BUSINESS ECONOMICS

STUDY TEXT

A6

Foundation level

THE NATIONAL BOARD OF ACCOUNTANTS AND AUDITORS TANZANIA (NBAA)

A6 BUSINESS ECONOMICS

A-06
BUSINESS ECONOMICS

STUDY GUIDE

NBAA

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FOREWORD.

The National Board of Accountants and Auditors is a professional body in Tanzania, established under the Auditors and Accountancy Registration Act No 33 of 1972 (CAP 286 R.E.2002). The Board has been charged with among other things, the responsibility to promote, develop and regulate the accountancy profession in the country.

In fulfilling its statutory obligations, NBAA prepares National Accountancy Examination Scheme for students aspiring to sit for Accounting Technician and Professional Examinations. Further, for effective implementation of the examination scheme and improve examination results, the Board provides Study Guides for all subjects to assist both examination candidates and trainers in the course of learning and teaching.

The Study Guides have been prepared in the form of text books with examples and questions to enable the user to have comprehensive understanding of the topics. The Study Guides cover a wide range of topics in the NBAA syllabi and adequately cover the most comprehensive and complete knowledge base that is required by a leaner to pass the respective examination levels.

Furthermore, the Study Guides have been prepared to match with the Competency Based Syllabi to enable the learners to be exposed to practical understanding of issues rather than memorisation of concepts. In this case, the Study Guides are characterized by the following features:-

1. Focus on outcomes – The outcomes shown in every topic provides clear understanding on what to be learnt.

2. Greater workplace relevance – the guides emphasize on the importance of applying knowledge and skills necessary for effectively performance in a work place. This is different from the traditional training where much concern has been expressed in theoretical perspectives.

3. Assessments as judgments of competence – The assessment questions embedded in the Study Guides are adequate measures of understanding of the subject matter.

Study Guides are also useful to trainers specifically those who are teaching in the review classes preparing learners to sit for the professional examinations. They will make use of these Study Guides together with their additional learning materials from other sources in ensuring that the learners are getting sufficient knowledge and skills not only to enable them pass examinations but also make them competent enough to perform effectively in their respectively workplace.

NBAA believes that these standard Study Guides are about assisting candidates to acquire necessary skills and knowledge that will enable them to perform as professionals. The outcomes to be achieved are clearly stated so that learners may know exactly the skills and knowledge they are supposed to acquire in a particular topic.

NBAA wishes all the best to NBAA Examination candidates, trainers in their review classes, lecturers in the higher learning institutions and all other beneficiaries of these learning materials in making good use of the Study Guides towards promoting the accountancy profession in Tanzania.

CPA. Pius A. Maneno
EXECUTIVE DIRECTOR
JUNE, 2019

STUDY CONTENTS

A-06 – Business Economics

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1 NATURE AND SCOPE OF ECONOMICS

Get Through Intro

The contents of this Study Guide will provide you with a thorough understanding of the key definitions, Nature & Scope of Economics.

Learning Outcomes

At the end of this topic students are expected to understand the following;

a) Definitions, nature and scope of Micro and Macro Economics, Positive and Normative Economics
b) Scope of Economics
c) Central problems of Economy
d) Scarcity, choice and opportunity costs
e) Production Possibility Curve and Opportunity Costs
f) Understanding Economic Systems (A traditional economy, A market economy, A command (or planned) economy and A mixed (or hybrid) economy).

a). Definitions, nature and scope of Micro and Macro Economics.
[Learning Outcome a]

1.1 Introduction

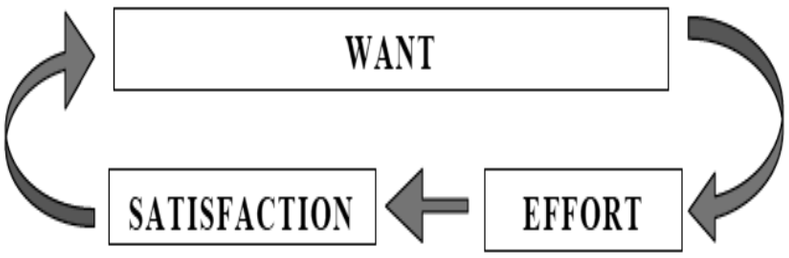
Definition

Economics is a social science concerned with the production, distribution, and consumption of goods and services. It studies how individuals, businesses, governments, and nations make choices on allocating resources to satisfy their wants and needs, trying to determine how these groups should organize and coordinate efforts to achieve maximum output. The central focus of economics is on scarcity of resources and choices among their alternative uses. The resources or inputs available to produce goods are limited or scarce. This scarcity induces people to make choices among alternatives, and the knowledge of economics is used to compare the alternatives for choosing the best among them. For example, a farmer can grow paddy, sugarcane, banana, cotton etc. in his farm. But he has to choose a crop depending upon the size of land.

Traditional economic theory has developed along two lines; viz., normative and positive. Normative focuses on prescriptive statements, and help establish rules aimed at attaining the specified goals of business. Positive, on the other hand, focuses on description and it aims at describing the manner in which the economic system operates without staffing how they should operate. The emphasis in business economics is on normative theory.

Two major factors are responsible for the emergence of economic problems. i) the existence of unlimited human wants and ii) the scarcity of available resources. The numerous human wants are to be satisfied through the scarce resources available in nature. Economics deals with how the numerous human wants are to be satisfied with limited resources. Thus, the science of economics centers on want - effort - satisfaction.

Diagram 1: Human wants



Economics not only covers the decision making behaviour of individuals but also the macro variables of economies like national income, public finance, international trade and so on.

1.2 Various definitions of Economics

Several economists have defined economics taking different aspects into account. The word ‘Economics’ was derived from two Greek words, oikos (a house) and nemein (to manage) which would mean ‘managing an household’ using the limited funds available, in the most satisfactory manner possible.

a) **Wealth definition**:

Adam smith (1723 - 1790), in his book “An Inquiry into Nature and Causes of Wealth of Nations” (1776) defined economics as the science of wealth. He explained how a nation’s wealth is created. He considered that the individual in the society wants to promote only his own gain and in this, he is led by

an “invisible hand” to promote the interests of the society though he has no real intention to promote the society’s interests.

Criticism: Smith defined economics only in terms of wealth and not in terms of human welfare. Ruskin and Carlyle condemned economics as a ‘dismal science’, as it taught selfishness which was against ethics. However, now, wealth is considered only to be a mean to end, the end being the human welfare. Hence, wealth definition was rejected and the emphasis was shifted from ‘wealth’ to welfare’.

b) Welfare Definition

Alfred Marshall (1842-1924) wrote a book Principles of Economics in 1890. In it, he defined economics as “a study of mankind in the ordinary business of life”. An altered form of this definition is: “Economics is a study of man’s actions in the ordinary business of life”. Marshall agrees that economics studies about wealth. But he does not accept the view that economics studies about wealth alone. In the words of Marshall, “Economics is on the one side a study of wealth, and on the other and more important side, a part of the study of man. In economics, we do not study about all aspects of humankind. As cairn cross puts it, Economics studies about man as “buyer and seller, producer and consumer, saver and investor, employer and worker”. Marshall’s definition is known as material welfare definition of Economics because of its emphasis on welfare.

Criticism: There is no doubt that Marshall’s definition came as an improvement over the definition of Adam Smith. For its emphasis is on social problems. Moreover, it tells us about the link between wealth and welfare.

c) Robbins’s Definition

According to Lionel Robbins’s famous definition, “Economics is the science which studies human behaviour as a relationship between ends and scarce means which have alternative uses”. By “ends” Robbins means human objectives, possible states of affairs that can be ranked in terms of their importance or desirability. By “means” he has in mind the available time and other resources that could be deployed to achieve those ends. Economic problems, as he conceives them, arise in situations where there are competing ends of different levels of importance, and where the available means could be put to more than one use and are scarce relative to those ends. In situations of this kind economic choices have to be made:

Criticism: a)Robbins does not make any distinction between goods conducive to human welfare and goods that are not conducive to human welfare. In the production of rice and alcoholic drink, scarce resources are used. But the production of rice promotes human welfare while production of alcoholic drinks is not conducive to human welfare. However, Robbins concludes that economics is neutral between ends. b) In Economics, it does not only study the micro economic aspects like how resources are allocated and how price is determined, but it also study the macroeconomic aspect like how national income is generated. c) Robbins definition does not cover the theory of economic growth and development.

d) Growth Definition

According to Prof. Paul Samuelson defined economics as “the study of how men and society choose, with or without the use of money, to employ scarce productive resources which could have alternative uses, to produce various commodities over time, and distribute them for consumption, now and in the future among various people and groups of society”.

Of all the definitions discussed above, the ‘growth’ definition stated by Samuelson appears to be the most satisfactory. However, in modern Economics, the subject matter of Economics is divided into main parts, viz., i) Micro Economics and ii) Macro Economics. Economics is, therefore, rightly considered as the study of allocation of scarce resources (in relation to unlimited ends) and of determinants of income, output, employment and economic growth.

b). Scope of Economics

[Learning Outcome a]

Scope means province or field of study. In discussing the scope of economics, we have to indicate whether it is a science or an art and a positive science or a normative science. It also covers the subject matter of economics.

1. Economics - A Science and an Art

I. **Economics as a branch of Science:** Science is a systematized body of knowledge that traces the relationship between cause and effect. Another attribute of science is that its phenomena should be amenable to measurement. Applying these characteristics, we find that economics is a branch of knowledge where the various facts relevant to it have been systematically collected, classified and analyzed. Economics investigates the possibility of deducing generalizations as regards the economic motives of human beings. The motives of individuals and business firms can be very easily measured in terms of money. Thus, economics is a science.

Economics – As a Social Science: In order to understand the social aspect of Economics, we should bear in mind that labourers are working on materials drawn from all over the world and producing commodities to be sold all over the world in order to exchange goods from all parts of the world to satisfy their wants. There is, thus, a close inter-dependence of millions of people living in distant lands unknown to one another. In this way, the process of satisfying wants is not only an individual process, but also a social process. In Economics, one has, thus, to study social behaviour i.e., behaviour of men in-groups.

II. Economics is also an art. An art is a system of rules for the attainment of a given end. A science teaches us to know; an art teaches us to do. Applying this definition, we find that economics offers us practical guidance in the solution of economic problems. Science and art are complementary to each other and economics is both a science and an art.

2. Positive and Normative Economics

Economics is both positive and normative science.

I. **Positive science**: It only describes what it is and normative science prescribes what it ought to be. Positive science does not indicate what is good or what is bad to the society. It will simply provide results of economic analysis of a problem.

II. **Normative science**: It makes distinction between good and bad. It prescribes what should be done to promote human welfare. A positive statement is based on facts. A normative statement involves ethical values. For example, “20 per cent of the labour force in Tanzania was unemployed last year” is a positive statement, which could is verified by scientific measurement. “Twenty per cent unemployment is too high” is normative statement comparing the fact of 20 percent unemployment with a standard of what is unreasonable. It also suggests how it can be rectified. Therefore, Economics is a positive as well as normative science.

c). Central problems of Economy: Scarcity, choice and opportunity costs: Production Possibility Curve and Opportunity Costs

[Learning Outcome c, d and e]

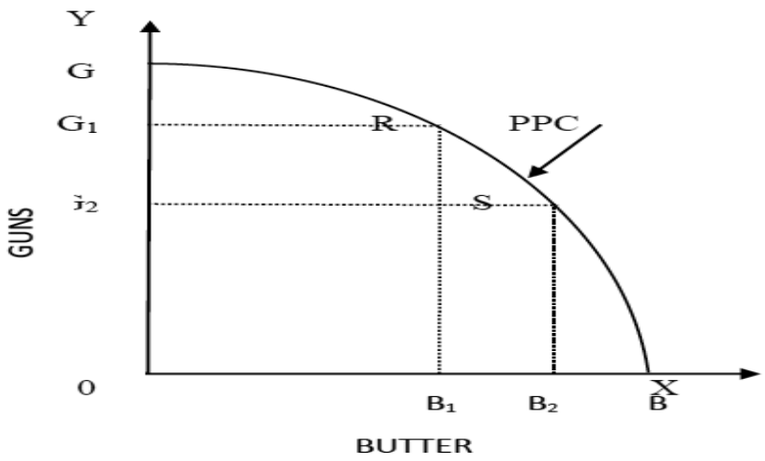
Economics is mainly concerned with the achievements and uses of material requirements to satisfy human wants. However, human wants are unlimited and productive resources are unlimited. Therefore, goods and services which satisfy human wants are scare. Because of the scarcity and limited resources and limited availability of goods and services we have basic economic problems.
The basic economic problems of an economy can be given as follows:

1. What to produce?
2. How to produce?
3. For whom to produce?
4. Efficiency of production.
5. Economic Growth.

1) What to Produce?
As the resources are limited and wants are unlimited the problem of what to produce implies that a society has to decide which goods and in what quantities are to be produced. With the help of Production Possibility Curve or Frontier popularly known as PPC the problem of what to produce and how to produce can be addressed. PPC is also known as transformation curve as moving from one point to another there is transformation of one good into another by shifting of resources used for their production.

Diagram 2 gives a hypothetical case of an economy in which using the given resources guns and butter can be produced. Butter is peace time good and guns are war time good. If all the resources are allocated for the production of butter then OB of butter and no guns can be produced. If all the resources are B_1 B_2 B utilized for the production of guns, then OG of guns and no butter will be produced. Thus the two extreme possibilities are OG & OB of guns and butter respectively. In between these two extremes one can have many combinations. When OG_1 of guns are produced the butter production is OB_1, for increasing the butter production by B_1B_2, some resources will be withdrawn from the guns production and thus it will decrease by G_1G_2. It is to be noted that to produce butter we have to reduce the production of guns. Hence the economy will divert the resources from production of butter to guns and vice versa depending on the need in the country.

Diagram 2: Production Possibilities Frontier/Curve



Thus the basic economic problem of what to produce is solved with the help of production possibility curve.

2) How to produce?

This is the problem of choice of technique. There are mainly two types of technology available for the production of a good. First is the labour intensive technology, which uses more labour than machines and second is the capital intensive technology, in which there is more use of capital or machines as compared to the labour. Further it means with what combination of resources a society decides to produce goods. Usually, there are various alternatives; there are various techniques of production of a commodity. In order to explain these problems we take into account two factors of production which are labour and capital. An economy having abundance of labour would produce labour intensive production, on the other hand economy having huge supply of capital intensive production. For example, India is a Labour Intensive Country and Japan is Capital Intensive Country.

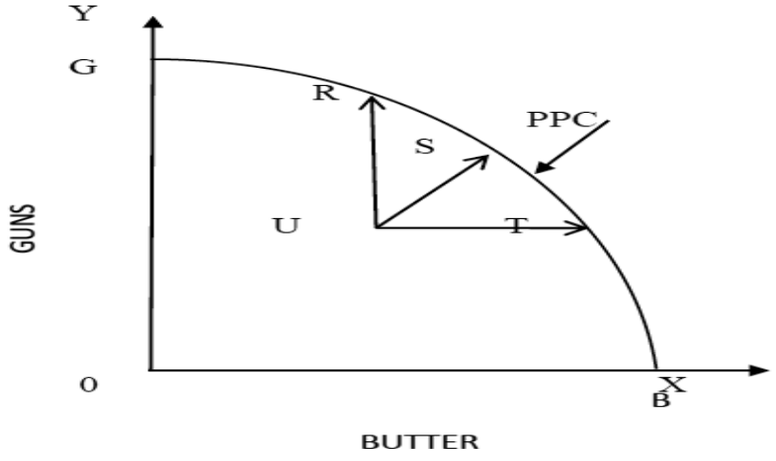
3) For whom to produce?

This is the problem of distribution of goods between different income groups of the society. How many resources are used for the rich and the middle class and what is left for the poor? This tells us about the relative importance the economy gives to the needs of the rich and poor. It also means the choice between present and the future needs. It implies how the national product is distributed among the various sections of societies, there are limited resources an economist has to decide who should get what and how much. This is to say how the national income is distributed among various segments of the society. An economy has to check whether this distribution is proper and the weaker section of the society is not deprived of the basic necessities of life.

4) Efficiency of Production: -

Another important problem faced by an economy is to examine whether the production process is carried out in the most efficient manner. The problem of efficiency is explained with the help of the Diagram 3. If the economy is not using its resources optimally then they are either underutilized or unemployed. This is called inefficient use of the given resources, because the output of the economy remains below the production possibility curve as shown by point U.

Diagram 3: Underutilization of resource



The economy can produce more of both the goods and more of either of the good by putting the idle resources to work. As shown by the arrows in the Diagram 3, the underutilized resources at U can be efficiently used by moving to any of the three points R, S and T on PPC.

Opportunity Costs.

Opportunity cost is the value of alternative forgone in order to have something else. This value is unique for each individual. For instance, someone may forgo Chips with eggs in order to have Rice with Beef. This implies that, the Rice with Beef has a greater value than the Chips with eggs. However, a person might change his/her mind in future because there may be some instances when the Rice

with Beef is not attractive as the Chips with eggs. The opportunity cost of an individual's decisions, therefore, is determined by his or her needs, wants, time and resources (income). This is important to the production possibility curve/frontier because a country will decide how to best allocate its resources according to its opportunity cost. Therefore, if the country chooses to produce more cotton, the opportunity cost is equivalent to the cost of giving up the required cotton production.

d). Understanding Economic Systems (Capitalist Economy, Socialist Economy and Mixed Economy). [Learning Outcome f]

Economic Systems

A country's economy or economic system is that society's way of coordinating the production and consumption of goods and services. The three basic questions of any economic system usually are 1)what will be produced? 2) How will it be produced? and 3) For whom will it be produced?. Moreover, there are different goals of an economic system which depend on society's values. For instance some of the values which are considered in choosing an economic system are;

- Economic Efficiencies-making the most of resources
- Economic Freedom-freedom from government in production and distribution
- Economic Security and Predictability-assurance that good and services will be available, payments will be made, a safety net will assist in case of disaster
- Economic Equity-fair distribution of wealth
- Economic Growth and Innovation-innovation leads to growth, growth leads to higher standard of living

There are four basic types of economic system

I. A traditional economy
II. A market economy
III. A command (or planned) economy
IV. A mixed (or hybrid) economy

I. A traditional economy

Custom and tradition dictate what to produce, how to produce it, and for whom. Hunting, fishing and farming are the main economic activities in such an economy. Although traditional economies are rare in the 21st century, some still exist (e.g., Remote tribal areas in South America, Africa and Asia). Also, some peoples like the Amish or the Inuit organize their economic lives that way.

Advantages:

- Every member of the society knows exactly what they are to do.
- There is a strong social network.
- Positions within society are already established.
- Basic Economic questions are already answered by traditions and customs.
- Life is generally stable, predictable and continuous.

Disadvantages:

- This type of society is often very slow to change.
- It does not take advantage of technological change.
- There is relatively little promotion of intellectual and scientific development.
- There is inefficient provision of goods and services.
- There is inadequate use of skill in relation to the factors of production.
- No upward movement of labor takes place.

II. Command Economies

In this type of economic systems the government controls all economic activity - government decides what goods are produced, how much of each good to produce and how much the people should get. Examples of this economic systems: - The former Soviet Union (now 15 countries including Russia and Ukraine) dismantled their planned economies from 1990. -China until the 1980s and 1990s - Cuba until the 1990s - North Korea – present day

Advantages:

- The welfare of all citizens is the primary goal
- Full employment of all available resources
- Government possesses the information to be able to direct resources where they are most needed.
- Wasteful competition is avoided
- There is no industrial unrest such as striking, as the government controls wages
- Greater emphasis on quality of life than on quantity produced.

Disadvantages:

- No freedom of choice for consumers or producers
- System is too rigid to adjust when changes occur, can result in shortages
- Lack of incentive for workers results in low morale and efficiency. Managers also are not motivated.
- There are too many officials, and too much unnecessary procedure and paperwork (red-tape or bureaucracy)
- Conflicts of interests can arise because what the country needs may not be what the people want.
- There is wastage of manpower because large numbers of people are required for central planning.

III. Free-Market Economy

The government plays little role in economic activity. Emphasis is on freedom of the individuals (consumers and producers). The private sector (private firms and individuals) answer the basic economic questions. There is consumer sovereignty. Profit maximization is the main goal in this economy. Price drives the economy Example of Free Market: There is no real life example of a purely free market economy, this only exists in theory.

Advantages:

- Manufacturers are free to produce what the consumers demand and the consumers in turn are free to spend their money as they see it fit.
- The decision of what to produce is not controlled by government or any single individual/firm. Hence, there is greater participation in the decision-making process.
- A large variety of goods and services are produced to satisfy the needs of consumers.
- Prices are determined by the forces of demand and supply (the price mechanism).
- There is freedom from government interference.
- Efficient production is promoted since resources are allocated to their most profitable use.
- Competition among firms improves quality, keeps prices low and spurs new technology and innovation.

Disadvantages:

- Since the making of profits is the dominant motive of the private sector, only goods and services that yield the highest profit will be produced.
- Since there is no government intervention in this type of system, consumer could be exploited through the charging of high prices for essential goods and services.
- This system leads to great inequalities as the few rich get richer and the many poor get poorer.
- There is much pollution associated with this system especially when industrialization begins to develop.
- There tends to be an over-consumption of demerit goods such as alcohol, cigarettes and drugs

IV. A mixed (or hybrid) economy

Both the government and individuals play important roles in deciding how much to produce and what to buy. The government's role in a mixed economy could vary considerably from country to country. In some its function could be limited to enforcing the laws and regulating the currency whereas in others it could involve many of the trappings of the welfare state, such as universal health care, free day care, and so on.In general, the aim of the private sector is to maximize profits while the aim of the public sector is to maximize social welfare. The public sector produces goods and services that the private sector is unable or unwilling to produce, with a bureaucratic set up like the planned economy (i.e. freeways)

Advantages

- The state can intervene in areas of the economy through the passing of laws to protect citizens from unfair trading practices.
- Both the government and the private sector can cooperate in offering certain services; e.g. transportation, health care.

Disadvantages:

- Too much government regulation may dampen the free enterprise spirit.
- Some state-owned industries are allowed to operate inefficiently, thus wasting resources.
- Where government intervenes in the market by setting maximum and minimum prices, this may cause excess demand or supply, which may be difficult to regulate in the long-run.
- Since the private sector helps to answer the economic questions, there can be the creation of monopolies.
- Inequitable distribution of wealth can also arise.

Test Yourself 1

1. What are the characteristics of welfare definition?
2. What are the characteristics of wealth definition?
3. Explain the subject matter of economics.
4. Distinguish between positive and normative economics.
5. Explain about the subject matter of economics
6. Which of the following is a positive statement?
   A. An unemployment rate of 7 percent is a national disgrace.
   B. Unemployment is not so important a problem as inflation.
   C. When the national unemployment rate is 7 percent, the unemployment rate for inner-city youth isoften close to 40 percent.
   D. Unemployment and inflation are equally important problems.

7. Which of the following is the best definition of opportunity costs?
   A. the amount of one good that must be given up in order to produce one more unit of another good.
   B. the amount of money that must be paid in order to purchase one more unit of a good.
   C. the amount of an input that must be used in order to produce one more unit of a good.
   D. the price of a good that must be charged in order for a merchant to sell one more unit.
   E. none of the above.

8. What are the limitations of a Mixed economy?
   A. High taxation and less incentive to work hard
   B. All profit goes to the government
   C. Restrictions on personal freedoms
   D. Uneven distribution of resources, consumer difficulty in obtaining information, and health-risk products?

9. An economic system in which business are allowed to produce any goods and services they wish to is referred to as?
   A. A centrally planned economy
   B. Free enterprise
   C. A mixed economy
   D. A private economy

10. An economic system in which business are allowed to produce any goods and services they wish to is referred to as?
    A. A centrally planned economy
    B. Free enterprise
    C. A mixed economy
    D. A private economy

2

Demand and Supply

Get Through Intro

The main purpose of this topic is to discuss supply and demand in the framework of system dynamics. This Chapter starts with review classical supply and demand. In addition, the chapter gives description of how to model supply and demand using system dynamics. Finally, few exercises are provided that will improve understanding of supply and demand and help improve system dynamics modeling skills.
.

Learning Outcomes

At the end of this topic students are expected to have a solid understanding of the following;

a) Demand
- Law of Demand
- Law of Supply
- Equilibrium: Determination of Price and Quantity
- A Shift versus a Movement along a Demand Curve
- Factors that Shift the Demand Curve
- Government Regulation of the Market: Price Ceilings and Floors

b) Supply
- Law of supply
- Determinants of supply
- Elasticity of supply
- Factors influencing supply
- A Shift versus a Movement along a Supply Curve
- Factors that Shift the Supply Curve

c) Elasticity
- The Elasticity Concept
- Own Price Elasticity
- Elasticity and Total Revenue
- Cross Price Elasticity
- Income Elasticity
- Demand Functions

26: Business and Management

1. Demand
[Learning Outcome a]

1.1 Demand

Demand is defined as the different quantities of a good or service that consumers are willing and able (ready) to buy at different prices within a given time period, *ceteris paribus.*

Demand schedule is a table that lists the quantities of a good a consumer is willing and able to buy at each price level in a given time period, when all other things remain the same.

Types of Demand

Individual demand for the commodity is referred to as the quantity of a commodity an individual is willing and able to purchase at a particular price, during a specific time period, given his/her money income, his/her taste, and prices of other commodities, such as substitutes and complements.

Market demand for the commodity is referred to as the total quantity which all the consumers of the commodity are willing and able to purchase at a given price per time unit, given their money incomes, their tastes, and prices of other commodities.

Demand for firm's product is the quantity of a firm's product that can be sold at a given price over time.

Market demand or industry demand for the product is referred as the sum of demand for the products of all firms in the industry.

Autonomous and derived demand for a commodity is one that arises on its own out of a natural desire to consume or possess a commodity. This type of demand is independent of the demand for other commodities

Derived demand for a commodity arises from the demand for other commodities, called 'parent products'. For instance demand for land, fertilizers and agricultural tools, is a derived demand because these commodities are demanded due to demand for food.

Short-term demand refers to the demand for goods over a short period.

The long-term demand refers to the demand which exists over a long period of time.

Demand Schedule is a table of the quantity demanded of a good at different price levels.

Example

Examples of Individual and Market Demand Schedule

Suppose that John and Anna are the only consumers of Chocolate Ice Cream in a particular market. The following table shows their annual demand schedules:

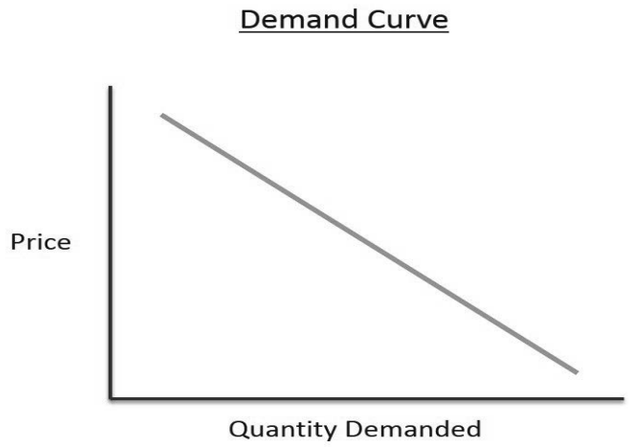
Table 1: Individual and Market Demand Schedule

Price (Tshs per Ice Cream)	John's Quantity Demanded (Ice Cream)	Anna's Quantity Demanded (Ice Cream)	Market Demand Schedule (Ice Cream)
2,000	16	32	16+32=48
4,000	10	24	10+24=34
6,000	6	16	6+16=22
8,000	2	8	2+8=10
10,000	0	4	0+4=4

The Demand Curve

The demand curve shows how much of good consumers are willing to buy as the price per unit changes. We can write this relationship between quantity demanded and price as an equation.

