USER MANUAL

GENERAL ECONOMICS

Code

School of SOB
Department of SOB

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Acknowledgements

The SOB wishes to thank those below for their contribution to this user manual

John Warugongo

Contents

Getting around this User manual

Margin icons

While working through this User manual you will notice the frequent use of margin icons. These icons serve to "signpost" a particular piece of text, a new task or change in activity; they have been included to help you to find your way around this User manual.

A complete icon set is shown below. We suggest that you familiarize yourself with the icons and their meaning before starting your study.

			
Outcomes	**Reflection**	**Reading**	**Study skills**
			
Discussion	**Help**	**Group activity**	**Note it!**
			
Summary	**Time**	**Terminology**	**Tip**
			
Activity	**Assignment**	**Self Assessment**	**Case study**

Topic 1

INTRODUCTION TO ECONOMICS

Introduction

Economics is the social science studying the production, distribution and consumption of goods and services. It is a complex social science that spans from mathematics to psychology. At its most basic, however, economics considers how a society provides for its needs. Its most basic need is survival; which requires food, clothing and shelter. Once those are covered, it can then look at more sophisticated commodities such as services, personal transport, entertainment, the list goes on.

Outcomes

Upon completion of this unit you will be able to:

- *[verb]* [complete the sentence].
- *[verb]* [complete the sentence].

Terminology

Adding extra rows to the Table graphicRemoving rows from the table graphic

Economics :	is defined as a science which studies human behaviour in a relation to how he utilizes scarce resources in order to maximizes utility as he satisfy his unlimited wants.
Observations:	Economics is the study of scarcity and choice. Meaning to satisfy the unlimited human wants individuals must make a choice
Economics as a science :	A science refers to a body of knowledge which describes the relationship between a set of given courses and their effects. Economic is a science because it's a body of laws which describe the relationship between some their courses and it effects. It's a
Economics as an Art	An art is a discipline that tells us how to achieve an end. Economics is an art because the final

: justification for studying economies has in the possibility of our ability to use it for solving economic problems. Economics is therefore used in solving ec

Branches of Economics

Economics generally has two branches namely

- **Microeconomics**
- **Macroeconomics**

Microeconomics

It's the study of the economic behaviour of individual economic units e.g. consumers firms, government agencies etc. It is study of public, business choices. (for example consumer decide how much of various goods to purchase, workers decide what job to take & business people decide how many workers to hire and how much output to produce). It is frequently called "Price theory".

Macroeconomics

Study of the aggregate economic variables i.e. it's the study of economic behaviors of industries or whole economy system. We study economic variables like, consumption, savings, growth of national output (GNP & GDP), Interests rates, unemployment and inflation.

Approaches to Economics

Refers to how economists go about the study of the subject economics. There are 2 main approaches to economic

a) Positive economics
b) Normative economics

Positive Economics

Is concerned with the investigation of the ways in which the different economic agents in society seek to achieve their goals. Deals with statements that can be tested using data eg positive economists may

analyze how a firm behaves in trying to make as much profit as possible. It's thus concerned with "what is" "what was" or" what will be". And these are statements whose validity can be tested against available evidence.

Normative Economics

Is concerned with making suggestions about the ways in which the societal goals may be more efficiently realized. This advocates for "what ought to be". E g the present high level of unemployment in Kenya today ought to be reduced. It's thus concerned with preposition based on varied judgments i.e. statement that are an expression of opinion.

BASIC ECONOMIC PROBLEMS

The economic problem is most simply explained by the question "how do we satisfy unlimited wants with limited resources?" The premise of the economic problem model is that human wants are constant and infinite due to constantly changing demands (often closely related to changing (demographics) of the population. However, resources in the world to satisfy human wants are always limited to the amount of natural or [human resources] available. The economic problem, and methods to curb it, revolves around the idea of choice in prioritizing which wants can be fulfilled, and how do we know what to produce for economy. There are 3 basic economic problems

i) What to produce?
ii) How to produce?
iii) For whom to produce?

Basic Terms and Concepts Used in Economics

i) **Scarcity**

Means limited in supply. Hence economic resources are scarce.

ii) **Choice**

Since economic resources are scarce and human wants unlimited, individuals must make a choice from a scale of

preference ie by ranking wants according to their urgency and intensity.

iii) **Opportunity cost**

Alternative foregone in order to enjoy a good/service

iv) **Want**

A want is a human desire or a wish to have a commodity.

Characteristics of human wants

- unlimited
- certain wants can be fully satisfied
- alternatives i.e. competitive in nature
- vary in urgency and intensity
- felt again and again i.e. recurrent
- complimentary i.e. certain wants must be satisfied together

v) **Good**

This is anything that satisfiers a human want and has an exchange value.

vi) **Wealth**

Refers to goods which posses the following characteristics

a) Utility
b) Scarcity
c) Monetary value
d) Capability of being transferred

Wealth includes business wealth, personal wealth and social wealth.

vii) **Utility**

Is the ability of a commodity to satisfy a human want i.e. it's the satisfaction derived from consuming a unit of a commodity (good or service)

viii) **Demand**

Is the desire and ability of a consumer to have a commodity at a given price over a given period of time?

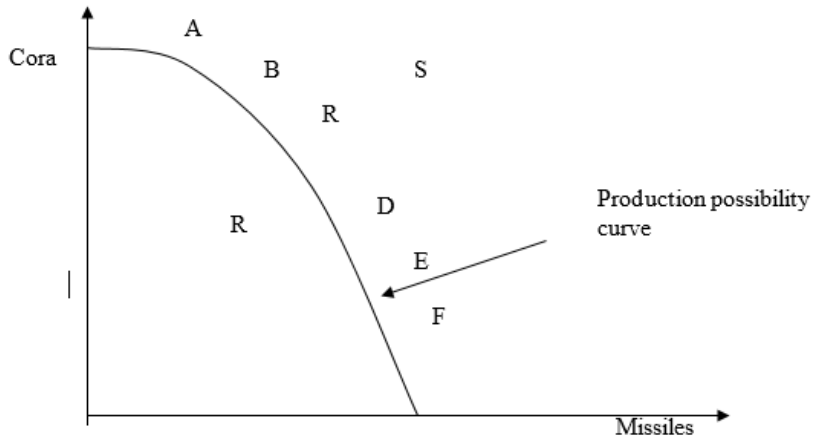
ix) **Market**

The market is the place where buyers and sellers go to buy and sell.

The name comes of course from those gatherings of people in towns, but today markets don't need to be physical. Not only can you have electronic marketplaces such as e-commerce, markets are also seen as the congregation of all people buying and selling things everywhere.

Production Possibility Curve/Production Possibility Frontier

This is a locus of point which joins together different combinations of two goods that can be produced by a country when all its resources are fully and efficiently utilized given the available technology.



Points (A-F) along the curve can be attained with the countries resources and technology assuming full employment and no wastage of resource. Points inside the curve e.g. R, represent either unemployment or inefficient use of resources. Points outside the curve e.g. S, can't be attained with the current level of resources and technology.

SPECIALIZATION

Involves concentrating on what one is best at, leaving others to supply skills, services and experiences differing from one's own.

Specialization creates a surplus produce which necessitates exchange (trade)

Advantages

i) Production of high output
ii) Production of high quality goods and services
iii) It saves times
iv) Promote innovation and invention
v) Promotes quality management and efficiency

vi) Leads to high mechanization

vii) High profits are earned in an organization

viii) Individuals have a personal liking to their jobs

ix) Leads to economies of scale

Disadvantages

i) may lead to overproduction causing wastage and lowering of prices

ii) greater risk of unemployment

iii) Employee get bored due to work monotony

iv) Leads to poor socialization of employees in a given industry

v) Employees lack responsibility of the final product produced.

vi) Leads to diseconomies of scale

Unit summary

Summary

In this unit you learned [Add summary text here - you may wish to use the unit outcomes to write this text]

[Continue your body text here]

Assignment

Assignment

[Add assignment text here]

[Continue your body text here]

Self Assessment

Self Assessment

[Add Self Assessment text here]

[Continue your body text here]

Topic 2

DEMAND OF GOOD AND SERVICES ANALYSIS

Introduction

Demand is the willingness and ability of a consumer to buy a commodity at a given price over a given period of time.

Outcomes

Upon completion of this unit you will be able to:

- *[verb]* [complete the sentence].
- *[verb]* [complete the sentence].
- *[verb]* [complete the sentence].
- *[verb]* [complete the sentence].
- *[verb]* [complete the sentence].
- *[verb]* [complete the sentence].

Terminology

[Term]: [Term description]

[Term]: [Term description]

[Term]: [Term description]

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[Term]: [Term description]

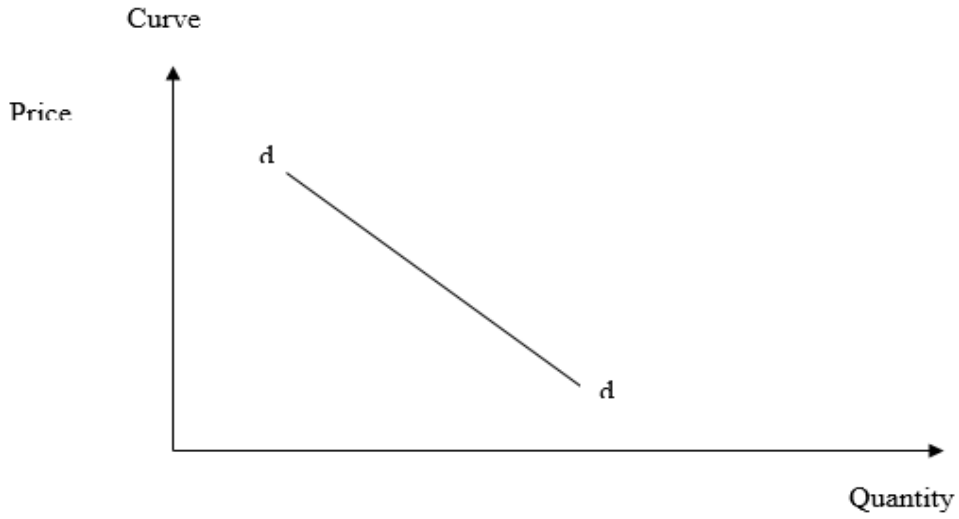
[Term]: [Term description]

[Term]: [Term description]

Demand schedule

This shows the relationship between prices and the corresponding quantities demanded.

Price (Ksh)	Quantity demanded (units)
30	1
25	4
20	7
15	10
10	13
5	15



Where dd = demand curve

From the demand schedule and the demand curve above it can be observed that:

a) More is demanded at low prices

b) Less is demanded at high prices

c) The demand curve slopes downwards from top left to bottom right. (downward sloping)

The law of Demand

It states that "The lower the price, the higher the quantity demanded and the higher the price, the lower the quantity demanded ceteris paribus.

Factors influencing demand /determinant of demand

i) ***Price of a good:*** the higher the price, the lower the quantities demanded and vice versa.

ii) ***Income of consumer***: it can influence demand level in three different ways depending on the type of good in question;

- *Normal good*, the higher the income, the higher the quantity demanded and the lower the income the lower the quantity demanded.
- *Inferior goods*: with increasing income, less of inferior goods are demanded until they are done away with.
- *Necessities* e.g. salt or sugar at low incomes, these goods are almost done away with. However as income increases, the consumption of these goods becomes constant.

iii) ***Future expectation of price changes***: if consumers expect that the price of a commodity will increase in future, more of the commodity will use demanded now. However if they expect that the price will fall in future, then less of the commodity will be demanded now

iv) Prices of other related goods

- *Substitute goods* e.g. tea and coffee. The demand of a commodity goes up if the price of its substitute increases e.g. more of tea is demanded when the price of coffee increases.
- *Complimentary goods* e.g. car and petrol. If the price of a commodity goes down, the demand of its compliment increases e.g. if the price of cars goes down the demand for petrol increases.

v) ***Population composition***: the higher the population the higher the quantity demanded and the lower the population the lower the demand.

- *Gender*. The demand for feminine goods is higher in a population largely composed of females than one that's largely composed of males.
- *Age*. The demand for baby clothes is higher in a population largely composed of babies than in a population largely composed of old people.

vi) ***Customs, religion and traditions***. Demand is low for those goods that are against people's customs and traditions and high for those goods that are for people's customs and traditions.

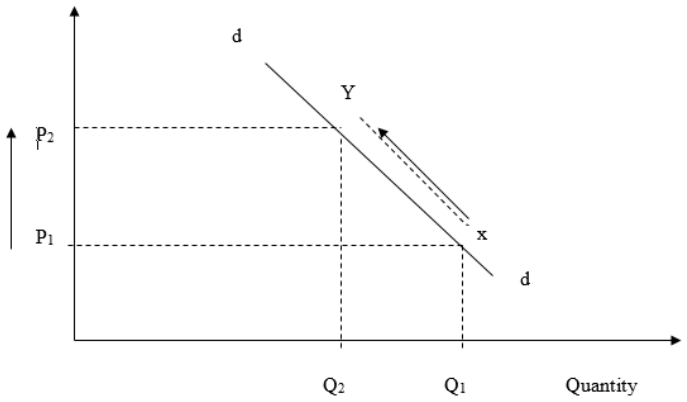
vii) ***Fashion of the day***. Demand is high for those goods that are in fashion and for those goods that are out of fashion. The demand for fashionable goods goes against the law and demand.

viii) ***Season and weather***. Change in season influenced the demand for a commodity e.g. the demand for warm clothes is high during cold season and low during warm season.

ix) ***Tastes and preferences***. Demand is high for those goods that are for people's tastes and preferences and low for those against people's tastes and preferences.

x) ***Government policy***: the government influences the demand for a commodity e.g. the government may encourage consumption of a commodity by reducing taxes and giving subsidies. On the other hand the government may discourage consumption of a commodity by increasing taxes and withdrawing subsidies.

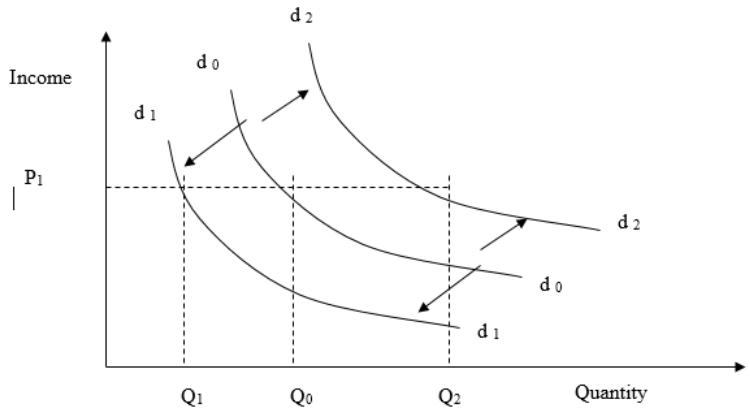
Movements along a Demand Curve



At a low price Pi, quantity demanded is high Q_1. An increase in price from P_1 to P_2 leads to decrease in quantity demanded form Q1 to Q_2. This causes a movement along the demand curve from point x to point y. On the other hand at a high price P_2, quantity demanded is low, Q2. a decrease from P_2 to P_1 leads to an increase in quantity demanded from Q_2 to Q_1. This causes a movement along the demand curve from point Y to point X

Movement along a demand curve is brought about by changes in price ceteris paribus.

Shifts in Demand curve (changes in demand)



An increase in income, leads to an increase in quantity demanded from Q_0 to Q_2. This causes a shift in the demand curve to the right (i.e. upward shift in demand curve) from d_od_o to d_2d_2. On the other hand, a decrease in income leads to a decrease in quality demanded from Q_0 to Q_1 this causes a shift in the demand curve to the left (i.e. downward shift) from d_od_0 to d_1d_1. Shifts in demand curve are brought about by changes in other factors influencing demand other than changes in price.

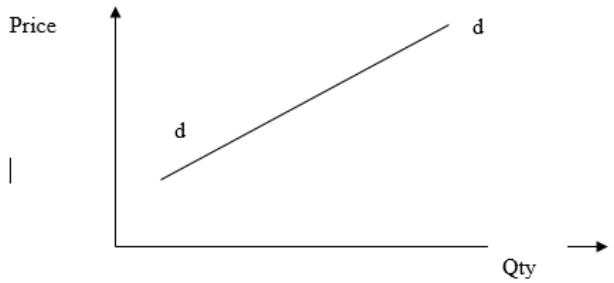
Likely Causes of Shifts in the Demand Curve for Good

CAUSE	**EFFECT**
i) increase in income	Increase in demand for good x The demand curve shifts to the right
ii) Decrease in income	Decrease in demand for good x The demand curve shifts to the left
iii) increase in price of the substitute	Increase in demand for good x Demand curve shifts to the right
iv) decrease in price of a substitute	Decrease in demand for good x Demand curve shifts to the left
v) Increase in price of a complimentary good	Decrease in demand for good x Demand curve shifts to the left
vi) Decrease in price of a complimentary good	Increase in demand for good x Demand curve shifts to the right
vii) Change in tastes in favour of x	Increase in demand for x Demand curve shifts to the right
Viii) Change in tastes against x	Decrease in demand for x Demand curve shifts to the left
Expectation of a raise in future price of x	Increase in demand of x

	Demand curve shift to the right
Expectation of a fall in future price of x	Decrease in demand of x Demand curve shift to the left

Exceptions to the Laws of Demand (Abnormal Demand)

Abnormal demand goes against the law of demand i.e. more goods are demanded at low prices



Exceptions to the law of demand applies in the following circumstances

a. ***Giffen goods***. An increase in price of the goods don't lead to a decrease in their demand

b. ***Veblem goods/goods of ostentation/luxurious goods***. Demand is high at high prices and low prices.

c. ***Inferior goods***

d. ***Future expectation*** of an increase in prices

e. ***Fashion***s

f. ***Necessities***, e.g. medicines

Unit summary

Summary

In this unit you learned [Add summary text here - you may wish to use the unit outcomes to write this text]

[Continue your body text here]

Assignment

Assignment

[Add assignment text here]

[Continue your body text here]

Self Assessment

Self Assessment

[Add Self Assessment text here]

[Continue your body text here]

Topic 3

SUPPLY OF GOODS AND SERVICES ANALYSIS

Introduction

Supply Definition

This is the amount of a commodity that sellers/supplies are willing and able to sell/supply at a given price over a given period of time.

Outcomes

Upon completion of this unit you will be able to:

- *[verb]* [complete the sentence].

Terminology

Supply Definition : This is the amount of a commodity that sellers/supplies are willing and able to sell/supply at a given price over a given period of time.

[Term]: [Term description]

[Term]: [Term description]

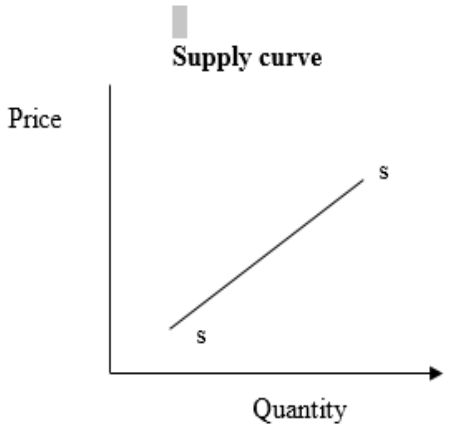
[Term]: [Term description]

Supply schedule

This is a table that shows the relationship between prices and the corresponding quantities supplied.

Price (Ksh)	Quantity supplied (units)
10	5

12	10
14	15
16	20
18	25



Where:

S = Supply curve

NB: From the supply schedule and supply curve above, we can see that:

i) less is supplied at low prices

ii) more is supplied at high prices

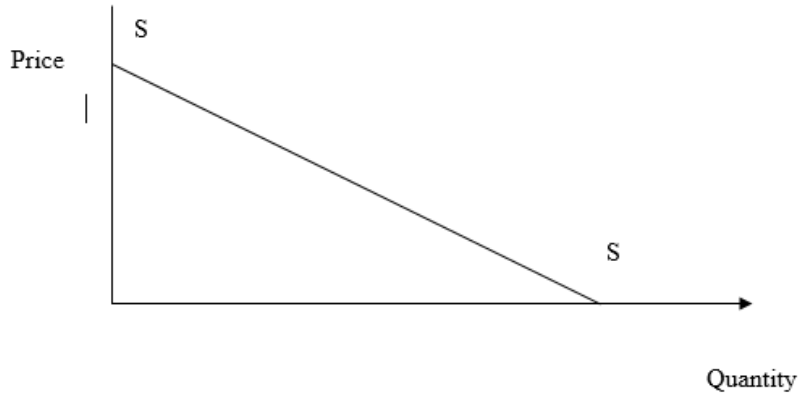
iii) the supply curve slopes upwards from bottom left to top right

Law of supply

States that "The higher the price the higher the quantities supplied and the lower the price, the lower the quantities supplied ceteris paribus.

Exceptions to the law of supply (Abnormal supply)

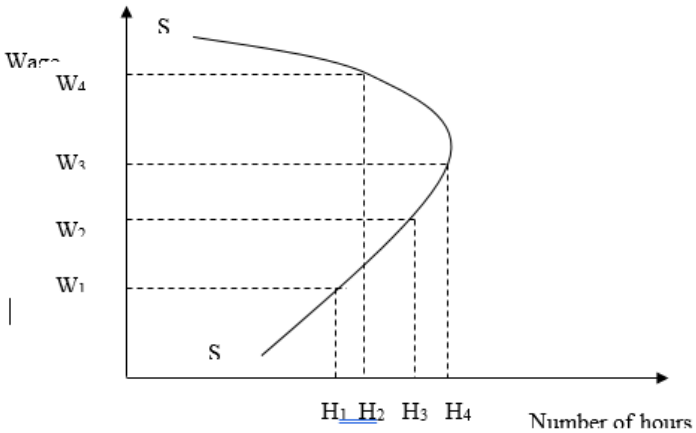
Goes against the law of supply i.e. less is supplied at high prices and more is supplied at low prices



Where S = Abnormal supply curve

Abnormal supply occurs in the following circumstances

a) Backward bending supply curve of labour (regression supply)



At a low wage W_1, the number of hours offered for work is low. An increase in wage to W_2, leads to an increase in the number of hours offered for work, W_2. A further increase in wage W_3, leads to a higher no. of hours offered for work H_3, leads to a higher no. of hours offered for H_3, however an increase in wage to W_4 leads to fewer hours offered for work H_4

Reasons for this are:

i) The worker now feels rich enough and substitutes work for leisure.

ii) There are certain workers who work with targets. Whenever they achieve their targets e.g. accumulating enough money to start a business, they are no longer encouraged to work.

iii) The higher the income, the higher the income tax it attracts. High taxation discourages workers from working and hence fewer hours being offered for work.

b) Supply of perishable goods

These are goods that don't last for long e.g. vegetables. Producers may supply these goods at low prices to avoid them going into waste.

c) Future expectation of price change

If producers expect that the prices of a commodity will fall in future, then they will supply more now at low prices.

a) Where money supply is controlled by the government.

DETERMINANTS OR SUPPLY

i) ***Price of the commodity*:** The higher the price of a particular commodity the higher the supply and vice versa in normal circumstances.

ii) ***Costs of production*:** The higher the costs of production the lower the quantities supplied and the lower, the costs, the higher the quantities supplied.

iii) ***The length of production period:*** If production takes a short period then supply is high thus elastic but if it takes a Long period supply is low

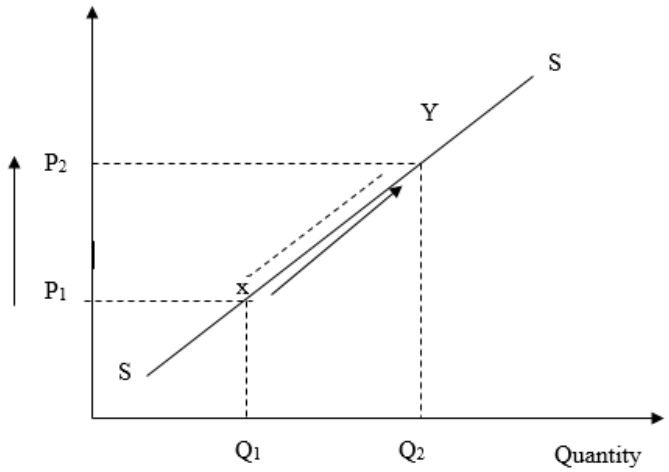
iv) ***Level of Technology***: The higher the technology the higher the supply and vice versa.

v) ***Environment factors***: like climate and weather, if the environmental factors are favourable, quantity supplied are higher. If they are unfavourable, supply is low.

vi) ***Government policy*:** The government influences the supply of commodities e.g. the government may encourage production by reducing **taxes** and giving **subsidies.** On the other hand, the government may discourage production by increasing taxes and withdrawing subsidies.

vii) ***Future expectation of price changes*:** If producers expect that the price of the commodity will fall in future, then they will supply more now and less in future. But if they expect that the price will increase in future, they will supply less now and more in future.

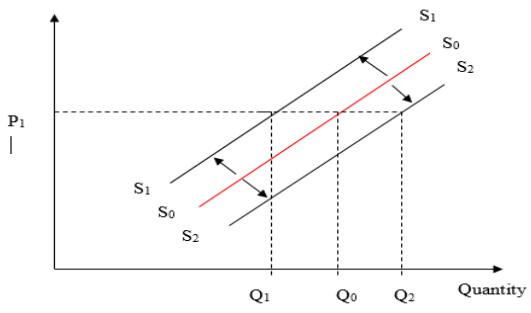
Movements along a Supply Curve



Movement along supply curve is influenced by changes in **prices ONLY.** Changes in prices from p_1 to p_2 causes changes in quantity supplied from Q_1 to Q_2.

SHIFTS IN A SUPPLY CURVE (CHANGES IN SUPPLY)

Shifts in supply curve are brought about by **changes in other factors** affecting/influencing supply **other than changes in price**.



If climate becomes favourable, quantity supplied increases from Q_0 to Q_2. This causes a shift in the supply curve to the right (i.e. downward shift in supply curve) from S_0S_0 to S_2S_2. If climate becomes unfavourable, quantity supplied decreases from Q_0 to Q_1, this causes a shift in the supply curve to the left (i.e. upward shift in the supply curve) from S_0S_0 to S_1S_1

Unit summary

Summary

In this unit you learned [Add summary text here - you may wish to use the unit outcomes to write this text]

[Continue your body text here]

Assignment

Assignment

[Add assignment text here]

[Continue your body text here]

Self Assessment

Self Assessment

[Add Self Assessment text here]

[Continue your body text here]

Topic 4

MARKET EQUILIBRIUM

Introduction

Equilibrium can be defined as a state of rest. It is a situation whereby quantity demanded (Q_d) is equal to quantity supplied (Q_s) i.e. $Q_d = Q_s$. In this state, we say that the market is clearing and there are no economic forces generated to change this point hence it is stable. Equilibrium point is generated when you draw demand and supply curve in the same axis. Through equilibrium point, we can derive market price and market quantity.

Market price is that price that's prevailing in the market. It is the price at which the amount of a good or service offered sellers equals the quantity that will be acceptable by the buyers. An equilibrium price and quantity combination must satisfy both the demand and supply functions. It is the price-quantity combination for which the desires of buyers and sellers are consistence with each other.

Outcomes

Upon completion of this unit you will be able to:

- *[verb]* [complete the sentence].
- *[verb]* [complete the sentence].
-

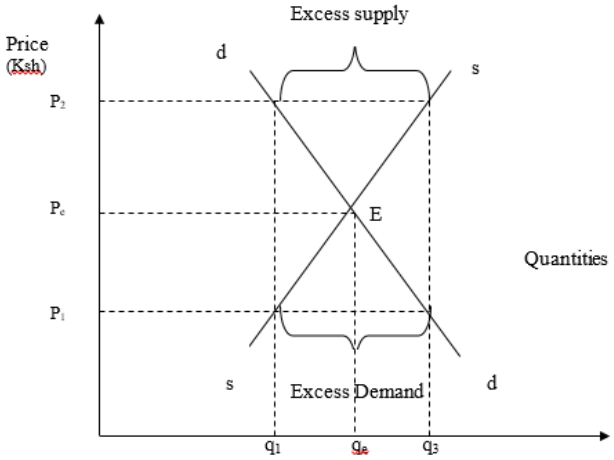
Terminology

[Term]: [Term description]

[Term]: [Term description]

Demand and supply schedules

Price (Ksh)	Quantity (demands) (units)	Quantity supplied (units)
2	100	40
4	90	50
6	80	60
8	70	70
10	60	80



Where qe = market /equilibrium quantity

Pe = equilibrium price

At a low price P_1, quantity demanded is high, q_3, while quantity supplied is low q_1. This creates an excess demand in the market. The excess demand pushes up the price from P_1 towards equilibrium price P_e. As the price increases quantity supplied increases from q_1. While quantity demanded decreases from qe, move towards equilibrium quantity Q_e.

At a high price, P_2, quantity demanded is low, q_1, while quantity supplied is high, q_2. this creases an excess supply in the market. The excess supply pushes down the price from P_2 towards equilibrium price P_e. As the price decreases, quantity demanded increases from q_2 while quantity supplied decreases from q_2, both towards equilibrium quantity q_e.

NB

- There are a lot of adjustments which go on and in the market until the equilibrium price and quantity are established
- Market is said to be at equilibrium (i.e. stable) when quantity demanded = quantity supplied and there's an establishment of equilibrium price and quantity

- Market is said to be at disequilibrium (i.e. unstable) when any divergence from the equilibrium position sets up forces which tend to push the prices further away from the equilibrium price.

NB

An equilibrium price is determined by solving the equilibrium condition for p. An equilibrium is solved by substituting an equilibrium price in either the demand or supply functions.

WORKED EXAMPLES

Question 1 (a)

Given that: $Q_d = 20 - 4p$

$Qs = -10 + 6\ p$

Determine the equilibrium price and quantity

SOLN

$Q_d = Qs$ $Q_d = 20 - (4 \times 3)$

$20 - 4p = -10 + 6\ p$ $= 20 - 12$

$30 = 10p$ $Qe = 8$

$3 = P_e$

Question 1 (b)

$Q_d = 10 - ¾\ p$

$Q_s = -15 + 6\ p$

Establish equilibrium price and quantity

SOLN

$Q_d = Q_s$

$10 - ¾\ P = -15 + 6P$

$25 = 6\ ¾\ P = 27/4\ P$

$P = (25 \times 4)/\ 27 = 100/27$

P = Ksh 3.7

When $P_e = 3.7$; $Q_e = 15 + (6 \times 3.7) = -15 + 22.2 = 7.2$ units

Question 1c

$Q_{dt} = 70 - 4Pt + 6Pc$ $Q_{st} = -13 + 20Pt$ $Q_{dc} = 80 - 2Pt + 4Pc$
$Q_{sc} = -6 + 40Pc$

SOLN

$70 - 4Pt + 6Pc = -13 + 20Pt$

$6Pc - 4Pt - 20Pt = -13 - 70$

$24Pt - 6Pc = 83$ .....(i)

$80 - 2Pt + 4Pc = -6 + 40Pc$

$86 = 40Pc - 4Pc + 2Pt = 36Pc + 2Pt$

$18Pc + Pt = 43$ …….(ii)

Using substitution

$Pt = 43 - 18Pc$

$24(43 - 18Pc) - 6Pc = 83$

$1032 - 432Pc - 6Pc = 83 = 1032 - 438Pc$

$-438Pc = 83 - 1032 = -949$; $Pc = 2.17$

When $Pc = 2.18$ then, $Pt = 43 - (18 \times 2.17) = 43 - 39 = 4$

Exercise

Assume that the demand and supply curves are

$Q_d = 50P + 250$ and $Q_s = 100/3P$

Deduce the equilibrium price and quantity

WORKED EXAMPLE

Demand function: $Q_d = 3550 - 266p$

Supply function: $Q_s = 1526 + 240p$

Question: determine the equilibrium market price and quantity.

Solution

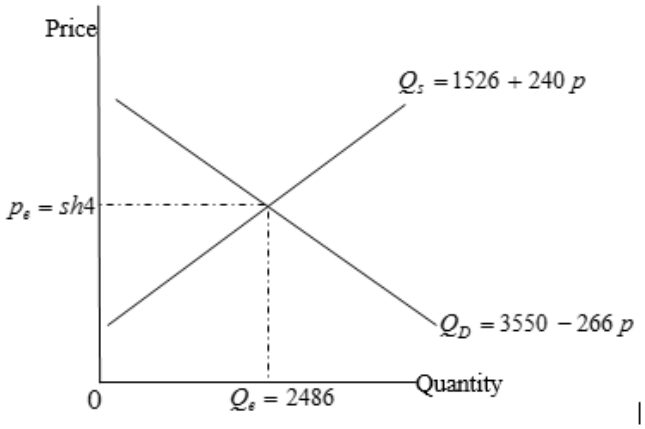
At equilibrium $Q_d = Q_s$

Thus. $3550 - 266p = 1526 + 240p$

$$2024 = 506p$$

$$p_e = \frac{2024}{506} = sh.4$$

$$\left.\begin{aligned} Q_s &= 1526 + 240(4) = 2486 \text{ units} \\ Q_d &= 3550 - 266(4) = 2486 \text{ units} \end{aligned}\right\} Q_e = 2486 \text{ units}$$



PRICE MECHANISM

The price mechanism is a system of determination of prices and resource allocation. It operates in a free market situation where forces of demand and supply dictate prices. It is the process by which changes in prices guide and shape changes in the value and types of the goods and services that are produced. The price mechanism will determine: "what is produced, how much is produced and for whom a good or service is produced for.

Importance of Price Mechanisms

- **Transmission of preferences** - consumers are able to alert producers to changes in wants and needs, so that the market provides the right amount of the right goods.
- **The Allocative Function**: The price mechanism will also ensure that goods will be allocated efficiently. If prices are set above equilibrium, suppliers will find themselves with a surplus of stock. Prices will fall to clear the market and allocate resources efficiently. Under this system there's no government interference and there's a lot of consumer sovereignty.
- **The Signaling Function**: Prices must convey sufficient information to all traders in the market for their economic activities and plans to be coordinated. It demonstrate where resources are required, via a change in demand
- **The Rationing Function**: When consumers and firms respond to the information and incentives provided by prices, scarce resources are rationed between competing uses. When there is a shortage of a good, the price increases, leaving only those with the willingness/ability to pay to purchase the product.
- **Incentive Function:** Increase in price should provide an incentive for producers to increase production of the good
- **Consumer Sovereignty**: The price mechanism (system) operates under a free market economy. Under this system there's no government interference and there's a lot of consumer sovereignty.

Reasons government interference with the price mechanism

i) To control against the production of socially undesirable goods and services e.g. drugs, illicit goods etc

ii) To control against depletion/exhaustion of certain natural resources due to over-exploitation

iii) To control against externalities e.g. pollution

iv) To ensure an equitable distribution of income and wealth

v) To ensure provision of essential goods and services

vi) To control against market imperfections like monopolies

vii) To control against inflation through price controls

viii) To attain full employment of resources

Methods of interfering with price mechanism

i) Taxation. This is to discourage entrepreneurs from charging high prices.

ii) Banning. The production of certain products

iii) By giving subsidies i.e. meeting part of the production costs so as to encourage production

iv) Through minimum wage legislation. This is to protect workers against exploitation by employers

v) Rent control. This is aimed at protecting tenants against exploitation by the landlords.

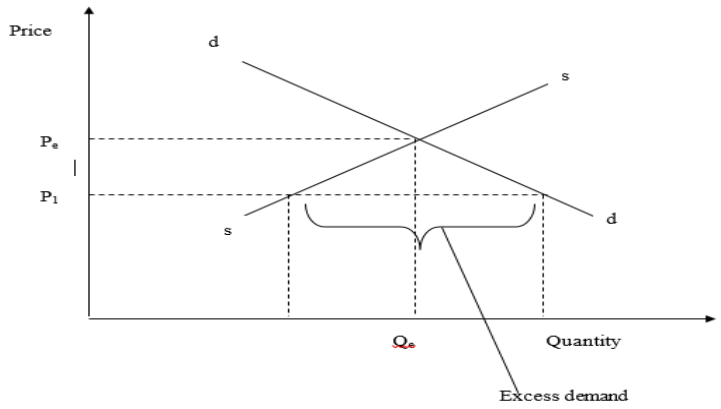
vi) Price controls i.e. by setting maximum and minimum prices of commodities

PRICE CONTROLS

This refers to the government action of artificially imposing through legislation the price of a commodity to be charged. Such imposed prices are referred to as flat prices. A flat price can either be a maximum or a minimum price.

Maximum Price (price ceiling)

Refers to that action taken by the government to set a price above which a commodity can't be sold. A maximum price is usually set below the equilibrium price since the government feels that the price set by the forces of demand and supply is too high.



Where P_1= maximum price

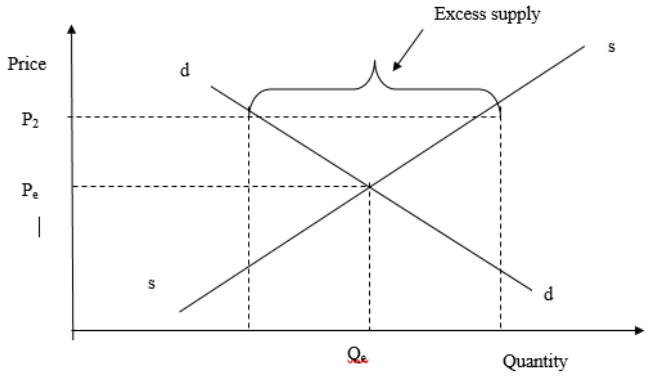
Effects of fixing a maximum price

i) Creates an excess demand in the market
ii) Causes shortages of a commodity since producers are not encouraged to produce.
iii) Leads to rationing of commodities due to shortages
iv) Leads to long queues of consumers buying the commodity
v) Causes unemployment since some workers are laid off
vi) Government revenue decreases since a low output is produced
vii) Encourages smuggling and black-marketing
viii) Research and development is encouraged since producers will try to move away from the price control industry.
ix) Leads to cost-efficiency i.e. minimization of costs, so as to increase on profits as prices are already controlled.

Minimum Price (Price Floor)

Refers to that price set by the government below which a commodity can't be sold.

It's usually set above the equilibrium price since the government feel that the price set by the forces of demand and supply is too low.



Where P_2 = Minimum Price

Effects of fixing a minimum price

i) Encourage production since producers sell at high prices
ii) Causes excess supply in the market leading to wastage
iii) Consumers are exploited since they are charged high prices
iv) Producers are assured of a stable income

v) In case of minimum wages, workers have an improved standard of living

vi) Government revenue increases through taxes

vii) Causes unemployment due to minimum wage legislation

viii) Leads to creation of employment

NB

A maximum price is usually set to protect consumers while a minimum price is usually set to protect producers

Unit summary

Summary

In this unit you learned [Add summary text here - you may wish to use the unit outcomes to write this text]

[Continue your body text here]

Assignment

Assignment

[Add assignment text here]

[Continue your body text here]

Self Assessment

Self Assessment

[Add Self Assessment text here]

[Continue your body text here]

Topic 5

THEORY OF PRODUCTION

Introduction

Factors of production

These are the resources/inputs that are used in production. They include

a) land
b) labour
c) capital
d) entrepreneurship

Outcomes

Upon completion of this unit you will be able to:

- *[verb]* [complete the sentence].
- *[verb]* [complete the sentence].
-

Terminology

[Term]: [Term description]

[Term]: [Term description]

Land

This refers to the natural resources that are given free by nature. Also referred to as God – given resources they include, soil, sunshine, water, minerals air etc.

Characteristics

i) Its basic factor of production
ii) Its limited in supply
iii) It's a fixed factor of production
iv) It provides raw materials, that are useful in production
v) It provides space for buildings
vi) It's both mobile and immobile

The reward for land is rent or royalty

Labour

Refers to the human effort, both mental and physical that used in production

Characteristics

i) It's a basic fact of production
ii) It may be manual semi skilled, skilled or highly skilled
iii) It increases the productivity of land
iv) It can't be stored
v) The efficiency of labour may be improved through
- Good health
- Education and training
- Industrial organizations and equipment
- Working environment
- Degree of specialization
- Climate conditions

vi) labour is both mobile and immobile

Mobility of labour

Refers to the case in which labour moves from one occupation to another or one profession to another.

Types of mobility of labour

a) Geographical mobility: refers to the movement of labour from one geographical location to another.
b) Occupational mobility: refers to the movement of labour from one occupation to another e.g. from agriculture to industry.
c) Vertical mobility: refers to the movement of labour from one job position to another through promotion.
d) Horizontal mobility. Refers to the movement of labour from one organization to another but within the same job position.

Advantages of mobility of labour

i) Leads to a higher pay
ii) Leads to creation of employment
iii) Increase social interaction
iv) Leads to exchange of skills and talents

Barriers to mobility

i) Trade union barriers
ii) Cultural barriers
iii) Professionals barriers
iv) Cost of moving
v) Family ties
vi) Social ties

The reward for labour is salary and wages

Capital

Refers to goods that are man-made and are helpful in further production e.g. machines, money. Money is part of capital as it's used to buy other goods that are used in further production.

Characteristics

i) It's manmade and thus its supply is controlled by man.
ii) Payment for capital is calculated in terms of time
iii) It increases the productivity of land
iv) It increases the efficiency of labour
v) It may be liquid, real or human capital
vi) Capital is both mobile and immobile

Payment for capital is called interest

Entrepreneurship

It also called organization or management

Characteristics

- Undertakes all risks
- Introduces capital
- Organizes the other factors of production
- Manages the production process
- Both mobile and immobile
- Markets the produce

Reward is profit or loss

TYPES OF PRODUCTION CURVES

Here distinction is made between three types of production curves.

- Total product curve
- Marginal product curve
- Average product curve

1) **Total Product (TP)**

In the short run, production function gives the total (maximum) output obtainable from different amounts of the variable inputs, given a specified amount of the fixed input.

In the short-run, production function is written as $Q = f(\overline{K}, L)$, where capital is fixed and labour is variable.

2) **Average Product (AP) or Average Physical Product (APP)**

The average product of an input is that product divided by the amount of the input used to produce this output.

$$AP_L = \frac{Q}{L} = \frac{f(\overline{K}, L)}{L}$$

This can be read as average product of the variable input labour.

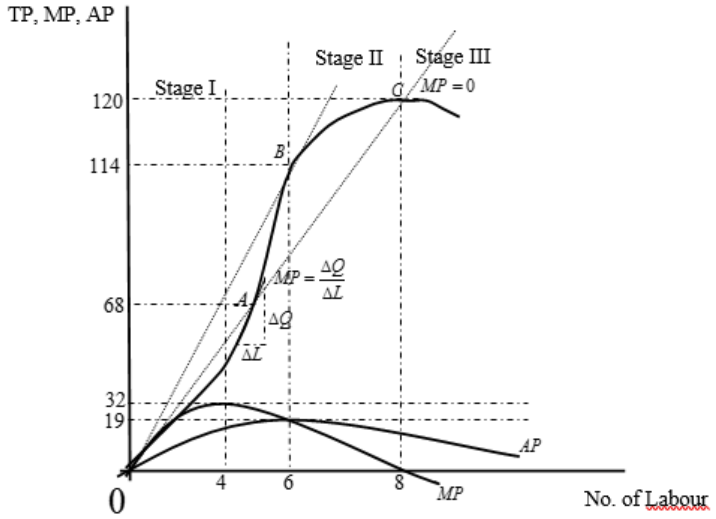
3) **Marginal Physical Product (MPP or MP)**

Is the change in total product that results from one unit change in the amount of variable inputs (e.g. labour), the fixed input remaining unchanged. (may also say, other inputs other than labour remaining unchanged)

Therefore marginal product of labour is the derivative of output with respect to labour.

$$MP_L = \frac{\partial Q}{\partial L} = \frac{\partial f(\overline{K}, L)}{\partial L}$$

No of capital	**No. of labour**	TP_L	$AP_L\left(\frac{TP}{L}\right)$	$MP_L\left(\frac{\Delta TP}{\Delta L}\right)$	**Stages**
1 unit	0.	0	0	0	
1 unit	1.	5	5	5	
1 unit	2.	16	8	11	I
1 unit	3.	36	12	20	
1 unit	4.	68	17	32	
1 unit	5.	95	19	27	
1 unit	6.	114	19	19	
1 unit	7.	119	17	5	II
1 unit	8.	120	15	1	
1 unit	9.	117	13	-3	
1 unit	10.	100	10	-17	II



This is a short run case whereby not all inputs are variable. Labour (L) is variable, while capital is fixed at 1 unit.

TP Curve

From the table and figure, total output increases with more employment of labour, reaches a maximum at $Q_x = 120$, and number of labour employed equal 8. as more and more laborers are employed beyond 8, output starts to decline.

MP Curve

As more laborers are employed, marginal product of labour increases, reaching maximum at $L = 4$, then declines reaching zero, when $L = 8$ beyond $L = 8$, MP_L becomes negative.

AP Curve

Average product curve also increases initially as L increases, reaching maximum at $L = 6$ then start declining. AP_L remain positive as long as total product is positive.

RELATIONSHIP BETWEEN TP & MP

1) As long as MP_L is increasing, TP will continue to raise at an increasing rate. This is the case as labour increases up to 4.

   Beyond $L = 4$ up to $L = 8, MP_L$ starts to decline although it is still positive. TP continues to increase but at a diminishing rate.

2) When MP_L reaches zero, TP reaches its maximum. At this point $TP = 120$ while $L = 8$.
3) When MP_L becomes negative, TP will start declining so any employment beyond $L = 8$ yield negative MP.

- This bring us to the **law of diminishing returns** which states that:-
- If more and more units of a variable input (in our case labour) are applied to a given quantity of fixed input, the total output may initially increase at an increasing rate, but beyond a certain level of output, the rate of increase in the total output diminishes.

- The reason behind the operation of this law is that with increasing units of labour to a fixed factor (say capital) each additional worker has less and less tools and equipment to work with. Consequently, the productivity of the marginal worker eventually decreases. As a result, the total product increases at a diminishing rate beyond a point.
- For the law to hold the following two condition must be fulfilled.

  1) Some input(s) must remain fixed as the amount of the input in question, say labour is varied.
  2) Technology must remain unchanged, since a change in technical know-how would cause the entire TP curve to shift. An upwards shift in TP curve reflects a change to superior technology while a downwards shift reflects a change to inferior technology relative to existing one.

THE THREE STAGES OF PRODUCTION

Using figure 1 above, we can identify three stages of production.

Stage I:

- Marginal product continues to increase making total product increase at an increasing rate. Marginal product reaches maximum at $L = 4$
- It is a stage of increasing returns because output increases as you increases the use of the variable factor (Labour). Here fixed factors (capital) is under utilized. That is why as more and more workers are added utilization of machine increases and productivity of additional workers increases. At this stage it would be inefficient for firms to operate since there is still room for increased output and hence high profit.

Stage II:

- Is a stage of diminishing returns MP starts declining until it reaches zero. Total product increases but at a diminishing rate and reaches maximum when $MP = 0$.
- Once optimum capital-labour ratio is reduced additional workers have less and less tools to work with. Consequently, the productivity of the marginal worker eventually decreases.
- Firms should operate in this stage because optimal utilization of factors is realized.

Stage III:

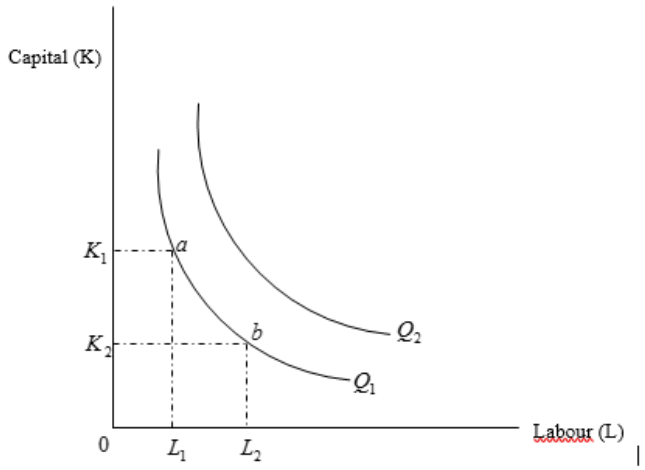
- It is the Stage of declining returns
- TP is declining and MP is negative.
- It will be very illogical for a firm to operate in this stage because employment of additional labour adds nothing to total product.
- Thus, stages I and III are irrational stages of operation. In stage I, capital is under utilized by small units of labour.
- In stage III, capital is over utilized/overburdened by large units of labour.
- Both extremes are uneconomical to operate in firms will thus operate in stage II, where MP is positive for both variables & fixed factors of production.

ISOQUANT ANALYSIS

- In the short-run, we assume that one factor of production remain fixed as the other one varies that is $Q = f(\overline{K}, L)$
- However, in the long-run, all factors of production become variable so that $Q = f(\overline{K}, L)$. In isoquant analysis, all factors are assumed to be variable.

What is an isoquant?

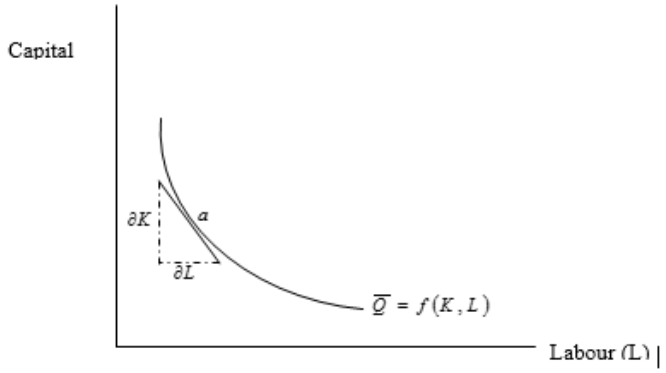
It can be defined as a curve joining various combinations of inputs that yield a given amount of output.



- Combination of inputs (a) and (b) yield same level of output.
- A higher isoquant to the right represents superior output $(Q_2 > Q_1)$
- The slope of the isoquant $\left(-\frac{\partial K}{\partial L}\right)$ defines the degree of substitutability of the factors of production (in our case, substitution between capital and labour)

Marginal rate of technical substitution (MRTS) of labour and capital.

Is the slope of isoquant it refers to the amount of capital (K) that firm must give up by increasing the amount employed of labour by one unit and still remain on the same isoquant (output level)



The slope of the isoquant at point (a) is given by the slope of the tangent at point (a)

Therefore slope = $\frac{\partial K}{\partial L}$

$$-\frac{\partial K}{\partial L} = MRTS_{K,L} = \frac{MP_L}{MP_K}$$

The above statement that MRTS is equal to the ratio of the marginal products of the factor can be proved

$$\overline{Q} = f(K, L)$$

$$\partial Q = \frac{\partial Q}{\partial K} \cdot \partial K + \frac{\partial Q}{\partial L} \cdot \partial L = 0$$

$$MP_K \partial K = MP_L \partial L$$

$$-\frac{\partial K}{\partial L} = \frac{MP_L}{MP_K}$$

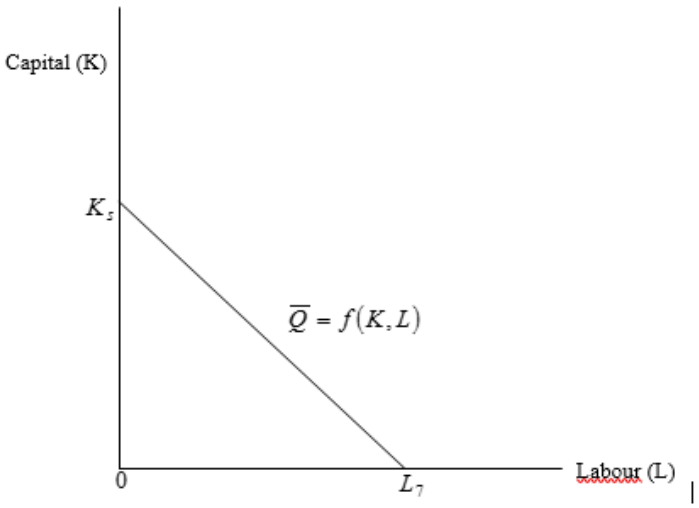
SHAPES OF ISOQUANTS

Isoquants may assume various shapes depending on the degree of substitutability.

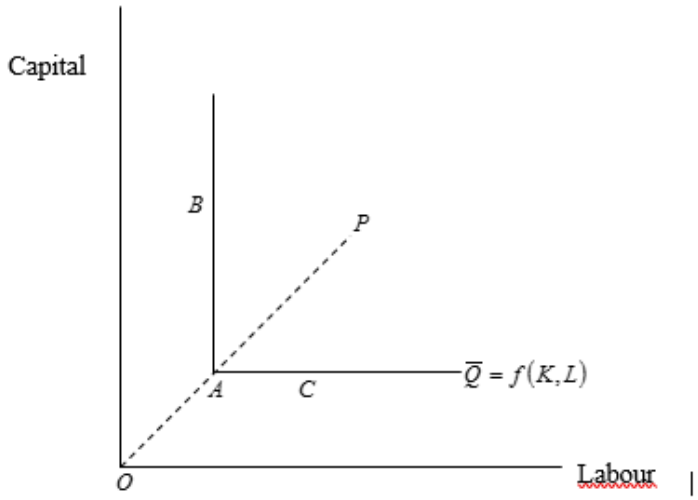
It reflects perfect substitution between factors of production i.e. Q could be produced wholly by using only capital and zero units of labour.

It represents infinite methods of product

1) **Linear isoquant**

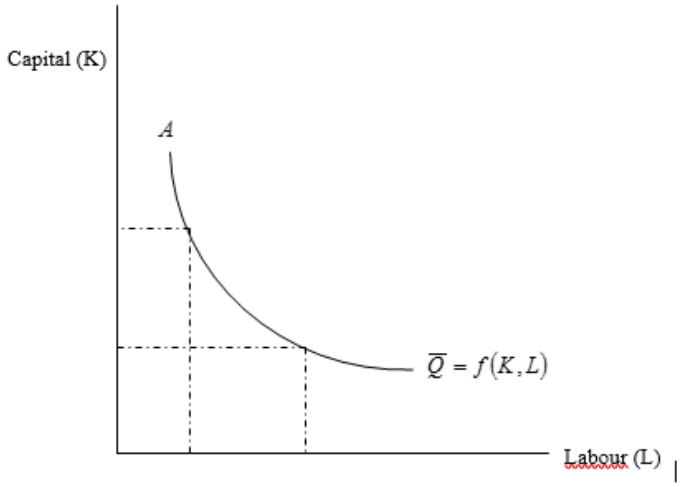


Input- output isoquant (Leontief isoquant)



- In this group of isoquants input cannot be substituted for one another.
- There exist only one single production process (P).
- All efficient production must take place at the corner of the isoquant (point A). the input combination represented by points B and C yield the same output as point A, but the A combination enables the use of less capital than the B combination with the same labour, or less labour than the C combination with capital the same.

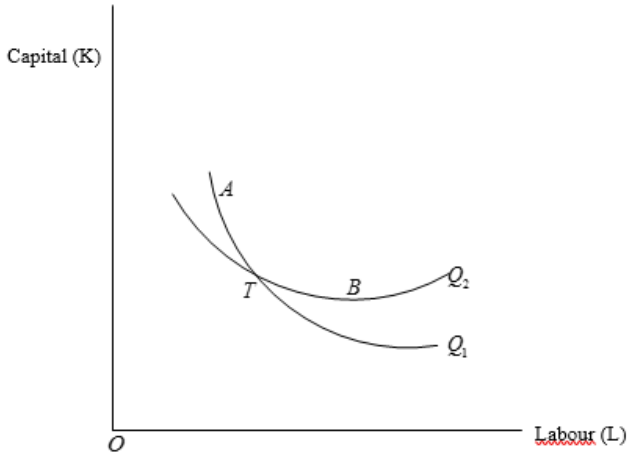
Smooth convex isoquant



- Assume continuous substitutability between K and L over a certain range AB, beyond which factors cannot substitute each other.
- This type of isoquant is mostly adopted in economic theory because it is mathematically simpler to handle by the rules of calculus.
- E.g. to get its slope we differentiate the equation $\frac{\partial K}{\partial L}$.

CHARACTERISTICS OF ISOQUANTS

1) Are downwards sloping within the relevant range. Increasing one factor would require that the other factor be decreasing to yield same level of output



If the two intersect it means that combination of K and L at point T would yield higher output Q_2 as well as Q_1 which may not be the case.

3) Superior isoquants are represented by those far away from the graph origin.
4) Isoquants are convex to the origin within the relevant range. This implies that the slope of the isoquant decreases (in absolute terms) as we move downwards along the isoquant, showing the increasing difficulty in substituting K for L.

THE LAW OF RETURN TO SCALE

This is a long-term analysis of production it shows by how much total output will change as a result of a change in all factor inputs by same proportion.

Suppose we start from an initial level of input and output.

$$X_0 = f(L, K)$$

And we increase all the factors by the same proportion k. We will clearly obtain a new level of output X^*, higher than the original level X_0

$$X^* = f(kL, kK)$$

If X^* increases by the same proportion k as the input, we say that there are **constant returns to scale.**

If X^* increases less than proportionally with the increase in the factors, we have **decreasing returns to scale.**

If X^* increases more than proportionally with the increase in the factors, we have **increasing returns to scale.**

Unit summary

Summary

In this unit you learned [Add summary text here - you may wish to use the unit outcomes to write this text]

[Continue your body text here]

Assignment

Assignment

[Add assignment text here]

Self Assessment

Self Assessment

[Add Self Assessment text here]

[Continue your body text here]

Topic 6

THE THEORY OF COSTS

Introduction

This is concerned with analysis of firms output and pricing decisions. The objective of the firm is to maximize profit. It uses inputs (factors) of production and through a process of production, firms will desire to spend as little as possible, thus the firms will have to minimize the cost as its objective.

The total cost is a multivariable function, that is, it is determined by many factor. Symbolization we may write the cost function as

$$C = f(X, T, P_f)$$

Where:

C is total cost

X is output

T is technology

P_f is price of factors.

For simplicity purpose, cost are graphically shown as a function of output, $C = f(X)$, ceteris paribus. If other factors do change their effect on costs is shown graphically by a shift of cost curve.

Upon completion of this unit you will be able to:

Outcomes

- *[verb]* [complete the sentence].
- *[verb]* [complete the sentence].
-

Terminology

Fixed costs (FC) : These are those costs of the firm which are independent of output i.e. they are constant at all level of output e.g. salaries, rent etc.

Variable costs (VC) : Are those costs of the firm that are dependent on output i.e. they change with changes in output e.g. wage transport costs, storage costs etc

TOTAL COSTS (TC)

Total cost = fixed costs + variable costs

Quantity (Q)	Fixed cost (Fc)	Variable costs (VC)	Total costs (Tc= Fc+Vc)	Marginal cost	Average total cost	Average fixed cost (AFC=Fc/q)	Average variables AVC = Vc/R
0	55	0	55	-			
1	55	30	85	30	85	56	30
2	55	55	110	25	55	27.5	27.5
3	55	75	130	20	43.33	18.33	25
4	55	105	160	30	40	13.75	26.25
5	55	155	210	50	42	11	31
6	55	225	280	70	46.67	9.17	37.5
7	55	315	370	90	52.86	7.86	45
8	55	425	480	110	60	6.88	53.126
9	55	555	610	130	67.78	6.11	61.67
10	55	705	760	150	76	5.5	70.5

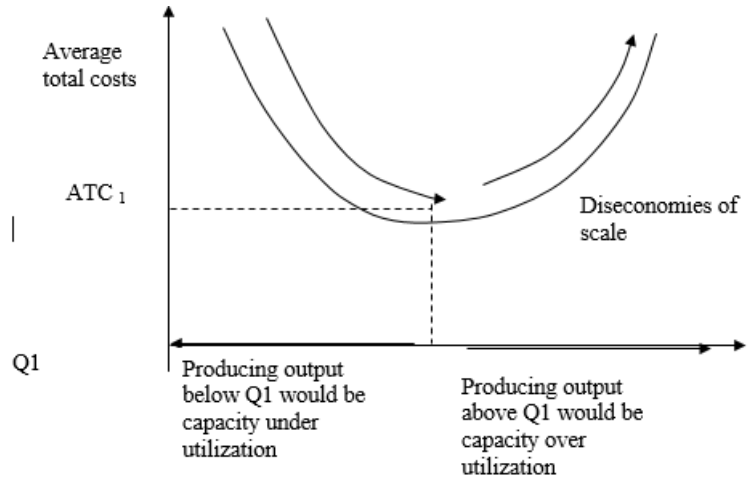
Marginal costs (MC)

This is the extra cost incurred in producing an extra unit of output

$$MC = \frac{\text{Change in Total Costs}}{\text{Change in Output}}$$

$$MC = \frac{\Delta TC}{\Delta Q}$$

THE OPTIMUM SIZE OF A FIRM



It's profitable for a firm to continue producing output level up to Q_1 because producing output up to Q_1 the firm would incur decreasing costs i.e. it would enjoy economies of scale. Thus from an output level below Q_1, the firm would be under utilizing its capacity

On the other hand, producing an output level above Q_1 would be unprofitable as the firm would incur increasing costs i.e. diseconomies of scale. Thus for any output level above Q_1, the firm would be over utilizing its capacity.

NB: *The optimum size of a firm would be that output level that a firm produces where there are no economies of scale and no diseconomies of scale and the average total costs are at their minimum. This is the ideal size of a firm.*

Between point A and B, the average total costs are decreasing/falling because of economies of scale.

Economies of scale Include

1. ***Technical economies***. As a firm increases its scale of production, it's able to adopt more efficient, machines leading to a decrease in its costs of prod1uction.
2. ***Financial economies***. As a firm increases its operations, it's able to acquire wider sources of capital more easily and cheaply thus reducing its costs of production.

3. ***Managerial economies.*** A firm that produces on large sale is able to employ qualified personnel leading to efficiency and quality management thus reducing its costs of production.
4. ***Buying economies***. A large firm buys raw material in bulk and hence enjoys trade discount which reduces its costs of production.
5. ***Marketing economies.*** A firm that sells in bulk incurs low marketing costs e.g low advertising costs.
6. ***Research and development economies***. A large firm is able to carry out its own research and development leading to cost reduction innovations.
7. ***Specialization and division of labour***. A large firm is able to employ specialized labour leading to production of high quality products and hence high profits.
8. ***Risk bearing, economies.*** A large firm is able to diversify in various markets and hence spread its risks and faces emergencies.
9. ***Transport economies***. The transportation costs per unit are lower for a large output than for a low output. A large firm is also able to use its own vehicles and this reduces the costs of production.
10. ***Staff welfare economies.*** Large firms are able to take care of the social welfare of their employee. This leads to high motivation high productivity, and low costs of organizing labour.

Between point B and C, the average total costs are increasing because of diseconomies of scales.

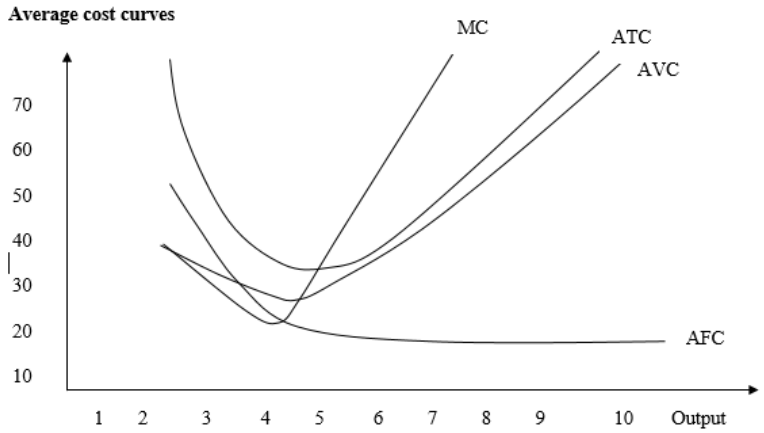
Diseconomies of Scale

Include

a) ***Organization problems.*** As a firm increases its scale of production, it may become too congested and hence difficult to organize labour and this increases the costs of production.
b) ***Bureaucracy:*** Decision making in a large firm is long and slow since many people have to be consulted and time wasting leads to an increase in the costs of production.
c) ***Exhaustion of raw materials***. As a firm becomes large it may exhaust its raw materials and be the acquisition of new sources of raw materials may be too expensive leading to an increase in the costs of production.
d) ***Storage problems***. Over production in large firm leads to storage problems and this may cause wastage and losses to the firm.
e) ***Exhaustion of market***. A large firm may eventually exhaust its own market due to change in fashion tastes and preference.
f) Lack of adequate means of transport
g) Corruption and mismanagement of resources
h) Use of obsolete technology
i) Theft and vandalism of the firm's assets by employees
j) Industrial disputes e.g. strikes

THE RELATIONSHIP BETWEEN THE AVERAGE COST CURVES

The average fixed costs fall with increase in output levels. The marginal cost curve cuts all the average cost curves. It cuts the ATC and AVC at the minimum points. If MC is less than any average cost curve, then the average cost curve falls.



NB

- Any average cost curve is pulled downward if marginal cost is less than the average cost.
- When marginal cost is equal to any average cost then the average cost curve is no longer pulled downwards.
- When marginal cost is greater than the average cost then any average cost curve is pulled upwards except for the AFC curve.

PROFIT MAXIMISATION

Firms attempt to maximize profits

$$\pi = TR - TC$$

For firm to be able to maximize profits;

First order condition

$$\frac{\partial \pi}{\partial Q} = 0$$

$$\frac{\partial \pi}{\partial Q} = \frac{\partial TR}{\partial Q} - \frac{\partial TC}{\partial Q} = 0$$

But: $\frac{\partial TR}{\partial Q}$ is marginal revenue.

$\frac{\partial TC}{\partial Q}$ is marginal cost.

Therefore, for profit maximization

$$MR = MC$$

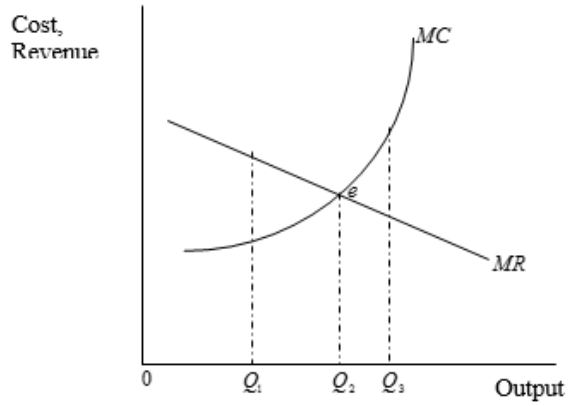
Second order condition for profit maximization

$$\frac{\partial^2 \pi}{\partial Q^2} < 0$$

$$\frac{\partial^2 \pi}{\partial Q^2} = \frac{\partial MR}{\partial Q} - \frac{\partial MC}{\partial Q} < 0$$

$$\therefore \frac{\partial MR}{\partial Q} < \frac{\partial MC}{\partial Q}$$

The second condition simply implies that the slope of the marginal cost should be greater than the slope of marginal revenue.



(i) Q_2 would be the equilibrium output because $MR = MC$. It is the only point where π is maximized.

(ii) At Q_1 $MR > MC$. If output is increased, it will add more to revenue than to the cost. This implies that increasing output would further increase profits.

(iii) At Q_3 $MC > MR$. If output is increased, you add more to cost than to revenue. Thus increasing output would reduce profits.

Unit summary

Summary

In this unit you learned [Add summary text here - you may wish to use the unit outcomes to write this text]

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Assignment

Assignment

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Self Assessment

Self Assessment

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Topic 7

MACROECONOMIC

Introduction

"Macro" is derived from the Greek word "Makros" meaning large. Macro economics considers the whole economy from a national point of view. It focuses on the performance of the entire economy rather than on the behavior of individual participants.

This is a branch of economic that attempts to analyses and explain the interrelations' between aggregate variables (aggregates – totals) as output, employment, interest rates, money and prices in the economy. These are the key variables that determine economic activities and the level of national income in an economy. Macroeconomics therefore analyses the performance of the economy as a whole.

Upon completion of this unit you will be able to:

Outcomes

Terminology

Goals/ Aims of macro-economic policy

Full employment : unemployment is where some resources are not optimally utilized and are lying idle. Full employment is favoured because the greater the level of employment, the greater the amount of goods and services available in the economy. It is argued that, the burden of unemployment and loss of goods and services will fall disproportionately on people who are without jobs.

Prices stability : inflation should be avoided at all costs so that prices remain stable and predictable over time. This is important because inflations affect poor people more adversely than wealthy. E.g. people whose incomes rise more rapidly than prices and those who are able to borrow the relatively low interest prior to inflation

benefit from inflation.

Economic growth : economic growth takes place when real output increases more rapidly than increase in population. With economic growth the society has more goods and services at its disposal as a correspondingly higher standard of living.

External balance : – if a country has favorable balance of payment (B.O.P), its foreign exchange reserve will increase hence can import the much needed capital for the investment. Unfavorable balances of payments would lead to an outflow of foreign exchange to finance the trade defies.

Importance of macroeconomics

1. It facilitates estimation of National Income statistics which aids in the analysis of economic performance.
2. If facilitates the study of the nature and size of material welfare of the society.
3. It is used to formulation economic policy by government e.g. we are able to understand how aggregate variables like G.N.P, wages rates, consumption, savings, investment, interest rates will be affected by changes in government expenditure, tax policy, monetary policy, foreign exchange rates.
4. It predicts the impacts of exogenous (independent) and endogenous variables (dependent variables)

Limitations of Macroeconomics

1. Macro-economic theory treats the aggregates it deals with as totally homogeneous and overlooks the significance of internal composition and structure of such variables.
2. It tends to make generizations about the whole economy based on small samples yet the samples may not adequately reflect the overall picture.
3. Aggregates may not be functionally related; for such cases the macro-economic policy formulated will be erroneous e.g. aggregate consumption will only be useful for analysis if it is functionally related to levels of in wealthy, interest rates, capital gains etc.
4. Aggregate models that may be derived from the exogenous behaviors of the economy may not conform to the real world e.g. the bulk of the macro-

economy developed so far has been irrelevant to developing countries since no models have been constructed in those countries. Those models are far from reality in developing countries.

NATIONAL INCOME ACCOUNTING

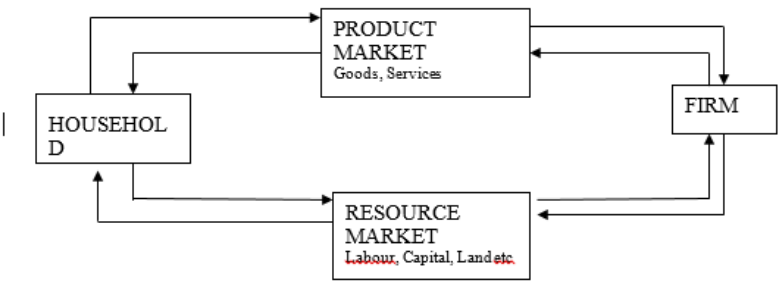
The circular flow of income

The circular flow model describes the flow of resources, products and incomes among economic sectors. For simplicity consider an economy with only two sectors (**Household and Firms**).

Firms that are involved in producing goods and service require the services of various factors of production. Those factors of production are hired from individuals who may be said to be households. On receiving the factors services, firms have to pay for them. This payment becomes expenditure to the paying firm and income to the receiving household.

The households in turn use the income obtained from firms to buy goods and services which are produced by firms. In this case the payment is income to the firm and expenditure to the households.

NB: It can be noted that income keeps on moving from households to the firms and then back to the households in a kind of a circle. This movement of income is referred to as the **circular flow of income**



Households' represents supply sources (land, labours, capital, and entrepreneur skills) to the resource market and receive earnings for those resources. The household acquires goods and services from the product market using the income they receive from firms. The firms acquire

resources from the resource markets for production of goods and services; and supply goods and services to the product market.

Observations

- The two sectors (household and firms) depend on each other as firms require the services of the households and the households require the goods and services produced by the firms.
- The sum of the value of goods and services must be equal to the sum of the factors rewards.

Assumptions of the Model

For the above circular flow of income to hold, the following assumptions must have been met:

- There are only two sectors; households and firms.
- Households spend all of their income on goods and services produced by firms.
- Firms spend all their revenue on factors of productions provided by the household.
- There is no government intervention.
- The economy is closed, that is, no foreign trade.

In reality, the above assumptions do not hold because there are normally other factors that come into play. E. g no country can exist without dealing with other countries. It is also difficult to have an economy where all incomes are spent on only acquisition of goods and services without savings and investments. Similarly, it is not possible to have an economy where the government does not take part. The actions of the government, savings and investments affect the volume of income flow between households and firms. They may increase or decrease the flow.

The factors that increase income and expenditure are referred to as ***injections*** while those that reduce the flow are referred to as ***withdrawals*** or ***leakages.***

Leakages and Injections

Leakages refer to any diversion of aggregate income from domestic spending. That is withdrawal from the circular flow. They includes:-

- Savings (S)
- Taxes (T)
- Imports (M)

Leakages = S + T + M

Injection refers to any payment or income other than by firms or any spending other than by domestic households in an economy. These include:-

- Investment. (I)
- Government purchases *and transfers* (G)
- Exports (X)

Injections = I + G + X

The Sectors of an Economy

An economy can by analyzed from various perspectives. One of them is dividing it into sectors. They are;

1. C + 1 is known as the frugal economy. It's also referred to as 2 sector economy.
2. C + 1 + G is known as Governed economy. It's also referred to as a 3 sector economy.
3. C + 1 +G +(X-M) is known as open economy. It's also referred to as a 4 sector economy.

Unit summary

Summary

In this unit you learned [Add summary text here - you may wish to use the unit outcomes to write this text]

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Assignment

Assignment

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Self Assessment

Self Assessment

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Topic 8

NATIONAL INCOME (N.I)

Introduction

[Add introductory text here]

Upon completion of this unit you will be able to:

Outcomes

- *[verb]* [complete the sentence].
-

Terminology

[Term]: [Term description]

[Term]: [Term description]

NATIONAL INCOME (N.I)

National Income is the total value of all the goods and services produced by a given country over a given period of time usually one year

NI = NNP – (indirect taxes less subsidies) or
NI = NNP – (indirect taxes + subsidies)

Concepts of National Income

1. ***Gross Domestic product (GDP) and Net Domestic Product (NDP)***

GDP refers to the total monetary value of all goods and services produced in a country over a period of one year. Its only deals with all what is produced within a country's borders irrespective of who is producing it.

2. ***Net Domestic Product (NDP)***

   This term implies that deductions for the value of capital (depreciation) are taken into account. Thus

Net Domestic Product = GDP – Depreciation

3. ***Gross National Product (GNP)***

GNP measures the total monetary value of all goods and services produced by individuals of a given country irrespective of whether they are producing it in their country or outside their country.

GNP= GDP +Net Factor income from abroad (Exports less Import)

4. ***Net National Product (NNP)***

This is the total output of consumer goods produced by residents plus the net increase in the economic total capital stock during any given period of time. NNP recognizes the loss of value of capital used in the production process (Depreciation)

NNP = GNP – Depreciation (capital consumption allowance)

5. Per Capita Income

It refers to average income per head in a given country. It represents national income divided by the total population in a country per year. Per Capita Income is national income attributed to one person (per head income)

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

6. ***Personal Income***

It refers the total income of a persons or households from all sources before taxation.

P.I = N.I - {retained incomes + social insurance payments}
P.I = N.I - {retained corporate profits + social insurance payments} + {interest received by households + transfer payment by households}.

7. ***Disposable income***

It is income after payment of taxes.

D.I = P.I – personal income taxes. Or

D.I = C+S

Uses of national income statistics

They are useful in the following ways:

1. To indicate the **standard of living**. They show the material well being of the people.
2. Level of economic welfare. It reveals the overall performance of the country during a given financial year
3. It makes it easy to plan as it provides statistics estimates of figures like savings, consumption and investments in the economy
4. The NI statistics are used by researchers and scholars to further new ideas and policy generations
5. It can be used to compare different standards of living in different countries
6. It can also be used to forecast future trends in economies
7. Investors use the estimates provided to understand the market trends to guide them in planning for investments
8. To indicate the **health of a nation**. They will show whether the current government can plan and allocate resources wisely. If not, a new government is elected to bring change and promise a better future.

Limitation of national income to indicate the standard of living

1) Immovable Wealth

Many societies do have other forms of wealth which is not captured when estimating national income. A substantial proportion of wealth does **not flow** e.g. property & houses, stocks, shares e.t.c. National income statistics only considers flow of wealth created by the process of production. This approach ignores immovable assets.

2) Inflation

A rise of GNP in money terms may be accompanied by no increase of output in the production ie in terms of goods & services we are receiving. This is because statistics are in money terms this will therefore distort national income estimates.

3) Population

A country may be having a rising GDP per head not because the real output is rising in terms of more goods and services, but because population is declining.

4). Distribution of income

Use of income per capita as a measure of living standards assumes that we all receive is the same proportion of national cake. Do you think this is realistic?. In actual fact, the highest income is concentrated in the hands of the rich few who are less than 3% of total population.

5) Working hours

NI may be due to people working long hours and in inferior working conditions. This does not reflect better living standards.

6) Level of accuracy

Level of accuracy between time periods being compared is used different. Estimates of the value of subsistent sector, population, and depreciation are rarely accurate.

Limitation of National income statistics in comparing standards of living in different countries too

The concept of national income helps us to relate with donors and other investors in international market. Hence it's crucial to understand the actual national income by improving on existing limitations.

I. Different currencies

Figures of national Income are expressed in different currencies & need to be considered to a common denominator currency for effective comparison. Its' not easy to convert all currencies to one currency.

2. Different definitions of National Income.

Goods & services included in definition of National Income may differ from country to country. In developed countries informal sector is not included but in developing its' a significant sector.

9. **Regional Variations in income and spending**

National GDP figures hide significant regional variations in output, employment and incomes per head of population. Within each region there are also areas of relative prosperity contrasting with unemployment black-spots and deep-rooted social and economic deprivation.

10. **The black economy and non-monetized sectors**

GDP figures might understate the true living standards because of the existence and growth of the **black economy**. The black economy includes economic activity that goes unrecorded by the Inland Revenue and Customs & Excise. The non-monetized sectors of the economy include output that is not sold at market prices but involves barter trade, and self-consumed products.

APPROACHES TO MEASUREMENT OF NATIONAL INCOME

The following approaches are used

1. Expenditure Approach
2. Income Approach
3. Output Approach

EXPENDITURE APPROACHES (E)

This sums all the market expenditures by final consumers including the purchase of capital goods by the business community. It is arrived at by adding together expenditure for all final goods and services in the economy. We include expenditures on final goods and services only.

Total expenditure may hence be broken into

- Expenditure of consumer goods by the general public, C.
- Expenditure on capital goods. Capital goods are also referred to as investments. There are two types of investments I.

  - ***Fixed Capital Investments:*** This refers to addition of durable goods to the existing stock of durable goods.
  - ***Inventory Investments:*** This is the purchase of raw materials. This expenditure can be denoted by the letter I.
- Government expenditure which may be divided into:
  - Expenditure on goods and services from firms such as buying of office equipment.
  - Expenditure on factor services from households such as hiring civil servants.

  Such government expenditure can be denoted by letter G
- Expenditure on net exports. Net exports are total exports less total imports. This components are denoted by the expression (X-M)

INCOME APPROACHES (Y)

The approach takes into account the sum of money that is received as income by different individuals who contribute to the production of goods and services. These are incomes such as rent, interest, wages and profits. In addition to personal income, "public income" is also included. This is the income which the government receives from its investment. Retained profits are included in national income under this method. Retained profits are profits set apart for purposes of meeting unexpected future commitments and rightfully belong to the owners of the business.

Not all types of income are included in the final calculation of national income, some income are received without corresponding output in the economy. These incomes are called ***Transfer payments,*** and are excluded from final calculation of national income. This is because they represent a re-distribution of income from those who have earned it to the recipient.

Examples of such income include, national insurance, social security benefits to individuals, student grants and pocket money.

Therefore, N.I = Personal Income+ Public Income +Retained Profits- Transfer Payments.

Aggregate Income (Y) = w +r + i + ∏

Where

r – Rent for land

w – Wages for labour

i – Interest for capital

∏- profits for entrepreneurship

Aggregate Income (Y) = C + S + T

The N.I arrived at using this method is at factor cost because it represents the actual payments to the factors of production

PRODUCT OR OUTPUT APPROACHES -VALUE ADDED- (O)

N.I may be arrived at by adding up the value of all final goods and services produced by firms during the year. This method adds up contributions of all individuals at each stage of product to total outputs plus value added of each industry, public, privates and subsistence sectors. Alternatively, N.I may be computed by adding up all the value added to the product at each stage of production. The total values added at different stages are summed through a process called value added.

Example

A commodity costing sh. 100 has been handled by three people A, B and C, and each person, after adding some value sells it as follow:

A	Sh.250
B	Sh.310
C	Sh.400

The value added in this case is

A	Sh. 150
B	Sh. 60
C	Sh. 90
Total	**Sh. 300**

When this total of Sh. 300 was added to the initial cost of Sh. 100, the total value added becomes Sh. 400 which is the value of the final product. It is only the "value added" that is added to avoid double counting. The intermediate inputs are primary inputs at the next stage E.g. the value of Sh. 250 for A is primary input for B. Under this method, some items need to be adjusted as follows:

Unit summary

Summary

In this unit you learned [Add summary text here - you may wish to use the unit outcomes to write this text]

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Assignment

Assignment

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Self Assessment

Self Assessment

[Add Self Assessment text here]

Topic 9

CONSUMPTION, SAVING AND INVESTMENTS

Introduction

This is a function that shows consumption as an increasing function of income. The consumption function is composed of autonomous (α) function and induced consumption (βY)

$$C = \alpha + \beta Y$$

Autonomous consumption is the part consumption that doest depend in disposable income thus it is the consumption when income is zero. This is because consumption also depends on other factors e.g. transfer payment and savings

Outcomes

Upon completion of this unit you will be able to:

- *[verb]* [complete the sentence].
- *[verb]* [complete the sentence].
-

Terminology

[Term]: [Term description]

[Term]: [Term description]

β = Marginal Propensityg to Consumer (M.P.C).

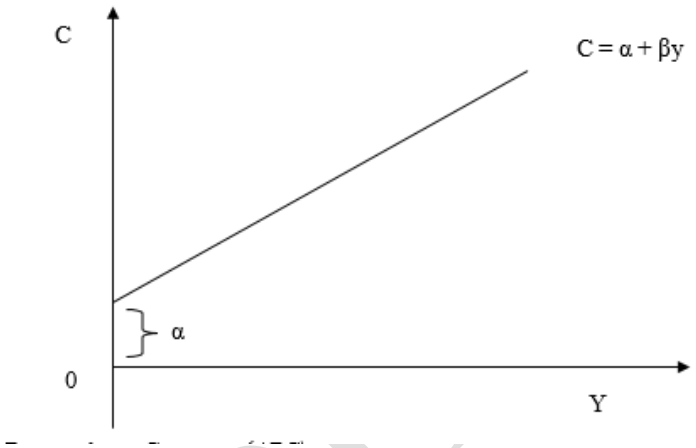
This is the marginal increase in consumption arising from a unit change in income.

MPC = ΔC/ΔY

e.g. C = 300 + 0.6Y

If you increase income by one unit, consumption will increase by 0.6 units.

Income is the major determinant of consumption. Keynesian consumption theory suggests that consumption is lineally dependent of income so that in the short run (C = α + βY) in Keynesian theory saving is function of income S=f(y)



Average Propensity to Consume (APC)

It is the propensity of disposable income that is spent on consumption.

$$\textbf{APC} = \textbf{C/y} = = \frac{\alpha + \beta y}{y} = \frac{\alpha}{y} + \beta$$

The Savings Function

The savings function is upward sloping implying that savings is an increasing function of income. It describes the total amount of savings at each level of disposable personal income. Savings is the difference between disposable income and consumption.

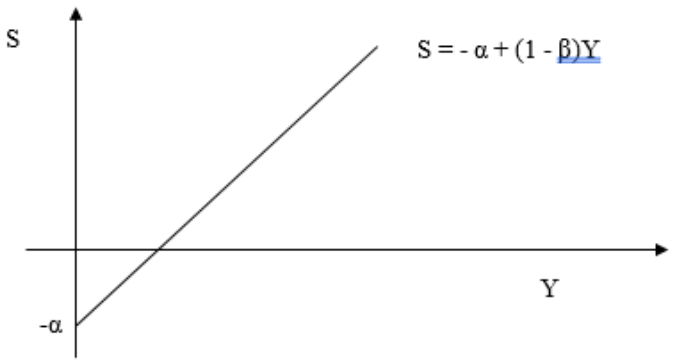
S =Y- C but **C= α + βY** then

S = Y- [α + βY]

S =Y-α - βY

= -α + Y - βY

S = -α + (1- β)Y---------- the savings function.



The slope of the savings function is the marginal propensity to save (MPS). Marginal propensity to save is the change in savings resulting from a unit change in personal disposable income. The average propensity to save (APS) is the proportion of disposable personal income that is saved APS = S/Y. Mathematically the relationship between MPC and MPS is given as follows.

S + C = Y

So **(1- β) + β = 1**

1-β = marginal propensity to save. Thus

MPS + MPC =1 **and** MPS = 1-MPC

The Investment Functions

The **investment function** is a summary of the variables that influence the levels of aggregate investments. It explains how the changes in national income induce changes in investment patterns in the national economy. The reason for investment being inversely related to the interest rate is simply because the interest rate is a measure of the opportunity cost of those resources. If the resources instead of financing the investment could be invested in financial assets, there is an opportunity cost of (1+r), where r is the interest rate. This implies higher investment spending with a lower interest rate. When GDP increases, the output and the capacity utilization increases. This results in an increase of capital investment.

Determinants of Consumption

1. *Rate of Interest:* According to classical economists, individuals will save more and spend less as interest rate increases
2. *Relative Prices:* This influences consumption behaviour with consumers shifting to relatively cheaper goods.
3. *Capital gains:* According to Keynes, windfall gains/losses will influence consumption. Keynes argued that consumption of wealth owners can be influenced by sudden changes in the money value of their wealth. Sudden changes are common where the stock exchange market is composed of speculators.
4. *Wealth:* High stocks of wealth lead to low marginal value of wealth and hence less desire to accumulate more. As a result, this leads to increased consumption.
5. *Money stock (Liquid assets):* The higher the stock of liquid assets the higher the marginal propensity to consume.
6. *Availability of consumer credit:* Readily available and/or cheap consumer credit leads to consumers borrowing for consumption purposes. This pushes up the aggregate consumption function.
7. *Attitudes and Expectations of Consumers*: Both change in consumer attitudes and expectations affect their consumption behaviour. If for

instance, consumers expect a price increase of a certain good, they may increase their current purchase of the same good.

8. *Money Illusion*: Consumption will go up when consumers suffer from money illusion. Money illusion occurs when consumers fail to realize the price increase accompanying the increase in their nominal income, thereby behaving as though their real income has increased when it has not. Money illusion is also called Pigou or real cash balance effect.
9. *Distribution of Income*: Redistribution of income may cause a shift in the aggregate consumption function, or lead to both a shift to a change in the slope of the function. It therefore affects the level of aggregate consumption, if the recipients have different marginal propensity to consume and average propensity to consume.
10. Composition of Population: Population composition in terms of age, sex and class determines consumption.

Determinants of Investment

1. *Interest rate (i):* Investment is inversely related to interest rate.
2. *Internal rate of Return (IRR):* It is the rate of interest that equates the present value of benefits from a project to the present value of its costs. A decision to invest is based on the comparison between IRR and i.

   If IRR > i, investment is made

   IRR < i, no investment

   IRR = i, other factors are considered in deciding whether or not to invest.

3. *Expected future income flows*;- if the investor expects high profits, then investment will be undertaken and vise versa
4. *Initial cost of the capital good and its useful life*: - if the capital good is affordable then it will be purchased and vise versa. An investor will purchase a good that is likely to last longer
5. *Degree of certainty*: An investor considers the risks and uncertainties involved in a particular investment. if they are high he may not invest

6. *Existing stock of capital:* If the existing capital is large potential investors may be discouraged. Similarly if there is excess or idle capacity in existing capital stock, investment may be discouraged.
7. *Level of income;* a rise in the level of income in the economy due to rise in money wages and other factors prices raises the demand for goods and services and this in turn will induce an increase in investment
8. *Business expectations*; if businessmen are optimistic and confident regarding future returns from capital goods they invest more.
9. *Consumer demand*; If the current demand for consumer goods is increasing rapidly, more investments will be made
10. *Liquid assets*; If investors posses large liquid assets then their inducements to invest is high
11. *Invention and innovation*: If investments and technological improvements lead to more efficient methods of production, which reduce costs, the marginal efficiency of new capital assets will rise, hence firms will invest more.
12. *New products*; if sale prospects of the new product is high and the expected revenue more than costs, investment will be encouraged
13. *Population growth;* this implies that there is a growing market (demand) for goods and services that must be met by increased production hence investment will increase to provide the capital goods required to increase production..
14. *Government policy:* Government can encourage investment through reduction in taxes and provision of social amenities for those investing in particular sectors.
15. *Political climate and stability;* if there is political instability in the economy, investment will adversely be affected.

Unit summary

Summary

In this unit you learned [Add summary text here - you may wish to use the unit outcomes to write this text]

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Assignment

Assignment

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Self Assessment

Self Assessment

[Add Self Assessment text here]

Topic 10

MONEY AND BANKING

Introduction

BARTER TRADE

Before money came into use, goods and services were paid for by exchanging other goods and services. However, there were many limitations as discussed below.

Outcomes

Upon completion of this unit you will be able to:

- *[verb]* [complete the sentence].
- *[verb]* [complete the sentence].
- *[verb]* [complete the sentence].
-

Terminology

Double coincidence of wants:	Trying to match the "buyer" with the "seller" is referred to as double coincidence of wants.
Indivisible goods:	There are some items which cannot be conveniently divided into small units without those items losing value.
Transport:	Some goods are too heavy to carry to the market with others too bulky.
Storing perishable goods:	Some goods cannot be stored for long because they are perishable.
Lack of measure of value:	It is difficult to determine how much of each good will be exchanged for another.
Low level of production:	Because of the above problems, people tried to produce nearly all their needs which discourage specialization resulting to low production.
Lack of standard for differed payment:	. Lending was done in terms of goods and it was difficult to decide the value of goods to be paid for in future.

History and Development of Money

Money is anything valuable that is generally acceptable by all people for exchange of goods and services. Different communities used different types of commodities as money; they included Cowry shells, Cows, Ivory beads and cloth. It had a lot of bulkiness, varied values and storage. Others used Gold which was a precious metal. Due to dangers of possession of gold many traders kept them with goldsmith for safe keeping, who in turns built strong rooms. After depositing gold with goldsmith, a merchant was issued with a receipt known as I.0.U. The merchants later learned the art of exchanging receipts instead of gold, a great step towards paper money introduction.

The first paper money (I. O. Uipts) was a promise to pay on demand a specified amount of gold. Paper money was thus representing gold and was as good as gold thus equivalent.

Goldsmiths later realized the excess gold in their possession and would lend to merchants who would in turn pay some interest. They had to lend carefully to minimize loss. This started a process of replacing goldsmith with gold banker who continued the same process of issuing receipts on delivery of gold. The system became gold standard

Later on use of gold for transactions between individuals and business was replaced by paper money (bank notes) and coins. They are collectively called currency – legal tender, ie which Law requires for settling debts.

In Kenya, currency notes are issued in denominations of 1000, 500, 200, 100, 50, 20 and coins are 40, 20, 10, 5, 1, 0.50, 0.10, 0.05 cents. Payments in five and ten cents be made for debts not exceeding five shillings while 5/= not exceeding Ksh.25. **Fiduciary issue coin** is a fraction of country's currency which is not backed by gold and it is inconvertible currency and **convertible currency** is the type that is backed by gold.

FUNCTIONS OF MONEY

1. ***Medium of Exchange.*** All goods and services are valued in money terms and can easily be exchanged for money.
2. ***Measure of value.*** Money is a yard stick for measuring the value of goods and services. All goods and services are expressed in terms of monetary terms.
3. ***Store of value/Wealth.*** It is used to store value of goods. Earnings from today's sales can be transferred to a future use.
4. ***Standard of deferred payments.*** It can be used for settling future debts. Payments can be made for goods to be supplied at a future time.
5. ***Unit of account.*** This is when the value of different goods and services is calculated and records kept in money forms.

PROPERTIES OF MONEY

1. ***Acceptability:*** Money must be accepted by all people.
2. ***Scarcity*:** Should be limited in supply.
3. ***Portability*:** Should be light in weight.
4. ***Durability*:** Should have ability to maintain its physical quality and value over a reasonable period.
5. ***Homogeneity:*** All notes and coins of the same unit should have equal size, shape and color.
6. ***Divisibility*:** Be possible to divide into small units to clear even small debts.
7. ***Difficult to forge through counterfeiting*:** The materials used to make money and techniques of making it should be difficult to copy.
8. ***Stability*:** Money should not fluctuate in value in short run, otherwise people hold wealth in terms of goods to avoid losses.
9. ***Recognisability*:** Easy to identify
10. ***Malleability*:** The unit cost of producing a unit of currency should be less than the face value.

BANKING SYSTEM

Evolution and Origin of Banking

From the topic of evolution and development of money, the goldsmith, whom people deposited their valuables like gold for safekeeping for a fee were issued negotiable and redeemable receipts. These receipts were in turn given to sellers of commodities by buyers as substitute for money (paper money). This shows that the goldsmith's receipts served as

promissory notes and was then accepted as both a medium of exchange and as a means of payment. The goldsmith later found out that on the average, the withdrawals of the gold (coins) were much less than the deposits with him, he then started advancing them on loans to those who wanted them and charge interests on them. Through such loans the goldsmith-cum-money lender stated performing two functions of modern banking- that of accepting deposits and advancing loans. The foregoing reveals that banking development therefore came out of the habit of "safe-keeping of valuable" for a token payment for the services rendered by the goldsmith.

Definition of a Bank

A bank is a legal institution which accepts deposits from the public and in turn advances loans by creating credit. This makes it different from other financial institution in that the later cannot create credit though they may be accepting deposits and making advances.

FUNCTIONS OF COMMERCIAL BANKS

Commercial banks perform a variety of functions in the economy. Some of their primary functions are

1. Accepting Deposit (Acceptance and Safe-Keeping of Deposits).
2. Granting of Loans and Advances
3. Credit Creation
4. Financing Foreign Trade
5. Agency Services
6. Transferring of funds
7. Management of customer's investment
8. Executor and trustee of wills.
9. Provisions of facilities for safe-keeping of important documents.
10. Foreign exchange (FOREX) facilities to travelers.
11. Advising customers on insurance matters.
12. Night safe facilities
13. Provision of services to importers and exporters.

Providing business status report and reference by writing reports or ensuring inquiries about the financial standing of the customers when the need arises.

CREDIT CREATION BY COMMERCIAL BANKS

Credit creation, a very important function of commercial banks is the process where they (Commercial banks) make available to borrowers in the form of loans and overdrafts deposits in their possession. Bank customers who want to enjoy credit facilities with them usually open and operate current accounts. They therefore make withdrawal of credits granted them from such accounts through the use of cheques, in most case, not cash. Credits are therefore credit by the banks by their making use of cheques and clearing facilities.

Thus, credit creation requires bank opening a deposit every time they make loan available to customers. The customers in turn open current account through which payments and withdrawals are finally effected through the Cheque clearing system. Thus bank loan creates deposits and it is in this sense that credit is credited by commercial banks.

Banks do not give out all deposit they receive on loans and also depositors do not withdraw their money simultaneously. They therefore keep small cash in reserve for day-to-day transactions, and then advance the excess on this reserve on loans. Also, the banks are legally required to keep a fixed percentage of their deposits in cash, and lend or invest the remaining amount which is called excess reserves. The entire banking system can lend and create credit upon a multiple of its original excess reserves. It calculates the *maximum* amount of money that an initial deposit can be expanded to with a given reserve ratio – such a factor is called a multiplier. As a formula, if the reserve ratio is R, then the money multiplier m is the reciprocal, $m = 1 / R$, and is the maximum amount of money commercial banks can legally create for a given quantity of reserves.

BANK CONSTRAINTS IN CREDIT CREATION

In its process of credit creation by commercial banks, there exist some inhibiting factors. These factors that limit the power of commercial banks to credit creation are:

1. ***The banking habit of the populace,*** i.e. the willingness of the people to use the facilities of the banking system. Where this is high and people adopt and embrace banking habits, more cash/ deposits will be available to the banks, thus more credit creation.
2. ***Legal Reserve Ratio:*** The higher the legal reserve ratio of bank the lower the credit creation ability of the banks and vice versa.
3. ***Security/Collateral Requirements by banks for loans.*** Where this is too stringent to borrowers, their borrowing ability is lowered hence low credit.
4. ***The income level in the economy.*** The larger the income of the people, the greater the bank deposits, all things being equal, hence higher credit creation
5. ***The credit control policy by the central bank***. A contractionary credit policy will limit the credit creation ability of banks, while an expansionary credit policy boosts the capacity.
6. ***The level of economic activities***: Banks credit creation ability in period of depression is curtailed because of its attendant consequences. Conversely credit is expanded when the economy is in full swing; boost periods.
7. ***The Banking behaviours and policy***: The efficiency of the banking cheque clearing system, rate of interest or (bank charges) for lending money to qualified borrowers and most especially the bank's willingness to make loans available to the investors all contribute and limits the credit creation ability of banks.
8. ***Leakages from the banking system:*** by way of cash withdrawal for spending or hoarding at home limits the credit creation ability of banks.

NB:

The foregoing has revealed that the commercial banks do not possess unlimited powers in its credit creation, but there are some variables to be kept in sight and monitored properly, where possible as to keep the benefits of this their important function in the economy.

CENTRAL BANK

Introduction

Banking transactions are businesses usually carried on by any individual or firm engaged in providing financial services to consumers, businesses or government enterprises. In the broadest sense, a bank has been seen as a financial intermediary that performs functions such as safeguards and transfers funds, lends or facilitates lending, guarantees credit worthiness, and exchanges money.

Functions of a Central Bank

The central bank is the foremost monetary institution in a market economy; usually government owned whose responsibility is to take care of the national interest. The functions performed by most central banks can be broadly grouped as follows:

1. Banker to government
2. Manager of government public debt
3. Banker to other banks
4. Supporter of money market
5. Agent of Monetary policy

MONETARY POLICY CONTROL METHODS AND INSTRUMENTS

The operation of a nation's monetary policy, a responsibility of the central bank, attempts to influence the economy by the control of the monetary magnitudes which in turn checks inflationary and deflationary pressures within the economy.

The **major objectives of the monetary policy** include the following:

1. Stabilization of internal price level.
2. Stabilizing the rate of foreign exchange
3. Protection of the outflow of foreign reserve
4. Control of business cycle.
5. Promotion of stable growth in the economy.
6. Meeting the monetary requirement of the business sector.

The **primary instruments of general monetary control** by the Central Bank are discussed hereunder.

(a) Open market operations (OMO)

The open market operations (OMO) refer to a monetary management techniques widely used by monetary authorities to control the growth of liquidity in an economy. OMO transaction consists of outright sales/purchases of government securities and is expected to have a permanent effect on the level of liquidity in the economy.

(b) Cash Reserve Requirement (legal Reserve Ratio)

This is the percentage of deposits that banks must maintain on reserve with the Central Bank. The amount that remains with the commercial banks over and above the minimum reserve is known as excess reserve on whose basis they create credit. When the CB raises the required reserve ratio, banks excess reserve will be reduced then unable to create as much money as they previously were able to because a large portion of their assets must be held in reserve. Conversely, where the reserve ratio is reduced, the banks will be able to create more, money in the economy. Thus, the larger the cash reserve requirement the smaller the excess reserve and the lower the ability of banks to create credit and vice versa.

(c) Bank Rate or Discount Rate Operation

This is the rate at which Central Bank rediscounts first class bills of exchange and government securities when the commercial bank needs to borrow from the apex bank. It is the interest rate charged by the CB at which it provides rediscount to banks through the discount window. Thus, the CB can make changes in the discount rate in monetary control. When banks seek additional reserves by borrowing from the CB, a significant escalation in the discount rate makes such borrowing more expensive and consequently reduces demands for reserves, hence contracting credit. Conversely, if the CB wants to expand credit, it lowers the bank rate, making borrowing from the CB cheap. A discount rate change may, at times, reinforce OMO

(d) Moral Persuasion

This involves the use of persuasion by the CB to the commercial banks to comply with the CB guidelines on any economic problem arising from the banking sector. Such guidelines arose from a democratic conference of representation of the CB and the banks on such identified problems. Agreement reached at such conferences on how best to handle the problem becomes the guidelines banks are asked to implement at their branches. Non-compliance with the provisions of the guidelines may be punished by the CB.

(e) Liquidity Ratio

The liquidity ratio, the percentage of a bank deposits held in form of cash or eligible liquid assets in the tills of the bank are also used as a monetary policy instrument. Money supply is reduced when this liquidity ratio is increased resulting in reduction in the banks excess reserves.
A reduction in the liquidity ratio leads to increase in the excess reserve, thus increase in the credit supply by banks.

The Role of the Central Bank in a Developing Economy

1. Creation and Expansion of the Financial System

The commercial banks that have the function of credit creation in the economy are mostly profit oriented institutions. They therefore prefer to be localized in the big cities to provide credit facilities to estates, plantations, big industrial and commercial ventures. The commercial banks hitherto provide only short-term loans to the aforementioned groups, thus credit facilities in the rural areas to peasant farmers, small business men/women and traders were mostly nonexistent.
The central bank in its bid to improve the currency and credit system of the country issues directives to the commercial banks to extend branch banking to rural (i.e. rural banking scheme) areas to make credit available to the rural business operatives. Also they are directed on the provision of credit facilities to marginal farmers on short, medium and long term basis. The central bank also encourages the establishment of community banks and other programmes through which deposit mobilization and investment s are encouraged in the rural areas. The central bank also helps in establishing specialized banks and financial corporations in order to finance large and small industries.

2. Price Level Stability Role

In units six, seven and eight where we discussed the demand and supply of money and inflations, you learned about the movement in price level resulting from the imbalance between demand and supply of money. It is a general economic system that as the economy develops; the demand for money is likely to go up due to increase in production and price. This if not properly checked may result in inflation. The central bank controls

the uses of policy that will prevent price level from rising without affecting investment and production adversely.

3. Interest Rate Policy Stability Role

In developing economies, the existence of high interest rates in different sectors act as an obstacle to the growth of both private and public investment. Since investors borrow from the banks and the capital market for purposes of investment, it therefore, behaves the system to encourage them by ensuring a low interest rate policy. Low interest rate policy is a cheap money policy, making public borrowing cheap, cost of servicing public debt low and finally encouraging and financing economic development. The policy becomes more effective if the central bank operates a discriminatory interest rate, charging high rates for non-essential and unproductive loans and lower rates for productive loans.

4. Debt Management Role

In developing economies in particular and every economy in general, the central bank manages the domestic and foreign debts on the instruction of the Federal Ministry of Finance. Debt management involves debt service payments and participation in debt restructuring through rescheduling, debt refinancing, as well as debt conversion to ensure that the debt is reduced to a manageable size. The aim of the bank in this results in areas of proper timing and issuing of government bonds and securities, stabilizing their prices and also minimizing the cost of servicing the public debt. In order to achieve this role, it becomes essential that the central bank should ensure a low interest rate policy on these bonds to make them more attractive. Thus, for this role of debt management to be successful, the central bank will ensure and encourage the existence of well developed money and capital markets where both short and long-term securities abound.

5. Monetary Stability

Monetary policy–the credit control measures adopted by the central bank of a country, is of vital importance in the process of development. This is important because of how they influence the pattern of investment and production through the conscious action taken by the bank in the control of the supply of money. This mechanism in effect, when the proper mix of the control instrument is adopted effectively, controls inflationary

pressures arising in the process of development. These instruments as we saw in the previous unit include – open market operations, required reserve, ratio, bank rate or discount rate, among others.

6. Foreign Exchange Management Role

The central bank manages and controls the foreign exchange resources of a nation – its acquisition and allocation in order to reduce destabilizing short-term capital flows. The bank thus monitors the use of scarce foreign exchange resource to ensure that foreign exchange disbursement and utilization are in line with the economic priorities at the same time in line with economic priorities and within the foreign exchange budget. In this regard the central bank further acts as the technical adviser to the government on foreign exchange policy, especially in maintaining a stable foreign exchange rate. This, the bank still achieves this through exchange controls and variations in the bank rates (discount rates). This role generally helps in achieving a balance of payment equilibrium; a problem prevalent in the developing economies.

Unit summary

Summary

In this unit you learned [Add summary text here - you may wish to use the unit outcomes to write this text]

[Continue your body text here]

Assignment

Assignment

[Add assignment text here]

[Continue your body text here]

Self Assessment

Self Assessment

[Add Self Assessment text here]

[Continue your body text here]

Topic 11

UNEMPLOYMENT

Introduction

You have must have heard of Keynes before in economics. He really contributed to modern avenues of understanding unemployment concept. You will find that Keynesian revolution which established the branch economics-Macroeconomics was stimulated by the need to explain and solve the high unemployment problems of the 1930s.

It proposed the use of counter cyclical aggregate demand policies to cure unemployment (stimulating demand can cure unemployment -but no longer acceptable).This causes the policies did not distinguish between unemployment that rises because economic performance is below potential output and unemployment that exists even when the economy is in equilibrium at the potential level of GDP.

Unemployment associated with actual **GDP being below potential** is referred to as cyclical unemployment.

We also have **equilibrium unemployment** which exists even when GDP is at its potential level.

Upon completion of this unit you will be able to:

Outcomes

- *[verb]* [complete the sentence].
- *[verb]* [complete the sentence].
-

Terminology

Unemployment: is defined as a situation where factors of production are willing and capable of being employed at the prevailing market wages rates but are involuntary unutilized or underutilized.

Unemployment

It's calculated using the formula below;

Unemployment = Number of unemployed x 100

Total workforce

The number of unemployed individuals depends on rate of growth of the economy, the production technique utilized and government policies.

In developing countries, unemployment rate are difficult to measure due to considerable size of informed sector.

Types of unemployment

1. Open Involuntary Unemployment

This is where people who are not working and are able to work at the existing wage rate cannot get jobs.

2. Open Voluntary Unemployment

- Is where people are able to get jobs at existing wage rate but prefer not to work.

3. Natural rate of unemployment

- This is the level of unemployment that exists when the economy is at full employment, producing its potential output.

4. Frictional Unemployment

- This is caused by the time lag involved in redeployment of labor. This land of unemployment is caused by mobility problems in the labor market, which result in friction in the labor market. This friction is either due to communication problems or mismatch between job opportunities and job seekers.

5. Seasonal Unemployment

- This arises due to the seasonal nature of some productive activities e.g. production in the agricultural sector.

6. Structural Unemployment

- Results either from change in demand occasioned by change in consumer tastes and preferences or from technological change.

7. Cyclical Unemployment

- Is caused by business cycles or swings in the economy e.g. depression and boom

8. Under-employment

- It occurs when people are working less than they would like to work. Or when people are in jobs that totally underutilize their skills and competence.

9. Disguised Unemployment

- Individuals do not want to do certain jobs because of their qualifications

10. The unemployment of Prematurely Retired

- This occurs when people are retrenched before they attain retirement age.

Causes of Unemployment

a) ***Lack of co-operation between factors of production.*** These are essential factors which have to be combined with labor in production process e.g. capital and land especially in developing countries.

b) ***Rapid population growth*** in many developing countries population grows faster than the overall rate of growth of economy. Labour supply is greater than absorption rate.

c) ***Use of inappropriate technology***. It is inappropriate in relation to the resources base in a given country e.g. in developing countries technology is labor saving and capital intensive .It should be capital intensive and labor saving.

d) ***The nature of education system.*** Most systems are from developed countries and don't conform to realities of the labor market, hence job creation is geared towards white collar jobs finds more labor force produced than the more blue color jobs.

e) ***Seasonality in production*****.** Changes in weather lead to seasonality in agriculture production & hence seasonally in employment.

f) ***Massive rural-urban migration***. This result in urban unemployment owing to institutional urban job creation capacity.

g) ***Lack of Capital:*** The less developing countries are facing the problem of capital shortage. While for the development of any country there is need of a huge amount of capital. When new projects buildings and factories are constructed a large number of people are engaged in these projects. So lack of capital is the major cause of unemployment.

h) ***Lack of Effective Demand*****.** According to Keynes when aggregate supply increases than the aggregate demand the unemployment prevails,. So he stresses that the rate of consumption may not fall.

i) ***Lack of Skill***. In the less developing countries, majority of the people is uneducated and they have no any skill about any particular job. So they cannot get the job.

j) ***Poor Performance of Agriculture Sector***. Under developed countries depends upon the agriculture sector and production of agriculture depends upon nature. Second problem is this that there is subdivision of land. Farmers have very small holdings neither they can sell it nor they can cultivate it.

Reasons of concern about unemployment

How does unemployment affect the economy?

1. **Unemployment financial costs.** The government and the nation suffer. In many countries the government has to pay the unemployed some benefits. The greater the number of the unemployed or the longer they are without work the more money the government has to shell out. Therefore, the nation not only has to deal with the lost income and decreased production but also with additional cost.

2. **Spending power.** The spending power of an unemployed person and his/her family decreases drastically and they would rather save than spend their money, which in turn affects the economy adversely.

3. **Reduced spending power of the employed.** Increased taxes and the insecurity about their own work may affect the spending power of the working people as well and they too may start to spend less than before thus affecting the economy and also the society in a negative manner.

4. **Recession.** With the increase rates of unemployment other economy factors are significantly affected, such as: the income per person, health costs, quality of health-care, standard of leaving and poverty.

The effect of unemployment on our society

Unemployment affects not just the person himself but also his/her family and in the long run the society where he lives

1. It leads to higher dependency ratio in the society.
2. **Mental health:** Mental health problems like: Law self-confidence, feeling unworthy, depression and hopelessness. With the lost income and the frustration involved in it, the recently unemployed may develop negative attitudes toward common things in life and may feel that all sense of purpose is lost. Frequent emotions could be – low self-esteem, inadequateness and feeling dejected and hopeless.
3. **Health diseases:** The unemployment overall tension can increase dramatically general health issues of individuals.
4. **Tension at home:** Quarrels and arguments at home front which may lead to tension and increased numbers of divorces etc.
5. **Political issues**: Loss of trust in administration and the government which may lead to political instability
6. **Tension over taxes rise:** Unemployment also brings up discontent and frustration amongst the tax paying citizens. In order to meet the demands of the unemployment fund the government many a times may have to increase the taxes thus giving way to restlessness amongst the tax paying citizens.
7. **Insecurity amongst employees:** The prevailing unemployment and the plight of the unemployed people and their families may create fear and insecurity even in the currently employed people.
8. **Crime and violence:** Increase in the rate of crime.
9. **Suicide cases:** Increase in the rate of suicide attempts and actual suicides as well.
10. **Social outing:** Unemployment may bring a decrease in social outings and interactions with other people, including friends.
11. **Stigma:** Unemployment brings with more than just 'no work'. It also brings with it the disgrace that the person has to bear. Nobody likes to be termed as unemployed.
12. **Standard of living:** In times of unemployment the competition for jobs and the negotiation power of the individual decreases and thus also the living standard of people with the salaries packages and income reduced.
13. **Employment gaps:** To further complicate the situation the longer the individual is out of job the more difficult it becomes to find one. Employers find employment gasps as a negative aspect. No one wants to hire a person who has been out of work for some time even when there's no fault of the individual per say.
14. **Lose of skills' usage:** The unemployed is not able to put his/her skills to use. And in a situation where it goes on for too long the person may have to lose some of his/her skills.

Policies to combat unemployment in developing Countries

1. ***Increasing employment creation in the private sector:*** An enabling environment and private sector growth to reduce budget debts. Low interest leads to growth of private sector. Incentive to microfinance institutions to provide capital to small and medium enterprises can encourage development of the private sector.
2. ***Seasonal unemployment can be reduced by diversification in production.*** Diversity from primary products to where demand is more price and income elastic.
3. Intensive rural development that creates incentives to industries to relocate from urban to rural.
4. Encouragement of conducive political and economic environment.
5. ***Encouragement of use of domestic resources*** that reduces foreign inputs which generate employment abroad.
6. ***Increase in Capital Formation.*** Government should establish the labour intensive industries to increase the rate of employment.
7. ***Establishment of Small Scale Industries.*** In the rural areas small scene industry should be established to remove the disguise unemployment.
8. ***Technical Training Centers.*** Technical and commercial centers should be established to provide training and skill to the public. It will be very useful in curtailing the unemployment.
9. ***Control on Population.*** There should be an effective check on the population growth. Family planning programme should be introduced and population should be reduced according the size of natural resources.
10. ***Increase in Effective Demand.*** Government should increase the rate of investment by establishing the various industries to increase the rate of employment.
11. ***Employment Exchange Offices.*** The offices should be established to provide the proper information about the employment to the public.
12. *Monetary and Fiscal Policy*. Monetary and fiscal policy should framed in such a manner that there should be maximum chances of employment to public

Unit summary

Summary

In this unit you learned [Add summary text here - you may wish to use the unit outcomes to write this text]

Assignment

Assignment

[Add assignment text here]

Self Assessment

Self Assessment

[Add Self Assessment text here]