ECONOMICS

REVISION NOTES OF NATIONAL INCOME

National income is the measure in money terms of the total value of **all final** goods and services resulting from the productive activities of a country in a given period of time usually one year.

FORMS:

1. **GROSS DOMESTIC PRODUCT (GDP)**

   This refers to the measure in money terms of the total value of all final goods and services that are produced within the geographical / territorial boundaries of a country within a given period of time usually one year.

2. **GROSS NATIONAL PRODUCT (GNP)**

   This refers to the measure in money terms of the total value of all final goods and services that are produced by nationals both within the country and national abroad for a given period of time, usually one year.

3. **NET DOMESTIC PRODUCT (NDP)**

   This refers to the measure in money terms of the total value of all final goods and services that are produced within the geographical boundaries of a country by both nationals and foreigners within a given period of time, usually a year less depreciation costs.

4. **NET NATIONAL PRODUCT (NNP)**

   The measure in money terms of the total value of all goods and services that are produced by nationals both with the country and nationals abroad for a given period, of time usually a year less depreciation costs.

   Note: Depreciation means the value lost by capital assets in the process of production of goods and services.

   Or The tear and wear of machines.

   Depreciation cost / capital consumption allowance refers to the amount of money set aside to cater for the loss of value of capital assets in the process of production.

Example:

Given that a country's stock of machinery is valued at Ugshs. 10m at the beginning of the year, the total output of machinery during the year was Ugshs 50m. Depreciation cost during the year is 20%. Calculate a) The value of depreciation.

b) Net output during the year.

DETERMINANTS OF THE LEVEL OF NATIONAL INCOME;

1. **The size of available capital stock:** Availability of capital stock leads to large scale investment and increased production hence the growth of national income while limited stock of capital leads to low levels of investment and reduced production in the country hence low levels of national income.
2. **The size of the available market.** Large internal and external markets enable large scale production leading to high levels of national income than when the market size is small.
3. **Level of technology in the country.** With highly developed technology, resource exploitation is high leading to high output and growth in national income while poor technology limits the level of resource exploitation leading to low levels of production and hence low levels of national income.
4. **Level of infrastructural development in the country;-** Well developed infrastructure leads to increase in production resulting into increase in the level of national income while poorly developed infrastructure in form of poor roads, poor communication etc. limits the level of production leading to low levels of national income.
5. **Government policy on investments;**- Good government policies like subsidization, tax holidays etc attract investments leading to increase in production of goods and services and hence increase in the level of national income while poor government policies on investment like high taxes limit production leading to low growth of national income.
6. **The political climate of the country:** A country which is politically stable attracts investment leading to increase in output and growth in the level of national income. On the other hand, countries with frequent wars scare away the potential investors leading to low levels of output hence low National Income.
7. **The size and quality of natural resources;**- A country with large amounts of valuable natural resources, if exploited, increases the level of saving, investment and growth of national Income. On the other hand, a country with limited supply of natural resources or limited exploitation has limited output hence low levels of National Income.
8. **The size and quality of labour force;**- A country with highly skilled labour has a higher levels of production in terms of quantity and quality hence higher levels of National Income compared to a country dominated by semi skilled and unskilled labour.
9. **The size of the commercial sector;**- Countries with a big commercial sector have large production which generates high levels of National Income while a country dominated by the subsistence sector has low levels of production hence limited levels of National Income.
10. **The population growth rate;** National Income is likely to be low in a country with a high population growth rate and a big population especially if majority of the people are poor. Such a country has many dependants which results into reduced savings and investments. While an economy with a low population growth rate and with a majority of people rich has high levels of savings and investment hence high levels of National Income.
11. **The level of entrepreneurship development;** Where the entrepreneurs are available, investments and production levels are high hence levels of National Income compared to where the entrepreneurs are limited.
12. **Cultural influence and attitude towards modern ideas;-** A country with less cultural rigidities can easily apply new methods of production leading to high output and increase in the level of National Income while a country whose population has cultural rigidities finds it hard to apply new methods of production in order to increase output and National Income.

13. **The level of accountability in the country.** A country with high levels of accountability has high levels of investments and production and hence high levels of National Income compared to a country where corruption is rampant.

FACTORS THAT LIMIT THE GROWTH OF UGANDA'S NATIONAL INCOME.

1. Limited natural resources and limited exploitation of the available ones. The natural resources are few and of low value.
2. Low- levels of entrepreneurship. Most of the investments are owned by foreigners who always repatriate profit limiting growth of National Income.
3. Limited market for Uganda's products. The international market is limited because of the trade restriction due to the poor quality of the products. On the other hand, the internal market is also limited because majority of the population are poor.
4. Low levels of technology;- This has limited the level of resource exploitation which limits production and lowers the level of National Income.
5. Inadequate skilled labour. Most Ugandans are either semi skilled or unskilled which limits production leading to low National Income.
6. High levels of subsistence production – especially under agricultural sectors. Most people under agriculture produce for their own consumption in this reduces the rate of the increase of National Income.
7. Dominance of primary production associated with low prices. Uganda's exports are agro – based and the income earned is always low. This is because the exports are always semi- ; processed products.
8. Existence of political instability in Uganda;- This leads to low levels of National Income because investors are scared and even the money which would have been used for investment is spent on war. This limits production in the economy.
9. High population growth rate; the population growth rate in Uganda is high leading to increase in the dependency in the country. This reduces savings and investment in the country leading to low levels of National Income.
10. High levels of corruption and poor governance in the country. Most of the funds are embezzled instead of investing in different projects that would generate more National Income.
11. Low levels of infrastructure development in Uganda; the transport network, power supply, training institutions and other forms of infrastructure are in poor condition, this limits production in different parts leading to low levels of National Income.
12. Poor attitude towards modern production; Traditional beliefs are strong in the country and the population is resistant to modern changes. This discourages modern production techniques hence reduced output and low national income.
13. Poor government policy in form of high taxes; delayed registration, limited subsidization, lack of tax holidays etc. this reduces production since people are left with low disposable income to invest.
14. High levels of liquidity preference. People prefer holding their assets in cash form than investing it to increase output.
15. High levels of influence from other countries and international bodies;- They tend to give policies that may not help the country to increase the levels of National income e.g. determining the projects to invest in.

Revision Question

Give reasons why the GDP of USA is higher than the GDP of Uganda.

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

1. Increasing the level of exploitation of available national resources.
2. Increasing the level of technology in order to increase production. This can also help to improve the quality of the products
3. Expanding markets both within the country and abroad. The external market can be expanded by joining regional cooperation further and the local market can be improved by increasing people's income. This encourages production and increase in national income.
4. Improving the level of political stability in the country so that people can settle in the various regions and carry out production.
5. Equipping labour with better skills and more practical skills that are needed to reduce job seekers and create job creators that would increase out put levels and national income.
6. Encouraging increased capital inflow and limiting capital outflow. This can be done by encouraging production for exports in order to earn more foreign exchange.
7. Developing the infrastructure further. Better infrastructure leads to reduction in production costs and attracts large scale production in the country.
8. Offering of investment incentives inform of tax holidays, tax relief and subsidies. This helps to attract large scale investment which leads to growth in the National Income.
9. Encouraging savings to avail funds for investment e.g. forced savings under NSSF or fixing attractive interests on deposits in banks.
10. Privatizing the economy further. Expanding the private sector attracts many people to participate in production and this leads to growth in the level of National Income.
11. Controlling the population growth rate in the country. As a result, the government expenditure on dependants reduces leading to increase in savings, investment in capital accumulation.
12. Commercialization of agriculture to increase production for exchange in the economy. Some of the products can be exported to generate more forex.
13. Encouraging further diversification of the exports e.g. by producing more non traditional exports like flowers.
14. Providing credit facilities to local investors in the country. This helps to increase capital base that is used for investment to increase output and national income levels.
15. Ensuring economic stability by controlling inflation in the country. This helps to reduce the production costs and attracts large scale investments.

COMPUTING / MEASURING / ESTIMATING NATIONAL INCOME

There are 3 methods or approaches of computing National Income.

1. **Income Approach;** - This method involves adding up all incomes earned by persons and firms that are engaged in the production of goods in services in a given year. It involves the summation of rent, wages, interest in profits (R + W + I + P). However, **transfer payments** are not included to avoid double counting when using income approach e.g. Pocket money, gifts, bursaries etc.
2. **The output / product Approach / value added Approach;-** In this approach, total National Income is got by adding up the money value of all **final** goods and services from all productive activities of the economy in a given period of time especially one year. using this approach, total national income is got by adding up the value of output by household (C), the value of output by the firm (I), the value of output by the government (G) and the value of net export (X – M)

Value Added Approach – involves the summation of the value that is added at each successive stage in the production process. E.g. in the production of bread, value is added at different stages to get the total value of bread at the final stage. Let us say the value of bread is 2000@, the value added at each stage is as follows;-

Item	**Value Added**
Wheat	250
Wheat flour	250
Sugar	300
Milk	200
Eggs, yeast etc.	1000
Total	**2000**

3. **Expenditure Approach:** - This involves adding up all expenditure on **final** goods and services that are produced in a country in a given period of time especially one year. It involves the summation of expenditure by the household (C), expenditure by the firms (I) expenditure by the government (G) and net expenditure abroad (X – M).

PROBLEMS FACED UNDER EACH APPROACH

1. **Expenditure Approach**
   a) It is difficult to distinguish between intermediate products and final products which results into double counting.
   b) There is inadequate information on individual's expenditure. This is mainly because people don't keep records or are not willing to reveal their expenditure.
   c) It is difficult to determine expenditure on imports since many people are involved.
2. **Income approach**
   a) Inadequate data on individual's incomes i.e. people are not willing to reveal their incomes.
   b) There is a problem of double counting – This is mainly due to the failure to distinguish between transfer payment and Quid Pro quo.
   c) It is difficult to estimate net income from abroad since many people are involved.
   d) It is difficult to determine the boundary of production i.e. which activities to be included in the calculation of national Income.
   e) The unpaid for services are left out yet they contribute to National Income e.g. work done by oneself work done by full time housewives.

3. **Output approach**
   a) Inadequate information concerning the value of output mainly because people do not keep records.
   b) Failure to distinguish between intermediate and final products.
   c) It is difficult to determine the money value of products under subsistence.
   d) It is difficult to determine the boundary of production i.e. what to include and what is exclude in National Income figures.

NB. Distinguish between transfer payments and Quid Pro Quo

Transfer payment refers to the income received without providing a good or a service eg pocket money to students, bursaries, gifts, old age pension, unemployment benefits etc.

The major sources of transfer payments are;-

a) Government

b) Non – government organizations (NGO)

c) International organizations

Quid pro quo refers to the income earned in exchange of a good or a service.

Problems faced in computing National Income figures.

1. **There is a problem of price changes / inflation** which may be mistaken to mean increase in National Income yet the actual income might have remained constant or fallen.
2. **Inadequate data of people's income and expenditure**. This is mainly because people don't keep records or aren't willing to reveal their expenditure.
3. **It's difficult to determine depreciation costs** and therefore hard to determine the net National Income of the country.
4. **It's difficult to determine net income earned from abroad.** This is mainly because there are many people involved and also there is smuggling.
5. There is a problem of **double counting.** This is mainly because of the failure to distinguish from intermediate and final good or transfer payment is quid pro quo.
6. **It's difficult to determine the money value under subsistence production**. Such output doesn't reach the market and the values are just estimated. Such information may be wrong and misleading.
7. **Difficult to determine the money value of the unpaid for services** e.g. housewives contribute a lot to national output yet their contribution isn't included in National Income statistics.
8. **It is difficult to determine the value of government expenditure**. This is because government services are highly subsidized and sometimes the expenditure is not revealed.
9. **It's difficult to determine the boundary of production** i.e. determining what products to include is a problem because of failure to distinguish between economic and non economic activities.
10. There is a problem of **inadequate trained personnel and shortage of equipment**. This results into inefficiency in collecting the computing data.
11. There is a problem of **illegal activities** e.g. prostitution. Income earned from such activities is hard to know is; difficult to include in National Income figures.
12. There is a problem of **errors encountered in the computation**. These are mainly commissions and omissions which result into wrong information about National Income figures.
13. It is difficult to compute the money value of **inventories and work in progress**. Such output might move from one year to another and its difficult to determine whether it was out put for the new or old year.

Statistical and conceptual problems faced in computing national income.

Definition of statistical: These are direct problems which cause difficulty in computing National Income figures and they result out of failure to get the data.

Definition of conceptual; these are definition problems which arise because of the failure to interpret correctly the information at hand.

NB. Some problems are statistical and conceptual.

Statistical problems

1. Inadequate on the people's income and expenditures.
2. Price changes in form of inflation in the country.
3. Inadequate skilled manpower and equipment
4. errors and omissions
5. unpaid for services
6. Valuation of government services is high.
7. It is difficulty to calculate the values of depreciation of machines
8. Difficulty in computing money values of subsistence output.

Conceptual problems

1. Difficulty in the computing of the value of inventories
2. Difficulty to determine boundary of production.
3. Difficulty in determining illegal activities.
4. Hard to determine value of unpaid services.
5. Hard to determine value of subsistence output.

NB.

Why the output approach is more appropriate in computing National Income figures in Uganda.

1. Data on output is more readily available than on income and expenditure.
2. The output approach helps in avoiding the problem of double counting. This is because computation is only for the final value of output.
3. Most people are engaged in more than one economic activity ad others are self employed. Output approach is the most appropriate since it covers all the production units.
4. It is easy to determine the boundary of production under the output approach compared to the other approaches where it is difficult to determine what to include and what to exclude.
5. Determining the value of subsistence output is possible when using the output approach.
6. It's possible to determine the net output and income from abroad when using the output approach. The products that are supposed to the foreign market can be values before being exported.

NB. Why does Uganda use GDP not NNP when computing National Income

1. It is difficult to determine the value of depreciation costs.
2. it is difficult to determine income earned from abroad.

Reasons for computing National in Uganda.

1. To find out the **rate of economic growth** and development over a given period of time e.g. income per capital indicates the rate at which the economy is growing either positively or negatively.
2. **To guide the government in economic planning and analysis/ Research purposes.** The figures provide information like performance of different sectors, level of poverty. This information is useful during national planning as well as making policies like taxation, subsidization and population control or research purpose.
3. **To provide International agencies giving foreign aid with information** about National Income to see which sector they can finance.
4. National Income figures are computed **for comparison purposes in a country over time.** The figures are computed in different years to find out whether the standard of living is improving or declining over time e.g. standard of living is higher in a year where the capital income has increased.
5. **National Income figures are computed to show how income/resources are distributed** in a country. This helps in guiding a country on taking appropriate action of redistributing income to reduce income inequality in the country.
6. **It's computed to help in international comparison between countries**. The city with higher capital income is considered to be more developed than a country with lower per capital income.
7. National Income are computed **to show the pattern of expenditure** in the economy; this is especially if they are computed using the expenditure approach. The figures show total expenditure in consumption, investment by the government and expenditure on the net imports or abroad.
8. National Income figures are computed **to reflect the market size in the country**. If the National Income is high, it means that majority of the people can afford many goods in services; attracting local and foreign investors to carry out production.
9. **To show the structure of the economy** and identifies the weakness of the structure for future action. This is by identifying the sectors which contribute much to the National Income e.g. if agriculture contributes much, it indicates that the country is dominated by the economic sector.
10. **To determine the standard of living** of the people in the country by way of indicating the per capita GNP.

Revision Question:

Explain the importance of computing National Income in an economy.

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Standard of living and cost of living;

Standard of living refers to the social economic well being / welfare of an individual or society as represented by the amount of goods and services consumed.

OR:

The condition of life in which people live or hope to live in a society during a given period if time.

Cost of living refers to the amount of money required by an individual to maintain a given level of welfare in terms of goods and services.

OR

The amount of money needed by an individual to maintain/ sustain a life style he/she is accustomed to.

NB.

There is an inverse relationship between the cost of living and standard of living. When the cost of living is increasing the standard of living is declining and vice versa.

Determinants of standard of living

1. **General Price level**. During inflation, the standard of living declines and when the prices fall, the standard of living increase.
2. **Income and distribution:** High levels of income and fair distribution lead to high levels of standard of living compared to low levels of income with poor distribution.
3. **Level of employment in an economy**. A country of high employment level enjoys higher standard of living that the one with many people who are unemployed.
4. **Political climate:** High standards of living are enjoyed during times of political stability than during war times.
5. **The amount of goods and services during a given time**. A country with many goods and services enjoys high standard of living than a country with limited good sand services.
6. **The amount and value of natural resources.** Existence of many valuable natural resources leads to high standard of living than under a situation where natural resources are scarce.
7. **The quality of the country's labour force.** (Level of education): Highly specialized labour force leads to high levels of production hence improved welfare than unskilled labour force.
8. The amount of leisure available to the people in the country.
9. The level of technology development.
10. Degree of political freedom enjoyed by the people in the country.
11. Quality of social services
12. Quality of goods and services produced.
13. Nature of goods produced.

PER CAPITA INCOME

Per capita income is the average income of the people in the country during a given period of time.

It is computed / calculated by dividing total national income by the total population of the country.

Per capital income = $\frac{\text{Total National Income}}{\text{Total population of the country.}}$

E.g. study the table below showing total population and GNP of countries A and B in the questions that follow.

Country	**GNP**	**Population (million)**

	(million dollars)	
A	1200	20
B	750	15

Calculate the capital income for countries A and B

A **B**

Reasons why Per Capita income is not a good indicator for standard of Living

1. It doesn't take into account how income is distributed among people in various sectors of the country; Capita income may be high yet the income is unevenly distributed and controlled by few people. It becomes wrong to assume that majority of the people enjoy high welfare.
2. It doesn't take into account the composition of the goods that are produced in the country i.e. capital goods (goods that produce other goods) while consumer goods are scarce implying that the people's standard of living isn't high.
3. It does not show the amount of leisure available to people in the country in a given period of time. Per capita income may be high where people overwork themselves without enjoying much leisure and this doesn't indicate standard of living.
4. It doesn't consider price levels (inflation) in a country during a particular time. During inflation, per capita income may be high yet the standard of living is low, due to high cost of living.
5. It doesn't put into account the level of employment in the country. Per capita income may be high yet there are high levels of unemployment and low standards of living.
6. It doesn't take into account the political climate in the country. Per capita income figures may be high yet there are high levels of political instability and people are not settled hence low standard of living.
7. It doesn't take into account the pattern of government expenditure. Per capita income figures may be high yet there is expenditure on non – productive activities that do not improve welfare directly.
8. It doesn't take into account the levels of taxation. Per capita income figures may be high yet there are high levels of taxation that reduce the disposal income.
9. It doesn't consider the working conditions in the country. Per capita income figures may be high yet, there are many occupational hazards that reduce the standard of living e.g. engineering, fishing, pilots, industries, mining, and army.
10. It does not consider the level of infrastructure development. Per capita income figures may be high yet the infrastructure is poorly developed, hence low standard of living.
11. It does not take into account the quality of goods and services produced. Per capita income figures may be high yet PQ products are supplied implying local standard of living.
12. It does not put into account social costs e.g. pollution, noise, jam, accidents etc.
13. It does not put into account non marker output e.g. work done by oneself, work done by full time house wives etc.

14. It does not put into account errors of commissions (extra info) and omissions (less info). Per capita income figures may be high due to errors made in the calculation hence failure to reflect standard of living.
15. It does not put into account the size of the subsistence sector. Per capita income figures may be low yet people are living on a large subsistence sector hence enjoying high standard of living.

QNS

a) Distinguish between standard of living and cost of living.
b) What are the limitations of using per capita income to determine the standard of living of the people?

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

When comparing standard of living between 2 countries, per capita income figures are not a good indicator because

1. It does not consider the **difference** in price levels. Per capita income may be high in a country experiencing inflation hence high cost of living and low standard of living, compared to another country where per capita income figures are low but there is no inflation and the cost of living are low.
2. It does not consider **differences** in the political climate. Per capita income may be high in a country experiencing political instability implying low standard of living compared to another country where per capita income may be low but there is political stability and high standard of living.
3. It doesn't consider **differences** in infrastructural development. Per capita income may be high in a country where the infrastructure is poorly developed hence low standard of living compared to another country where per capita income figures may be low but with well developed infrastructure.
4. It does not consider the **differences** in boundaries of production. Per capita income figures may be low where many products have been excluded in the compilation indicating low standard of living compared to another country where per capita income figures are high because every product was included in the compilation.
5. It does not consider **differences** in climatic requirements. Per capita income figures may be high in a country with many climatic requirements e.g. countries experiencing winter hence low standard of living compared to another country where per capita income figures are low with no extra climatic requirements.
6. It does not take into account **differences** in quality of goods and services produced in an economy. Per capita income figures may be high in countries with low quality of goods and services, in such countries, welfare is low compared to other countries with low Per capita income but with high quality of goods and services.
7. It does not consider the **difference** in level of taxation. Per capita income figures may be high in countries with a high level of taxation such countries have a low standard of living on

the other hand, where per capita income are high with a low level of taxation, the welfare of the is high.

8. It does not take into account the **difference** in patterns of expenditure. Per capita income may be high in countries where expenditure is on non – productive activities which may not directly improve welfare as compared to other countries where per capita income figures may be low yet expenditure is on productive activities which improve the welfare of the people.
9. It does not consider the **differences** in currencies used in different countries per capita income figures may be high in a country with a currency that has low value implying that people have low standard of living; compared to another country with low per capita income but whose currency is of high value, hence high standard of living.
10. It does not take into account **differences** in working conditions. Per capita income may be high in countries that are experiencing occupational hazards and therefore low standard of living. On the other hand, per capita income figures may be low in countries with good and favourable working conditions hence welfare is high.
11. It does not indicate **differences** in the levels of employment in the country. Per capita income figures may be high in countries yet there are high levels of unemployment and therefore low standard of living. On the other hand, in some countries per capita income figures may be low yet there are high levels of employment and hence high standard of living.
12. It does not consider **differences** the amount of leisure available per capita income figures may be high yet people overwork themselves without enjoying much leisure hence low standard of living. On the other hand, per capita income figures may be low yet people enjoy much leisure and without overworking themselves hence high standard of living.
13. It does not take into account **differences** in how income is distributed among the people for various sectors. Per capita income figures may be high in some countries yet the income is unevenly distributed and a lot of income is in the hands of a few individuals where the majority are poor hence welfare is low while per capita income figures may be low in some countries yet the income is evenly distributed; high standard of living.

14 Differences in the size of subsistence sector,

15 Differences in the tastes,

16 Differences in the availability of data.

LIMITATIONS OF USING PER CAPITA INCOME FIGURES TO COMPARE STANDARD OF LIVING WITHIN A COUNTRY OVER TIME.

1. It does not consider **changes** in price levels overtime. Per capita income figures may be high at a time when the country is experiencing inflation hence high cost of living and low welfare compared to another time when per capita income figures are low but price levels are also low hence low cost of living and high standard of living.
2. It does not consider **changes** in infrastructural development overtime . Per capita income figures may be high when the infrastructure is poorly developed hence low standard of living compared to another time when per capita income is low but infrastructure is well developed in the country.
3. It does not consider **changes** in employment overtime. The figures may be high at a time when the level of unemployment is high hence low standard of living compared to another time when the per capita income is low yet the level of employment is the country is high.

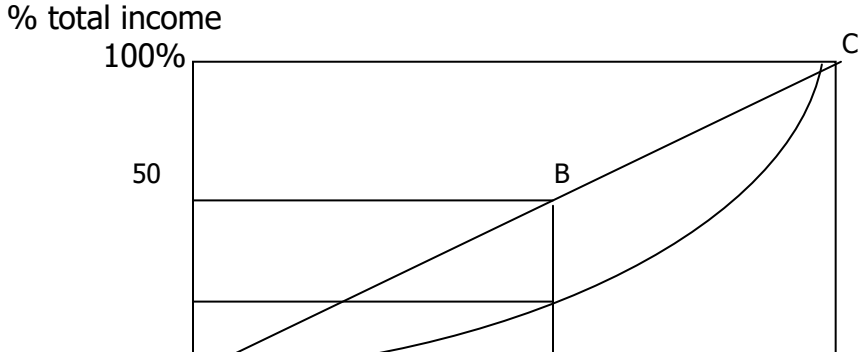
4. It does not consider **changes** in the working conditions overtime. Per capita income figures may be high when there are occupational hazards in the country hence low standard of living as compared to another time when the figures are low but good and favorable working conditions prevail and therefore high standard of living.
5. It does not take into account the **changes** in quality of goods and services produced in the economy. Per capita income figures may be high at a time where Poor quality products are produced hence low welfare compared to another time when the figures are low but high quality goods and services are produced.
6. It does not take into account the **changes** in the political climate of the country overtime. Per capita income figures may be high at a time when political instability is taking place and therefore low standard of living compared to another time when the figures are low but with political stability in the country.
7. It does not take into account the **changes** in how income is distributed among individuals or various sectors overtime. Per capita income figures may be at a time when income is unevenly distributed and a lot of income is in the hands of a few individuals hence low standard of living compared to another time when the figures are low and the income is evenly distributed with high standard of living.
8. It does not consider **changes** in the amount of leisure available. Per capita income figures may be high at a time when people overwork themselves hence low standard of living compared to another time when people enjoy leisure and have a better standard of living.
9. It does not consider **changes** in the levels of taxation. Per capita income figures may be high at a time when high taxes are levied and hence low welfare as compared to another time when the figures are low yet low taxes are levied on the public hence high standard of living.
10. It does not consider changes in the tastes and preferences overtime'
11. It does not consider changes in the requirements overtime
12. It does not consider changes in the non marketed out put.
13. It does not consider changes in the government expenditure patterns overtime.
14. It does not consider changes in the social costs overtime.
15. It does not consider changes in the composition of goods produced.

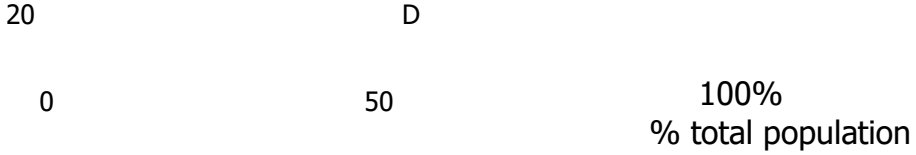
INCOME DISTRIBUTION

Income distribution means the way in which National Income shared among the population of the country at a given period time.

Income inequality refers to a situation where there is uneven distribution of income among the people within the country i.e. the co-existence of the very rich and the very poor in the same economy. Income inequality is illustrated by the Lorenz curve which is a graph that shows the way in which National Income is distributed among the total population in a given country.

Illustration





Line OBC is a line of perfect equality which shows that income is evenly distributed among the population e.g. at point B it shows that 50% of the population takes 50% of the national income.
The Lorenz curve ODC shows that income is not evenly distributed e.g. at point D, it shows that 50% of the population shares 20% of the National Income and the remaining 80% of National income is shared by the remaining 50%.
NB. The greater the distance between the line of perfect equality in the Lorenz curve, the greater the income inequality.

Forms of Income Inequality.

1. Inequalities between individual households.
2. Regional inequality
3. Sectoral inequality
4. Intra –sectoral inequality
5. International inequality

Causes of income inequality in LDCs

1. **Uneven distribution of natural resources**;- Regions with high supply of quality natural resources engage in production and have high income levels compared to regions with limited access to natural resources which limits their production and their income levels.
2. **Differences in the level of education and skills**. People who are highly educated and with a lot of skills are employed in high paying jobs and have higher income that those who are not educated or not skilled.
3. **Differences in talents and other natural abilities**: People with special talents e.g. footballers, singers, drama actors are highly paid for their talents and have higher income that those with limited talents.
4. **Differences in the nature of occupation**; People who are employed in risky jobs usually earn more income compared to people in less risky jobs.
5. **Differences in experience and seniority**;- People who have served for a long period of time under particular sectors are more experienced and earn higher income because they are capable of producing quality output compared to the newly employed people.
6. **Differences in the distribution and development of social economic infrastructure;** Areas with better infrastructure attract high investment and production and people earn more income than in areas with poor infrastructure.
7. **Differences in political favour:** Regions that are more favoured by the political set up, have high levels of investment allocations and engage in high production therefore have high income compared to those that are less favoured.

8. **Differences in the level of political stability;** Regions that are politically stable participate in production and get more income compared to those with political instability and therefore people are not settled to produce, hence low incomes.
9. **Discriminations in the labour market.** This is based on sex, religion and tribe. Workers who are discriminated against always earn less income than workers who are favoured.
10. **Differences in trade union influence;** Workers who belong to strong trade unions bargain for higher wages leading to increase in their income than workers that belong to weak trade unions or workers that are not members of any trade union.
11. **Differences in family / social background;**- Some people get much income from inheritance compared to other people with poor historical backgrounds who remain with lower income.
12. **Differences in the quantity of output produced;** incase of piece rate method of wage payment, people who produce a lot of output are highly paid compared to people who produce a lot of output are highly paid compared to people who produce less output.
13. **Differences in the number of hours worked.** Under the time rate method of wage payment, workers who work for long hours earn more income than workers working for less hours.
14. **Non – matching wage policy;-** different employers pay their workers differently. Employers who are willing and able to pay high wages have workers that earn more income than employees who are unwilling to pay high wages.
15. **Differences in access to credit;** people who access 2 credit have the capacity to increase their production hence increased income compared to people with limited access to credit.
16. **Differences in elasticity pf labour supply;** Where labour supply is inelastic, high wages are paid because of the scarcity of workers hence high income compared to where labour supply is elastic.

Effects of income inequality

Positive or Advantages

1. It encourages hard work among the poor which leads to increased output.
2. It encourages competition as the poor try to be more efficient in order to get more income.
3. It leads to supply of cheap labor by the poor people who are always willing to work at low wages- This reduces the cost of production which increases profits of the producers.
4. It encourages mobility of labour as the poor look for jobs in different places where they can earn income. This leads to fair distribution of labour in the economy.
5. It leads to better working relations between the poor workers and their rich employees. This improves work relations through group work as the poor "try to eradicate and fight poverty.
6. It leads to increased investment by the rich since they have high MPS
7. The poor people provide market for goods and services. This is because, they have higher marginal prosperity to consume. This attracts investment and increased production.
8. Encourages creativity and innovativeness among the poor. They are to be more innovative so as to increase output and income.
9. Guarantees supply of labour to unattractive jobs which are considered essential to society e.g. cleaning toilets, maids, garbage men etc.
10. Increases government tax revenue especially by taxing the rich.
11. Forces the government to begin developing projects that can help the poor improve their welfare. This includes improving the social economic infrastructure and putting up programs to reduce poverty e.g. prosperity for all, NAADS, *send a cow*, USE etc.

Negative

1. It reduces government tax revenue. This is because once the majority of the people are poor, the government collects little revenue from them in form of taxes.
2. It reduces the size of the market. Income inequality reduces aggregate demand since the poor can't afford to buy the commodities produced which in turn affects the levels of investment.
3. It leads to misallocation of resources i.e. resources are shifted from the production of goods that are demanded by the poor to the production of goods demanded by the rich.
4. It results into exploitation of the poor by the rich. The poor are underpaid by the rich employers and yet they are assigned tasks to work for long hours.
5. It creates social conflict and disharmony. Tension develops between the very rich is the very poor which can even result into political instability.
6. It encourages vices like prostitution, gambling, theft because the poor have to get means of survival.
7. It leads to RUM and its associated evils like slum development, high crime rates etc. The poor move from rural areas expecting to find jobs in town.
8. It leads to brain drain where people move to other countries expecting to get better paid jobs.
9. It increases government expenditure in providing services to the poor. This increases the dependency burden on the government.
10. It results into capital outflow inform of profit repatriation especially if the majority of the rich people are foreigners.
11. Leads to creation of social classes on the basis of income levels e.g. the society is divided into the rich and the poor classes with the poor people having low standard of living.
12. Results into BOP problems since the rich prefer buying imported expensive goods. This increases expenditure abroad.

MEASURES TO REDUCE INCOME INEQUALITY

1. **Education reforms:** Education should be made more practical so that the poor can create their own jobs e.g. woodwork, bricklaying, home economics etc.
2. **Progressive taxation:** This is where the rich are taxed more than the poor so as to reduce the economic gap. E.g. PAYE (Pay As You Earn)
3. **Improved infrastructures:** This helps to increase production hence increased income.
4. **Liberalizing the economy:** This involves removal of unnecessary restrictions on trade and investment so as to allow private individuals to participate in production.
5. **Decentralized government:** This helps to increase production at local government level and creates employment to the local population.
6. **Controlling the population growth rate:** through use of modern family planning methods. This helps to reduce the dependency ratio and increase savings and investments.
7. **Modernizing agriculture;** so as to encourage production in the rural areas. This helps in rural transformation hence increased income among the rural people.
8. **Diversification of the economy;** to enable the population participate in a variety of economic activities.
9. **Raising wages of low income earners ;** (instituting a living wage)
10. **Improving the investment climate;** so as to attract investment, create employment and increase production.

11. **Provision of affordable credit facilities;** so as to help the poor access capital e.g. use off microfinance institutions, use of SACCOS.
12. **Empowerment of the disadvantaged groups;** so as to improve their welfare this is through programmes like prosperity for all, USE etc.
13. **Privatizing the economy;** i.e. transferring ownership of assets from the government to private individuals so as to encourage increased production and employment creation in the long run.
14. **Subsidizing the poor;** or increasing government expenditure to develop the disadvantaged regions.
15. **Improving political climate;** so as to attract people to settle down and carry out production that increases their income.
16. **Encouraging the development of small scale enterprises;** so as to increase participation in production that leads to increased income.

CLOSED AND OPEN ECONOMY

A closed economy is the one without any foreign links i.e. it does not take part in international trade and does not apply to any foreign ideas, the symbols for National Income in a closed economy are C + I + G.

An open economy is the one with foreign links implying that it takes part in International trade and applies foreign ideas, the symbols for National Income in an open economy are C + I + G + (X – M)

Question : Give 4 reasons to justify why our country is an open economy.

X-TICS OF A CLOSED ECONOMY.

- No import and export trade
- No foreign investments
- There is self reliance
- No foreign interference
- Production is only for domestic consumption
- Only local resources are used in production.

X-TICS OF AN OPEN ECONOMY.

- Involvement in import and export trade.
- Use of foreign inputs
- Inflow of foreign investments.
- Use of foreign currencies
- Being a member of international bodies
- Adoption of foreign policies.

THE CIRCULAR FLOW OF INCOME IN A CLOSED ECONOMY.

- The circular flow of income in an economy refers to the flow of payments and receipts for factor services and currently produced output passing between domestic firms (I) and the household (HH)

Assumption of the circular flow

- Assumes a closed economy.
- Assumes a simple 2 sector economy i.e. house hold in the firm.
- No government intervention
- Production costs and prices remain constant.
- The household owns F.O.P.
- The business sector doesn't consume (all the output produced is sold to the house hold)
- The household doesn't produce (all F.O.P. are sold to the firm)
- All the income received by the household is spent.

Illustration of the circular flow.

From the above, arrow 2 shows the flow of factor services from the household to the Income.

Arrow 3 shows the flow of output (goods and services) from the Income to the house hold.

2 and 3 are called **real flows**.

Arrow 1 shows payments by the firm to the households for factor services.

Arrow 4 shows the payments by the Household to the firm for goods and services.

Arrow 1 and 4 are **money flows**.

NB: The circular flow of income illustrates the 3 approaches used to measure National income.

If no errors are made, the 3 approaches give identical results

a) Household expenditure on goods and services is equivalent to the value of the goods and services of the firm **E ≅ O**

b) Household income from the supply of the factors of production is equivalent to its expenditure. **Y ≅ E**

c) Income received by the firm is equivalent to the output that is produced.

Y ≅ O

Therefore since E ≅ O, Y ≅ E, Y ≅ O , it follows that "**E ≅ O ≅ Y"**

Injections and leakages in the circular flow.

Injections are elements that add to the circular flow of National Income. They include investment, exports, government expenditure and capital inflow.

Leakages are elements that reduce the circular flow of National Income

OR These are subtractions or withdraw from the circular flow of National Income.

They include imports, savings, taxation and capital outflow.

Equilibrium of national Income.

An economy is at equilibrium where injections are equal to leakages in the circular flow of income i.e. $I + G + E + K_{inflow} = S + M + T + K_{outflow}$ e.g. given that the level of investment is 50 million, the level of savings is 10 million, the level of government expenditure is 20 million, the level of export is 15 million, the taxation level is 20 million. Calculate the level of imports for the economy that is in a state of equilibrium.

Example 2:

Adjustments in National income.

1. Given GDP, derive NDP

----

2. Given GDP, derive GNP

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3. Given GDP, derive NNP

----

4. Given NNP, derive GDP

----------Note :

Distinguish between **National Income at factor cost** and national **Income at market price.**

National Income at factor cost is the one measured at what was paid to the factors of production in the production process for a given period of time while **national Income at market price** is the one measured at the prevailing prince in the market for a given period of time.

At factor cost, the firms are subsidized but do not play indirect taxes while at market prices the firms pay indirect taxes and are not subsidized.

Eg

1. Given GDPfc, derive NDPmp

---

2. Given GDPfc, derive NNP mp ----------

PRICE INDEX / COST OF LIVING INDEX.

It refers to a number that measures the changes in prices of goods and services over a given period of time.

or

A measure of relative changes in prices of commodities over a given period time.

NB. **Consumer price index (CPI**) is the measure of relative changes in prices of selected consumer goods and services over a given period of time. It is sometimes called **the retail price index.**

HOW PRICE INDEX IS COMPUTED.

1. Selecting a basket of goods and services to act as representatives of other goods in the economy.
2. Choosing a base year (a year when prices are stable)
3. Attaching prices of goods and services in the basket for both the base year and the current year.
4. Calculating the simple price index (price relative) for each commodity. The formula is Current year price x 100
   Base year price

$$\left(\frac{PC}{PB}x100\right)$$

5. Calculating the Average simple index and the formula is ;
   Sum of simple index (SI)
   Nº of commodities
6. Attaching weights:- These are in reference to tastes and preference towards the commodity.
7. Calculating the weighted price index for each commodity and the formula is

$$\left(\frac{PC}{PB}x100xweight\right)$$

   (Or Simple index x weight)

8. Calculating the average weighted index and the formula is

ε of the weighted index
ε of weights.

Example 1: study the table showing the commodity prices for selected items and answer the questions that follow;

Commodity	Base year Price (2000)	Simple index (2000)	Current year (price (2001)	Weight
A	1000	100	1200	2
B	800	100	1000	4
C	400	100	650	3
D	750	100	900	3
E	1500	100	1800	1

Calculate

a) Price relative/ simple price index for each commodity for the year 2001.
b) A.S.I for the year 2001
c) Weighted index for each commodity for 2001
d) The average weighted index 2001.

Example 2: study the table below and answer the questions that follow.

Commodity	Base year Price (2005)	Simple index(2005)	Current year price (2006)	Simple index(2006)	Weight
P	200	100	-	75	4
Q	250	100	-	120	1
R	150	100	-	160	3
S	400	100	-	100	5
T	300	100	-	160	2

Calculate

e) current year prices for each commodity (2006)

f) A.S.I for 2006

g) Weighted index for each commodity for 2006

h) The average weighted index 2006.

Problems faced in the computation of price indices:-

1. Difficulty in determining the representative basket. Only few commodities are considered and they are not representative enough of other commodities.
2. Difficulty in choosing the base year. This is because it is difficult to get a year when prices are stable since prices are always changing.
3. Tastes and preferences of people changing. It is hard to attach weight or the selected weight may not be representative enough for all people in the country.
4. Price changes/fluctuations especially with change in season. This necessitates collection of new data for computation.
5. Absence of standardized weights and measures. This mainly affects commodities which are difficult to be quantified e.g. goods sold in bundles or heap and there is no standard measure.
6. Prices differ in different areas; - it is hard to get a general price level that is representative enough of all the prices in the economy.

7. Inadequate data especially on the commodities and their respective prices.
8. Limited skilled personnel to compile the relevant information.
9. It is not applicable where barter trade in practiced; this is because no prices are attached to commodities in such a system.
10. A few areas are sampled and a bigger part of the country is left out which is not representative enough.
11. Prices are often estimated especially under subsistence production and these might be far from the actual prices.
12. As income changes, people's expenditure patterns also change, this necessitates computing new statistics.
13. People spend differently on similar products due to price discrimination; it is hard to select a representative group.
14. There is appearance of new products and disappearance of old products in the market; this necessitates computation of price indices most of the time.

Reasons for computing price index; -

1. To determine the level of inflation or deflation in the country. Where the index is above 100, it indicates inflation and the opposite.
2. To measure changes in the value of money, where the price index is above 100, it implies that money has lost value and the opposite.
3. To determine the cost of living and standard of living. Where the price index is high, it indicates high cost of living and low standards of living & the opposite.
4. For comparison purposes between countries, price index helps to compare the standards of living of people between countries.
5. To compare standards of living within a country but overtime.
6. For determining the tax levels/rates. When prices increase, the government is forced to increase the taxes so as to raise more revenue.
7. For wage determination. Wages are adjusted to match with the cost of living in order to maintain workers' standard of living (sliding scale). Increase in the price index necessitates increasing the wages of workers.
8. For deflating National income in order to give the real income. Inflation exaggerates national income figures and therefore price index can be used to make adjustments so as to et real national income or real per capita income.

   $$\text{Real GDP} = \frac{\text{Nominal GDP}}{\text{GDP deflator}}$$

   NB: the GDP deflator is calculated in the same way as the price index

   QN: Explain how the price index is computed in the country.
   What are the limitations of computations of price indices in your country?

INVESTMENT

This is the **process** of creating capital stock.

OR the **process** of devoting part of person's/nation's income for creation of capital goods.

There are two forms of investment i.e. - induced investment
- Autonomous investment

Induced Investment it the one that varies with changes in income and profit level.
Autonomous Investment is the one that is not affected by the level of income but other factors like population, political, climate, etc

Real and financial investment.
Real investment is the one in physical items which are tangible. Eg buildings, land etc
Financial investment is the one in financial markets like buying shares, bonds and treasury bills.

Pump priming: is where the government initiates programs to undertake and finance investment on public works so as to stimulate private investment.
It helps the economy in the following ways;
a) increase in infrastructural development
b) Increase in capital accumulation
c) Increase in out put.
d) Increase in local resource exploitation.
e) Creates fair income distribution
f) Helps to diversify the economy.

Factors influencing the level of investment

1. Level of income/savings
2. Level of infrastructural development
3. Government investment policy e.g. tax holidays, subsidies or over taxation.
4. Level of technology.
5. The political climate in the country
6. The size of the market
7. The level of entrepreneurship skills.
8. The nature of the land tenure system.
9. The quantity and quality of the existing natural resources.
10. The level of capital inflow and outflow.
11. The existing stock of capital
12. The profit level.
13. Social cultural factors (people's attitude to investment and culture attachment)
14. The level of interest rate on loans.
15. The prevailing economic conditions e.g. the rate of inflation.
16. The marginal efficiency of capital; if it is high, high investment.

Question: Explain the factors that influence investment in the private sector in your country.

Note: marginal efficiency of capital;
This refers tom the additional returns expected after employing an extra init of capital.
It is calculated by the formula

Factors that determine MEC
1. Market size
2. The level of interest rate
3. The level of output expected
4. The rate of depreciation
5. The quality and efficiency of co operant factors
6. Price levels

Factors limiting investment in your country.

1. Low levels of savings
2. Poor infrastructural development
3. Low level of technology
4. Political instability
5. Small size of market
6. Low levels of entrepreneurial skills
7. Few limited natural resources.
8. Unfavourable land tenure system.
9. Low profit level
10. Limited stock of capital
11. Low level of capital inflow and high level of capital outflow
12. High interest rates on loans.
13. Low marginal efficiency of capital
14. Backwardness/ high attachment to culture values
15. Unfavourable government investment policy e.g. High taxes charged on investors.

Measures to increase investment in Uganda.

1. Improving infrastructure e.g. developing roads, HEP, water supply, etc
2. Maintaining political stability.
3. Improving technology
4. Reducing interest rate on capital so as to encourage borrowing
5. Reduction in taxes so as to reduce the cost of production.
6. Encouraging savings so as to create finance for investment,
7. Controlling the population growth so as to reduce dependency burden.
8. Increasing incomes of the people so as to create capital for investment
9. Encouraging capital inflow by attracting foreign investors.
10. Encouraging entrepreneurial skills through undertaking training.
11. Increasing the size of the market by joining the regional integrations e.g. EAC, COMESA
12. Increasing the exploitation of the available resources.
13. Creating macro-economic stability e.g. stability in the exchange rates/interest rates/prices etc.
14. Providing information about investment opportunities to both local and foreign investors.
15. Further privatization to encourage private investment.
16. Providing credit facilities to low income groups e.g programmes like prosperity for all, NAADS.

Note: capital deepening; is the process of increasing the stock of capital by changing the production technique where the use of capital is emphasized in the production process in relation to other factors especially labour.

Capital widening refers to the process of increasing the stock of capital without changing the proportion in which it is used in relation to other factors especially labour

CONSUMPTION:

Is a process of using goods and services to satisfy human wants. It can either be induced or autonomous.

Induced consumption: Is consumption expenditure which changes directly with changes in income.

Autonomous consumption: is part of total consumption expenditure which doesn't change with change in NY, but due to other factors like seasons, tastes and preferences.

Factors influencing consumption

1. Level of income and its distribution.
2. Level of savings, high savings, lower consumption.
3. Government policy on taxation and subsidization.
4. Level of government expenditure
5. The interest rate on loans.
6. Cultural and religious beliefs.
7. The quality of the products.
8. Tastes and preferences
9. The level of prices
10. The season of the year.

Qn: - Explain the factors limiting consumption levels in Uganda;
- What measures should be undertaken to increase consumption in our country?

SAVINGS:

Savings is the portion of income which is not spent on current consumption but put aside for future use.
NB: **Saving** is the act of abstaining from current consumption to create funds for future use.

Factors influencing the level of savings

1. Income level
2. Population growth rate-high population less savings because of high dependency burden.
3. The level of economic activities
4. The level of development of commercial banks
5. Price level (degree of price stability) high price level = low savings, since people fear that their money would lose value in the commercial banks.
6. Marginal propensity to save/marginal propensity to consume.
7. Interest rates on deposits.
8. Degree of accountability in the financial institutions e.g. corruption of managers etc.
9. Existing stock on capital.
10. Government policy on savings. NSSF where the government encourages forced savings.
11. The level of taxation.
12. The spending habits/time preference.
13. Degree of monetization/commercialization.

Account for low levels of savings in your country.

1.
2.
3.
4
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10

11
12

MACRO-ECONOMIC DIS-EQUILLIBRIUM:

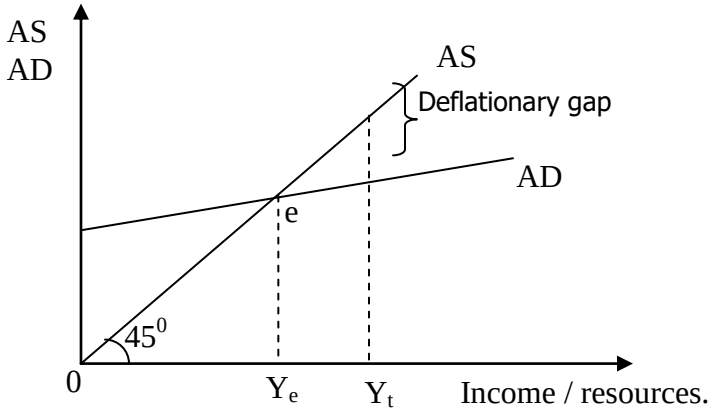
An economy is at **equillibrium** when aggregate demand is equal to aggregate supply. Any deviation causes a macro-economic disequilibrium.

Macro-economic disequilibrium is a situation in an economy where either aggregate supply exceeds aggregate demand or aggregate demand exceeds aggregate supply. It can lead to either a **deflationary gap or an inflationary gap.**

DEFLATIONARY GAP (POSITIVE OUTPUT GAP/RECESSIONARY GAP)

This is a situation in an economy that is experienced where aggregate supply exceeds aggregate demand at full employment level of income or resources.

Illustration



Point E is the equilibrium level where aggregate demand is equal to aggregate supply yet resources aren't fully employed. Above point the aggregate supply exceeds aggregate demand implying that the economy is experiencing a deflationary gap.

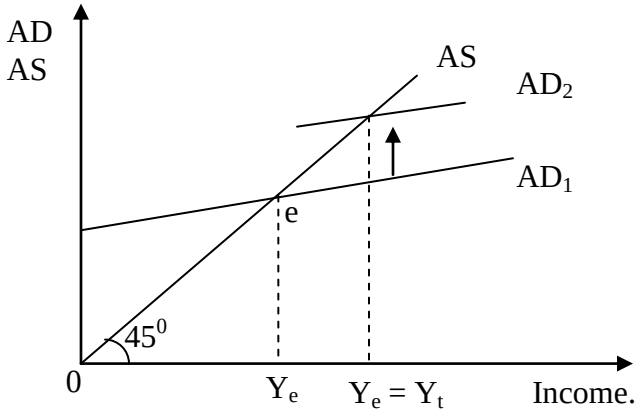
This gap is characterized by:-

Measures to reduce the deflationary gap;-

A deflationary gap can be covered by increasing aggregate demand and this can be done by the following;-

1. Reducing direct taxed in order to increase people's income.
2. Increasing government expenditure so that people who work in the government sector can earn more income for spending.
3. Use of expansionary/monetary policy (increasing money supply)
4. Increasing wages to enable workers earn more income expenditure
5. Increasing exports to create market abroad
6. Reducing imports to encourage people to consume locally produced goods.
7. Subsidizing consumers to encourage increase in consumption.
8. Use of the minimum price legislation

How a deflationary gap can be closed



In order to attain full employment of resources, there is need to increase aggregate demand from AD1 to AD_2.

THE INFLATIONARY GAP: (negative output gap)

This is a situation that is experienced in the economy where aggregate demand exceeds aggregate supply at full employment level.

Under this situation, it's impossible to increase aggregate supply since all resources are fully employed.

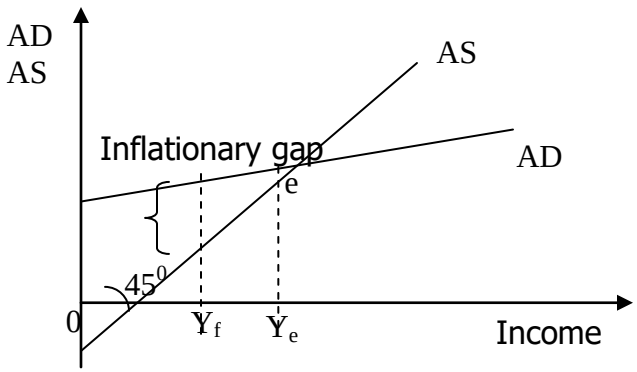
Characteristics

1. Persistent increase in the general price level.
2. Increase in the cost of living
3. Decline in the standards of living
4. Scarcity of commodities
5. Smuggling of commodities for other countries.

Effects

1. It encourages investment
2. Leads to increased importation in the country
3. Leads to increased factor prices.
4. Results into increased resource allocation
5. Results into social tension.

Illustration:

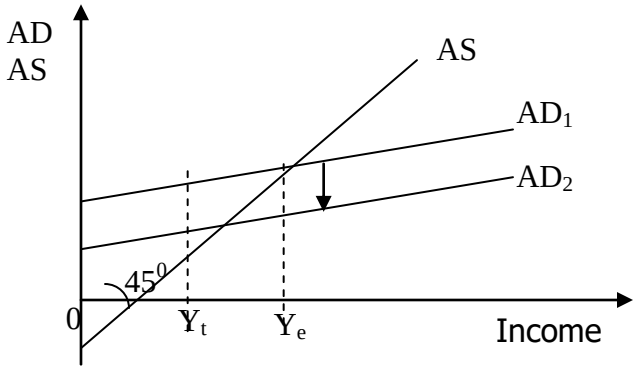


Measures to close an inflationary gap;

1. Use of contradictory or restrictive monetary policy or reducing money supply.
2. Increasing direct taxes in order to reduce disposable incomes.
3. Use of maximum price legislation.
4. Reducing government expenditure so that people working in government sector earn less income for spending/retrenchment policy.
5. Reducing exports for the market abroad.
6. Increasing imports.
7. Create a wage freeze or controlling wages.

How an inflationary gap can be closed.

Illustration:



CONCEPT OF MARGINAL PROPENSITY TO CONSUME AND MARGINAL PROPENSITY TO SAVE

Marginal propensity to consume(MPC) is the proportion of ones additional income spent on consumption.

OR It's the ratio of change in consumption expenditure to change in income.

MPC = Change in consumption expenditure
Change in income

$$MPC = \left(\frac{\text{Change in C}}{\text{Change in Y}} \right)$$

Marginal propensity to save (MPS) is the proportion of ones additional income that is saved

OR the ratio of change in savings to change in income.

MPS = Change in savings
Change in income

$$\left(MPS = \frac{\text{Change in S}}{} \right)$$

Change in Y

e.g. Given that the consumption expenditure changed from 20 million shillings to 45 million shs, due to the change in income from 50 million shs to 100 million shs. Find the MPC

NOTE;

1. Average propensity to consume (APC) is the proportion of the total income that is spend on consumption
or the ration of the total consumption expenditure to income

$$APC = \frac{\text{Consumption expenditure}}{\text{Income}}$$

$$\left(APC = \frac{C}{Y}\right)$$

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

$$APS = \frac{\text{Savings}}{\text{Income}}$$

$$\left(APS = \frac{S}{Y}\right)$$

3. Marginal propensity to tax (MPT) is the proportion (fraction) of additional income that is paid as tax.

4. **Average propensity to tax (APT)** is the proportion (fraction) of the total income that is paid as tax.

5. Marginal propensity to import (MPI) is the fraction of additional income that is spent on imports.

6. Average propensity to import (API) is the fraction of the total income that is spent on imports.

THE CONCEPT OF MULTIPLIERS: -

A multiplier refers to the number of times a given change in initial expenditure multiplies it self to give a final change in NY i.e. the ration of change in NY to change in expenditure that brought it.

TYPES OF MULTIPLIERS:

1. **The Investment Multiplier.** Refers to the number of times the initial change in investment expenditure multiplies itself to bring about a final change in national Income. Its given by the formula; $\frac{\text{Change in income}}{\text{Change in investment expenditure}}$
2. **The Government Multiplier**; refers to the number of times the initial change in government expenditure multiplies itself to give a final change in NY. Its given by the formula;
   $\frac{\text{Change in income}}{}$

Change in government expenditure

3. **The Export Multiplier**; refers to the number of times the initial change in export earning multiplies itself to give a final change in NY.

Its given by the formulae;

Change in income

Change in export earning

4. **The tax multiplier;** refers to the number of times an initial change in taxation earning multiplies itself to give a final change in NY. Its formulae is;

   Change in income

   Change in tax earning

5. **The Income Multiplier;** refers to the number of times the initial change in total / aggregate expenditure multiplies itself to give a final change in NY. Its formulae is;

   Change in income

   Change in total expenditure

NB: the multiplier can also be calculated using the formulae;

$$M(K) = \left(\frac{1}{1\text{-MPC}} \right) \quad \textbf{OR} \quad \left(\frac{1}{\text{MPS}} \right)$$

E.G a) Given that the MPC is 0.75, calculate;

1. the MPS

2. Multiplier

b) Given that the MPC is 80%, calculate the multiplier

NB: The multiplier can be used to calculate the final change in income and the final income e.g. given that investment expenditure changed from 100 million to 150 million and the MPC is 0.8, calculate the final change in income.

Final change in income = Initial change in income X multiplier

Final income = Final change in income + Initial income/initial GDP

Eg: Given that the current level of GDP is 300 million, an increase in investment expenditure is by 50 million and the MPS is 0.2. Calculate the final level of NY

M =

Final Y = final change in Y +GDP

HOW THE GOVERNMENT MULTIPLIER OPERATES:

It operates in such a way that initial government expenditure is shared between consumption and savings.

E.g. study he table showing changes in the level of income, consumption and savings.

Time period	Change in income (‘000$)	Change in consumption (‘000$)	Change in savings (‘000$)
A	100,000	80,000	20,000
B			
C			
D			
E			

Given that the MPC is 80%, and the change in income is 100 million USD

a) Complete the table
b) State the multiplier
c) Calculate the final change in the level of income.

Factors limiting the operation of the Investment multiplier;

1. Poor investment climate e.g. high taxes, limited subsidization, etc.
2. Low income levels of individuals
3. Poor infrastructure – discourages investment which limits the multiplier
4. High population growth rate.
5. Limited entrepreneurial skills
6. High levels of capital outflow in form brain drain, profit repatriation, debt, serving
7. Limited market both within and abroad.
8. High levels of corruption and embezzlement

9. Political instability
10. High levels of income inequality
11. Low savings.
12. High marginal propensity to import.

CONSUMPTION MULTIPLIER: (ACCELERATOR PRINCIPLE)

The consumption multiplier refers to the number of times initial change in consumption expenditure multiplies itself to give a final change in investment.

It is the ratio of change in investment expenditure to change in consumption expenditure.
It is given by the formular
Change in investment

Change in consumption expenditure.

Limitations of the accelerator principle;

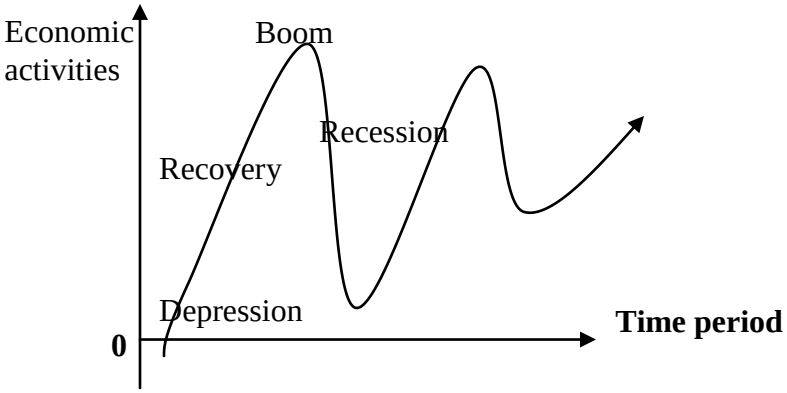
1. It mainly assumes that resources are readily available which is not the case I.e. consumption expenditure may increase and investment remains constant if resources are limited.
2. It is based on the existence of excess capacity such that investment can be increased immediately when consumption expenditure expands. However, this is not the case because excess capacity doesn't always exist.
3. It ignores the fact that, increase in output and investment may be as a result of new resources, new innovations but not change in consumption.

<u>BUSINESS/TRADE CYCLES;</u>

This means fluctuations in the level of own activities in the economy. It characterized by;

- Fluctuating prices
- fluctuating demand
- fluctuating employment levels,
- fluctuating profits /income,
- fluctuating investment

Illustration of a business/trade cycle



A typical trade cycle is divided into four parts

a) **Depression / slump/Trough;** is a situation of very low economic activities; characterized by

- Very low prices
- Very low profits
- Very low investment
- Very high unemployment

b) **Recovery;** is a situation of rising economic activities; characterized by;
- Rising aggregate demand
- Rising investment
- Improvement in employment levels etc

c) **Boom;** is an economic situation of the highest economic activities, characterized by;
- Very high aggregate demand
- Very high prices
- Very high profits
- Very high investment levels
- Very high employment, etc.

d) **Recession;** is a situation of decline in economic activities; characterized by;-
- Declining in aggregate demand
- Declining in profits
- Declining investment levels.

At this level, the economy can be easily pushed into a depression.

Ways of lifting the economy from a depression;-

1. Reducing taxes on income so as to increase aggregate demand, and disposable income.
2. Increasing government expenditure to increase incomes and consumption.
3. Encouraging increased exportation to create more market
4. Use of expansionary monetary policies e.g. buying securities by the government
5. Subsidizing consumers.
6. Increasing people's wages

Other terms under national income;-

1. **Nominal income**; is the income expressed in terms of money e.g. 5,000/= 10,000/=
2. **Real income**; refers to income expressed in terms of goods and services that one can buy using the money (nominal) income.

Or is the purchasing power of ones nominal income.

Factors that affect Real income;

1. Level of nominal income
2. General price level
3. Level of taxation
4. Level of supply of good and services
5. Level of the monetary sector/subsistence sector

- **Disposable income** is the total income of an individual less direct taxes.

- **Net property income from abroad;** is the difference between property income from abroad earned by nationals of a particular country on investments and property income earned from the country by the foreigners.
- **Personal income;** refers to the total income earned by an individual from the different alternative activities / sources