Diagram 4: Demand Curve



Law of Demand

The law of demand states that there is a negative relationship between the price of a good and the quantity purchased. It is merely a reflection of the basic postulate of economics: when an action becomes more costly, fewer people will choose it. An increase in the price of a product will make it more costly for buyers to purchase it, and therefore less will be purchased at the higher price.

The inverse relationship between price and quantity demanded depends on two factors:

a) *Substitution effect*

When the relative price (opportunity cost) of a good or service rises, people seek substitutes for it, so the quantity demanded decreases

b) *Income effect*

When the price of a good falls, individual tend to buy more of that good because, with the lower price, the individual consumer can afford to buy exactly the same amount as before and have money remaining, as if his income increases. Then, with the remaining money the consumer can buy more goods.

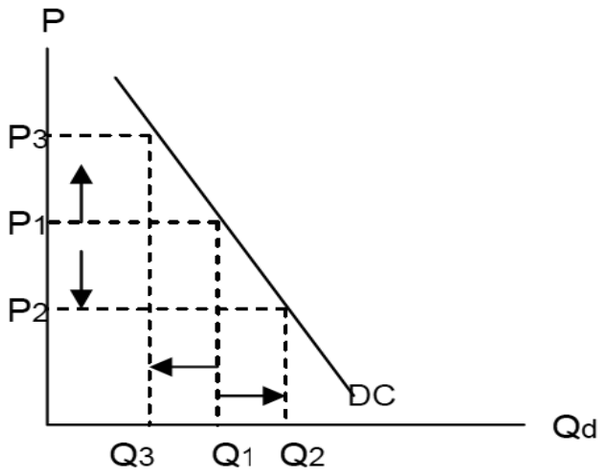
Change in Quantity Demanded vs. Change in Demand (Movements vs. Shifts)

It is important to make a distinction between the change in demand and the change in quantity demanded to distinguish a shift in the demand curve from a movement along demand curve.

Change in the quantity demanded:

A change in the quantity demanded refers to the movements along a "**fixed**" demand curve as a response to a change in the good's own price, ceteris paribus. An increase in quantity demanded is caused by a decrease in price while a decrease in quantity demanded is caused by an increase in price.

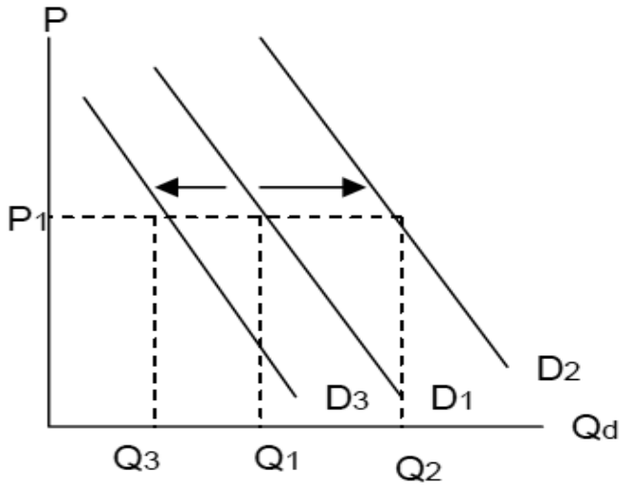
Diagram 5: Change in the quantity demanded



Change in demand:

When one or some of the factors influencing demand change, with the price of the good remains constant the demand will change and the demand curve will shift rightward or leftward. The shift in demand refers to the change in the quantity demanded at every given price. In this case, even though the price of the good remains constant the quantity will either rise or fall as shown in the graph. When the other factor causes the demand to shift to the right, the move from D_1 to D_2, then this is referred to as an increase in demand. This is because; at the same price of P_1 the quantity that consumers plan to buy increases from Q_1 to Q_2. Likewise, when the other factor causes the demand curve to shift to the left, the move from D_1 to D_3, then this is referred to as a decrease in demand. This is because; at the same price of P_1 the quantity that consumers plan to buy decreases from Q_1 to Q_3

Diagram 6: Change in demanded



Factors that Affect Demand

- *Change in Consumers' Incomes*

The influence of consumers' income on demand depends on whether the good is normal good or inferior good.

For a **normal good**, an increase in income increases demand for the good and shifts the demand curve rightward; (examples include cloths, cars and vacations). For an **inferior good**, an increase in income decreases demand for the good and shifts the demand curve leftward. Examples of inferior goods include used cars or used furniture. Inter-city bus is another example of an inferior good

- *The Prices of Related Goods*

Goods are either related or unrelated to each other for consumers. When two goods are unrelated, then the change in the price of one good will have no impact on the demand for the other good. For example, the change in the price of potatoes will not affect the demand for cars.

Substitute goods in consumption are goods that can be used or consumed in place of one another. For example, Pepsi and Coke.

Complements: Two goods are complements in consumption if they are normally consumed together. For example, cars and Fuel (Petrol or Diesel)

- *Expectations about the Future*

If the price of a good is expected to rise in the future, current demand increases and the demand curve shifts rightward.

- *Tastes and Preferences*

People with the same income have different demands if they have different preferences.

- *The Number of Buyers in the Market*

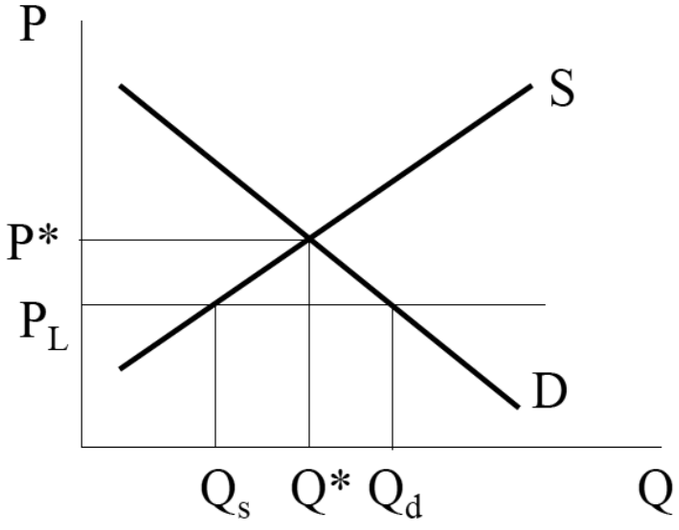
The larger the population or the buyers of the good, the greater is the demand for the good

Equilibrium: Determination of Price and Quantity

Putting demand and supply together, we can find equilibrium where the supply and demand curve crosses. The equilibrium consists of an equilibrium price P* and an equilibrium quantity Q*. The equilibrium must satisfy the market-clearing condition,

which is $Q_d = Q_s$.

Diagram 7: Market Equilibrium



Example

Mathematical example: Suppose P = 20 - 0.1Q_d and P = 5 + 0.05Q_s. In equilibrium,
Qd = Qs, so we have a system of equations. Solve for Q like so:
20 - 0.1Q = 5 +0.05Q
15 = 0.15Q
Q* = 100.

Then plug Q* into either equation: P = 20 - 0.1(100) = 10.

So the market equilibrium is P* = 10, Q* = 100.

If price is below P*, at PL, then we have Qd > Qs. This is called “excess demand” or “shortage.” The quantity that actually occurs will be Qs. For this quantity, buyers are willing to pay much more than PL, so they’ll start bidding against each and raising the price. If price is below P*, at P_L, then we have Qs > Qd. This is called “excess supply” or “surplus.” The suppliers will start competing against each other for customers by lowering the price.

2. Supply

[Learning Outcome b]

The supply of a good or service refers to the quantities of a good or a service that producers are willing and able (ready) to produce (sell) at different prices in a given time period, *ceteris paribus*.

The Law of Supply

The law of supply shows a positive (direct) relationship between price and quantity supplied. The quantity of a good supplied in a given time period increases as its price increases, ceteris paribus.

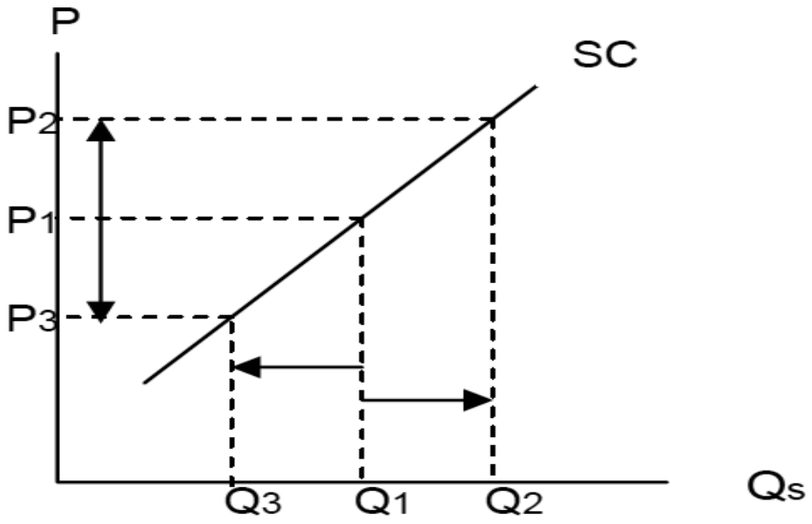
Supply curve is a graphical representation of the supply schedule that shows the relationship between quantity supplied of a good and its price when all other influences on producer's planned sales remain the same.

Change in Quantity Supplied vs. Change in Supply (Movements vs. Shifts)

Change in the quantity supplied

Quantity supplied changes as a result of the change in the good own price and referred to as movement along the same supply curve. Price is not constant along a given supply curve. An increase in price from P_1 to P_2 increases the quantity supplied from Q_1 to Q_2. A decrease in quantity supplied would be caused by the price decreasing, say from P_1 to P_3.

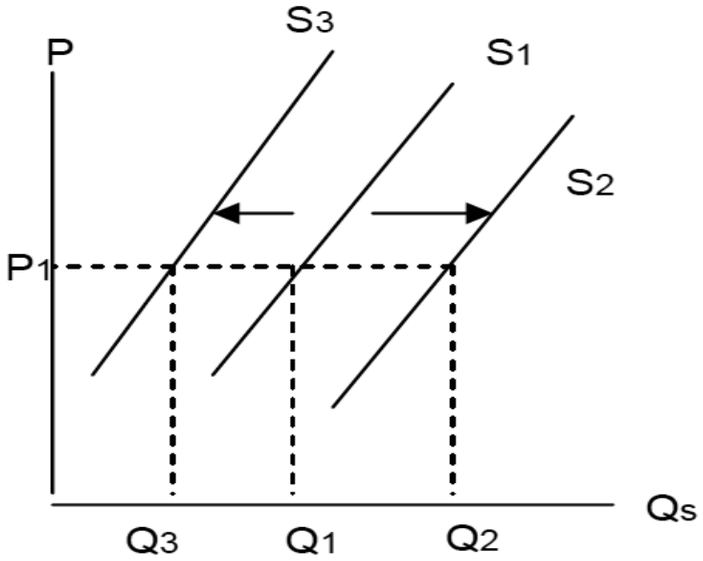
Diagram 8: Change in the quantity supplied



Changes in supply

Change in supply exists because of changes in one or some of non-price determinants of supply, which results in shifting the supply curve. An increase in supply results in a rightward shift and a decrease in the supply results in a leftward shift. At a price of P_1 in the graph, when the supply curve shifts right from S_1 to S_2, then quantity increases from Q_1 to Q_2. When the other factors cause the supply curve to shift left, from S_1 to S_3, the amount supplied decreases from Q_1 to Q_3.

Diagram 9: Change in the supply



Factors Affecting Supply

- Change in the Cost of Factors of Production

A supplier combines raw materials, capital, and labor to produce the output. The costs of production are the primary determinant of supply.

- *Changes in Technology*

New technologies means that either production increases with the same level of resources or that fewer resources are needed to produce the same level of output.

- *Changes in the Price of Related Goods*

Similar to demand where goods are related in consumption, goods are also often related in production. The prices of related goods or services that firm produce influence supply. It depends on whether the goods are substitutes or complements.

- *Substitutes in production*

The two goods are substitutes in production when both goods can be produced using the same resources. For example, corn and wheat, leather built and leather shoes.

- *Complements in production*

The two goods are complements in production if one good is produced as a by-product of the other good.

- *Expectations about the Future*

If the price of a good is expected to fall in the future, current supply increases and the supply curve shifts rightward.

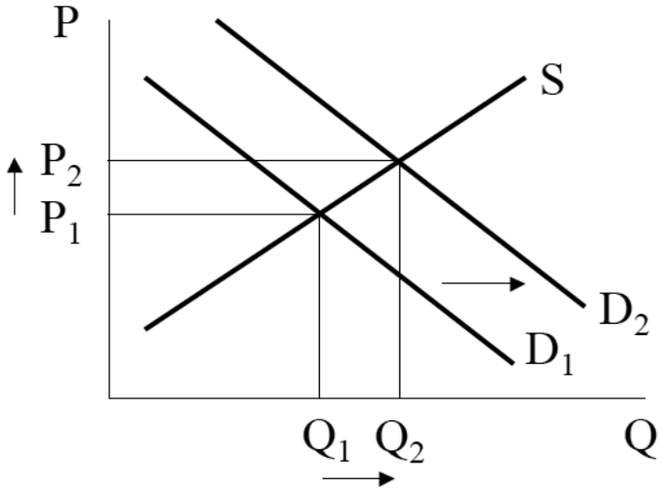
- Number of Sellers:

The larger the number of suppliers of a good, the greater is the supply of the good. An increase in the number of suppliers shifts the supply curve rightward.

3. Analyzing Changes in Market Equilibrium

Rightward shift in Demand: This could be caused by many things: an increase in income, higher price of substitute, lower price of complements, etc. Such a shift will tend to have two effects: raising equilibrium price, and raising equilibrium quantity.

Diagram 10: Rightward shift in Demand



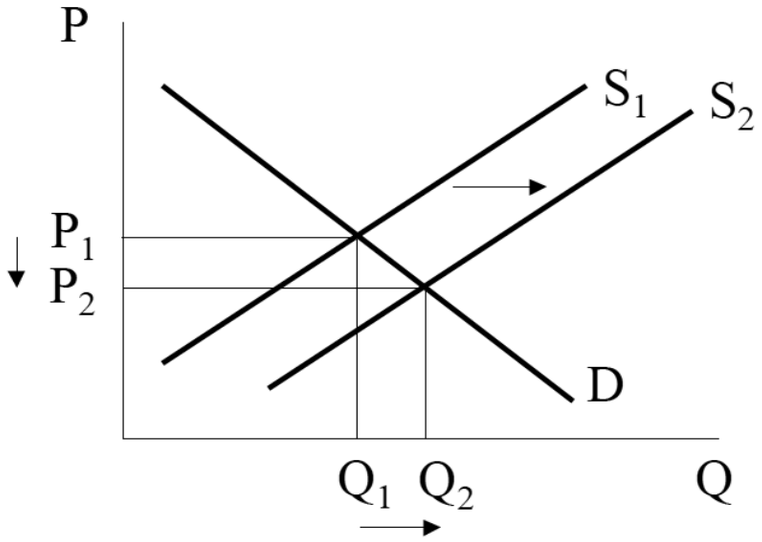
A leftward shift of demand would reverse the effects: a fall in both price and quantity. The general result is that Demand shifts cause price and quantity to move in the same direction.

Example

Consider the market for rental housing, and suppose that a new factory or industry opens up in the city, attracting more residents. Then there will be a rightward shift in demand, driving up both price and quantity

Rightward shift of supply: (caused by lower factor price, better technology or whatever). This will tend to have two effects: raising equilibrium quantity, and lowering equilibrium price.

Diagram 11: Rightward shift in Supply



A leftshift of supply would reverse the effects, so the general result is that supply shifts tend to cause price and quantity to move in opposite directions.

Example

If a certain restaurant needs several ingredients to make a special Samosa such as meat, tomatoes and so on. Now, imagine the price of meat increases. That means, the restaurant faces higher costs for every Samosa it produces. If the price of the Samosa remains the same, this results in a smaller profit for the restaurant. Because of this, the restaurant will produce less Samosas and focus on other dishes that are more profitable. Therefore supply of Samosas decreases, as the price of meat increases. If the price of meat increases a lot, some restaurants may even decide to shut down and go out of business, because they cannot earn profits anymore. This reduces supply even further. By contrast, if the price of meat decreases, it becomes more attractive to sell Samosas, which results in an increase in supply. Hence, supply is negatively correlated to the price of the inputs used in production

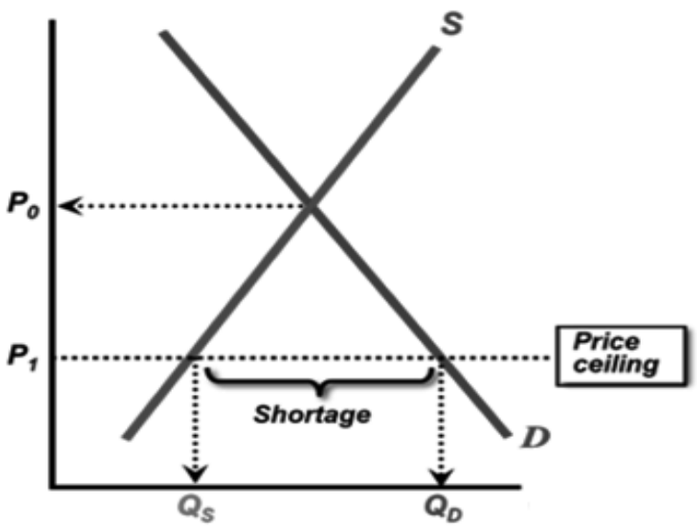
4. Price Controls

While demand and supply analysis provides insight on how markets allocate resources, it is also enlightening to see what happens when governments use the political process to fix prices and interfere with markets Sometimes either buyers or sellers with special interests will seek to gain by getting the government to impose price controls. Price controls may be either price ceilings, which set a maximum legal price for a product, or price floors, which impose a minimum legal price. Imposing price controls may look like an easy way for the government to help buyers at the expense of sellers (or vice versa). However, price controls generate secondary effects that reduce the gains from trade and often harm even the intended beneficiaries. Let's take a closer look at both price ceilings and price floors.

Price Ceilings

A price ceiling establishes a maximum price that can be charged for a good, service, or resource. If the price ceiling is set below the market equilibrium, a shortage will emerge. The exhibit to the right illustrates this point. Here, a price ceiling of P_1 fixes the price below the P_0 market equilibrium. At the below equilibrium P_1 price, the quantity consumers would like to purchase (Q_D) will exceed the quantity (Q_S) that producers are willing to supply. A shortage (Q_D – Q_S) of the good will result. Producers are unwilling to supply as many units of the good as consumers would like to purchase at the below equilibrium fixed price. Moreover, at the low fixed price, the quantity of the good exchanged declines to Q_S, and the gains from trade of the buyers and sellers are reduced. Governments use price ceilings to protect consumers from conditions that could make commodities prohibitively expensive.

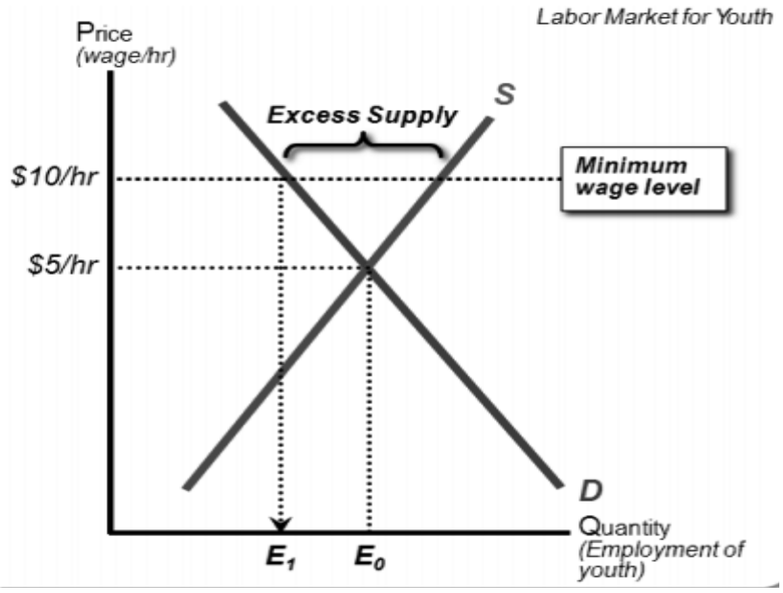
Diagram 12: Price ceilings



Price floors

A price floor establishes a minimum price that can legally be charged. When a price floor is imposed above the current market equilibrium, it will alter the operation of markets. The exhibit below illustrates what happens when a price floor (P_1) for a good or service is set above the market equilibrium level (P_0). At the higher price, the quantity supplied increases along the supply curve to Q_S, while the quantity demanded decreases along the demand curve to Q_D. A surplus (Q_S – Q_D) will result at the controlled price. Like price ceilings, price floors also reduce the quantity of the good exchanged and the gains from trade. Governments use price floors to keep certain prices from going too low.

Diagram 13: Price floor



Example

Suppose the government of Tanzania sets the price of Maize above the equilibrium. As expected, surpluses emerge. Reacting to the surpluses, the government imposes restrictions, limiting the acres planted of the Maize by farmers. Minimum wages provide another example of a price floor. The minimum pushes the wages of various categories of inexperienced, low skill workers (such as youth) above the equilibrium.

5. Elasticity [Learning Outcome c]

The Elasticity Concept

Elasticity measures the sensitivity of one variable to another. Specifically, it is a number that tells us the percentage change that will occur in one variable in response to a 1 percent increase in another variable. For example, the price elasticity of demand measures the sensitivity of quantity demanded to price changes. It tells us what the percentage change in the quantity demanded for a good will be following a 1 percent increase in the price of that good.

Price elasticity of demand

A measure of the extent to which the quantity demanded of a good changes when the price of the good changes. To determine the price elasticity of demand, the percentage change in the quantity demanded with the percentage change in price can be compared

Price elasticity = (% change in quantity) / (% change in price) = $\%\Delta Q / \%\Delta P$
(where Δ stands for “change in”)

To find the percentage change in quantity (or price) we divide the change in quantity (or price) by the level of quantity (or price): i.e, $\Delta Q / Q$ (for quantity) and $\Delta P / P$ (for price). We can therefore rewrite the expression for
price elasticity as:

$EP = (\Delta Q / Q) \div (\Delta P / P)$ or $EP = (\Delta Q / \Delta P) \times (P / Q)$

Example

If P1 = 15, P2 = 10, Q1 =30, Q2 = 50, then Ed = -1.25

Which means that if the price of the good changes by 1%, the quantity demanded of that good will change in the opposite direction by 1.25%

Cross-Price Elasticity

Cross-price elasticity measures the responsiveness of quantity of one product to changes in the price of another related (substitute or complement) product. It is defined as the percentage change in quantity demanded of good A as a result of a percentage change in the price of good B. The expression for cross-price elasticity is:

$E_{AB} = \%\Delta Q_A / \%\Delta P_B$

Income Elasticity

Income elasticity measures the responsiveness of quantity to income changes and can be defined as the percentage change in quantity demanded as a result of a percentage change in income. It is expressed as:

$E_Y = \%\Delta Q / \%\Delta Y$

Elasticity of Supply

Elasticity of supply--the percentage change in quantity supplied as a result of a percentage change in the price of the good.

$E_S = \%\Delta Q_S / \%\Delta P$ (where Q_S denotes quantity supplied)

Own Price Elasticity

Own price or demand elasticity measures the percentage change in quantity demanded divided by the percentage change in the price of the good. Due to the law of demand, the sign will always be negative, so it is common to consider only the absolute value when analyzing the own price elasticity.

$E_d = \%\Delta Q / \%\Delta P$

Terminology

- Inelastic: Demand is inelastic if $0 < |E_D| < 1$
- Unit elastic: Demand is unit elastic if $|E_D| = 1$
- Elastic: Demand is elastic if $|E_D| > 1$
- Perfectly elastic: Demand is perfectly elastic if $|E_D| = \infty$
- Perfectly inelastic: Demand is perfectly inelastic if $|E_D| = 0$

Price Elasticity and Total Revenue

Total revenue (TR) equals the total amount of money a firm receives from the sales of its product and is found by multiplying the price they receive times the quantity that they sell. TR = P * Q. TR is affected by changes in both P and Qd. But as we know by now the law of demand states that an ↑ in P will result in a ↓ in Qd. Thus, an increase in P may or may not lead to greater TR. This depends on which effect is the largest, price effect or the effect of quantity demanded. The size of the price elasticity of demand coefficient, tells us which of these two effects is largest.

- With elastic demand – a rise in price lowers total revenue TR increases as price falls.
- With inelastic demand – a rise in price increases total revenue and TR decreases as price falls.
- If E_D is inelastic ($E_D < 1$), a rise in price increases total revenue.
- If E_D is unit elastic ($E_D = 1$), a rise in price leaves total revenue unchanged
- If E_D is elastic ($E_D > 1$), a rise in price lowers total revenue.

Example

Assume that the demand for a given product can be represented by the equation, Price = 100 - 0.5(quantity). If the current price is Tshs 1,000/= and the quantity demanded is 180, then when the prices increase to Tshs. 2,000 reduces the quantity demanded by four units explain how this change will affect the Total Revenue.

TR = P. Q
TR_1 = ((100-0.5(180)) x (180)= Tshs 1,800

TR_2 = ((100-0.5(176)) x (176)= Tshs 2,112

Total Revenue Increased by Tshs 312/=.

Determinants of elasticity

- Demand is more elastic under the following circumstances.
- Availability of close substitutes.
- When the good is defined specifically rather than broadly.
- When the good is a luxury rather than a necessity.
- In the long run rather than the short run.
- Supply is more elastic under the following circumstances.
- When producers are able to adjust their output easily.
- In the long run rather than the short run.
- Producers can change the scale of their production.

1. The quantity demanded is
A. the amount of a good that consumers plan to purchase at a particular price.
B. independent of the price of the good.
C. independent of consumers' buying plans.
D. D) always equal to the equilibrium quantity.

2. The law of demand states that, other things remaining the same, the higher the price of a good, the
A. smaller is the demand for the good.
B. smaller is the quantity of the good demanded.
C. larger is the quantity of the good demanded.
D. larger is the demand for the good.

3. The law of demand implies that, other things remaining the same,
A. as the demand for Chicken Rice increases, the price of a Chicken Chips will fall.
B. as the price of a Chicken Chips rises, the quantity of Chicken Chips demanded will decrease.
C. as income increases, the quantity of Chicken Chips demanded will increase.
D. as the price of a Chicken Chips rises, the quantity of Chicken Chips demanded will increase.

4. The law of demand states that the quantity of a good demanded varies
A. inversely with its price.
B. directly with population.
C. directly with income.
D. inversely with the price of substitute goods.

1. True/ False

1. An exact measure of the individual's willingness to pay for the opportunity to purchase an automobile at some price is the consumer surplus.

2. If the substitution effect is zero, then an individual will be indifferent between a subsidy on each unit consumed of some good and a lump-sum cash subsidy that costs the government an equal amount of money.

3. A two-part tariff on some good that laves a consumer at the same level of utility as received under a simple per-unit price is always more profitable for the firm selling the product.

4. If the government can subsidize a low-income family with a subsidy on clothing or with a lump-sum cash transfer, and both programs are equally costly to the government, then the family will be better off with the subsidy on clothing.

5. If the government wants to increase its revenue through a tax on some good, then it can collect more revenue through a lump sum tax than through a per-unit tax that would leave the individual at the same utility level.

6. The higher the price of a good, the larger the Consumer Surplus associated with that good will be.

Answers: 1.F 2.T 3.T 4.F 5.T 6.F

THEORY OF CONSUMER BEHAVIOR

3

Get Through Intro

This chapter introduces a theory of consumer behavior. The theory is used to investigate why consumers make Purchases. Ultimately, consumers are assumed to “optimize” their utility given scarce resources Consumer theory is the basis for the “demand” side of the supply and demand model. Walters (1974)[1] defined a consumer is an individual who purchases, has the capacity to purchase, goods and services offered for sale by marketing institutions in order to satisfy personal or household needs, wants, or desires. Human behaviour encompasses every thought, feeling or action by people. This implies that every thought, motive, sensation and decision that is made every day, is classified as human behaviour. Therefore, consumer behaviour is broadly the study of individuals, or organisations and the processes consumers use to search, select, use and dispose of products, services, experience, or ideas to satisfy needs and its impact on the consumer and society.

Learning Outcomes

At the end of this topic students are expected to have rigorous analysis of the following concepts;

a) Identify and describe Utility theory
- Utility theory and analysis
- Cardinal and Ordinal Utility theory
- Law of Diminishing Marginal Utility

b) Indifference Curve Analysis and Demand Curves
- Indifference Curve Analysis
- The Budget Constraints/line
- Changes in income
- Changes in prices
- Consumer Equilibrium

[1]Walters, C. G. (1974). Consumer behavior: Theory and practice. McGraw-Hill/Irwin.

1. Utility theory [Learning Outcome a]

The Concept of Utility

Utility is satisfaction received from consuming goods or services and it depends on quantities of goods consumed. A consumer usually decides his demand for a commodity on the basis of utility (or satisfaction) that he derives from it. What is utility? Utility of a commodity is its want-satisfying capacity. The more the need of a commodity or the stronger the desire to have it, the greater is the utility derived from the commodity. Utility is subjective. Different individuals can get different levels of utility from the same commodity. For example, someone who likes Ice Cream will get much higher utility from a chocolate than someone who is not so fond of Ice Cream, Also, utility that one individual gets from the commodity can change with change in place and time. For example, utility from the use of a room heater will depend upon whether it is summer or winter (time).

Cardinal Utility Analysis

Cardinal utility analysis assumes that level of utility can be expressed in numbers. For example, we can measure the utility derived from a shirt and say, this shirt gives me 40 units of utility (utils). Before discussing further, it will be useful to have a look at two important measures of utility

Measures of Utility

Total Utility: Total utility of a fixed quantity of a commodity (TU) is the total satisfaction derived from consuming the given amount of some commodity x. More of commodity x provides more satisfaction to the consumer. TU depends on the quantity of the commodity consumed. Therefore, TU_n refers to total utility derived from consuming n units of a commodity x.

Marginal Utility: Marginal utility (MU) is the change in total utility due to consumption of one additional unit of a commodity.

Example

For example, suppose 4 Oranges give us 28 units of total utility and 5 Oranges give us 30 units of total utility. Clearly, consumption of the 5th Orange has caused total utility to increase by 2 units (30 units minus 28 units). Therefore, marginal utility of the 5th banana is 2 units.

$MU_5 = TU_5 – TU_4 = 30 – 28 = 2$

In general, $MU_n = TU_n – TU_{n-1}$, where subscript n refers to the nth unit of the commodity

Total utility and marginal utility can also be related in the following way.

$TU_n = MU_1 + MU_2 + … + MU_{n-1} + MU_n$

This simply means that TU derived from consuming n units of bananas is the sum totals of marginal utility of first banana (MU_1), marginal utility of second banana (MU2), and so on, till the marginal utility of the nth unit.

Table 2 shows an imaginary example of Jones who enjoys taking a cup of tea time to time. The values of marginal and total utility derived from consumption of various amounts of a tea. Usually, it is seen that the marginal utility diminishes with increase in consumption of the commodity in this case tea. This happens because having obtained some amount of the commodity; the desire of the consumer to have still more of it becomes weaker. The same is also shown in the table

Table 2: Values of marginal and total utility derived from consumption of cups of tea by Jones

Units	Total Utility	Marginal Utility
1	0	
2	20	20
3	38	18
4	52	14
5	60	8
6	64	4

Ordinal Utility Analysis

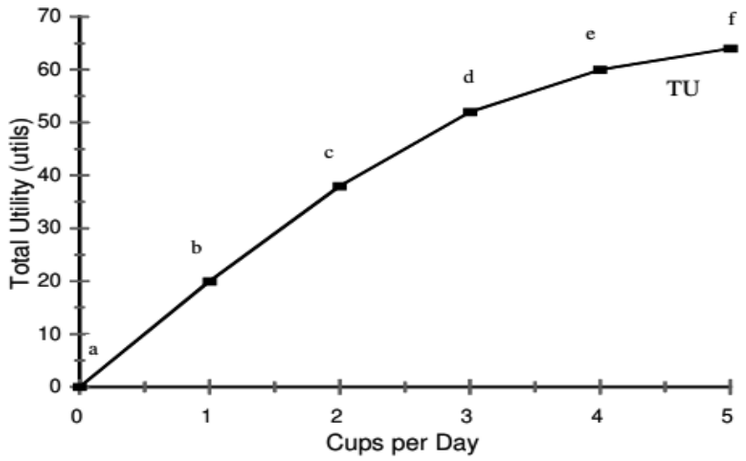
Cardinal utility analysis is simple to understand, but suffers from a major drawback in the form of quantification of utility in numbers. In real life, we never express utility in the form of numbers. At the most, we can rank various alternative combinations in terms of having more or less utility. In other words, the consumer does not measure utility in numbers, though she often ranks various consumption bundles. This forms the starting point of this topic – Ordinal Utility Analysis.

Law of Diminishing Marginal Utility

The Law of Diminishing Marginal utility states that as the stock of commodity increases with the consumer, its marginal utility to the consumer decreases. It can eventually fall to zero and become even negative. The law describes a familiar psychological tendency of the human beings. Marshall says that “the additional benefit which a person derives from a given increase in his stock of thing diminishes with every increase in the stock that he already has”. The specific behavior of marginal utility as described by the law of DMU follows from the conventional (and realistic) assumption that the intensity of a given want can be fully satisfied provided the consumer consumes a large enough quantity of relevant good/service. In other words, during the process of its satisfaction, nothing should happen to increase its intensity.

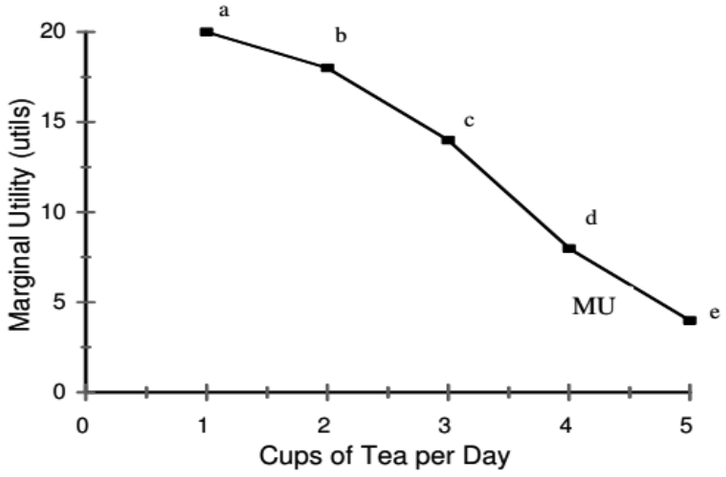
From Jones example, the total utility function illustrates the law of diminishing marginal utility because it becomes less steep as more tea is consumed. Drinking more cups per day increases total utility, but at a decreasing rate so the total utility function becomes flatter as consumption increases. For example, moving from point a at the origin to point b, we see that total utility increases to 20 from drinking the first cup. However, drinking the second cup moves Jones to point c where total utility is 38, an increase of only 18 utils compared to 20 for the first cup. Trace out the smaller and smaller increases in total utility that Jones derives from drinking the third, fourth, and fifth cups by moving along the total utility function through points d, e, and f. All total utility functions that exhibit the law of diminishing marginal utility become flatter as consumption increases.

Diagram 14: Total Utility from Herbal Tea (utils)



The law of diminishing marginal utility shows up as a negative slope for the marginal utility function. Points a through e on the graph show the marginal utility Jo derives from the first through the fifth cups of tea. Even though total utility is rising, each cup of tea consumed adds less to total utility than the cup consumed previously. If the total utility function increases at a decreasing rate, then the marginal utility function must have a negative slope.

Diagram 15: Marginal Utility from Cups of Tea



Assumptions of Law of Diminishing Marginal Utility

The law of diminishing marginal utility is true under the following assumptions.

i. Rationality: In the cardinal utility analysis, it is assumed that the consumer is rational. He aims at maximization of utility subject to availability of his income.

ii. Constant marginal utility of money: It is assumed in the theory that the marginal utility of money based for purchasing goods remains constant. If the marginal utility of money changes with the

increase or decrease in income, it then cannot yield correct measurement of the marginal utility of the good.

iii. Diminishing marginal utility: Another important assumption of utility analysis is that the utility gained from the successive units of a commodity diminishes in a given time period.

iv. Utility is additive: In the early versions of the theory of consumer behavior, it was assumed that the utilities of different commodities are independent. The total utility of each commodity is additive.

$$U = U^1 (X^1) + U^2 (X^2) + U^3 (X^3) \ldots\ldots\ldots U^n (X^n)$$

v. Consumption to be continuous: It is assumed in this law that the consumption of a commodity should be continuous. If there is interval between the consumption of the same units of the commodity, the law may not hold good. For instance, if you take one glass of water in the morning and the 2nd at noon, the marginal utility of the 2nd glass of water may increase.

vi. Suitable quantity: It is also assumed that the commodity consumed is taken in suitable and reasonable units. If the units are too small, then the marginal utility instead of falling may increase up to a few units.

vii. Character of the consumer does not change: The law holds true if there is no change in the character of the consumer. For example, if a consumer develops a taste for wine, the additional units of wine may increase the marginal utility to a drunkard.

viii. No change to fashion: Customs and tastes: If there is a sudden change in fashion or customs or taste of a consumer, it can than make the law inoperative.

ix. No change in the price of the commodity: there should be any change in the price of that commodity as more units are consumed.

Exceptions of the law of DMU

i) Dissimilar units

This law is applicable for homogenous unit only, i.e. only if all units of a commodity consumed are similar in length, breadth, shape and size. If there is a change in such factors, the utility obtained from it can be increased. For example: If the 2nd orange is much larger than the 1st one, it will yield more satisfaction than the 1st.

ii) Unreasonable quantity

The quantity of the commodity a consumer consumes should be reasonable. If the units of consumption are too small, then every successive unit of consumption may give higher utility to the consumer. For example: If a person is given water by a spoon when he is very thirsty, each additional spoonful will give him more satisfaction.

iii) Not a suitable time period

There should not be very long gap between the consumption of different units of the commodity. If there is time lag between the consumption of different units, then this law may not hold good. For example: If a man has lunch at 10 a.m. and dinner at 8 p.m. and eats nothing in between, the dinner will possibly yield even more satisfaction than the lunch, i.e. his marginal utility will not diminish.

iv) Rare collection

This law does not apply for rare collections such as old coins, stamps and so on because the longer and larger the number he collects, the greater will be the utility.

v) Change in taste and fashion of the consumer
The law of diminishing marginal utility will be applicable only if the consumer is not supposed to change taste and fashion of the commodity whatever he/she was using previously.

vi) Abnormal person
The law of diminishing marginal utility is applicable for normal person only. Abnormal persons such as drunkards and druggist are not associated with the law.

vii) Change in income of the consumer
To hold the law good, there should not be any change in the income of the consumer. If the income of the consumer increases, he will consume more and more units of a commodity which he prefers. As a result, utility can be increased rather than decreased.

viii) Habitual goods
The law will not be applicable for habitual goods such as consumption of cigarettes, consumption of drugs, alcohol, etc.

ix) Durable and valuable goods
The law is not applicable in case of durable goods as well as valuable goods such as buildings, vehicles, gems, gold, etc.

Uses of the law of DMU

The concept of marginal utility of a good and the manner, in which it changes in relation to a change in its stock
with a typical consumer, plays a central role in demand analysis.

a) It is directly linked with the price which the consumer is ready to pay for different quantities of the good under consideration. The analysis is based upon the assumption that the decision of the consumer is guided by his 'rationality', that is his economic interest. He buys an additional unit of a good only if its marginal utility is equal to or greater than the price to be paid for it. Given that the law of DMU applies to the good, we are able to derive the law of demand which states that the quantity demanded of a good is inversely related to its price per unit.

b) The relationship between diminishing marginal utility of a good and its price helps in explaining the determination of its price in the market. It also helps in explaining paradoxes like water (which is so essential for life) being cheaper than diamonds (which is luxury).

c) The law of UMU can be extended to the case where a consumer is faced with the decision to divide his total expenditure over a number of goods. This extension leads to the law of equi-marginal utility.

d) The law of DMU is highly useful to the authorities also in working out their social welfare programmes. They can take steps by which goods and services are allocated between members of the society in such a way that marginal utility of each good/service tends to be the same for every individual. If a particular good does not satisfy this condition, then its successive units should be transferred from those for whom it has smaller marginal utility to those for whom it has higher marginal utility. For example, marginal utility of a 'basic necessity' like nutritious food is expected to be higher for a poor family than for a rich one which has already enough of it. Therefore, if through rationing, taxes, subsidies, or other methods, some of it is transferred from richer families to the poorer ones, total utility of the society as a whole is expected to increase.

2. Indifference Curve

[Learning Outcome b]

A Single Indifference Curve shows the different Combinations of X and Y that yield Equal Satisfaction to the Consumer. An Indifference Curve is a Combination of Goods, each of which yield the Same Level of Total Utility to which the Consumer is Indifferent.

-

Assumptions to Indifference Curve Analysis

- Rationality of Consumer

The Consumer is Rational & aims at maximizing his Total Satisfaction.

- Ordinal Utility

Utility can be expressed Ordinally i.e. Consumer is able to tell only Order of his Preferences.

- Nonsatiety

Consumer is not oversupplied with Goods in Question.

- Transitivity of Choice

Means that if a Consumer prefers A to B &B to C, he must prefer A to C.

- Consistency of Choice

Means that if a Consumer prefers A to B in one period, he will not prefer B to A in another period or Treat them as Equal

- Diminishing Marginal Rate of Substitution
- There are two goods X and Y
- The consumer possesses complete information about the prices of the goods in the market.
- The prices of the two goods are given.
- The consumer's tastes, habits and income remain the same throughout the analysis.

Example

Peter has 1 unit of food and 12 units of clothing. Now, we ask Jones how many units of clothing he is willing to give up in exchange for an additional unit of food so that his level of satisfaction remains unchanged. Peter agrees to give up 6 units of clothing for an additional unit of food. Hence, we have two combinations of food and clothing giving equal satisfaction to Jones as follows:

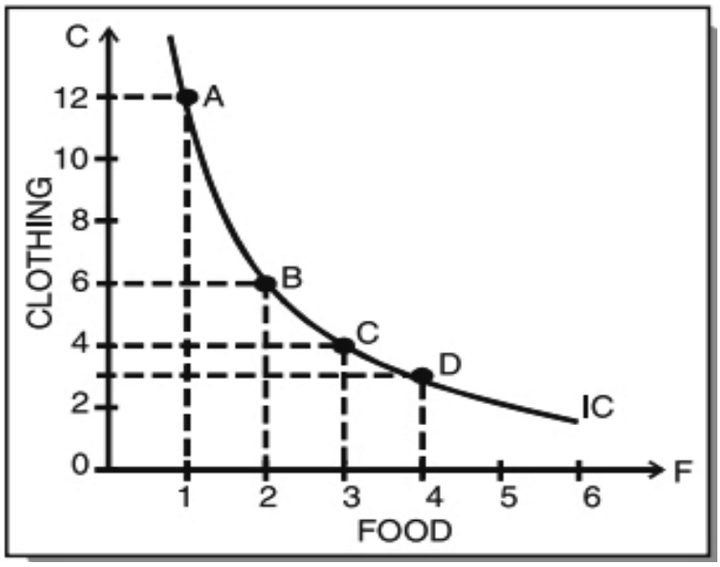
By asking him different questions on his preferences, we get various combinations as follows:

Table 3: Combination of food preferences

Combination	Food	Clothing
A	1	12
B	2	6
C	3	4
D	4	3

Graphical Representation:

Diagram 16: A Consumer's Indifference Curve

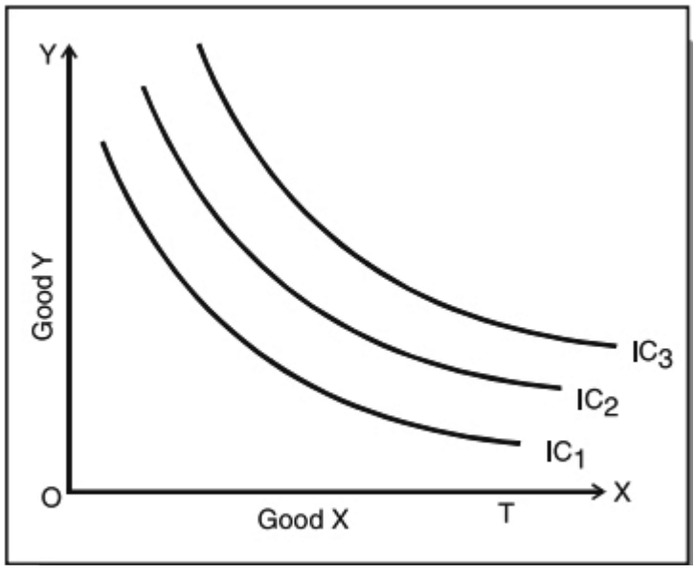


The diagram shows an Indifference curve (IC). Any combination lying on this curve gives the same level of consumer satisfaction. It is also known as Iso-Utility Curve.

Indifference Map

An Indifference Map is a set of Indifference Curves. It depicts the complete picture of a consumer's preferences. The following diagram showing an indifference map consisting of three curves:

Diagram 17: Indifference map



A consumer is indifferent among the combinations lying on the same indifference curve. However, it is important to note that he prefers the combinations on the higher indifference curves to those on the lower ones. This is because a higher indifference curve implies a higher level of satisfaction. Therefore, all combinations on IC_1 offer the same satisfaction, but all combinations on IC_2 give greater satisfaction than those on IC_1.

Marginal Rate of Substitution

This is the rate at which a consumer is prepared to exchange a good X for Y. If we go back to Peter's example above, we have the following table:

Table 4: Marginal Rate of Substitution

Combination	Food	Clothing	MRS
A	1	12	-
B	2	6	6
C	3	4	2
D	4	3	1

In this example, Jones initially gives up 6 units of clothing to get an extra unit of food. Hence, the MRS is 6. Similarly, for subsequent exchanges, the MRS is 2 and 1 respectively. Therefore, MRS of X for Y is the amount of Y whose loss can be compensated by a unit gain of X, keeping the satisfaction the same.

As Jones accumulates more units of food, the MRS starts falling – meaning he is prepared to give up fewer units of clothing for food. There are two reasons for this:

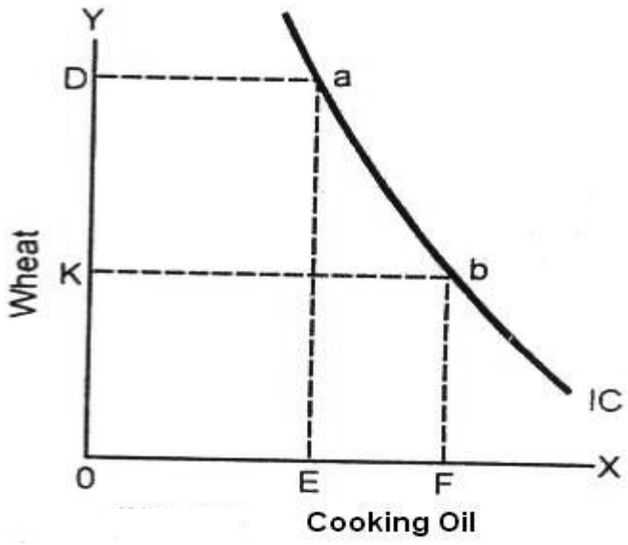
As Jones gets more units of food, his intensity of desire for additional units of food decreases. Most of the goods are imperfect substitutes for one another. If they could substitute one another perfectly, then MRS would remain constant.

Properties of an Indifference Curve or IC

a) Indifference Curves are Negatively Sloped:

The indifference curves must slope down from left to right. This means that an indifference curve is negatively sloped. It slopes downward because as the consumer increases the consumption of X commodity, he has to give up certain units of Y commodity in order to maintain the same level of satisfaction.

Diagram 18: Indifference Curves are negatively Sloped



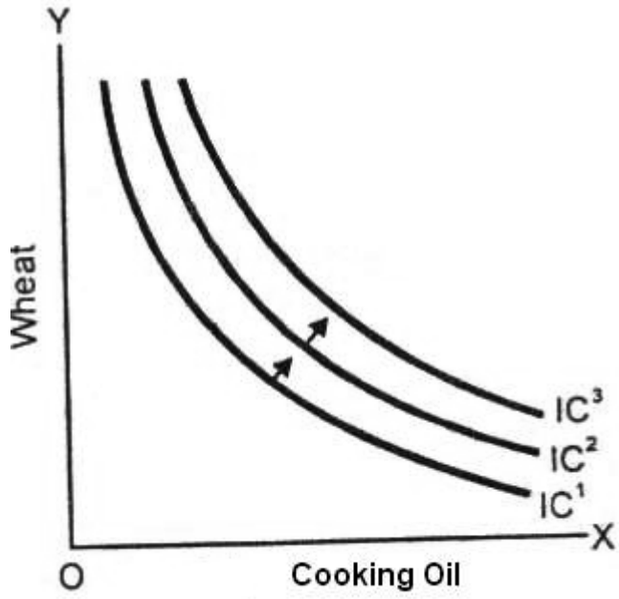
In Diagram 18 the two combinations of commodity cooking oil and commodity wheat is shown by the points a and b on the same indifference curve. The consumer is indifferent towards points a and b as

they represent equal level of satisfaction. At point (a) on the indifference curve, the consumer is satisfied with OE units of ghee and OD units of wheat. He is equally satisfied with OF units of ghee and OK units of wheat shown by point b on the indifference curve. It is only on the negatively sloped curve that different points representing different combinations of goods X and Y give the same level of satisfaction to make the consumer indifferent.

b) Higher Indifference Curve Represents Higher Level:

A higher indifference curve that lies above and to the right of another indifference curve represents a higher level of satisfaction and combination on a lower indifference curve yields a lower satisfaction. In other words, we can say that the combination of goods which lies on a higher indifference curve will be preferred by a consumer to the combination which lies on a lower indifference curve.

Diagram 19: Higher Indifference Curve Represents Higher Level

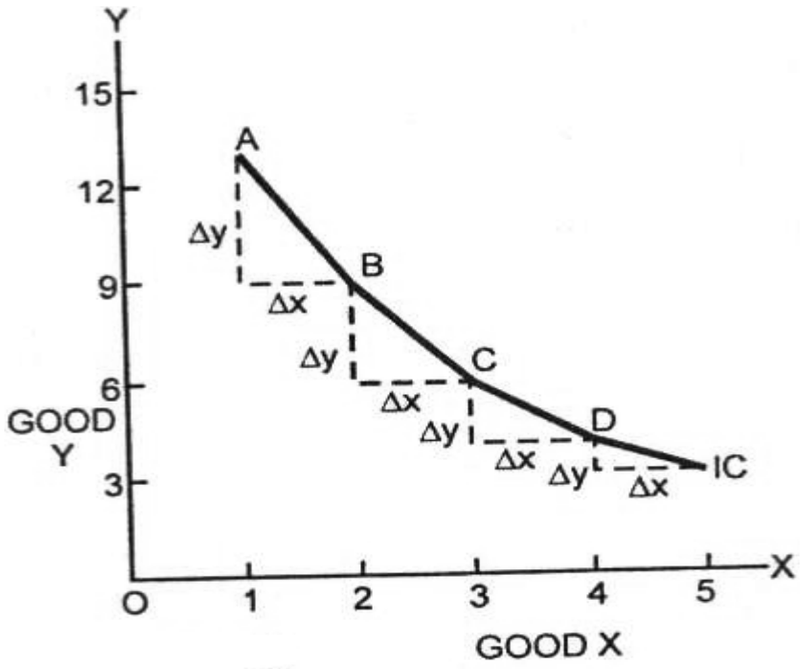


In this Diagram 19 there are three indifference curves, IC^1, IC^2 and IC^3 which represents different levels of satisfaction. The indifference curve IC^3 shows greater amount of satisfaction and it contains more of both goods than IC^2 and IC^1 ($IC^3 > IC^2 > IC^1$).

c) Indifference Curve are Convex to the Origin:

This is an important property of indifference curves. They are convex to the origin (bowed inward). This is equivalent to saying that as the consumer substitutes commodity X for commodity Y, the marginal rate of substitution diminishes of X for Y along an indifference curve.

Diagram 20: Indifference Curve is Convex to the Origin

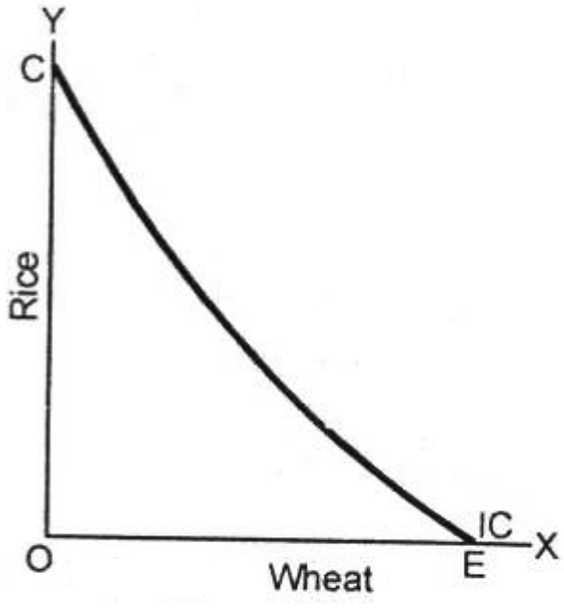


In this Diagram 20 as the consumer moves from A to B to C to D, the willingness to substitute good X for good Y diminishes. This means that as the amount of good X is increased by equal amounts, that of good Y diminishes by smaller amounts. The marginal rate of substitution of X for Y is the quantity of Y good that the consumer is willing to give up gaininga marginal unit of good X The slope of IC is negative. It is convex to the origin.

d) Indifference Curves do not Touch the Horizontal or Vertical Axis:

One of the basic assumptions of indifference curves is that the consumer purchases combinations of different commodities. He is not supposed to purchase only one commodity. In that case indifference curve will touch one axis. This violates the basic assumption of indifference curves.

Diagram 21: Indifference Curve is Convex to the Origin



In Diagram 21, it is shown that the in difference IC touches Y axis at point C and X axis at point E. At point C, the consumer purchase only OC commodity of rice and no commodity of wheat, similarly at point E, he buys OE quantity of wheat and no amount of rice. Such indifference curves are against our basic assumption. Our basic assumption is that the consumer buys two goods in combination.

Budget Line:

The understanding of the concept of budget line is essential for knowing the theory of consumer's equilibrium. "A budget line or price line represents the various combinations of two goods which can be purchased with a given money income and assumed prices of goods".

Example

A consumer has weekly income of Tshs 60. He purchases only two goods, packets of biscuits and packets of coffee. The price of each packet of biscuits is Tshs 6 and the price of each packet of coffee is Tshs 12. Given the assumed income and the price, of the two goods, the consumer can purchase various combination of goods or market combination of goods weekly.

Schedule:

The various alternative market baskets (combinations of goods) are shown in the Table 5 below

Table 5: Carious alternative combination of goods

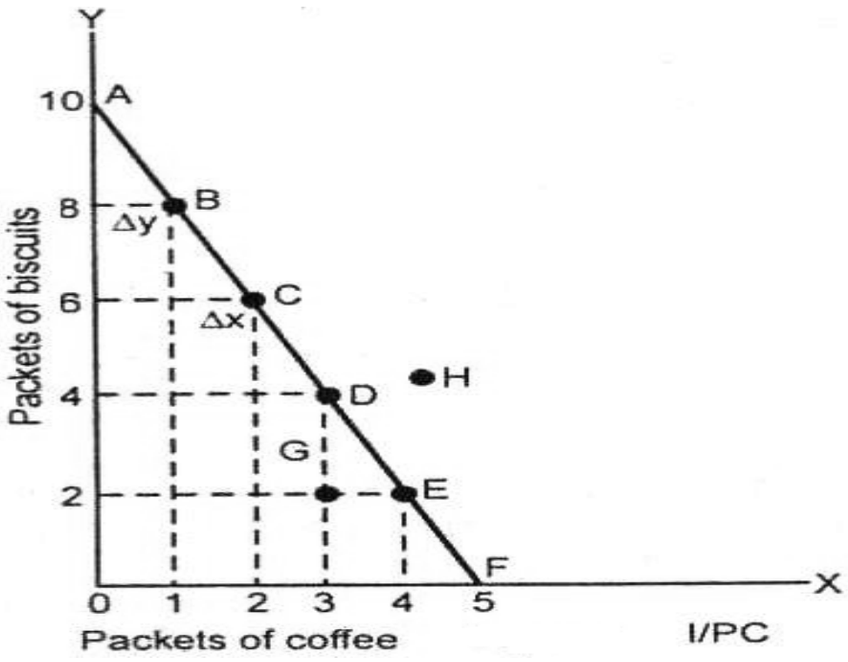
Market Basket	Packets of Biscuits Per Week	Packets of Coffee Per Week
A	10	0
B	8	1
C	6	2
D	4	3
E	2	4
F	0	5

a) Market basket A in the table above shows that if the whole amounts of Tshs 60 are spent on the purchase of biscuits, then the consumer buys 10 packets of biscuits at a price of Tshs 6 each and nothing is left to purchase coffee.

b) Market basket F shows the other extreme. If the consumer spends the entire amount of Tshs 60 on the purchase of coffee, a maximum of 5 packets of coffee can be purchased with it at a price of Tshs 12 each with nothing left over for the purchase of biscuits.

c) The intermediate market baskets B to E shows the mixes of packets of biscuits and packets of coffee that the cost a total of Tshs 60. For example, in combination of market basket C, the consumer can purchase 6 packets of biscuits and 2 packets of coffee with a total cost of Tshs 60.

Diagram 22: Budget Line



In the Diagram 22 the line AF shows the various combinations of goods the consumer can purchase. This line is called the budget line. It shows 6 possible combinations of packets of biscuits and packets if coffee which a consumer can purchase weekly. These combinations are indicated by points A, B, C, D, E and. Point A indicates that 10 packet of biscuits can be purchased if the entire income of Tshs 60 is devoted to the purchase of biscuits. Similarly, point F shows the purchase of 5 packets of coffee for the entire income of Tshs 60 per week. The budget line AF indicates all the combinations of packets of biscuits and packets of coffee which a consumer can buy given the assumed prices and income. In case, a consumer decides to purchase combination of goods inside the budget line such as G, then it involves a total outlay that is smaller than the amount of Tshs 60 per week. Any point outside the budget line such as H requires an outlay larger than the consumer's weekly income of Tshs 60.

Moreover, the slope of the budget line indicates how many packets of biscuits a purchaser must give up to buy one more packet of coffee. For example, the slope at point B on the budget line is $\Delta Y / \Delta X$ or two packets of biscuits 1 = packet of coffee. This indicates that a move from B to C involves sacrificing two packets of biscuits to gain an additional one packet of coffee. Since AF budget line is straight, the slope is constant at -2 packets of biscuits per one packet of coffee at all points along the line.

Mathematically:

$PxX + PyY = M$

Where Px and Py denote prices of goods X and Y respectively and M stands for money income. The above budget-line equation implies that, given the money income of the consumer and prices of the two goods, every combination lying on the budget line will cost the same amount of money and can therefore be purchased with the given income. The budget line can be defined as a set of combinations of two commodities that can be purchased if whole of a given income is spent on them and its slope is equal to the negative of the price ratio.

Budget Space:

It should be carefully understood that the budget equation PxX + PyY = M or Y = M/Py – Px/Py. X depicted by the budget line in only describes the budget line and not the budget space. A budget space shows a set of all commodity combinations that can be purchase by spending the whole or a part of the given income. In other words, budget space represents all those combinations of the commodities which the consumer can afford to buy, given the budget constraint.

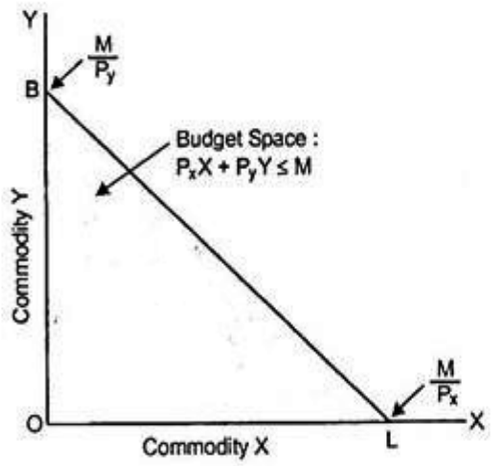
Thus, the budget space implies the set of all combinations of two goods for which income spent on good X (i.e., Px X) and income spent on good Y (i.e., PyY) must exceed the given money income.

Therefore, we can algebraically express the budget space in the following form of inequality:

PxX + PyY < M or M > PxX + PyY

The budget space has been graphically shown in Diagram 23 as the shaded area. The budget space is the entire area enclosed by the budget line BL and the two axes.

Diagram 23: Budget Space



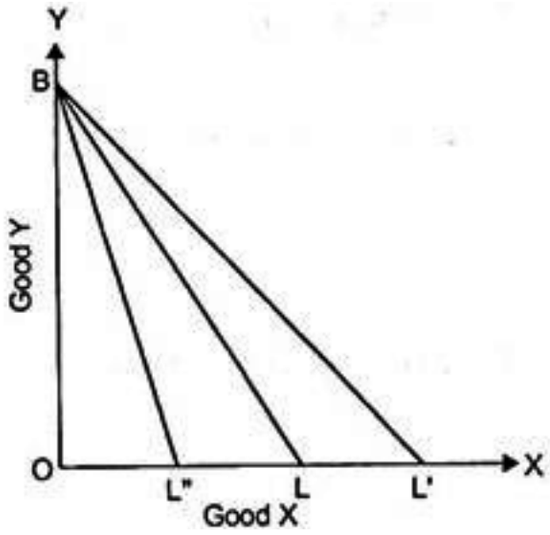
Budget Space

Changes in Price and Shift in Budget Line:

Now, what happens to the price line if either the prices of goods change or the income changes. Let us first take the case of the changes in prices of the goods. This is illustrated in Diagram 24. Suppose the budget line in the beginning is BL, given certain prices of the goods X and Y and a certain income. Suppose the price of X falls, the price of Y and income remaining unchanged.

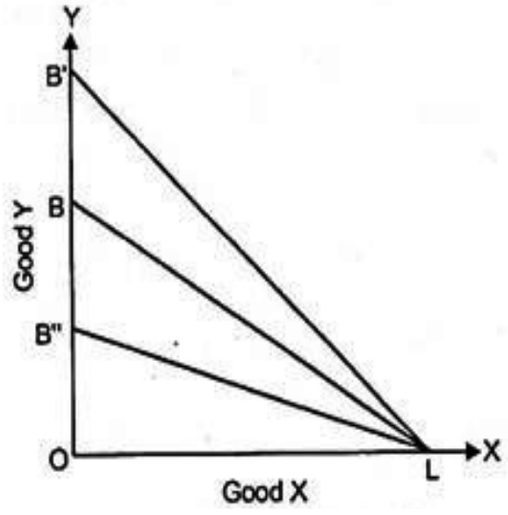
Now, with a lower price of X the consumer will be able to purchase more quantity of X than before with his given income. Let at the lower price of X, the given income purchases OL' of X which is greater than OL. Since the price of Y remains the same, there can be no change in the quantity purchased of good Y with the same given income and as a result there will be no shift in the point B. Thus, with the fall in the price of good X, the consumer's money income and the price of Y remaining constant, the price line will take the new position BL'.

Diagram 24: Changes in Budget Line as a Result of Changes in Price of Good X



Now, what will happen to the budget line (initial budget line BL) if the price of good X raises, the price of good Y and income remaining unaltered. With higher price of good X, the consumer can purchase smaller quantity of X, say OL", than before. Thus, with the rise in price of X the price line will assume the new position BL". Diagram 25 shows the changes in the price line when the price of good Y falls or rises, with the price of X and income remaining the same. In this the initial budget line is BL.

Diagram 25: Changes in Price Line as a Result of Changes in Price of Good Y



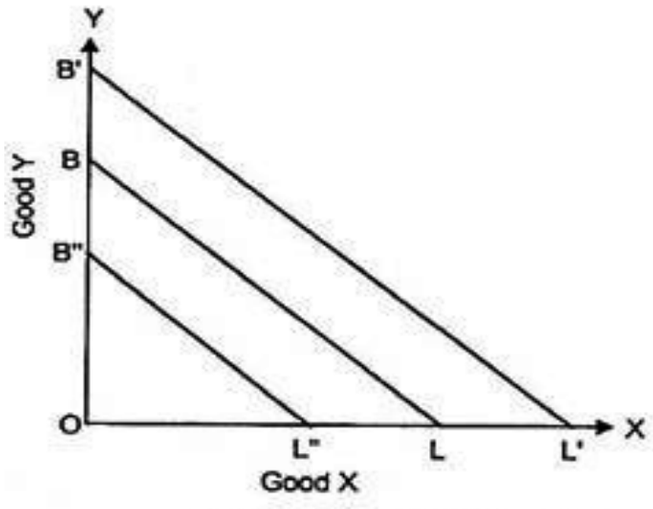
With the fall in price of good Y, other things remaining unchanged, the consumer could buy more of Y with the given money income and therefore budget line will shift to LB'. Similarly, with the rise in price Y, other things being constant, the budget line will shift to LB".

Changes in Income and Shifts in Budget line:

Now, the question is what happens to the budget Y line if the income changes, while the prices of goods remain the same. The effect of changes in income on the budget line is shown in Diagram 26. Let BL be the initial budget line, given certain prices of goods and income.' If the consumer's income

increases while the prices of both goods X and Y remain unaltered, the price line shifts upward (say, to B'L') and is parallel to the original budget line BL.

Diagram 26: Shifts in Budget Line as a Result of Changes in Income



This is because with the increased income the consumer is able to purchase proportionately larger quantity of good X than before if whole of the income is spent on X, and proportionately greater quantity of good Y than before if whole of the income is spent on Y. On the other hand, if the income of the consumer decreases, the prices of both goods X and Y remaining unchanged, the budget line shifts downward (say, to B"L") but remains parallel to the original price line BL. This is because a lower income will purchase a proportionately smaller quantity of good X if whole of the income is spent Changes in Income on X and proportionately smaller quantity of good Y if whole of the income is spent on Y.

It is clear from above that the budget line will change if either the prices of goods change or the income of the consumer changes.

Thus, the two determinants of the budget line are:

(a) The prices of goods, and

(b) The consumer's income to be spent on the goods.

Test Yourself 4

Jones has the following consumption possibilities between two goods, X and Y. I = 400 Tshs; PX = 40 Tshs; PY = 20 shs

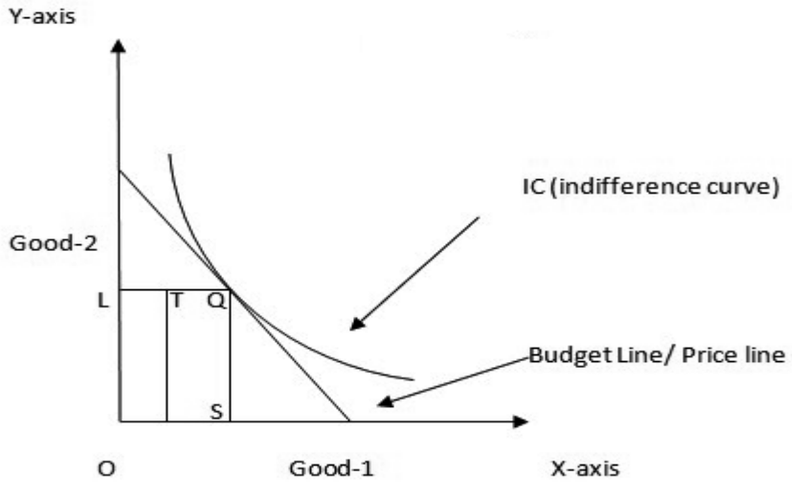
- Calculate and draw the individual's budget line
- Show what happens to the budget line when: Income decreases by 10%
- PY rises by 20%

Hint: Start from the original budget line in each case

Consumer's Equilibrium

"The term consumer's equilibrium refers to the amount of goods and services which the consumer may buy in the market given his income and given prices of goods in the market". The aim of the consumer is to get maximum satisfaction from his money income. Given the price line or budget line and the indifference map: "A consumer is said to be in equilibrium at a point where the price line is touching the highest attainable indifference curve from below as point Q in Diagram 27 shows".

Diagram 27: Consumer's Equilibrium



Conditions:

Thus the consumer's equilibrium under the indifference curve theory must meet the following two conditions:

First: A given price line should be tangent to an indifference curve or marginal rate of satisfaction of good X for good Y (MRSxy) must be equal to the price ratio of the two goods. i.e.

$MRS_{xy} = P_x / P_y$

Or

By definition Indeffernce Curve slope = dy/dx = MU_x/MU_y

$MU_x/MU_y = P_x / P_y$

Or

$MU_x / P_x = MU_y / P_y$

Example

To illustrate how the consumer equilibrium condition determines the quantity of goods 1 and 2 that the consumer demands, suppose that the price of good 1 is 2 Tshs per unit and the price of good 2 is 1 Tshs per unit. Suppose also that the consumer has a budget of 5 Tshs. The marginal utility (MU) that the consumer receives from consuming 1 to 4 units of goods 1 and 2 is reported in Table…..below . Here, marginal utility is measured in fictional units called utils, which serve to quantify the consumer's additional utility or satisfaction from consuming different quantities of goods 1 and 2. The larger the number of utils, the greater is the consumer's marginal utility from consuming that unit of the good.

Table also reports the ratio of the consumer's marginal utility to the price of each good. For example, the consumer receives 24 utils from consuming the first unit of good 1, and the price of good 1 is Tshs 2. Hence, the ratio of the marginal utility of the first unit of good 1 to the price of good 1 is 12.

Table 6: Illustration of Consumer Equilibrium. Price of Good 1 = 2 Tshs. Price of Good 2 = 1 Tshs, Budget = 5 Tshs

Units of good 1	MU of good 1	MU/Price of good 1	Units of good 2	MU of good 2	MU/Price of good 2
1	24	12	1	9	9
2	18	9	2	8	8
3	12	6	3	5	5
4	6	3	4	1	1

The consumer equilibrium is found by comparing the marginal utility per dollar spent (the ratio of the marginal utility to the price of a good) for goods 1 and 2, subject to the constraint that the consumer does not exceed her budget of 5 Tshs. The marginal utility per shilling spent on the first unit of good 1 is greater than the marginal utility per shilling spent on the first unit of good 2(12 utils > 9 utils). Because the price of good 1 is 2 Tshs per unit, the consumer can afford to purchase this first unit of good 1, and so she does. She now has 5 Tshs − 2 Tshs = 3 Tshs remaining in her budget. The consumer's next step is to compare the marginal utility per dollar spent on the second unit of good 1 with marginal utility per dollar spent on the first unit of good 2. Because these ratios are both equal to 9 utils, the consumer is indifferent between purchasing the second unit of good 1 and first unit of good 2, so she purchases both. She can afford to do so because the second unit of good 1 costs 2 Tshs and the first unit of good 2 costs 1 Tshs, for a total of 3 Tshs. At this point, the consumer has exhausted her budget of 5 Tshs and has arrived at the consumer equilibrium, where the marginal utilities per dollar spent are equal. The consumer's equilibrium choice is to purchase 2 units of good 1 and 1 unit of good 2.

Second: The second order condition is that indifference curve must be convex to the origin at the point of tangency.

Assumptions of Consumer's Equilibrium

a) Rationality: The consumer is rational. He wants to obtain maximum satisfaction given his income and prices.

b) Utility is ordinal: It is assumed that the consumer can rank his preference according to the satisfaction of each combination of goods.

c) Consistency of choice: It is also assumed that the consumer is consistent in the choice of goods.

d) Perfect competition: There is perfect competition in the market from where the consumer is purchasing the goods.

e) Total utility: The total utility of the consumer depends on the quantities of the good consumed.

Income and Substitution Effects

The substitution effect

The substitution effect is about what happens to the demand for good x when the price of good x changes. It is the part of the total change in demand caused by the change in the relative price of x (relative to other goods). When the price of x rises, it always becomes more expensive, and therefore less attractive, relative to other goods. Therefore, the substitution effect is always negative. This means that, when the price of good x rises, the change in demand for x caused by the substitution effect is negative. When the price of good x falls, the change in demand for x caused by the substitution effect is positive.

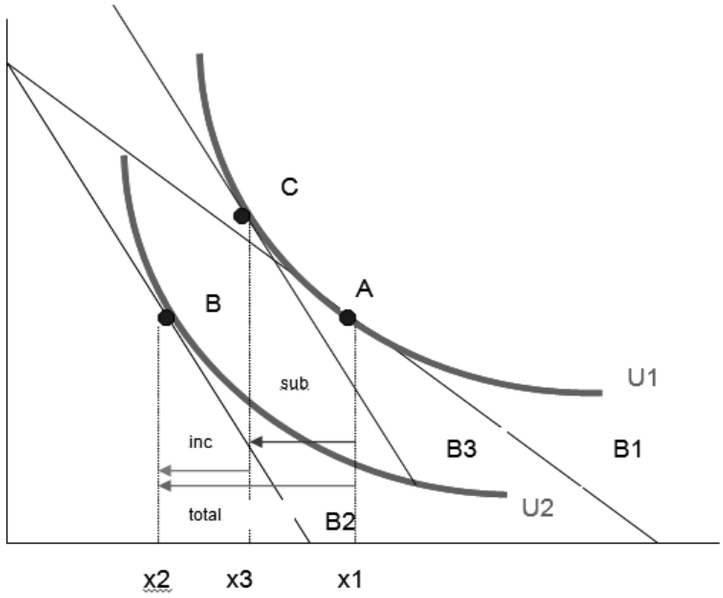
The income effect

The income effect is the part of the change in demand caused by the change in a consumer's purchasing power. Let's say the price of x rises and the prices of all other goods remain the same, as does the consumer's income. This means the consumer's purchasing power has decreased; if she spends the same amount of money on all other goods as before, she can no longer afford as many units of x as she used to be able to. Income effects can also be caused by changes to the consumer's income (without prices changing) as, if income increases their purchasing power increases, and vice versa for an income decrease.

The income effect can be positive or negative. Inferior goods (the sort of goods you would expect people to buy less of as they get richer, e.g. bus travel) are defined as being goods that have a negative income effect: when the price of good x rises or the consumer's income falls, the change in demand for x caused by the income effect is negative. The opposite is true for normal goods (the sort of goods you would expect people to buy more of as they get richer, e.g. cars).

This graph shows the substitution effect and income effect of a price increase for a normal good.

Diagram 28: Income and Substitution effect



The price of x increases causing the budget line to shift from B1 to B2. The consumer changes his consumption from the bundle of x and y represented by point A to the bundle represented by point B. The movement from A to B represents the total effect of the price change. Consumption of x goes down from x1 to x2 for two reasons. The substitution effect occurs because x is now more expensive relative to y (B2 is steeper than B1). The income effect of the price change occurs because real income (I/Px) has decreased. B is on a lower indifference curve than A. The total effect is the substitution effect plus the income effect.

To separate the substitution effect from the total effect, first draw a new budget line, B3. B3 is parallel to B2 because it represents the higher price for x. It must be tangent to the original indifference curve U1. In the graph above this is point C. Point C shows us how much x the consumer would buy if the price of x were increased and at the same time he was given more income so that he was no worse off than he was before the price went up. The movement from A to C is the substitution effect. The income effect is what is left when the substitution effect (A to C) is subtracted from the total effect (A to B), which is B to C in the graph above. X is a normal good because when then the budget line shifts from B3 to B2 (income decreases), consumption of X goes down from x3 to x2.

Application of Indifference Curve Analysis

a) In the consumer's equilibrium analysis, it is primarily assumed that the price of the goods X and Y and the income of the consumer remains constant. We now examine as to how the consumer reacts as regards to his purchases of good when his income changes within the indifference curve frameworks. Income is one of the most important factors affecting the purchase of commodities.
b) If the prices of goods, tastes and preferences of the consumer remains constant and there a change in his income, it will directly affect consumer's demand. This effect on the purchase due to change in income is called the income effect.
c) A rise in consumer's income will shift the price line or budget line upward to the right and he goes on to higher point of equilibrium. A fall in the income, will shift the price line downward to the left and the consumer attains lower (tangency) points of equilibrium. The shift of the price line is parallel as the prices of the goods are assumed to remain the same. The income effect is explained with the help of following diagram.

Self-Examination Questions

True/False Questions

1. An indifference curve is defined as a set of bundles that a consumer with a given income can afford, and among which she or he is indifferent.

2. More is preferred to less means that if the total number of goods in bundle A exceeds the total quantity in B, than A is preferred to B.

3. The assumptions of completeness, two-term consistency, transitivity and continuity are necessary for constructing a utility function over a set of preferences.

4. The utility function V(x1, x2) = 5[U(x1, x2)]/2+7 represents the same preference ordering as the utility function U(x1, x2).

5. A diminishing marginal rate of substitution implies that an individual requires increasing amounts of one good as he gives up more and more of the other good to remain at the same utility level.

6. More is preferred to less imply that two bundles with different amounts of either good 1 or good 2 and the same amount of the other good cannot be on the same indifference curve.

7. Since utility is ordinal and not cardinal, interpersonal comparisons cannot be made.

8. The MRS for indifference curve x1 + x2 =c is diminishing.

9. The indifference curve between garbage and ice cream would be positively sloped.

10. If Alfred's indifference curve between income and leisure is positively sloped and convex, then the additional income required to induce Alfred to work additional hours is constant and equal to his current wage.

Answers: 1.F 2.F 3.T 4.T 5.T 6.T 7.T 8.F 9.T 10.F

4

Theory of Production, Cost and Revenue

Get Through Intro

In economics, production theory explains the principles in which the business has to take decisions on how much of each commodity it sells and how much it produces and also how much of raw material i.e., fixed capital and labor it employs and how much it will use. It defines the relationships between the prices of the commodities and productive factors on one hand and the quantities of these commodities and productive factors that are produced on the other hand.

Learning Outcomes

a) Production concepts
- Factors of production
- Total Product, Marginal Product, Average Product
- Isoquants
- The law of diminishing returns
- Law of returns to scale Identify and explain different types of environmental factors affecting a business

b) Costs Analysis
- Cost of determinants
- Types of costs: Total cost, Variable Cost, Fixed costs, and Marginal costs
- Short run cost output relationship
- Cost output relationship in the long run
- Revenue concepts and Revenue Curves

1. Production concepts

[Learning Outcome a]

4.1 Definition of Production

Production is basically an activity of transformation, which connects factor inputs and outputs. Also is the process of transforming inputs into outputs can be any of the following kinds. Change in the form (Raw material transformed to finished goods) and Change in Place (Supply chain, Factory to Retailer)

4.2 Basic Concepts of Production Theory: Classifications of Inputs

4.2.1 Basic Concepts of Production Theory

- An input is a good or service that goes into the production process. An input is simply anything which a firm buys for use in its production process.
- An output, on the other hand, is any good or service that comes out of a production process.
- Inputs are considered variable or fixed depending on how readily their usage can be changed

  a) Fixed input: An input for which the level of usage cannot readily be changed. In economic sense, a fixed input is one whose supply is inelastic in the short run. In technical sense, a fixed input is one that remains fixed (or constant) for certain level of output.

  b) Variable input: A variable input is one whose supply in the short run is elastic, example, labour, raw materials, and the like. Users of such inputs can employ a larger quantity in the short run. Technically, a variable input is one that changes with changes in output. In the long run, all inputs are variable.

- Short run: At least one input is fixed All changes in output achieved by changing usage of variable inputs
- Long run: All inputs are variable and output changed by varying usage of all inputs

4.2.2 Factors of Production

There are four factors of production which provide foundations of economic activity. They describe all the inputs or resources that are used in the production of goods and services. The classical factors of production include land, labor and capital. In recent years however, a forth factor has been added to the list; entrepreneurship. The factors of production are sometimes also referred to as producer goods and services, because they are mainly used in the production of other goods and services (i.e. consumer goods and services).

1. Land

Land as a factor of production is sometimes also referred to as natural resources. It includes all naturally-occurring resources such as soil, water, air, plants, etc. that can be used in the production process. Land has three important characteristics: (1) its quantity is fixed, i.e. perfectly inelastic, (2) it is immobile, which means it cannot be moved, and (3) it is passive in nature, because it cannot produce anything on its own.

2. Labor

Labor as a factor of production refers to the human effort that is used in the production of goods and services. It includes all physical and mental efforts that are made by employees during the production process. The employees receive wages in exchange for their efforts. Wages are a critical aspect, because they are necessary in order to be able to distinguish between labor and leisure activities.

3. Capital

Capital as a factor of production describes all man-made goods that are used in the production process. The capital stock may include goods such as machinery, tools, vehicles, semi-finished products, etc. It is important to note that capital is by definition a derived factor of production, since it requires the combination of land and labor (i.e. the other two factors of production).

4. Entrepreneurship

Even though entrepreneurship is not part of the classical factors of production, it is often added to the list as a fourth factor. The reasoning behind this is that entrepreneurship often leads to innovation, new processes or new products. Hence, it can increase production efficiency and act as a factor of production.

4.2.2 Production Function

A production function is the functional relationship between inputs and output. It shows the maximum outputs which can be obtained for a given combination of inputs. It expresses the technologicalrelationship between inputs and output of a product. In general, we can represent the production function for a firm as:

$$Q = f(x1, x2, \ldots, xn)$$

Where Q is the maximum quantity of output, x1, x2, ….,xn are the quantities of various inputs, and f stands for functional relationship between inputs and output. For the sake of clarity, let us restrict our attention to only one product produced using either one input or two inputs. If there are only two inputs, capital (K) and labour (L), we write the production function as:Q = f (L, K)This function defines the maximum rate of output (Q) obtainable for a given rate of capital and labour input. It may be noted here that outputs may be tangible like computers, television sets, etc., or it may be intangible like education, medical care, etc.

4.2.3 Relationship between Total, Average, and Marginal Product: Short-Run Analysis

- Total Product (TP) = total quantity of output
- Average Product (AP) = total product per total input
- Marginal Product (MP) = change in quantity when one additional unit of input used
- The marginal product of labor is the increase in output obtained by adding 1 unit of labor but holding constant the inputs of all other factors

  Marginal Product of L:

  MPL= □Q/□L (holding K constant)

  = □Q/□L

  Average Product of L:

  APL= Q/L (holding K constant)

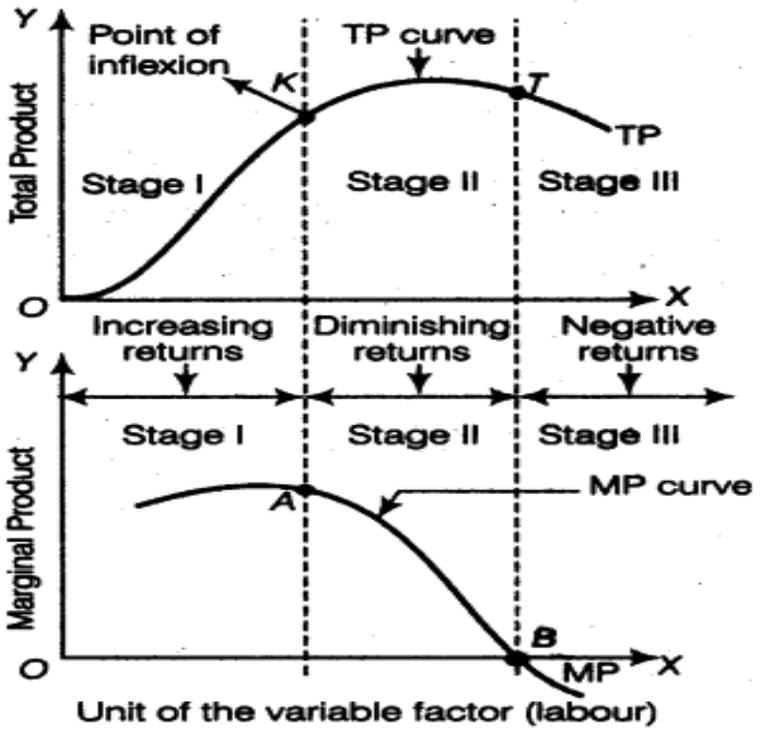
The Law of Diminishing Returns

The law of diminishing returns operates in the short run when we can't change all the factors of production. Further, it studies the change in output by varying the quantity of one input. Technically, the law states that as we increase the quantity of one input which is combined with other fixed inputs, the marginal physical productivity of the variable input must eventually decline. In simpler words, the total productivity, for a given state of technology, is bound to increase with an increase in the quantity of a variable input. However, as the quantity of the inputs keeps on increasing, the marginal product rises to a maximum, then starts to decline and eventually becomes negative. This is because the crowding of inputs eventually leads to a negative impact on the output. Lastly, the law of diminishing returns also comes with some assumptions:

Assumptions of the law

- the state of technology to be constant. A variable state of technology would impact the marginal and average product. In that case, we would not be able to accurately study the relationship between output and the fixed input.
- Only one input should be variable keeping other inputs constant. This law does not apply to cases when all the inputs vary proportionately. In that case, the returns to scale come to the rescue.
- The law does not apply to a production scenario where we require specifically fixed proportions of inputs. In such a case, an increase in any input would not have any impact on production, since the marginal product will be equal to zero.
- We consider only physical inputs and outputs and not economic profitability in monetary terms. We can divide the behavior of output when varying one input, keeping other inputs fixed in the short run, into three stages.

Diagram 29: Law of Diminishing Marginal Returns



Stage I: Increasing Returns

We characterize this stage with the total output increasing at an increasing rate with each additional unit of the variable input. This continues to point A on the TP curve. Further, the MP curve rises to the point X corresponding to the point B on the TP curve, also known as the point of inflexion. After point B, the TP curve continues to rise but now at a decreasing rate. The MP also starts to fall but is positive. The end of this stage sees the maximum point of the average product, where the AP and MP curves intersect. We get increasing returns in the first stage because initially, the fixed factors are abundant relative to the variable factor. The introduction of additional units of the variable factor leads to the effective utilisation of the fixed factors. Evidently, production increases at an increasing rate. For example, if a machine requires four workers for its optimum utilisation, and in the current scenario is two workers are operating the machine, the factor would be underutilised. Addition of another worker would definitely lead to an increase in the output. Further addition of a worker would lead to optimum utilisation and hence production would increase.

Stage II: Diminishing Returns

Throughout the stage of diminishing returns, the total product keeps on increasing. However unlike the stage of increasing returns, here the total product increases at a diminishing rate. This happens because the marginal product falls and becomes less than the average product, which also sees a downwards slope. Thus, this stage is known as the stage of diminishing returns. The end of this stage is marked by the total product attaining its maximum value and the marginal product becoming zero. Further, this stage is very important because the firm will seek to produce in its range. After the addition of a certain amount of variable inputs which lead to the optimum and efficient utilisation of fixed input, the output starts diminishing. This is because any further addition to the variable factor after the point of efficient utilisation renders the fixed factor inadequate relative to variable factor. Again, this is the reason why the marginal and average product decline at this stage.

Stage III: Negative Returns

The origin of stage 3 starts from the maximum point of the TP curve. In this stage, the TP curve now starts to decline. Moreover, the MP curve becomes negative coupled with a fall in the AP curve. The excessive addition of variable inputs leads to negative returns at this stage. This is because of the crowding of the variable factors. The variable and fixed factors now start getting into each other's ways. Effectively, there is no coordination and hence the output falls.

Laws of Returns to Scale

How the output of a business responds to a change in factor inputs is called returns to scale

Example

Table 7: Laws of Return to Scale

Units of Capital	Units of Labour	Total Output	% Change in Inputs	% Change in Output	Returns to Scale
20	150	3000			
40	300	7500	100	150	Increasing
60	450	12000	50	60	Increasing
80	600	16000	33	33	Constant
100	750	18000	25	13	Decreasing

Consider the table above that shows added capital and labour inputs: When we double the factor inputs from (150L + 20K) to (300L + 40K) the % change in output is 150% which implies increasing returns. When the scale of production is changed from (600L + 80K) to (750L + 100K) then the percentage change in output (13%) is less than the change in inputs (25%) i.e. decreasing returns

1. Increasing Returns to Scale:

Increasing returns to scale or diminishing cost refers to a situation when all factors of production are increased, output increases at a higher rate. It means if all inputs are doubled, output will also increase at the faster rate than double. Hence, it is said to be increasing returns to scale. This increase is due to many reasons like division external economies of scale.

2. Diminishing Returns to Scale:
Diminishing returns or increasing costs refer to that production situation, where if all the factors of production are increased in a given proportion, output increases in a smaller proportion. It means, if inputs are doubled, output will be less than doubled.

3. Constant Returns to Scale:
Constant returns to scale or constant cost refers to the production situation in which output increases exactly in the same proportion in which factors of production are increased. In simple terms, if factors of production are doubled output will also be doubled

Isoquants

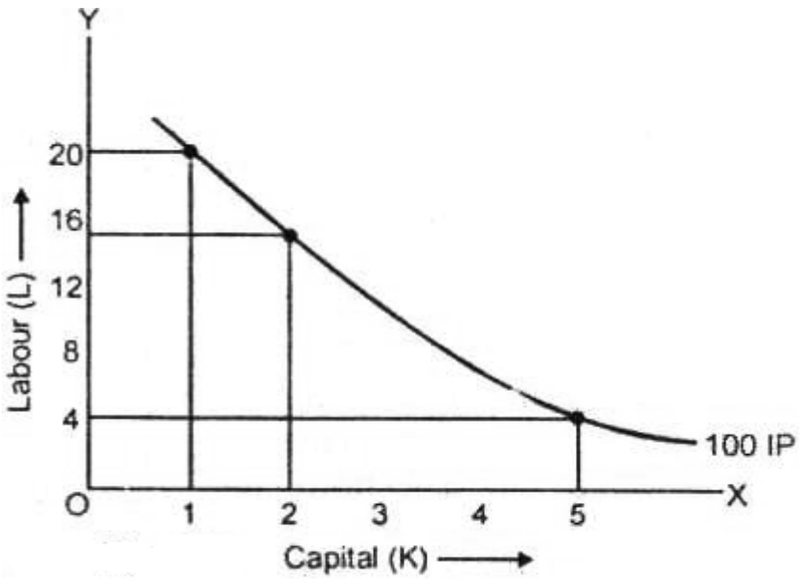
An isoquant shows the different combinations of K and L that produce a certain amount of a good or service.

Properties of Isoquants

(i) An Isoquant Slopes Downward from Left to Right:

This implies that the Isoquant is a negatively sloped curve. This is because when the quantify of factor K (capital) is increased, the quantity of L (labor) must be reduced so as to keep the same level of output.

Diagram 30: Isoquant

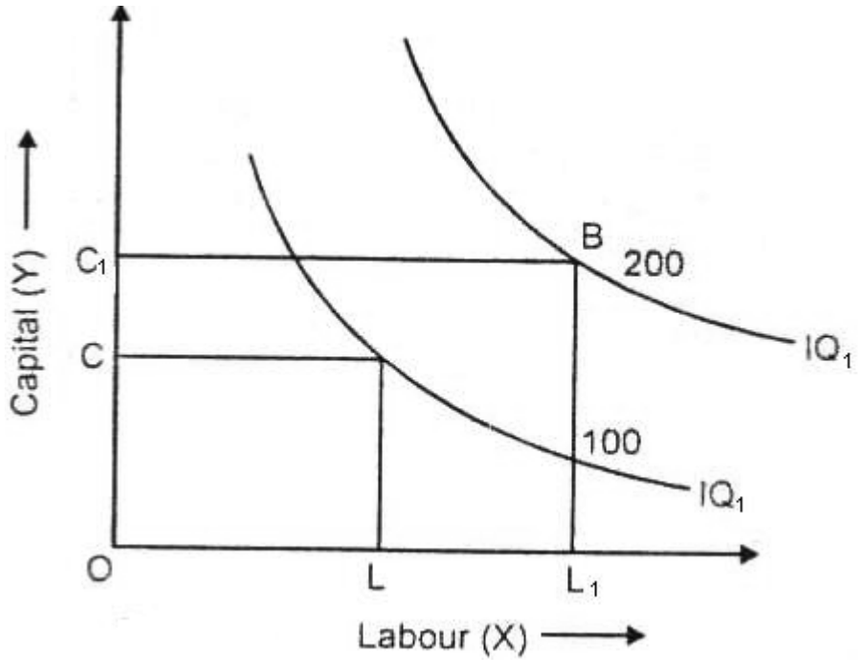


The Diagram 29 depicts that an isoquant IP is negatively sloped curve. This curve shows that as the amount of factor K is increased from one unit to 2 units, the units of factor L are decreased from 20 to 15 only so that output of 100 units remains constant.

(ii) An Isoquant that Lies Above and to the Right of Another Represents a Higher Output Level:

It means a higher isoquant represents higher level of output.

Diagram 31: Higher Isoquants

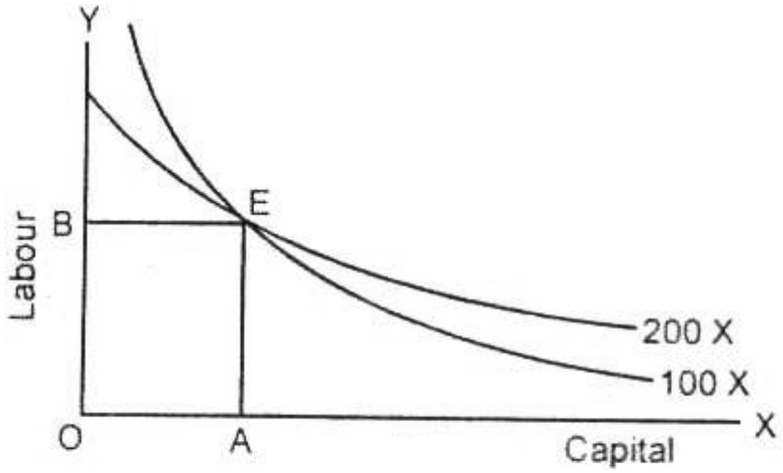


The Diagram 31 represents this property. It shows that greater output can be secured by increasing the quantity combinations of both the factors X and Y. The producer increases the output from 100 units to 200 units by increasing the quantity combination of both the X and Y. The combination of OC of capital and OL of labor yield 100 units of production. The production can be increased to 200 units by increasing the capital from OC to OC1 and labor from OL to OL1.

(iii) Isoquants Cannot Cut Each Other:

The two isoquants cannot intersect each other.

Diagram 32: Isoquants interaction



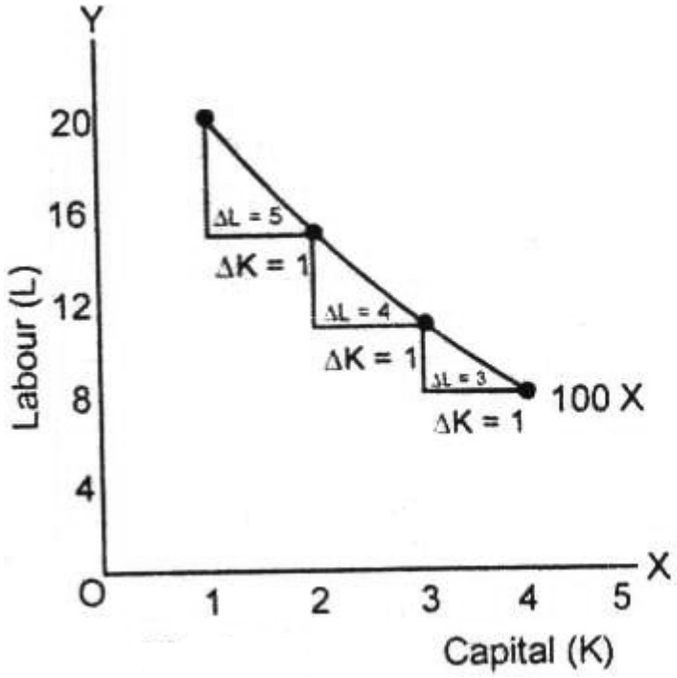
If two isoquant are drawn to intersect each other as is shown in this Diagram 32, then it is a negation of the property that higher Isoquant represents higher level of output to a lower Isoquant. The intersection at point E shows that the same factor combination can produce 100 units as well as 200 units. But this

is quite absurd. How can the same level of factor combination produce two different levels of output, when the technique of production remains unchanged. Hence two isoquants cannot intersect each other.

(iv) Isoquants are Convex to the Origin:

This property implies that the marginal significance of one factor in terms of another factor diminishes along an ISO product curve. In other words, the isoquants are convex to the origin due to diminishing marginal rate of substitution.

Diagram 33: Isoquants Convex feature



In this Diagram 33 MRSKL diminishes from 5:1 to 4:1 and further to 3:1. This shows that as more and more units of capital (K) are employed to produce 100 units of the product, lesser and lesser units of labor (L) are used. Hence diminishing marginal rate of technical substitution is the reason for the convexity of an isoquant.

(v) Each Isoquant is Oval Shaped:

The iso product curve, is elliptical. This means that the firm produces only those segments of the iso-product curves which are convex to the origin and lie between the ridge lines. This is the economic region of production.

2. Costs Analysis

[Learning Outcome b]

Types of Costs

Long Run Costs: are accumulated when firms change production levels over time in response to expected economic profits or losses.

- In the long run there are no fixed factors of production. The land, labor, capital goods, and entrepreneurship all vary to reach the long run cost of producing a good or service.

- The long run is a planning and implementation stage for producers. They analyze the current and projected state of the market in order to make production decisions.
- Efficient long run costs are sustained when the combination of outputs that a firm produces results in the desired quantity of the goods at the lowest possible cost.
- Examples of long run decisions that impact a firm's costs include changing the quantity of production, decreasing or expanding a company, and entering or leaving a market.

Short Run Costs:

- Short run costs are accumulated in real time throughout the production process.
- Fixed costs have no impact of short run costs, only variable costs and revenues affect the short run
- Variable costs change with the output. Examples of variable costs include employee wages and costs of raw materials. The short run costs increase or decrease based on variable cost as well as the rate of production.
- If a firm manages its short run costs well over time, it will be more likely to succeed in reaching the desired long run costs and goals.

Fixed Cost / indirect costs / overheads

- In economics, fixed costs are business expenses that are not dependent on the level of goods or services produced by the business. They tend to be time-related, such as salaries or rents being paid per month, and are often referred to as overhead costs.
- Fixed costs are not permanently fixed; they will change over time, but are fixed in relation to the quantity of production for the relevant period.
- For example, a company may have unexpected and unpredictable expenses unrelated to production, and warehouse costs and the like are fixed only over the time period of the lease. By definition, there are no fixed costs in the long run, because the long run is a sufficient period of time for all short-run fixed inputs to become variable.

Variable Cost

- Variable costs are costs that change in proportion to the good or service that a business produces.
- Variable costs are also the sum of marginal costs over all units produced.
- They can also be considered normal costs. Fixed costs and variable costs make up the two components of total cost. For example, variable manufacturing overhead costs are variable costs that are indirect costs, not direct costs. Variable costs are sometimes called unit-level costs as they vary with the number of units produced.

Total Fixed Cost

- Total cost for all fixed inputs of the firm per time is called total fixed cost.

Total Variable Cost

- Total variable cost is calculated by adding variable cost of all variable inputs. It is varies with output. Total cost is sum of total fixed cost and total variable cost.

Total Cost (TC) = Total Fixed Cost (TFC) + Total Variable Cost (TVC).

Average Costs

Production cost per unit of output, computed by dividing the total of fixed costs and variable costs by the number of total units produced (total output). Lower average costs are a potent competitive advantage.

Also called unit cost. Formula: (Fixed costs + Variable costs) ÷ Total output.

Marginal Cost

Marginal cost is the additional cost incurred for the production of an additional unit of output. The formula is calculated by dividing the change in the total cost by the change in the product output.

Marginal Cost:

MC= □TC/ □Q

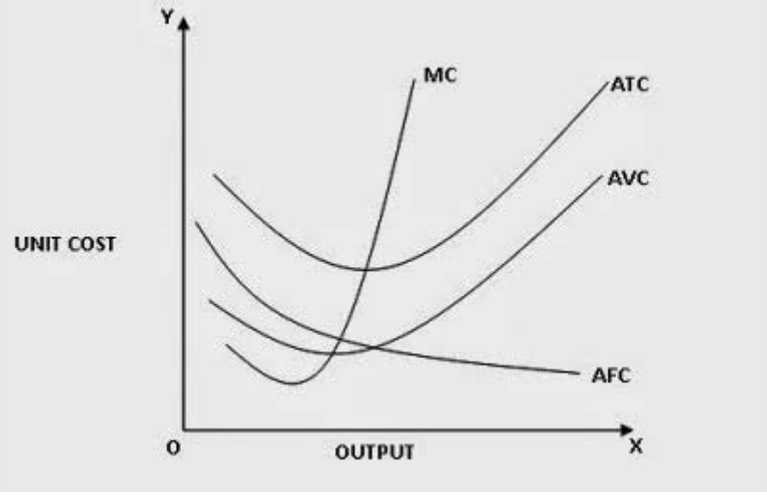
□TC =Change in Total Cost and □Q = Change in Quantity

Comparison between Short Run and Long Run Cost

i. Short-run Average Cost and Marginal Cost

The concept of cost becomes more meaningful when they are expressed in terms of per unit cost. Cost per unit can be computed with reference to fixed cost, variable cost, total cost and marginal cost. The following diagram reveals the relationship that exists among these concepts:

Diagram 34: Short run costs analysis



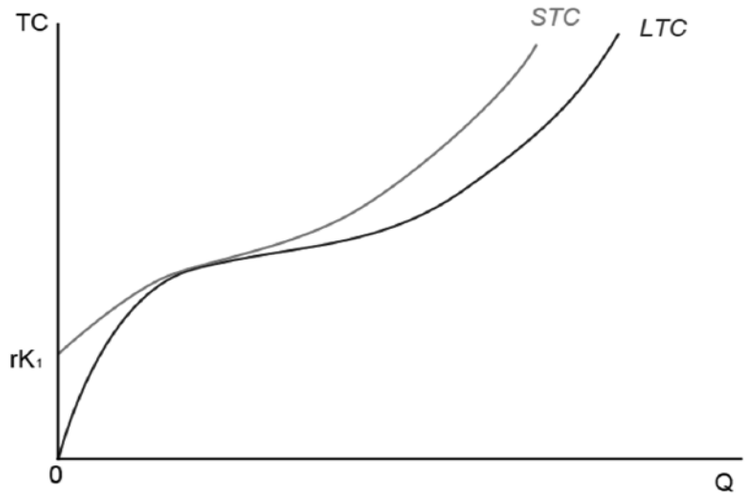
Due to the operation of the Law of Variable Proportions AVC curve slopes downwards till it reaches a certain level of output and then begins to rise upwards. Average Total Cost (ATC): Average Total Cost or simply Average Cost is obtained by dividing the TC by the number of units produced. Thus:

ii. Long Run Costs Analysis

- The main difference between long run and short run costs is that there are no fixed factors in the long run; there are both fixed and variable factors in the short run.
- In the long run the general price level, contractual wages, and expectations adjust fully to the state of the economy. In the short run these variables do not always adjust due to the condensed time period.

- In order to be successful a firm must set realistic long run cost expectations. How the short run costs are handled determines whether the firm will meet its future production and financial goals.
- This graph shows the relationship between long run and short run costs.

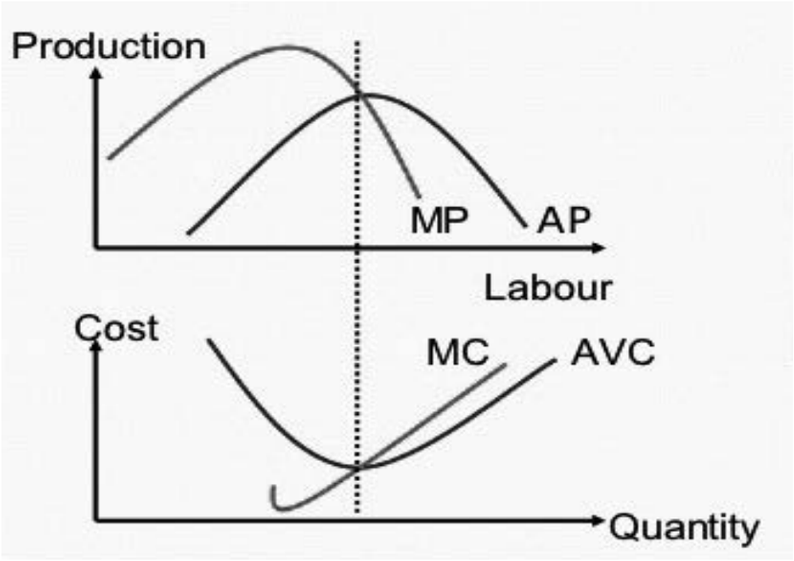
Diagram 35: Long run costs curves



Short run cost output relationship

The cost-output relationship plays an important role in determining the optimum level of production. Knowledge of the cost-output relation helps the manager in cost control, profit prediction, pricing, promotionetc. The relation between cost and its determinants is technically described as the cost function. By recalling the law of diminishing returns, the average product first increases, reaches a maximum, then diminishes, average vari-able cost first decreases, reaches its minimum (when average product is maximum), then increases. The shape of the average product curve generates a U-shaped AVC curve. Thus ATC is U-shaped because AVC is U-shaped and AVC is U-shaped. So we discover a close relation between the Law of Diminishing Re-turn and the shape of the short run average cost curve. The same type of relation can be discussed between the Law of Diminishing Return and the shape of the MC curve. It is to this relation that we turn now.

Diagram 36: Costs output relationship



Revenue Analysis

Definition of Total Revenue, Average revenue, Marginal Revenue

a) *Total Revenue:* refers to the total amount of income received by the firm from selling a given amountof its output.

TR = P x Q

Where TR is total revenue, P is price per unit, Q is quantity of output sold over some time period. e.g if a firm sells 15 units of a product at Tshs 20 per unit, the total revenue is 20x15 = 300.

b) *Average revenue:* is the revenue per unit of the product sold. It is total revenue divided by the numberof units of the product sold

AR = TR / Q =PxQ / Q =P

e.g If TR is Tshs 300 and 15 units are sold. AR = 300 / 15 = 20.

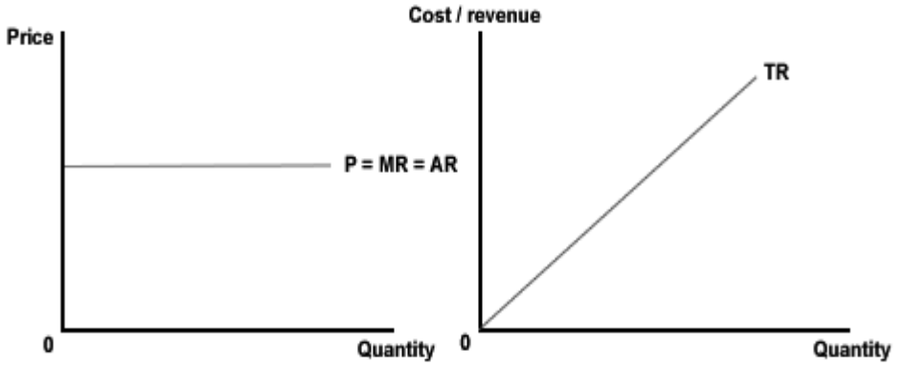
c) *Marginal Revenue*: is defined as the addition to total revenue which results from the sale of oneadditional unit of output.

MR n = TRn – TR n-1

e.g. Total revenue is Tshs 300 units for sale of 15 units and Total revenue is Tshs 304 for the sale of 16
units. MR is 304-300 = 4.

Total, Average and Marginal Revenue under Perfect Competition.

Diagram 37: Revenue curves



Relationship between AR and MR

When price remains same at all output, no firm is in a position to influence the market price of the product. A firm can sell more quantity of output at the same price. It means, the revenue from every additional unit (MR) is equal to AR. As a result, both AR and MR curves coincide in a horizontal straight line parallel to the X-axis as shown in Diagram… above

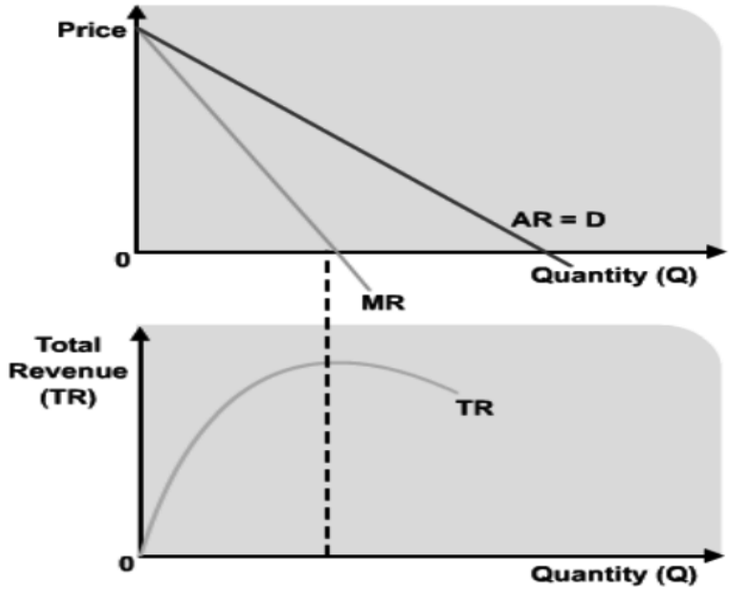
Relationship between TR and MR

When price remains constant, firms can sell any quantity of output at the price fixed by the market. As a result, MR curve (and AR curve) is a horizontal straight line parallel to the X-axis. Since MR remains constant, TR also increases at a constant rate. Due to this reason, the TR curve is a positively sloped straight line.

Total, Average and Marginal Revenue under Imperfect Competition.

A firm under imperfect competition is required to reduce the price if it wants to sell more output. Total Revenue will increases initially, but at a diminishing rate, with increase in output, reaches the maximum and remains constant at that level and then starts falling. This is because the producer under imperfect competition as it increases output, it must reduce the price more and more to sell additional output and this causes an increase in the total revenue to get smaller. As price falls to very low levels, the total revenue actually falls.

Diagram 38: Revenue curves under imperfect competition



Average Revenue falls continuously as output increases, because a firm is required to reduce the price to sell more.

- Relationship between Total revenue and Marginal revenue under imperfect competition.

i. When TR is increasing MR is falling but is positive.
ii. When TR will be maximum when MR is zero.
iii. When TR will fall when MR is negative

- Relationship between Average revenue and Marginal revenue under imperfect competition

i. So long as the AR curve is falling, marginal revenue must be less than average revenue for every level of output (except for the first level where it is equal.
ii. When AR is a straight line, MR is also a straight line but the rate of fall of MR will be twiceas much as the rate of fall of AR.

Self-Examination Questions

1. What is production?
2. What are the four factors of production?
3. What is the short run production function?
4. What are fixed and variable inputs?
5. What is the short run? Long run?
6. Graph the short run production function (or total product curve). Why is it shaped the way it is shaped?
7. Why would the total product curve shift up?
8. What are the variable costs of a firm? Give examples.
9. Is AFC curve U-shaped? If not, what is the possible shape of AFC curve?
10. If all inputs are increased simul-taneously will AC increase due to the law of diminishing marginal productivity?
11. All costs are variable costs in the long run. Explain.
12. What do you mean by short period and long period in price theory?
13. Explain the concepts of Total, Average and Marginal Revenue with examples
14. Explain the relationship between costs and output in short run
15. Explain the relationship between costs and output in long run
16. What is the difference between Accounting Profit and Economic Profit

5

Theory of distribution (Factor Market)

Get Through Intro

Distribution' refers to the sharing of the wealth that is produced among the different factors of production. In the modern time, the production of goods and services is a joint operation. All the different factors of production i.e., land, labour, capital and enterprise are combined together in productive activity. Productive activity is thus the result of the joint effort of these four factors of production which work collectively to produce more wealth. These factors need to be paid or rewarded for their services for producing the wealth. Therefore, the theory of distribution is concerned with the evaluation of the services of the factors of production, a study of the conditions of demand for and supply of the units of these factors and the influences bringing about changes in their market price. Moreover, the theory of distribution is mostly an extension of the theory of value. In the theory of distribution, however, we determine the prices not of the factors of production but of their services. For instance, in the factor market, it is not hectares of land which are being bought or sold, but the services of land. Similarly, neither labor nor capital goods are being evaluated, but the services of labor or of capital. Thus, rent is not the price of land but the price of service or use of land; wages, the price of the service of labor; interest, the price of the use of capital, and profit, the reward of entrepreneur's services.

Learning Outcomes

a) The Marginal Productivity Theory
b) Meaning and theories of factor pricing (wage, interest, profit and rent)
c) Demand and Supply of factors of production analysis

1. The marginal productivity theory

[Learning Outcome a]

In order to explain the theory, the various concepts of marginal productivity should be discussed at first.

a) *Marginal Physical Product (MPP):* It is defined as addition to the total product when one more unit of the variable factor is employed, the amount of all other factors remaining unchanged. For example, if two workers produce 5 pencils and three workers produce 7 pencils then MP will be 2 pencils.

b) *Marginal Revenue Product (MRP):* It is defined as the addition to the total revenue resulting from the employment of one more unit of the variable factor and the sale of the additional product. In mathematical notation, MRP is calculated as:

MRP = MP x MR

c) *Value of Marginal Product (VMP):* It is defined as the proceeds from the sale of the marginal product. In mathematical notation, VMP is calculated as:

VMP = MP x P

d) *Average Revenue Productivity (ARP) :* It is the average revenue per unit of a factor of production. Under Perfect Competition since P (Price) = MR :. VMP = MRP
Under Imperfect Competition, Since P > MR :. VMP> MRP

The marginal productively theory is an attempt to explain the determination of the rewards of various factors of production in a competitive market. By marginal productively theory of a factor is meant the value of the marginal physical product of the factor. It is worked out by multiplying the price of the output per unit by units of output.

Formula:

VMP = MP x P

Value of Marginal Product (VMP) = Marginal Physical Product x Price

The marginal productivity theory contends that in a competitive market, the price or reward of each factor of production tends to be equal to its marginal productivity. The demand for various factors of production is a derived demand. The resources do not usually directly satisfy consumer wants. They are demanded because these help in producing goods and service's. An entrepreneur while hiring a factor of production calculates the contribution which it makes to total production and the amount which has to be paid to it in a competitive market. An individual firm cannot influence the price of the factor of production. It has to take the ruling price in the market as given. The firm can employ as many number of factors units as it wishes at the ruling price of the factor.

Explanation of the Theory:

The marginal productivity theory states that under perfect competition, price of each factor of production will be equal to its marginal productivity. The price of the factor is determined by the industry. The firm will employ that number of a given factor at which price is equal to its marginal productivity. Thus, for industry, it is a theory of factor pricing while for a firm it is a factor demand theory.

Major issues of the theory

- Reward of each Factor unit is equal to its marginal productivity : We know that a rational producer aims either at maximizing his profit or minimizing his loss. Producer is in equilibrium only when the marginal cost is equal to marginal revenue. In other words, a producer will employ the factors only upto the point where the Cost of an additional factor unit equals its marginal revenue.

  Hence Factor Price = Marginal Revenue Productivity (Or VMP).

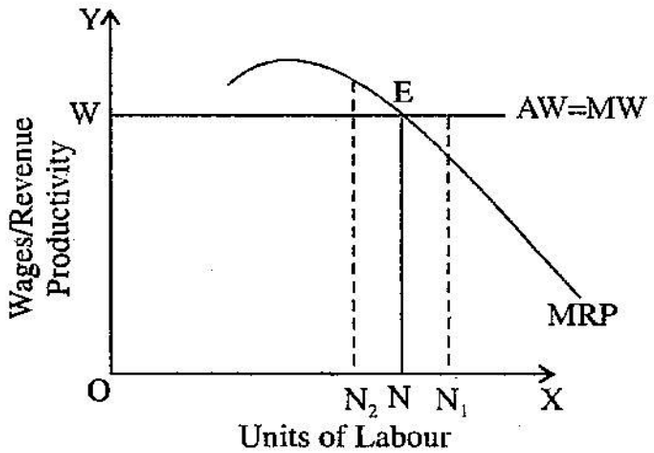
- The theory states that a firm should employ that many units of a factor (labor in our example) where marginal revenue productivity (or VMP) becomes equal to the factor price (i.e. wage-rate in our example). VMP of a factor = Factor Price. It is here that a firm will be in equilibrium and will get the maximum possible profit in a given situation. This is explained in the following example and diagram:

Example

Table 8: Labor units and Marginal Productivity

Labour Units	AW=MW or Wage rate (Tshs)	MRP (Tshs)
1	50<	70
2	50<	80
3	50<	70
4	50<	60
5	**50=**	**50**
6	50<	40
8	50<	30

Diagram 39: Wage labor relation curve



From the above table and Diagram…. that when MRP (or VMP) ¡s greater than Wage-rate (MW = AW), firm can increase its profit by employing more laborers. With the employment of more laborers, MRP will decline and it will eventually become equal to wage rate. Similarly, if wage rate is greater than MRP, firm will be in loss. Then it will go on reducing the number of laborers till wages and MRP become equal. Hence firm will employ 5 (Example) or ON (Diagram 39) units of labor. Thus, under perfect competition in the labor market a firm is in equilibrium when two conditions are fulfilled:

i. MRP (or VMP) = AW = MW (wage rate).
ii. MRP curve should cut MW (AW) curve form above.

These two conditions are fulfilled in at point E (above Diagram 39). According to it, this firm will employ ON laborers at OW rate of wages.

Assumptions of the Theory

The Marginal Productivity Theory is based on certain assumptions which are as follows:

- There is perfect competition both in the factor market as well as in the product market.
- The different units of the same factor of production are homogeneous in the sense that all of them are equally efficient.
- The working hours for factors of production are given and fixed and there is no provision for overtime.
- All factors of production are assumed to be perfectly mobile.
- It is assumed that the various factors production must be perfect substitutes of each other, that one can be replaced for the other.
- The economy is working at or near full employment of factors.
- The theory is based on the assumption that production operates under the Law of Diminishing Returns. This means when other things are constant, an increase in the supply of the factor would increase the total production at a diminishing rate.

Criticism of the Theory

- It is difficult to calculate the MP of a factor because production is a joint efforts of all factors
- The theory ignores the role of supply curve of factors in determination of price of a factor.
- The theory is based on the assumption of perfect competition. It is an unrealistic assumption which rarely exists in the real world.
- The theory assumes full employment. Full employment rarely exists in the real world.
- Short period is ignored.
- It only explains the demand side of factors.

2. Meaning and Definitions of Factor Pricing: [Learning Outcome b]

The theory of factor pricing is also called theory of distribution. The distribution may be either functional or personal. The personal distribution is concerned with the distribution of national income among various factors of production which is unequally distributed. On the other hand, the functional distribution is concerned with the remuneration paid to various factors of production in an act of production.

The factors of production, viz., land, labour, capital, entrepreneur and organisation are paid in the form of rent, wages, interest, profit and salary. Thus, the theory of functional distribution is called the theory of factor pricing.

The various definitions of the theory of distribution have been given as under:

(i) Professor Chapman has defined, “The economics of distribution accounts for the sharing of wealth produced by a community among the agents or the owners of the agents which have been active in its production.”

(ii) According to Professor Seligman, “All wealth that is created in society finds its way to the final disposition of the individuals through certain channels or sources of income. This process is known as distribution.”

Need for a Separate Factor Pricing:

In the distribution part of economic theory we study the determination of reward for various factors of production. Why is the theory of demand and supply not applicable for the determination of factor price, Professor Alfred Marshall has emphasised that there is a need for a separate theory of factor pricing because the characteristics of commodities and factors of production are different.

The following are the arguments but forward for the need of a separate theory of distribution or factor pricing:

(i) The demand for a factor of production is not a direct demand as is found in case of a commodity. The demand for factors of production depends on the demand for the goods and services in which they are employed. While the demand for a commodity is a direct demand because it directly satisfies the want of a consumer. Thus, there should be a separate theory of factor pricing.

(ii) The demand for a factor of production is a joint demand because two or more than two factors are jointly demanded for an act of production.

(iii) Some of the factors of production are human factors, namely, labour, entrepreneur and organisation. They are not only affected by the economic factors but are also affected by the non-economic factors. In case of commodity pricing there is no involvement of human factor.

Thus, the characteristics of factors of production are different than those of commodities. Hence, there should be a separate theory of distribution for factor price determination.

Theories of factor pricing (wage, interest, profit and rent)

1. Reward for Land: Rent

Although today we generally use the term ‘rent’ for any contractual payment for use of an asset, say, rent for a shop, a house, a piece of land or a machine etc., economists have traditionally associated rent with the use of services of land only. Not only this, the notion of rent has its origin in feudal societies, where most of land was owned by big landlords or noblemen. They used to charge some payment from the farmers who cultivated those tracts of land. That portion of payment for use of productive power of the soil was called rent.

Ricardian Theory of Rent

David Ricardo propounded original theory of rent. His idea was that ‘nature has been very generous to human beings and has endowed the land with some ‘original and indestructible powers’ for their use. Due to those powers, output from the land would exceed the total of payment to all kinds of inputs. Thus, after compensating all other factors of production involved in agriculture, there would remain a surplus. The owner of the land can rightfully claim that ‘surplus’.

Modern Theory of Rent

Modern economists contend that differences in fertility of land do not form the basis of the general principle of rent. The essential factors of rent are the relative scarcity of the products that land can yield. The scarcity of land is, in fact, derived from the scarcity of its products. Fundamentally speaking, rent is paid because the produce of the land is scarce in relation to its demand. In the face of this scarcity, rent will arise even if all the land in a country is exactly alike.

2. Reward for Capital: Interest

The reward to Capital as a factor of producton is the rate of interest. Capital covers a wide variety of items. E.g. Factory buildings, machines, computers, stocks of finished and partly finished goods are all examples of Capital. Due to the fact that the definition of Capital is so extensive, economists have divided Capital into sub categories in order to help distinguish between the different types of Capital.

Theories of Interest

There are a number of theories, which seek to determine the rate of interest. These theories try to explain the phenomenon of interest in terms of different set of variables.

a) Loanable Funds Theory

This theory relies on demand for borrowings and supply of loanable funds to determine the rate at which transaction will take place. It assumes that at any moment of time there will be some people who would spend less than their current income (savers) and others who plan to spend more than their income. The former will constitute the supplies of loanable funds while the latter constitutes the group,which demands such funds.

b) Liquidity-Preference Theory

Keynes had developed this approach and he related demand for money and rate of interest to aggregate level of income in the society. In his formulation demand for liquid money would depend on transaction, precaution or speculation, given the level of income. But supply of money was a policy determined variable. The rate of interest was thus determined by interaction of a demand function with a given supply of money. However, in his approach, the rate of interest has nothing to do with determination of rate of remuneration of a factor of production. We have given a more detailed explanation of liquidity preference approach in the subsequent units.

c) Time Preference Approach

Irving Fisher developed this approach. His idea was that consumer tries to compare present consumption and future consumption. The rate at which future consumptioncan substitute for present consumption (and vice-versa) will be marginal rate of substitution between present and future consumption. This is called the rate of time preference. It shall be equal to slope of indifference curve between present and future consumption.

3. Reward for Labor: Wage

The Subsistence Theory of Wages

The theory was first propounded by Adam Smith and later on it was developed by classical economists. The theory is also known as Iron Law of Wages. According to this theory wages tends towards the minimum subsistence level in the long run. Minimum subsistence level is the amount which is necessary to maintain the minimum level of living for a family. Production cost of labour is assumed equal to subsistence expenses. Subsistence means those minimum needs of workers and their family which can keep them alive. If the wages are above the subsistence level workers are induced to have more marriages, more children and the supply of labour will increase thereby the wages will be reduced to subsistence level. Contrary to it when wages are less than subsistence level there will be starvation, increase in infant mortality rate and thereby the supply of labour will be reduced and the wage would increase to subsistence level. Thus, in the long run the actual wage rate will be equivalent to subsistence level.

The Standard of Living Theory of Wages

This theory is an improvement over the subsistence theory of wages. According to this theory the wage rate should be determined on the basis of standard of living of workers. The wages change according to change in the standard of living of workers. The wage rate should be determined on the basis of the minimum needs of workers including the necessaries, comforts and luxuries of life to whom workers have accustomed. The wage rate should be suffice to maintain a given standard of living of a worker to which he is accustomed. If the wage rate is higher than the standard of living of workers there will be more marriages, more children and the supply of labour will increase and thereby the wage rate will be brought down to the standard of living. Contrary to it, if the wage rate is less than the standard of living there will be less marriages, less children and the supply of labour will be reduced thereby the wage rate will increase to the standard of living of workers.

The Wage Fund Theory of Wages

The theory was developed and propounded by Professor J.S. Mill. According to this theory wage rate is determined by the ratio of wage fund and the population. The population means the number of workers employed. An entrepreneur keeps a part of his capital for the payment to worker which is called wage fund and this fund is fixed. Wage fund being fixed the wage rate depends upon the number of workers. More the workers low will be the wage rate and less the number of workers high will be the wage rate. Thus, there is inverse relationship between the wage rate and number of workers.

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The wage rate can be calculated with the help of the following formula:

Wage Rate = Wage fund/ Number of Workers

According to this theory, wage rate can be increased in two ways—firstly, by increasing the wage fund and secondly, by reducing the number of workers. The wage fund is based on the savings of an entrepreneur and generally it is fixed during a given period. Thus the wage rate can be increased by reducing the number of workers. The theory points out that the wage rate cannot be raised through the trade unions in an organisation.

Residual Claimant Theory of Wages

The theory was propounded by an American economist F.A. Walker. According to Professor Walker the total production of an industry is distributed among land, labour, capital and entrepreneur in the form of rent, wages, interest and profit. When the rent, interest and profit are distributed among landlord, capitalist and entrepreneur, the remaining share goes to labour which is residual claimant. According to this theory, rent, interest and profits are determined on the basis of some principles of remuneration but there is no theory as such for the determination of wages. Thus, after the payment of rent, interest and profit from output whatever the residual share is wages.

Modern Theory of Wages

Wage is the payment made for the services of labour. Modern theory of wages has been propounded to determine the wage. It takes into consideration the demand for labour and supply of labour for the determination of wages. It is also called demand and supply theory of wages. Wage determination is a specific form of general theory of value.

Marginal Productivity Theory of Wages

Marginal productivity theory of distribution is the general theory of factor price determination. When the same theory is applied for the wage determination then the theory is called marginal productivity theory of wages.

According to this theory under perfect competition each worker gets wage rate equal to its marginal productivity (W=MP). Marginal productivity of labour is an addition to the total productivity when an additional unit of labour is employed. It is also called marginal physical productivity (MPP). When the MPP is multiplied by the price of a commodity we will get the volume of marginal product (VMP). Under perfect competition the marginal revenue productivity (MRP) and value of marginal productivity (VMP) are one and the same or are equal (MRP=VMP).

4. Reward for Entrepreneurship: Profit

The term profit has distinct meaning for different people, such as businessmen, accountants, policymakers, workers and economists. Profit simply means a positive gain generated from business operations or investment after subtracting all expenses or costs. In economic terms profit is defined as a reward received by an entrepreneur by combining all the factors of production to serve the need of individuals in the economy faced with uncertainties. The following are the major theories of Profit;

The Compensatory Theory of Profits:

Frank Knight argued that economic profit is a return to the entrepreneur in exchange of the risk undertaken by him (her) in the operation of a busi-ness enterprise. Because the other three factors of production (viz., land, labour and capital) have con-tractual agreements of payment for their services – wages, rent and interest, economic profit is a residue that may exist after these other factors have been compensated. No other factor income can be zero or negative' but profit can be, since at times there may be no profit at all or even a loss.

Profit due to Monopoly or Friction

Profit may arise due to the existence of mar-ket imperfections or monopoly. In pure competition there is no scope for making excess profit in the long run because of free entry. But a monopolist will se-cure sufficient control over a market so that competi-tion is eliminated and profit maintained. Monopoly profit results from the capacity of the producer to ex-ert considerable influence over price and supply in such a manner that profit can continue to be made over a long period of time.

Managerial Efficiency

It is often argued that profit arises as a result of managerial efficiency. It can be shown in many instances that management, through more efficient operations, can reduce the cost of doing business, anticipate and offset changes that will adversely af-fect the company's income, adopt new marketing techniques, improve product quality and expand the product line in order to increase profit.

Profit due to Technology and Innovation

The capitalist economic system is often criti-cized on the ground that it permits the earning of economic profits as a result of time lags in market adjustments and monopoly position. On the contrary, the innovation theory contends that earning economic profits is necessary for inducing individuals to undertake the risks associated with developing new products, new production techniques, or new marketing strategies.

Demand and Supply Theory of Pricing of Factors of Production

The Marginal Productivity Theory came under severe criticism of modern economists on the ground that it ignores the supply side of a factor of production besides many other weak points. The Modem Theory of pricing of factors of production also known as "Demand and Supply Theory" gives a satisfactory answer to the problem of determining factor prices. According to the theory just as the price of a commodity which is determined by the forces of demand and supply, similarly the price of a factor of production is also determined by the demand for that factor and its supply.

Demand of Factors of production

a) Demand for Land

Demand is the amount of good and services consumers are willing to buy at a given price over a specific period of time. Similarly, land demand refers to the amount of land and/or land products that individuals or firms are willing to buy at a certain price. Land is determined by price, income and price of related products.

b) Demand for Capital

Demand for capital is the amount of funds required to get started and to expand the firm. This this funding is called capital (or ‘venture capital’, for starting some new companies). People with money to spare offer up venture capital, and people who start and run businesses accept it and use it to expand the economy. The challenges that hinder demand for capital are such as Lack of Entrepreneurship, Lack of Availability of Skilled Labour, Shortage of Basic Facilities, High Interest Rates and Taxation policy

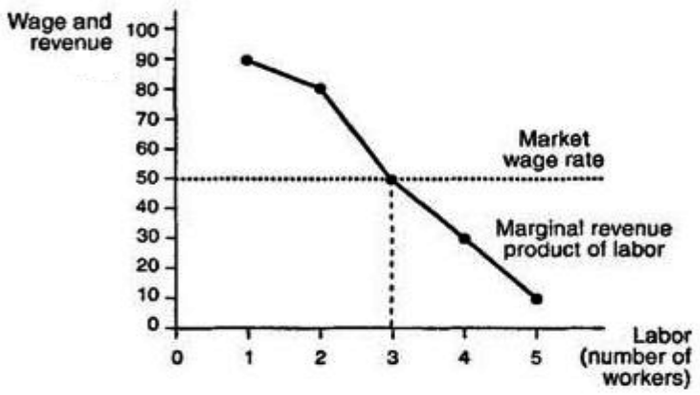
c) *Demand for labor*

The firm's demand for labor is a derived demand; it is derived from the demand for the firm's output. If demand for the firm's output increases, the firm will demand more labor and will hire more workers. If demand for the firm's output falls, the firm will demand less labor and will reduce its work force. Marginal revenue product of labor. When the firm knows the level of demand for its output, it determines how much labor to demand by looking at the marginal revenue product of labor. The marginal revenue product of labor (or any input) is the additional revenue the firm earns by employing one more unit of labor. The marginal revenue product of labor is related to the marginal product of labor. In a perfectly competitive market, the firm's marginal revenue product of labor is the value of the marginal product of labor.

Labor Demand Curve

A labor demand curve shows the number of workers firms are willing and able to hire at different wages. As a rule, a firm will hire a worker only if the additional revenue it gets from doing so covers the additional cost.The firm's profit-maximizing labor-demand decision is depicted graphically in Diagram 38.

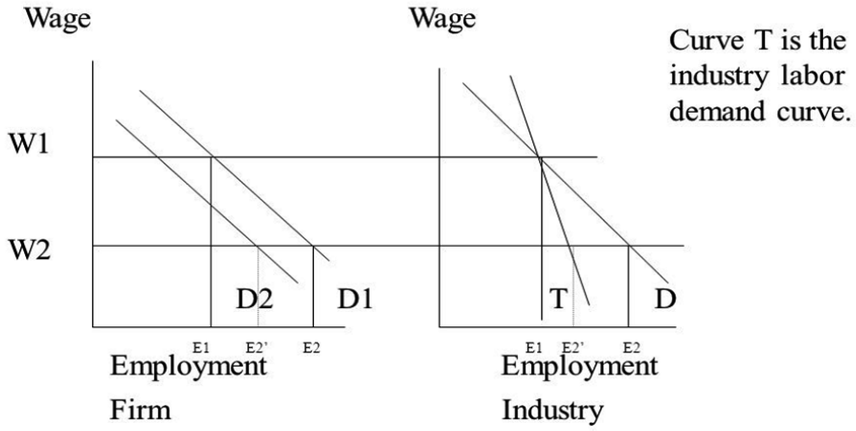
Diagram 40: Demand for labor curve



Industry demand for Labor curve

To obtain the demand curve for the whole industry, all the demand curves of the individual firms have to be summed up. Let us for the sake of illustration take that the industry consists of only three firms with the demand curves D1 and D2. The total demand curve of the industry would be summation of three demand curves

Diagram 41: Industry demand of labor



Supply of Factors of factors of Production

At first glance it may appear that quantities of most factors are fixed in an economy. For example, there is an upper limit to the number of workers. Similarly, there are upper limits to quantities of coal, oil, copper, iron ore, etc., available in the economy. However, in practice we are never near these limits. Often a large undiscovered or unexploited quantity exists, and a shortage of the resource that raises its price encourages exploration and the development of previously unprofitable sources. Thus, the supply of a resource to the economy usually varies considerably with changes in the price of the resource. With this brief introduction we now come to a discussion of the characteristic features of the supplies of individual factors.

a) *Supply of Land*

Land in economics includes all natural resources provided free by nature. The quantity of a particular natural resource existing in the world is, of course, limited. But we are never near these upper limits. Generally large undiscovered (or unexploited) sources exist and a shortage that raises their prices encourages exploration, research and development of previously unprofitable sources. Therefore, the

supply of any natural resource usually varies considerably with changes in its price, A high return to land provides incentives for the development of its productive powers through irrigation, drainage, fertilization, etc., which greatly increase the supply of arable land. On the other hand, if the return to land is low, its fertility may be allowed to be exhausted within a short period of time. Traditionally, however, the supply of land (which includes all natural resources besides mere space) to the whole economy has been assumed to be absolutely

b) *Supply of Capital*

Capital is a man-made factor of production and interest is its cost. The supply of capital in a country consists or the existing machines plants, equipment, buildings, etc., and is called the Capital Stock. In the course of production during the year a part of the existing capital stock is used up and to that extent the supply diminishes. On the other hand, new machines, buildings, plant and equipment are produced every year which go partly to replace the worn-out part of the capital stock and partly to add to the stock. Ignoring cyclical fluctuations, the supply of capital has been increasing over time in all modern economies.

c) *The Supply of Labor*

The supply of labor, like the supply for other services, merely indicates how much labor workers are willing to offer at various prices. The supply curve for each worker will be different as each worker has different opportunity costs and preferences.

Two factors that influence a workers supply of labour

1. Substitution effect of a rise in wages

With higher wages, workers will give greater value to working than leisure. With work more profitable, there is a higher opportunity cost of not working. The substitution effect causes more hours to be worked as wages rise.

2. Income effect of a rise in wages

This occurs when an increase in wages causes workers to work fewer hours. This is because workers can get a higher income by working fewer hours. Therefore they may work less. Therefore, after wage rise, workers may work less because they can get their target income with fewer hours spent working.

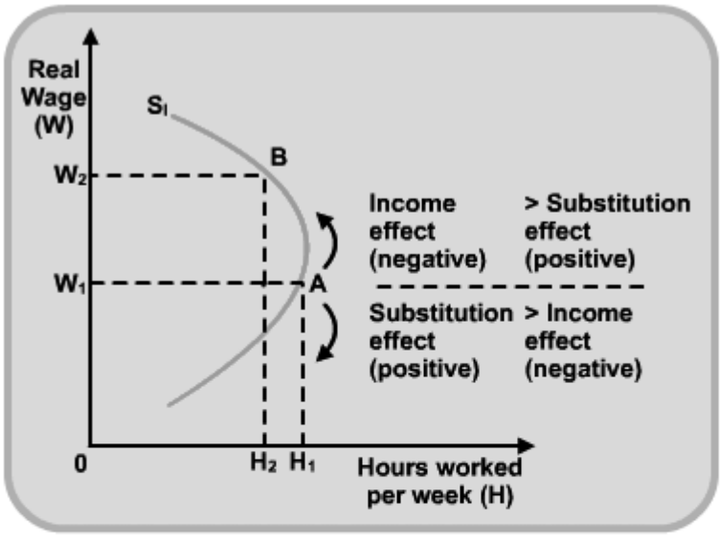
Backward Sloping Supply Curve of Labour:

A labor supply curve shows the number of workers who are willing and able to work in an occupation at different wages. While labour's supply curve sloping upwards from left to right is the general rule, an exceptional case of labour's supply curve may also be indicated (see Diagram…) When the workers' standard of living is low, they may be able to satisfy their wants with a small income and when they have made that much, they may prefer leisure to work. That is why it happens that, sometimes, increase in wages leads to a contraction of the supply of labour. This is represented by a backward-sloping supply curve as under.

The higher wage will mean that the individual's real income will have risen, ceteris paribus. Although some people never seem to have enough money, many will get to the stage, at higher wage rates, where they are earning quite a lot of money and would like to spend more time at home with their children, or just go on more holidays. Their demand for most goods rises as their real income rises, including 'leisure'. What is the point of earning lots of money if you have no spare time to enjoy it? So,

there is an income effect of a wage rise as well. As the real wage rises, the income effect causes the hours worked to fall (i.e. the income effect is always negative).

Diagram 42: Labor Regressive supply curve



Self-Examination Questions

1. Explain the theory of Marginal Productivity
2. What are the major theories of wage and their criticisms?.
3. Explain the reasons for backward sloping supply curve
4. What is the difference between marginal physical product and marginal revenue product?
5. Why an input demand is called ‘derived demand’?
6. Under what conditions value of the marginal physical product (VMP) of an input is equal to the marginal revenue product (MRP) of that input and VMP is not equal to MRP?
7. How do you explain the demand curve of an input?
8. Distinguish between rent, wages, interest and profit.

Market Structure Analysis

6

Get Through Intro

The Market Structure refers to the characteristics of the market either organizational or competitive, that describes the nature of competition and the pricing policy followed in the market. Thus, the market structure can be defined as, the number of firms producing the identical goods and services in the market and whose structure is determined on the basis of the competition prevailing in that market. The term " market" refers to a place where sellers and buyers meet and facilitate the selling and buying of goods and services. But in economics, it is much wider than just a place; it is a range of all the buyers and sellers, who are spread out to perform the marketing activities. This Chapter examines market structure analysis, including a comparison of marketing and economic methods and discussions of defining a market, getting to an overall market structure, marketplaces versus study of important groups, market structures, and market structures versus market segments.

Learning Outcomes

a) Types of market

1) Perfect Competition
   - Pricing under perfect market
   - Shutdown point
2) Monopoly Market
- Sources of monopoly power
- Maximizing monopoly profits
- Price discrimination

3) Monopolistic Competition
- Profit Maximization
- Long run equilibrium

4) Oligopoly Markets
- Basic Oligopoly Models
- Conditions for Oligopoly
- Role of strategic interdependence
- Profit Maximization in the Three Oligopoly Settings
- Cournot Model
- Stackelberg Model
- Bertrand Model

1. Types of Market

[Learning Outcome a]

A market is any one of a variety of different systems, institutions, procedures, social relations and infrastructures whereby persons trade, and goods and services are exchanged, forming part of the economy. It is an arrangement that allows buyers and sellers to exchange things. In mainstream economics, the concept of a market is any structure that allows buyers and sellers to exchange any type of goods, services and information.

Features of Market

- Customer focus:

The marketing function of a business is customer-centred. It makes an attempt to study the customer needs, and goods are produced accordingly. The business existence depends on human needs. In a competitive market, the goods that are best suited to the customer are the ones that are well-accepted. Hence, every activity of a business is customer-oriented.

- Customer satisfaction:

A customer expects some services or benefits from the product for which payment is made. If this benefit is more than the amount paid, then the customer is satisfied. In the long run, customer satisfaction helps to retain market demand. It helps achieve organizational objectives. Customer satisfaction can be enhanced by providing value-added services, which includes providing additional facilities at little or no extra cost.

- Objective-oriented

All marketing activities are objective-oriented. Different objectives are fixed at different levels, but the main objective is to earn profit from business along with the satisfac-tion of human wants. Marketing activities undertaken by sellers make an attempt to find out the weaknesses in the existing system, and measures are taken to improve the shortfalls so that the objectives are achieved.

- Marketing is both art and science:

Art refers to a specific skill that is required in marketing activities of any type of business. Science refers to a systematic body of knowledge, based on facts and principles. The concept of marketing includes a bunch of social sciences such as economics, sociology, psychology and law. It indicates market operations based on some principles. Hence, marketing is an art as well as a science.

- Continuous and regular activity:

Marketing is an activity designed to plan, price, promote and distribute products. At the same time, it also addresses both the current and future consumers. Thus, it is a continuous process. A marketer has to consistently monitor environment. This helps in coming up with new products.

- Exchange process:

Marketing involves exchange of goods, services and ideas with the medium of money. Exchange takes place between sellers and buyers. Most of marketing activities are concerned with the exchange of goods. Functions such as distribution, after-sale services and packaging help in the exchange process. Channels of distribution and physical distribution play an important role in the exchange process by creating place utility.

- Marketing environment:

Economic policies, market conditions, and environmental factors, such as political, technological, demographic and international, influence marketing activities. Marketing activities are inseparable from

such environmental factors. A successful marketer needs to adapt to these changing factors and adjust marketing strategies to suit new market developments.

- Marketing mix:

A combination of four inputs constitutes the core of a company's marketing system—product, price, place, and promotion. Marketing mix is a flexible combination of vari-ables. They are influenced by consumer behaviour, trade factors, competition and government regulatory measures.

- Integrated approach:

The marketing activities must be co-ordinated with other functional areas of an organization. Functions such as production, finance, research, purchasing, storekeeping and public relations (PR) are to be integrated with marketing. This will help in achieving organiza-tional objectives. Otherwise, it will result in organizational conflicts.

Types of Market

a) On the Basis of Geographic Location

Local Markets: In such a market the buyers and sellers are limited to the local region or area. They usually sell perishable goods of daily use since the transport of such goods can be expensive.

Regional Markets: These markets cover a wider are than local markets like a district, or a cluster of few smaller states

National Market: This is when the demand for the goods is limited to one specific country. Or the government may not allow the trade of such goods outside national boundaries.

International Market: When the demand for the product is international and the goods are also traded internationally in bulk quantities, we call it an international market.

b) On the Basis of Time

Very Short Period Market: This is when the supply of the goods is fixed, and so it cannot be changed instantaneously. Say for example the market for flowers, vegetables. Fruits etc. The price of goods will depend on demand.

Short Period Market: The market is slightly longer than the previous one. Here the supply can be slightly adjusted.

Long Period Market: Here the supply can be changed easily by scaling production. So it can change according to the demand of the market. So the market will determine its equilibrium price in time.

c) On the basis of Competition

i. Perfect Competition

A perfectly competitive market is a hypothetical market where competition is at its greatest possible level.Perfect competition describes a market structure, where a large number of small firms compete against each other. In this scenario, a single firm does not have any significant market power. As a result, the industry as a whole produces the socially optimal level of output, because none of the firms have the ability to influence market prices.

Features of the perfect competitive market

1. Large Number of Buyers and Sellers:

The first condition is that the number of buyers and sellers must be so large that none of them individually is in a position to influence the price and output of the industry as a whole. In the market the position of a purchaser or a seller is just like a drop of water in an ocean.

2. Homogeneity of the Product:

Each firm should produce and sell a homogeneous product so that no buyer has any preference for the product of any individual seller over others. If goods will be homogeneous then price will also be uniform everywhere.

3. Free Entry and Exit of Firms:

The firm should be free to enter or leave the firm. If there is hope of profit the firm will enter in business and if there is profitability of loss, the firm will leave the business.

4. Perfect Knowledge of the Market:

Buyers and sellers must possess complete knowledge about the prices at which goods are being bought and sold and of the prices at which others are prepared to buy and sell. This will help in having uniformity in prices.

5. Perfect Mobility of the Factors of Production and Goods:

There should be perfect mobility of goods and factors between industries. Goods should be free to move to those places where they can fetch the highest price.

6. Absence of Price Control:

There should be complete openness in buying and selling of goods. Here prices are liable to change freely in response to demand and supply conditions.

7. Perfect Competition among Buyers and Sellers:

In this purchasers and sellers have got complete freedom for bargaining, no restrictions in charging more or demanding less, competition feeling must be present there.

8. Absence of Transport Cost:

There must be absence of transport cost. In having less or negligible transport cost will help complete market in maintaining uniformity in price.

9. One Price of the Commodity:

There is always one price of the commodity available in the market.

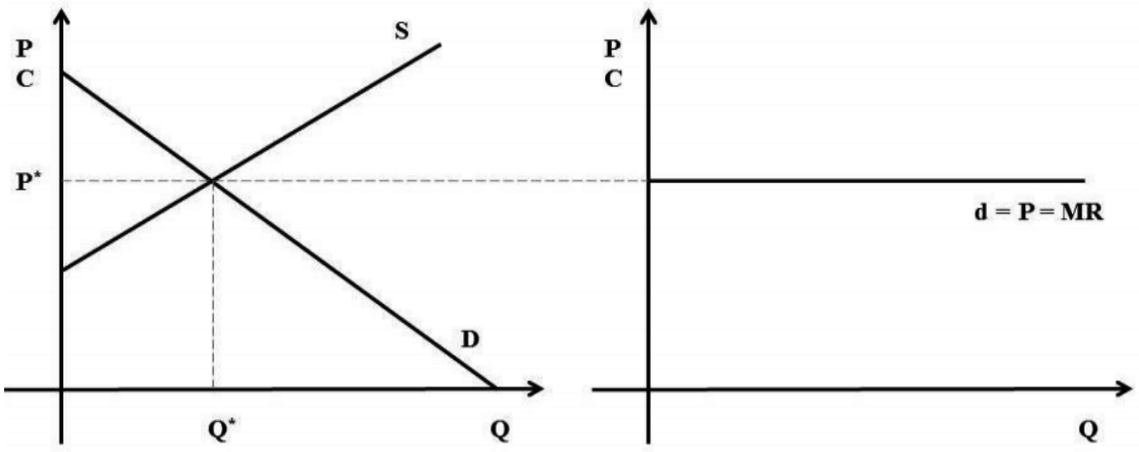
10. Independent Relationship between Buyers and Sellers:

There should not be any attachment between sellers and purchasers in the market. Here, the seller should not show prick and choose method in accepting the price of the commodity. If we will see from the close we will find that in real life “Perfect Competition is a pure myth.”

Price Determination under Perfect Competition

As explained above under perfect competition, the buyers and sellers cannot influence the market price by increasing or decreasing their purchases or output, respectively. The market price of products in perfect competition is determined by the industry. This implies that in perfect competition, the market price of products is determined by taking into account two market forces, namely market demand and market supply.

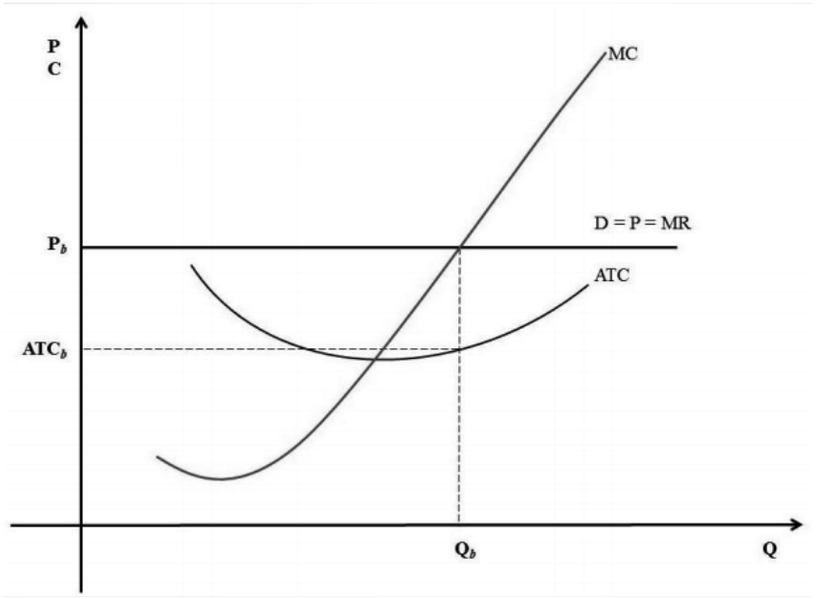
Diagram 43: Price determination under perfect competition



The product price is constant, the change in the total revenue per unit change in output, that means the change in marginal revenue (MR) is also constant and is equal to the product price.

Perfect Competition in Short-Run Analysis

Diagram 44: Perfect competition under short run



The best level of output in the short run is the one at which the firm maximizes profits or minimizes losses.

$$P = MR = MC$$

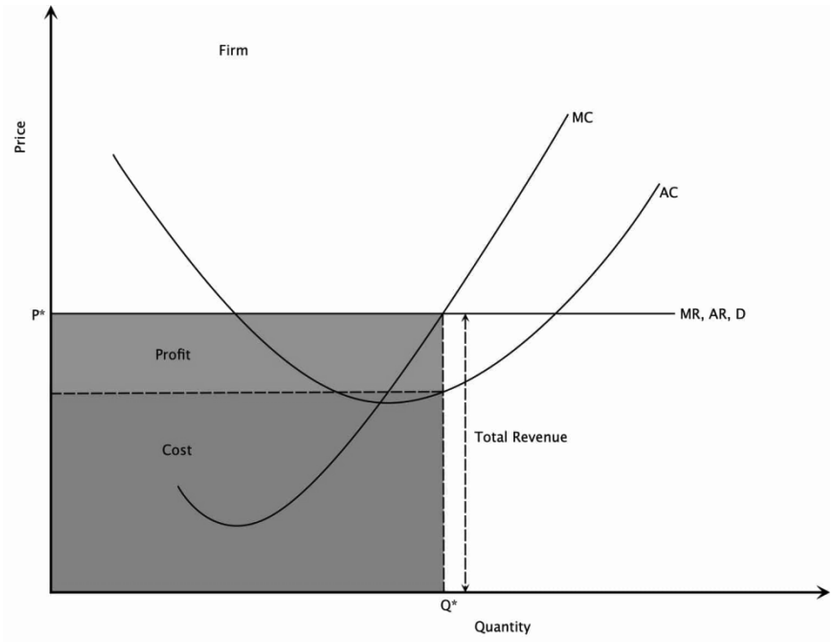
Profit Maximization under perfect competition

The three diagrams below show the Supernormal profit, normal profit/break even and loss situation of a firm in Short run. In the Perfect Competition short-run, the firm will continue to produce if it can recover the average variable cost, as fixed costs are paid regardless of production i.e. Price should be higher or equal to Average Variable Costs

a) Supernormal Profit/Abnormal

In perfect competition firms are assumed to be profit maximisers. Firms will therefore produce where marginal cost is equal to marginal revenue (MC=MR). The price the firm charges are determined by the market because the individual firm is too small to influence price and is therefore a price-taker. Perfectly competitive firms can make super-normal profits in the short-run as shown in the diagram below. In this diagram the horizontal average revenue curve is shown to be above the average total cost at the point where MC=MR (point P*).

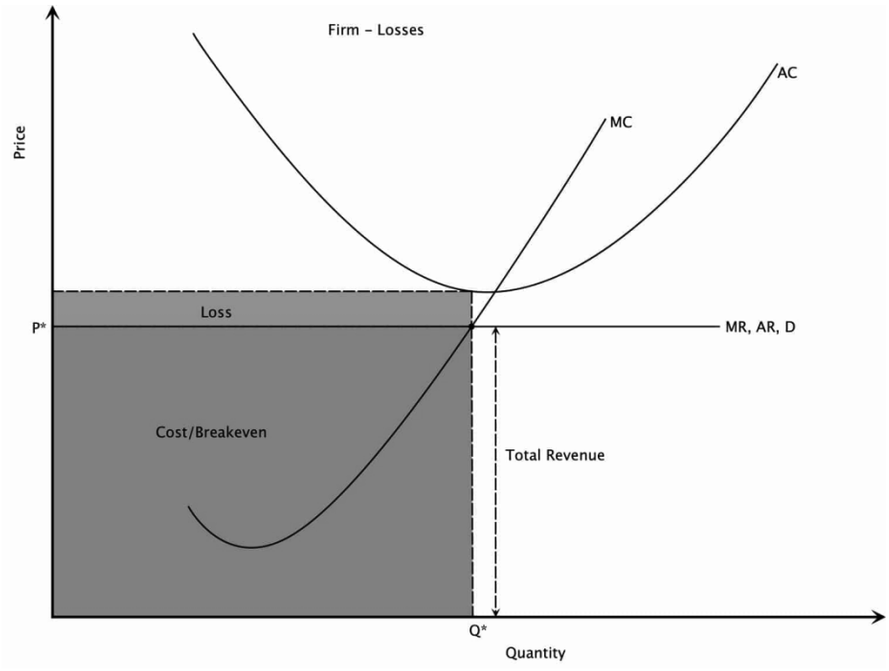
Diagram 45: Supernormal profit under short run



b) Losses

If AC exceeds AR (Price), this means that the firm is running at losses as per unit cost is falling short of the price per unit of output and hence it is the case of a short period In the following Diagram 45 the Red shaded area shows the losses made by the firm.

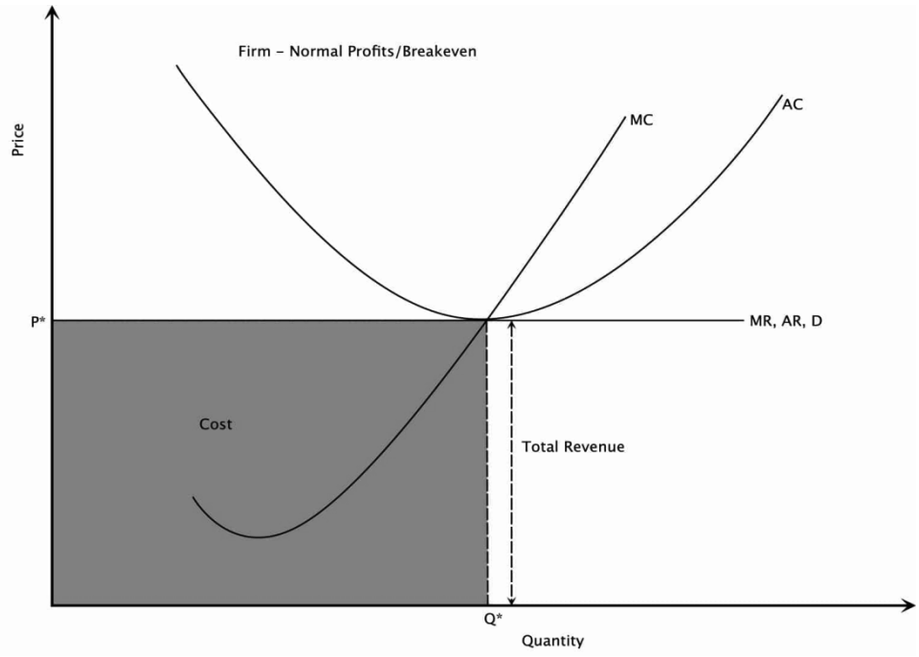
Diagram 46: Losses under perfect competition



c) Normal Profits/Breakeven

If AR = AC at the point of equilibrium, this means AC is minimum and AC is also equal to MC and MR. This implies that the firms is getting only normal profit. This is the case of long run in general and can also be the case of the short period. This situation has been shown in the Diagram 46.

Diagram 47: Normal profits under short run



ii) *Monopoly*

A monopoly is a market with a single seller (called the monopolist) but many buyers. In a perfectly competitive market, with a large number of sellers and buyers, no single buyer or seller can influence the price of a commodity. Unlike sellers in a perfectly competitive market, a monopolist exercises substantial control over the market price of a commodity. The quantity sold by the monopolist is usually less than the quantity sold by a perfectly competitive firm and the price charged by the monopolist is usually more than the price charged by a perfectly competitive firm. While a perfectly competitive firm is a "price taker," a monopolist is a "price maker." Similar to a monopoly is a monopsony, which is a market with many sellers but only one buyer. Examples of Monopoly in Tanzania are such as TANESCO,

Sources of monopoly power

- *Economies of Scale:* If the LAC is downward sloping, it is essentially wise to have only a single producer in the market. This is called a natural monopoly, as every additional competitor makes production more costly and wasteful.

- *Exclusive Control over Important Inputs* Complete or large control over necessary inputs for production causes some companies to be the sole power in an industry, as competitors cannot form due to the lack of inputs.

- *Patents:* A patent typically confers the right to exclusive benefit from all exchanges involving the invention to which it applies. Patents can be harmful and beneficial for a market, as they give rise to monopolistic powers, but without them some inventions would simply not occur at all.

- *Government Licenses of Franchises*: Government or local authorities can give out licenses for firms in certain areas so they gain exclusive rights of operations for example. These licenses are for industries or areas in which more than one firm would be harmful, however they come with regulations and restrictions

- *Restricted Ownership of Raw Materials and Inputs*: In very few cases the source of monopoly power is the ownership of strategic inputs. If a particular firm owns all of an input required for the production of a particular good or service, then it could emerge as the only producer of that good or service.

- *Sunk Costs:* The greater the cost of establishing a new business in an industry, the more difficult it is to enter that industry. That cost will, in turn, be greater if the outlays required to start a business are unlikely to be recovered if the business should fail.

- *Location:* Sometimes monopoly power is the result of location. For example, sellers in markets isolated by distance from their nearest rivals have a degree of monopoly power. The local movie theater in a small town has a monopoly in showing first-run movies. Doctors, dentists, and mechanics in isolated towns may also be monopolists.

Advantages of Monopoly

1. Stability of prices

In a monopoly market structure the prices are pretty stable. This is because there is only one firm involved in the market that sets the prices since there is no competing product. In other types of market structures prices are not stable and tend to be elastic as a result of the competition.

2. Economies of Scale
Since there is a single seller in the market it leads to economics of scale because big scale production which lowers the cost per unit for the seller. The seller may pass this benefit down to the consumer in terms of a lower price.

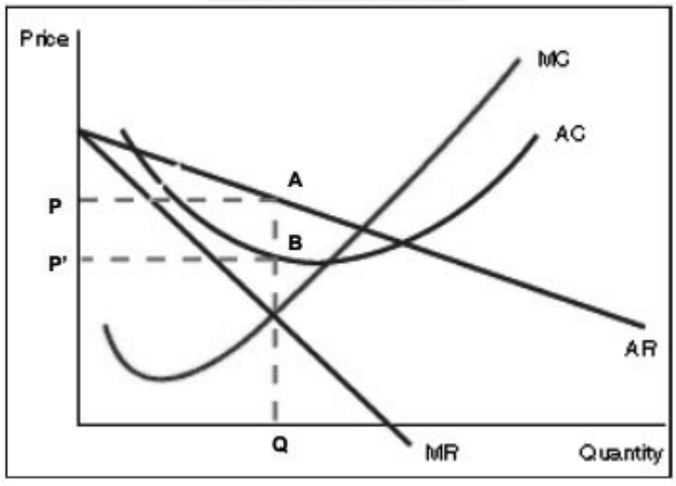
3. Research and Development
Since the monopolist is making abnormal or supernormal profits, the firm can invest that money into research and development. Customers may get better a quality product at reduced price leading to enhanced consumer surplus and satisfaction

Maximizing monopoly profits

a) Supernormal Profit/abnormal

A firm earns super-normal profits when the average cost of production is less than the average revenue for the corresponding output.

Diagram 48: Monopoly Supernormal profit



In the Diagram 48 above, you can see that the price per unit = OP = QA. Also, the cost per unit = OP'. Therefore, the firm is earning more and incurring a lesser cost. In this case, the per unit profit is

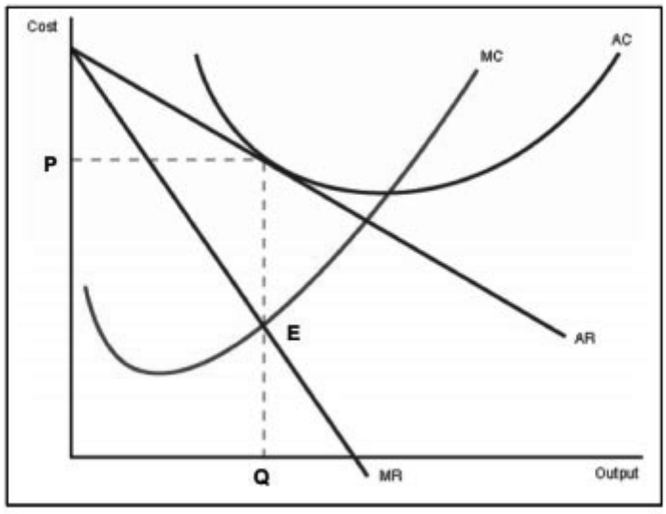
$$OP - OP' = PP'$$

Also, the total profit earned by the monopolist is PP'BA.

b) Normal Profit/Breakeven

A firm earns normal profits when the average cost of production is equal to the average revenue for the corresponding output.

Diagram 49: Monopoly normal profit

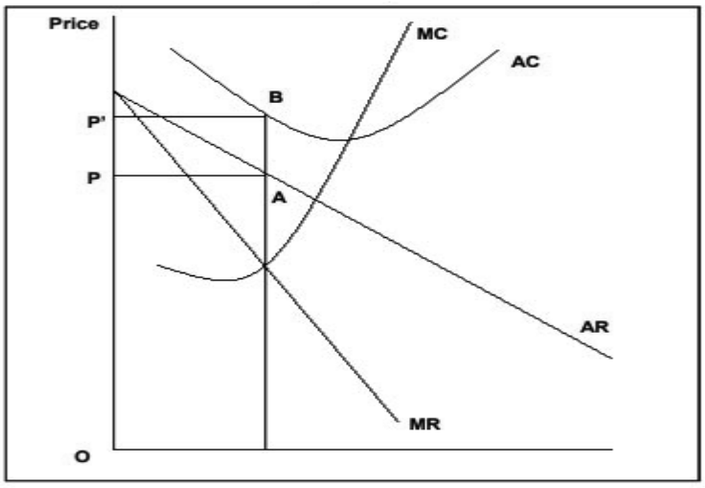


In the Diagram above, you can see that the MC curve cuts the MR curve at the equilibrium point E. Also, the AC curve touches the AR curve at a point corresponding to the same point. Therefore, the firm earns normal profits.

c) Losses

A firm earns losses when the average cost of production is higher than the average revenue for the corresponding output.

Diagram 50: Monopoly Losses



In the Diagram 50 above, you can see that the average cost curve lies above the average revenue curve for the same quantity. The average revenue = OP and the average cost = OP'. Therefore, the firm is incurring an average loss of PP' and the total loss is PP'BA. In the short-run, a monopolist sometimes sets a lower price and incurs losses to keep new firms away.

Summary:

- The firm earns normal profits – If the average cost = the average revenue
- It earns super-normal profits – If the average cost < the average revenue
- It incurs losses – If the average cost > the average revenue

Price Discrimination

Price discrimination is when a seller sells a specific commodity or service to different buyers at different prices for reasons not concerning differences in costs.

Conditions for Price Discrimination

Price discrimination is possible under the following conditions:

- The seller must have some control over the supply of his product. Such monopoly power is necessary to discriminate the price.
- The seller should be able to divide the market into at least two sub-markets (or more).
- The price-elasticity of the product must be different in different markets. Therefore, the monopolist can set a high price for those buyers whose price-elasticity of demand for the product is less than 1. In simple words, even if the seller increases the price, such buyers do not reduce the purchase volume.
- Buyers from the low-priced market should not be able to sell the product to buyers from the high-priced market.

Three Types of Price Discrimination

1. *First-Degree Price Discrimination*

First-degree price discrimination occurs when a firm charges each customer the maximum amount they are willing to pay for a good or service. This practice can only be applied if the company knows the maximum willingness to pay for each individual customer. It describes the highest possible level of price discrimination which is why it's sometimes also referred to as perfect price discrimination. When the required information is available, the firm can maximize profits and eliminate all consumer surplus.

Example

Assume there is a restaurant called TEMBO. Assume this restaurant knows each consumer's maximum willingness to pay for a pizza. So instead of charging every customer the same price, everyone has to pay exactly as much as they are willing to. That means, if you are willing to pay Tshs 8,000 for a pizza, you pay Tshs 8,000 Meanwhile, your friend who is willing to pay Tshs 10,000 pays Tshs 10,000 and so on and so forth. As a result, TEMBO Restaurant can maximize profits without reducing the total quantity sold and thereby eliminate consumer surplus.

2. *Second-Degree Price Discrimination*

Second-degree price discrimination occurs when firms offer different prices depending on the quantity purchased. This strategy can be applied when there are at least two groups with a different willingness to pay but the firms cannot identify which consumers belong to which group. The most common form of second-degree price discrimination is bulk discounts. This allows companies to extract some additional consumer surplus from customers with a higher demand by giving them a discount on larger quantities.

Example

Now, assume TEMBO Restaurant does not know each customer's maximum willingness to pay. Instead, the restaurant knows there are exactly two types of consumers: hungry and starving consumers. Hungry consumers are willing to pay Tshs 8,000 for a regular pizza. Meanwhile, starving consumers have a higher demand so they would be willing to buy more than a regular pizza at that price. Therefore TEMBO Restaurant can create an additional extra-large pizza which is twice as large as a regular one but only costs Tshs 15,000 This encourages starving customers to buy the larger quantity and allow the restaurant to extract more of their consumer surplus.

3. Third-Degree Price Discrimination

Third-degree price discrimination occurs when firms charge different prices to different groups of customers. This form of discrimination can be applied when companies are able to identify at least two groups of consumers that have a similar willingness to pay (i.e. they know which consumers belong to which group). The most common forms of third-degree price discrimination are discounts based on demographic criteria (i.e. age, income, size of family), location or time.

Example

For example, students don't usually have a regular income. As a result, many of them won't be willing to spend Tshs 8,000 for a pizza. Knowing this, TEMBO Restaurant can create a special offer for students where they can get a pizza for Tshs 5,000. The only requirement is that they provide a valid student ID. This allows the restaurant to easily identify students while still charging regular prices for all other customers.

iii)Monopolistic competition

Monopolistic competition is a market structure in which there are many firms selling differentiated products. Monopolistic competition combines elements of monopoly and competitive markets. Essentially a monopolistic competitive market is one with freedom of entry and exit, but firms can differentiate their products. Therefore, they have an inelastic demand curve and so they can set prices. However, because there is freedom of entry, supernormal profits will encourage more firms to enter the market leading to normal profits in the long term.

Examples of monopolistic competition

- Restaurants – restaurants compete on quality of food as much as price. Product differentiation is a key element of the business. There are relatively low barriers to entry in setting up a new restaurant.
- Hairdressers. A service which will give firms a reputation for the quality of their hair-cutting.
- Clothing. Designer label clothes are about the brand and product differentiation
- TV programmes – globalisation has increased the diversity of tv programmes from networks around the world. Consumers can choose between domestic channels but also imports from other countries and new services, such as Netflix.

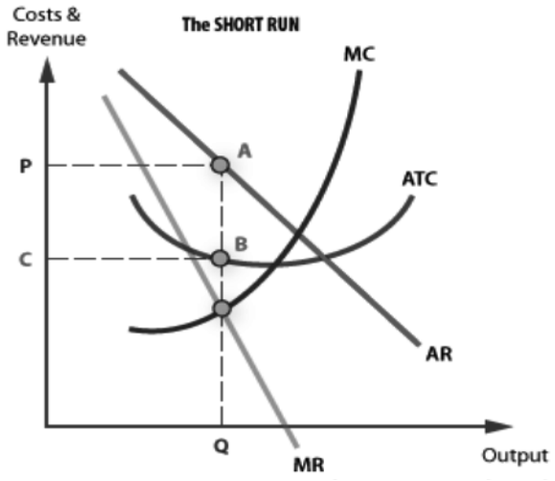
A monopolistic competitive industry has the following features:

- Many firms.
- Freedom of entry and exit.
- Firms produce differentiated products.
- Firms have price inelastic demand; they are price makers because the good is highly differentiated
- Firms make normal profits in the long run but could make supernormal profits in the short term

Monopolistic competition in the short run

At profit maximisation, MC = MR, and output is Q and price P. Given that price (AR) is above ATC at Q, supernormal profits are possible (area PABC).

Diagram 51: Monopolistic competition in the short run

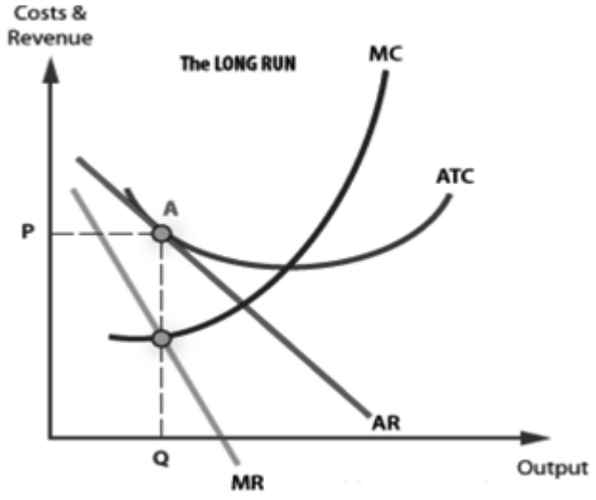


As new firms enter the market, demand for the existing firm's products becomes more elastic and the demand curve shifts to the left, driving down price. Eventually, all super-normal profits are eroded away.

Monopolistic competition in the long run

Super-normal profits attract in new entrants, which shifts the demand curve for existing firm to the left. New entrants continue until only normal profit is available. At this point, firms have reached their long run equilibrium.

Diagram 52: Monopolistic competition in the long run



Clearly, the firm benefits most when it is in its short run and will try to stay in the short run by innovating, and further product differentiation.

iv) Oligopoly Market

Oligopoly is a market structure in which the number of sellers is small. Oligopoly requires strategic thinking, unlike perfect competition, monopoly, and monopolistic competition. Under perfect competition, monopoly, and
Monopolistic competition, a seller faces a well-defined demand curve for its output, and should choose the quantity where MR=MC. The seller does not worry about how other sellers will react, because either the seller is negligibly small, or already a monopoly. Under oligopoly, a seller is big enough to affect the market.

Features of Oligopoly Market

- Few Sellers: Under the Oligopoly market, the sellers are few, and the customers are many. Few firms dominating the market enjoys a considerable control over the price of the product.

- Interdependence: it is one of the most important features of an Oligopoly market, wherein, the seller has to be cautious with respect to any action taken by the competing firms. Since there are few sellers in the market, if any firm makes the change in the price or promotional scheme, all other firms in the industry have to comply with it, to remain in the competition. Thus, every firm remains alert to the actions of others and plan their counterattack beforehand, to escape the turmoil. Hence, there is a complete interdependence among the sellers with respect to their price-output policies.

- Advertising: Under Oligopoly market, every firm advertises their products on a frequent basis, with the intention to reach more and more customers and increase their customer base. This is due to the advertising that makes the competition intense. If any firm does a lot of advertisement while the other remained silent, then he will observe that his customers are going to that firm who is continuously promoting its product. Thus, in order to be in the race, each firm spends lots of money on advertisement activities.

- Competition: It is genuine that with a few players in the market, there will be an intense competition among the sellers. Any move taken by the firm will have a considerable impact on its rivals. Thus, every seller keeps an eye over its rival and be ready with the counterattack.

- Entry and Exit Barriers: The firms can easily exit the industry whenever it wants, but has to face certain barriers to entering into it. These barriers could be Government license, Patent, large firm's economies of scale, high capital requirement, complex technology, etc. Also, sometimes the government regulations favor the existing large firms, thereby acting as a barrier for the new entrants.

- Lack of Uniformity: There is a lack of uniformity among the firms in terms of their size, some are big, and some are small. Since there are less number of firms, any action taken by one firm has a considerable effect on the other. Thus, every firm must keep a close eye on its counterpart and plan the promotional activities accordingly.

Competition and collusion

Oligopolists are pulled in two different directions:

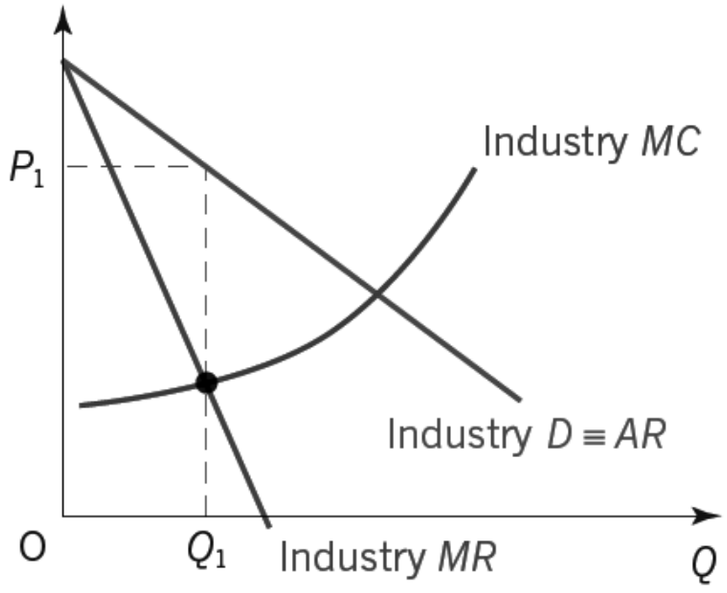
i) The interdependence of firms may make them wish to collude with each other. If they can club together and act as if they were a monopoly, they could jointly maximise industry profits.

ii) On the other hand, they will be tempted to compete with their rivals to gain a bigger share of industry profits for themselves. These two policies are incompatible. The more fiercely firms compete to gain a bigger share of industry profits, the smaller these industry profits will become! For example, price competition drives down the average industry price, while competition through advertising raises industry costs. Either way, industry profits fall. Sometimes firms will collude. Sometimes they will not. The following sections examine first collusive oligopoly (both open and tacit), and then non-collusive oligopoly.

a) *Collusive oligopoly*

When firms under oligopoly engage in collusion, they may agree on prices, market share, advertising expenditure, etc. Such collusion reduces the uncertainty they face. It reduces the fear of engaging in competitive price cutting or retaliatory advertising, both of which could reduce total industry profits.

Diagram 53: Profit-maximizing cartel



Cartels

A formal collusive agreement is called a cartel. The cartel will maximise profits if it acts like a monopoly: if the members behave as if they were a single firm. This is illustrated in Diagram… The total market demand curve is shown with the corresponding market MR curve. The cartel's MC curve is the horizontal sum of the MC curves of its members (since we are adding the output of each of the cartel members at each level of marginal cost). Profits are maximized at Q1 where MC = MR. The cartel must therefore set a price of P1 (at which Q1 will be demanded). Having agreed on the cartel price, the members may then compete against each other using non-price competition, to gain as big a share of resulting sales (Q1) as they can. Alternatively, the cartel members may somehow agree to divide the market between them. Each member would be given a quota. The sum of all the quotas must add up to Q1. If the quotas exceeded Q1, either there would be output unsold if price remained fixed at P1, or the price would fall.

Factors favoring collusion

Collusion between firms, whether formal or tacit, is more likely when firms can clearly identify with each other or some leader and when they trust each other not to break agreements. It will be easier for firms to collude if the following conditions apply:

- There are only very few firms, all well known to each other.
- They are open with each other about costs and production methods.
- They have similar production methods and average costs, and are thus likely to want to change prices at the same time and by the same percentage.
- They produce similar products and can thus more easily reach agreements on price.
- There is a dominant firm.
- There are significant barriers to entry and thus there is little fear of disruption by new firms.
- The market is stable. If industry demand or production costs fluctuate wildly, it will be difficult to make agreements, partly due to difficulties in predicting and partly because agreements may frequently have to be amended. There is a particular problem in a declining market where firms may be tempted to undercut each other's price in order to maintain their sales.
- There are no government measures to curb collusion.

iii) Non-collusive oligopoly: the breakdown of collusion

In some oligopolies, there may be only a few (if any) factors favouring collusion. In such cases, the likelihood of price competition is greater. Even if there is collusion, there will always be the temptation for individual oligopolists to 'cheat', by cutting prices or by selling more than their allotted quota. The danger, of course, is that this would invite retaliation from the other members of the cartel, with a resulting price war. Price would then fall and the cartel could well break up in disarray.

When considering whether to break a collusive agreement, even if only a tacit one, a firm will ask: (1) 'How much can we get away with without inviting retaliation?' and (2) 'If a price war does result, will we be the winners? Will we succeed in driving some or all of our rivals out of business and yet survive ourselves, and thereby gain greater market power?'. The position of rival firms, therefore, is rather like that of generals of opposing armies or the players in a game. It is a question of choosing the appropriate strategy: the strategy that will best succeed in outwitting your opponents. The strategy that a firm adopts will, of course, be concerned not just with price, but also with advertising and product development.

Non-collusive oligopoly: assumptions about rivals' behaviour

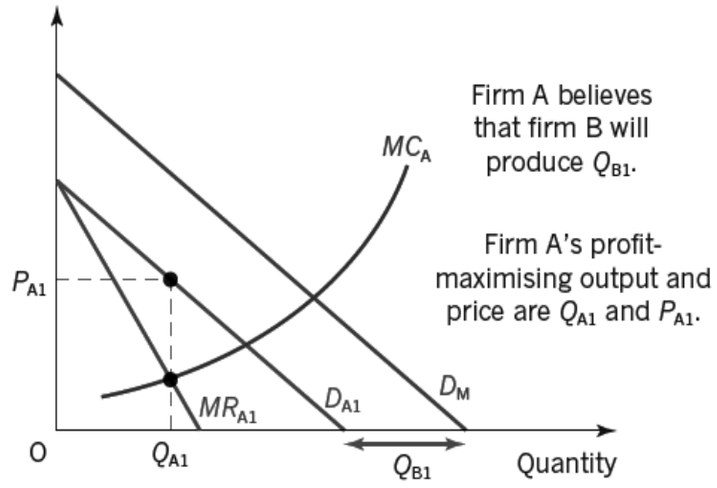
Even though oligopolists might not collude, they will still need to take account of rivals' likely behaviour when deciding their own strategy. In doing so they will probably look at rivals' past behaviour and make assumptions based on it. There are three well-known models, each based on a different set of assumptions.

Assumption that rivals produce a given quantity: the Cournot model

One assumption is that rivals will produce a particular quantity. This is most likely when the market is stable and the rivals have been producing a relatively constant quantity for some time. The task, then, for the individual oligopolist is to decide its own price and quantity given the presumed output of its competitors. The Cournot model takes the simple case of just two firms (a duopoly) producing an identical product: for example, two electricity generating companies supplying the whole country. This is illustrated in Diagram…, which shows the profit-maximising price and output for firm A. The total market demand curve is shown as DM. Assume that firm A believes that its rival, firm B, will produce QB1 units. Thus firm A perceives its own demand curve (DA1) to be QB1 units less than total market demand. In other words, the horizontal gap between DM and D_{A1} is Q_{B1} units. Given its perceived demand curve of D_{A1}, its marginal revenue curve will be MR_{A1} and the profit-maximising output will be Q_{A1}, where MR_{A1} = MCA. The profit-maximising price will be P_{A1}. If firm A believed that firm B would produce more than QB1, its perceived demand and MR curves would be further to the left and the profit-maximising quantity and price would both be lower.

Profits in the Cournot model. Industry profits will be less than under a monopoly or a cartel. The reason is that price will be lower than the monopoly price. This can be seen from Diagram…. If this were a monopoly, then to find the profit-maximising output, we would need to construct an MR curve corresponding to the market demand curve (DM). This would intersect with the MC curve at a higher output than Q_{A1} and a higher price (given by DM).Nevertheless, profits in the Cournot model will be higher than under perfect competition, since price is still above marginal cost.

Diagram 54: Cournot model under perfect competition



Self-Examination Questions

1. What is the difference between perfect competition and monopolistic competition?

A. Perfect competition has a large number of small firms while monopolistic competition does not.
B. In monopolistic competition, firms produce identical goods, while in perfect competition, firms produce slightly different goods.
C. Perfect competition has no barriers to entry, while monopolistic competition does.
D. In perfect competition, firms produce identical goods, while in monopolistic competition, firms produce slightly different goods.
E. Perfect competition has barriers to entry while monopolistic competition does not.

2. In a perfectly competitive market, the type of decision a firm has to make is different in the shortrun than in the long run. Which of the following is an example of a perfectly competitive firm'sshort-run decision?

A) the profit-maximizing level of output
B) whether or not to change its plant size
C) how much to spend on advertising and sales promotion
D) what price to charge buyers for the product
E) whether or not to enter or exit an industry

3. The firm's over-riding objective is to

A) maximize economic profit.
B) avoid an economic loss.
C) maximize total revenue.
D) maximize normal profit.
E) earn a normal profit.

4. The price charged by a perfectly competitive firm is

A) higher the more the firm produces.
B) different than the price charged by competing firms.
C) the same as the market price.
D) indeterminate.
E) lower the more the firm produces.

5. Which of the following is true about monopolistic competition but false about perfectcompetition?

A) Firms can earn an economic profit in the short run.
B) There are a large number of independently acting sellers.
C) There are no barriers to entry.
D) Firms compete on their product's price as well as its quality and marketing.
E) Firms cannot earn an economic profit in the long run.

6. What does monopolistic competition have in common with monopoly?

A) mutual interdependence
B) the ability to collude with respect to price
C) a large number of firms
D) a downward-sloping demand curve
E) barriers to entry

7. Explain two differences between a perfectly competitive market structure and an oligopolisticmarket structure.
8. Explain the likely impact of a monopoly market structure on both prices and living standards
9. Draw and Interpret shapes of AR and MR Curves under Various forms of Market Structure.
10. Compare various forms of Market Structure.

National Income Accounting

7

Get Through Intro

The level of economic activity that is taking place in an economy is vitally important because it determines the quantity of goods and services that will be produced in the economy. This, in turn, gives an indication of the material well-being of the people of a country. Every year, the Tanzania's economy produces a large number (and a wide variety) of goods and services wheat, tomato, banana, apple, cars, shoes, clothing, buildings, houses, medical services, legal services, banking service, electricity, textbooks, etc. The more of these goods and services that the economy produces, the more we will have available for consumption and the better off we will be. Therefore, the purpose of this topic is to study how the gross national product is measuring the economic activity of a nation. The concept is defined and explained. The components are analyzed in the expenditure and the income approach, and the two are reconciled.

Learning Outcomes

a) Introduction to macroeconomic and objectives of economic policies
- National income concepts
- Approaches to calculate national income
- Factors determining national income
- Usefulness of national income statistics
- Difficulties in measuring national income

b) Keynesian National income determination
- Consumption and saving functions
- Marginal and average propensity to consume and save
- Equilibrium National income
- The expenditure multipliers

1. Introduction to macroeconomic and objectives of economic policies [Learning Outcome a]

Macroeconomics is an analysis of a country's economic structure and performance and the government's policies in affecting its economic conditions. Economists are interested to know the factors that contribute towards a country's economic growth because if the economy progresses, it will provide more job opportunities, goods and services and eventually raise the people's standard of living. Macroeconomics can progress as it tests a particular theory to see how the overall economy functions, whereby the theory is used to forecast the effects of a particular policy and event that was carried out. Economists define macroeconomics as a field of economics that studies the relationship between aggregate variables such as income, purchasing power, price and money. This means macroeconomics examines the function of the economy as a whole system, looking at how demand and supply of products, services and resources are determined and factors that influence them.

Objectives of Macroeconomics

a) Full employment:

Performance of any government is judged in terms of goals of achieving full employment and price stability. These two may be called the key indicators of health of an economy. In other words, modern governments aim at reducing both unemployment and inflation rates.

b) Price stability:

No longer is the attainment of full employment considered as a macroeconomic goal. The emphasis has shifted to price stability. By price stability we must not mean an unchanging price level over time. Not necessarily, price increase is unwel-come, particularly if it is restricted within a reasonable limit. In other words, price fluc-tuations of a larger degree are always unwel-come.

c) Economic growth:

Economic growth in a market economy is never steady. These economies experience ups and downs in their performance.

d) Balance of payments equilibrium and exchange rate stability:

From a macro- economic point of view, one can show that an international transaction differs from domestic transaction in terms of (foreign) currency exchange. Over a period of time, all countries aim at balanced flow of goods, services and assets into and out of the country. Whenever this happens, total international monetary reserves are viewed as stable.

National Income Accounting Concepts

The purpose of this topic is to study how the gross national product is measuring the economic activity of a nation. The concept is defined and explained. The components are analyzed in the expenditure and the income approach, and the two are reconciled. Adjustments for inflation are presented. The concept is compared to other measures of economic welfare.

National Income Accounting

National income accounting is used to determine the level of economic activity of a country. Two methods are used and the results reconciled: the expenditure approach sums what has been purchased during the year and the income approach sums what has been earned during the year.

Gross National Product

The gross national product is the sum total of all final goods and services produced by the people of one country in one year. The GNP is a flow concept. It can be calculated with either the expenditure approach or the income approach. The GNP excludes intermediate goods, second hand sales as well

as financial transactions. The GNP is a money amount and must be adjusted for changes in the value of money.

Gross Domestic Product

The gross domestic product is the sum of all the final goods and services produced by the residents of a country in one year. Summing the production of residents (rather than nationals as in GNP) gives often a more accurate picture of the level of activity in a country. The difference between GDP and GNP is net unilateral transfers and factor income of foreigners.

Intermediate Goods

Intermediate goods are goods which are made part of some final good. For instance, tires are intermediate goods when they are part of a car. Tires are final goods when they are sold separately as replacement parts. Incorporating intermediate goods to form a final good adds value to that good.

Types of GDP

- Nominal GDP: the total value of all goods and services produced at current market prices. This includes all the changes in market prices during the current year due to inflation or deflation.
- Real GDP: the sum of all goods and services produced at constant prices. The prices used in determining the Gross Domestic Product are based on a certain base year or the previous year. This provides a more accurate account of economic growth, as it is already an inflation-adjusted measurement, meaning the effects of inflation are taken out.
- Actual GDP: real-time measurement of all outputs at any interval or any given time. It demonstrates the existing state of business of the economy.
- Potential GDP: ideal economic condition with 100% employment across all sectors, steady currency, and stable product price

Three Approaches to Measure GDP

GPD can be measured in several different ways. The most common methods include:

i) Product Approach or Value Added Approach
ii) Expenditures Approach
iii) Income Approach

i) The Production (output) approach

This method of compiling GDP leads to counting the production by sector of activity. Moreover, the total values of all goods produced in the economy are taken into account. In essence, this is just calculating price times quantity of all goods in the economy.

ii) The income approach

The income approach is when you add together all factor payments to calculate GDP. Factor payments are all the payments that go to inputs to produce output. Typically, the main factor payments are: profits, returns to labor and returns to capital. The formula for the income approach is as follows:

$GDP = \pi + wl + rk$

where:

π = profits that firms make

wl = wage * total labour provided - this is the returns to labour.

rk = rental rate of capital * the amount of capital provided

Other types of Income includes the following:

- Compensation of Employees (wages, salaries etc)
- Proprietor's Income (Unincorporated business income)
- Rental Income (Property owner income)
- Personal Income
- