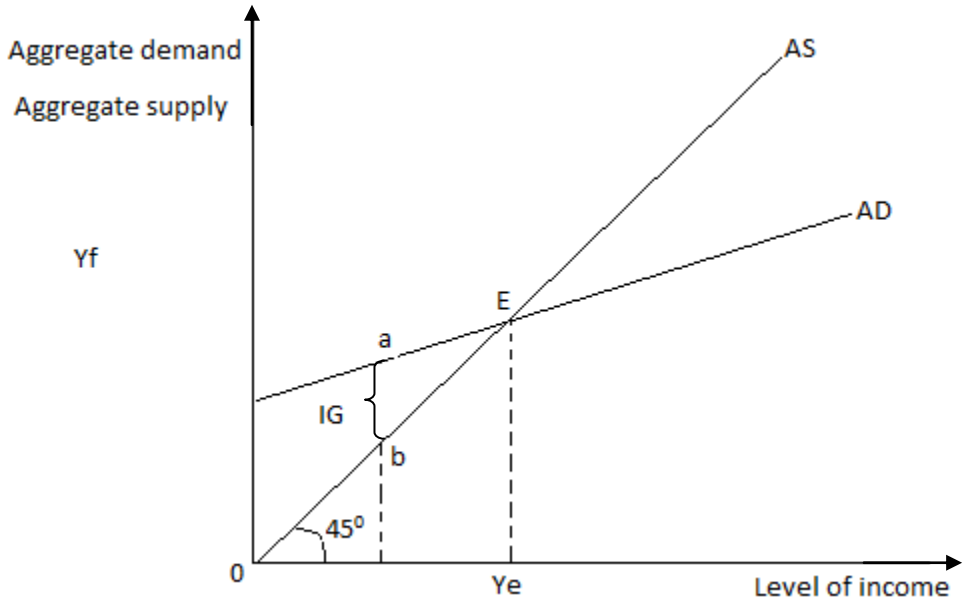

The gap ab represents the inflationary gap.

Yf is income at full employment level

Ye is the equilibrium income

E is the equilibrium point

EFFECTS OF AN INFLATIONARY GAP

- ♣ Persistent increase in prices of goods and services
- ♣ Upward pressure on factor prices e.g. wages
- ♣ Increased demand for factors of production
- ♣ Increased profits for firms
- ♣ Increased importation of goods and services

HOW TO CLOSE AN INFLATIONARY GAP

1. Increase direct taxes so as to reduce peoples' disposable income hence reducing aggregate demand.
2. Reduction in government expenditure for example cutting down wages and salaries paid to workers. This reduces peoples' income and thus they remain with less money to spend on goods and services thereby reducing aggregate demand.
3. Control wages. This is achieved through the maximum wage policy aimed at reducing the wages and salaries of employees thereby reducing aggregate demand in the economy.
4. Use of restrictive monetary policy for example selling government securities to the public, increasing the bank rate, etc. This reduces on the amount of money in circulation and thus checks on aggregate demand.
5. Discourage exportation of goods and services which are scarce in the economy. Reduction in exports guarantees enough goods and services for consumption thus increasing aggregate supply and reducing the inflationary gap.

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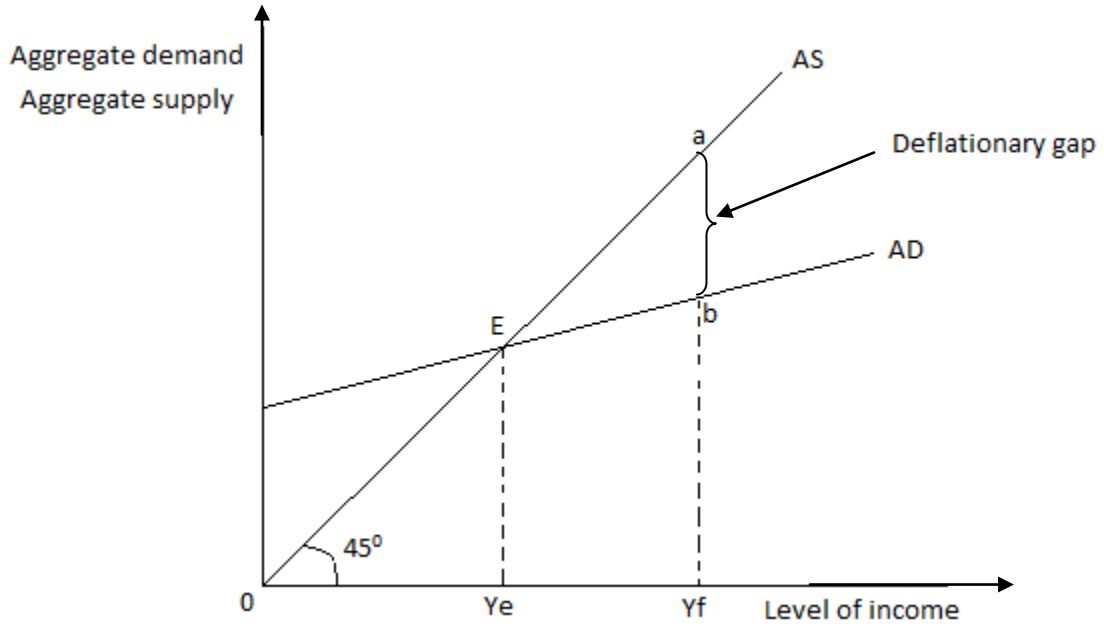
6. Encourage importation of goods and services which are scarce in the economy. This boosts aggregate supply hence reducing inflationary gap.
7. Minimum price legislation/ fixing a minimum price. A minimum price encourages producers to produce more goods and it discourages consumption.

A DEFLATIONARY GAP (POSITIVE OUTPUT GAP)

A deflationary gap is an economic situation where aggregate supply exceeds aggregate demand at full employment level of resources.

Illustration



Ye = Equilibrium level of income
ab = Deflationary gap
Yf = full employment level of income
E = Equilibrium point

EFFECTS OF A DEFLATIONARY GAP

- ♣ Decline in prices
- ♣ Decline in output and economic growth.
- ♣ Rising unemployment
- ♣ Decline in government revenue
- ♣ Decline in incomes
- ♣ Decline in demand for goods and services
- ♣ Existence of surplus output in the economy.

HOW TO CLOSE A DEFALTIONARY GAP

1. Reduce direct taxes. A reduction in direct taxes increases peoples' disposable income hence increasing aggregate demand, investment, output and employment hence closing the deflationary gap.

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2. Increase government expenditure. This can be through increased provision of essential goods and services either free of charge or at subsidized prices. This increases aggregate demand on consumption hence closing the deflationary gap.
3. Increase wages. And salaries of workers. This increases incomes of workers leading to an increase in aggregate demand which in turn increases investment, employment and output hence closing a deflationary gap.
4. Use of expansionary monetary policy. This increases money supply in the economy which helps to stimulate aggregate demand for goods and services.
5. Encourage exportation of goods and services which are abundant in the economy. This creates an outlet for surplus domestic output which helps to increase incomes of exporters hence increasing the level of aggregate demand.
6. Discourage the importation of goods and services which are abundant in the economy so as to reduce on the supply of such goods. This increases the demand for domestic goods so that aggregate supply matches with the level of aggregate demand in an economy.
7. Fixing a maximum price. This discourages production of goods and services and encourages consumption.
8. Improvement of infrastructure for example the transport network to ease transportation of commodities from areas of plenty to areas of scarcity.
9. Provide a conducive investment climate. This encourages more investment activities that generate more income for the people thus leading to increase in aggregate demand for goods and services.

CONSUMPTION, SAVING AND INVESTMENT THEORIES

CONSUMPTION THEORY

Consumption refers to the total expenditure on goods and services which yield utility in the current period

OR

Consumption is the act of using a good or service to satisfy human needs.

CONSUMPTION FUNCTION

This refers to the income – consumption relationship. This relationship is algebraically expressed as $C = a + bY_d$

Where;

C = consumption (dependent variable)

a = autonomous consumption (consumption at zero income)

b = Marginal Propensity to Consume (MPC)

Yd = Disposable income.

When the household's income is zero, it will consume some minimal amount via begging, borrowing or drawing from past savings. This level of consumption is autonomous because it persists even when there is no income. The part of income which depends on income is induced consumption and it varies with disposable income i.e. the higher the household's income the higher the consumption and vice versa.

CONSUMPTION FUNCTION

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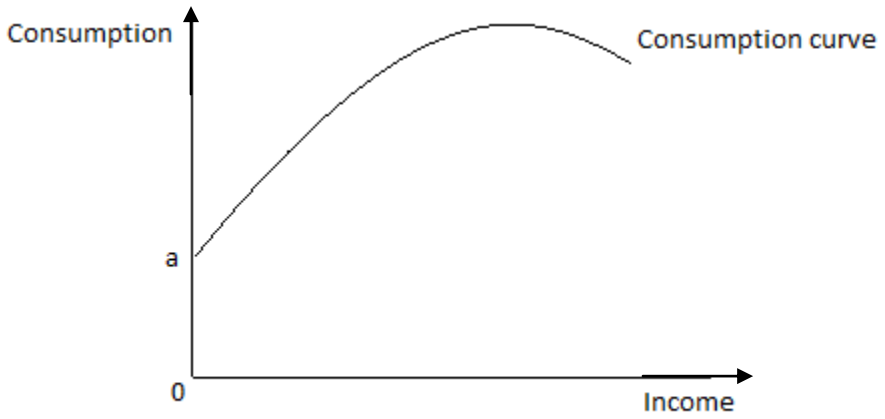

As income rises, MPC declines. Rich individuals have a low MPC i.e. as their income increases; they consume a small proportion of the additional income.

CONCEPTS USED IN CONSUMPTION THEORY

1. **Autonomous consumption**
   This is the consumption that does not dependent on the income level. It exists even at zero income.
2. **Induced consumption**
   This is consumption which depends on the level of income i.e. increase in income leads to increase in consumption and vice versa.
3. **Marginal Propensity to Consume (MPC)**
   This is the proportion of the additional income that is spent on consumption/consumed.
   It is the ratio of change in consumption to change in income

$$Marginal\ Propensity\ to\ Consume = \frac{Change\ in\ coonsumption}{Change\ in\ income}$$

   The determinants of Marginal Propensity to Consume include;
   - ♣ The level of income
   - ♣ The consumption habits
   - ♣ The price level
   - ♣ The interest rates on savings
   - ♣ Level of direct taxation
   - ♣ Level of development of commercial banks and other financial institutions.

   NB
   MPC tends to reduce with a rise in income. is noted to be high among the poor and relatively low among the rich.
4. **Average Propensity to Consume (APC)**
   This is the proportion of the total income spent on consumption.
   It is the ratio of consumption expenditure to income.

$$Average\ Propensity\ to\ Consume = \frac{Consumption}{Income}$$

5. **Marginal Propensity to Import (MPM)**
   This is the proportion of the additional national income sent on imports in the country.
   It is the ratio of change in import expenditure to change in national income.

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$$Marginal\ Propensity\ to\ Import = \frac{Change\ in\ import\ expenditure}{Change\ in\ national\ income}$$

6. **Average Propensity to Import (APM)**
   This is the proportion of the total national income that is spent on imports.
   It is the ratio of the total import expenditure to total national income.

$$Average\ Propensity\ to\ Import = \frac{Total\ import\ expenditure}{Total\ national\ income}$$

WORKED EXAMPLES

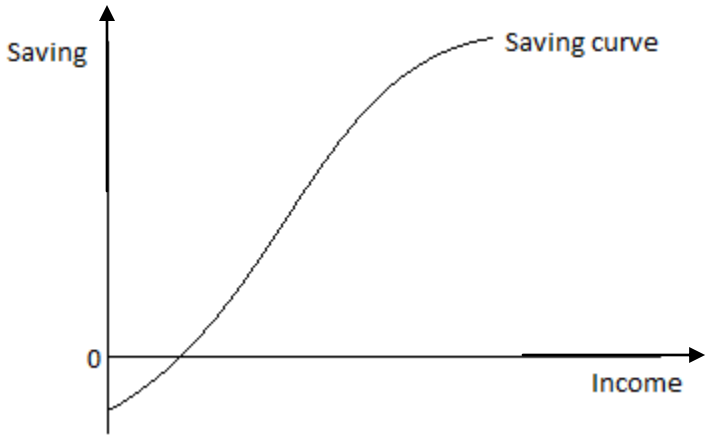
1. Given that a country's national income is Shs 60,000 billion and its total consumption is Shs 48,000 billion; calculate its APC.
   Ans: APC = 0.8
2. Given that a country's Gross Domestic Product (GDP) increased from 100 million $ to 300 million $ and the value of imports increased from 25 million $ to 75 million$; calculate the Marginal Propensity to Import.
   Ans: MPM = 0.25.

SAVINGS THEORY

Savings refers to the proportion of income which is not spent on current consumption but put aside for future use.

SAVINGS FUNCTION

Households decide how much to consume and how much to save. It follows that once we know the dependence of consumption on disposable income, we get to know the dependence of saving s on disposable income. The graph below shows that savings increase as income increases.



CONCEPTS USED IN THE SAVINGS THEORY

1. **Contractual savings**
   These are savings where an individual is supposed to save a fixed amount of money in a given time for example per month. Such savings include savings with insurance companies, pension schemes.
2. **Discretional savings**
   These are savings where people are not obliged to save a specific amount in a given time for example bank deposits, building societies.
3. **Marginal Propensity to Save**
   This is the proportion of the additional income that is saved
   It is the ratio of change in savings to change in income.

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$$Marginal\ Propensity\ to\ save = \frac{Change\ in\ savings}{Change\ in\ income}$$

MPS tends to increase with increase in income. It is noted to be high among the rich and low among the poor.

NOTE

$$MPC + MPS = 1$$

PROOF

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

Dividing throughout by ΔY;

$$\frac{\Delta Y}{\Delta Y} + \frac{\Delta C}{\Delta Y} = \frac{\Delta S}{\Delta Y}$$
$$1 = MPC + MPS$$

∴ MPC = 1 – MPS

MPS = 1 – MPC

4. **Average Propensity to Save (APS)**

This is the proportion of the total income that is saved.

It is the ratio of total savings to total income.

$$Average\ Propensity\ to\ Save = \frac{Savings}{Income}$$

Example

Given that a rise in national income from $5200 million to $5280 million led to an increase in savings from $400 million to $420 million;

Calculate;

a) MPS: Ans = 0.25
b) MPC: Ans = 0.75

Exercise

You are provided with the following table. Fill in the missing values;

Y	C	S	ΔY	ΔC	ΔS	MPC	MPS
100,000	60,000	-	-	-	-	-	-
120,000	50,000	-	-	-	-	-	-
150,000	70,000	-	-	-	-	-	-
185,000	85,000	-	-	-	-	-	-
200,000	90,000	-	-	-	-	-	-

DETERMINANTS OF THE LEVEL OF SAVINGS IN AN ECONOMY

- The level of income
- The level of prices in the economy/ rate of inflation
- Degree of liquidity preference

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- Degree of uncertainty
- Rate of interest on bank deposits
- Age of individual
- Consumption and expenditure habits of the people
- Health status of the person
- Degree of awareness of the masses about the benefits of saving
- Level of direct taxes
- Level of development of the financial sector (commercial sector)
- Degree of monetisation of the economy/ size of the subsistence sector
- Degree of accountability.

THE INVESTMENT THEORY

Definitions

Investment

Investment refers to the process of devoting part of a person's/ national income to production and creation of capital goods in an economy.

Gross investment

It refers to the value of investment before deducting the depreciation value.

Net investment

Net investment refers to the total amount of capital invested minus depreciation (capital consumption allowance)

OR

Net investment refers to additional capital goods produced in excess to those that wear out and need to be replaced.

TYPES OF INVESTMENT

1. **Autonomous investment**
   This is a form of investment which is independent of the level of national income. It is influenced by other factors such as wars, climate, population growth rates, labour force, government policy etc.
2. **Induced investment**
   This is the form of investment which is dependent on the size of national income. The higher the level of national income, the higher the level of national income and the lower the level of national income, the lower the level of investment.

DETERMINANTS OF THE LEVEL OF INVESTMENT IN AN ECONOMY

1. **Level of interest rates on loans.**
   High interest rates on loans discourage potential investors from getting loans from commercial banks and other financial institutions. This leads to low levels of investment. On the other hand, low interest rates on loans make borrowing cheap and this enables investors to borrow and buy capital goods hence high investment levels.
2. **Marginal efficiency of capital.**
   Marginal efficiency of capital is the anticipated monetary returns on an additional unit of capital invested. The higher the marginal efficiency of capital, the greater the level of investment and the lower the marginal efficiency of capital, the lower the level of investment
3. **Level of income.**
   High incomes result into high savings which leads to high levels of investment. However low incomes give rise to low savings and this leads to low investment levels.
4. **Government investment policies.**

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Favourable policies to investors like tax holidays, subsidies lead to higher levels of investment since they reduce the cost of doing business. On other hand, unfriendly policies like heavy taxation, unnecessary bureaucracy discourage investors hence low investment.

5. **The level of existing stock of capital.**
   The higher the level of existing stock of capital, the higher the level of investment and vice versa
6. **Level of development of infrastructure.**
   Well developed infrastructure in form of good roads, railway lines, communication facilities encourage investors to set up production units. On the other hand poor infrastructures discourage investments.
7. **The level of entrepreneurship skills**
   High levels of entrepreneurship skills lead to high investment levels due to high degree of organisation of factors of production and risk taking and vice versa.
8. **The existing political atmosphere.**
   Existence of political stability in an economy encourages both local and foreign investors due to assured security of life and property hence high levels of investment. However, political instability creates uncertainty and this scares potential investors leading to low levels of investment in the economy.
9. **The prevailing economic situation.**
   Macroeconomic stability in form of stable prices and stable exchange rates encourage investments and vice versa.
10. **The state of technology used.**
    The use of more efficient methods of production leads to high levels of investment since the production process is simplified. On the other hand, use of poor technology discourages investments in the economy.
11. **Market size**
    A wider market directly stimulates greater economic activities and this leads to high levels of investment since the production line is quickly cleared. However a small market discourages investment.
12. **Etc.**

ASSIGNMENT

Suggest measures that should be taken to increase the level of investment in your country.

THE MULTIPLIER CONCEPT

The multiplier refers to the number of times that an initial change in a given expenditure multiplies itself to generate a final change in national income.

The size of the multiplier can be calculated using the formula;

$$Multiplier, K = \frac{\Delta Y}{\Delta E} \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots (`1)$$

Where;

ΔY = change in income

ΔE = Change in initial expenditure.

From equation 1,

$$\Delta Y = K\Delta E \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots (2)$$

NOTE

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The size of the multiplier depends on the Marginal Propensity to Consume (MPC) and the Marginal Propensity to Save (MPS). Therefore the multiplier can be expressed in terms of MPC MPS as follows.

$$K = \frac{1}{1 - MPC} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (3)$$

But 1 – MPC = MPS

$$K = \frac{1}{MPS} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (4)$$

Also note that;

$$Final\ income = initial\ income \times Multiplier \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (5)$$

$$Final\ level\ of\ income = initial\ income + change\ in\ income \ldots\ldots\ldots (6)$$

Examples

1. Given that; the current level of Gross Domestic Product is 300 million shillings, the increase in national investment expenditure is 50 million shillings and the marginal propensity to save is 0.2, calculate the final level of national income.
   Ans = 550 million shillings.
2. Given that the marginal propensity to consume (MPC) in an economy is 0.7 and there is a change in investment of shs 50 million, calculate the following;
   (i) investment multiplier: **Ans = 3.3333**
   (ii) final change in income in the economy: **Ans = 165 million shillings**
3. Given that initial national income of a country is Shs 22 billion and that the MPS is 40%, calculate the final income in that country.
   Ans = shs 55 billion
4. Given that the marginal propensity to consume (MPC) in a two-sector economy is 80%, initial investment is Shs 20,000,000 million, initial equilibrium level of income is Shs 80,000,0000 million. If investment increased by Shs 5,000 million;
   Calculate;
   (i) Multiplier value: **Ans = 5 times**
   (ii) New equilibrium level of income: **Ans = 80,025,000 million**

Exercise

Given that a country's national income is Uganda shillings 100 million; the marginal propensity to consume 0.6, calculate the country's final level of income.

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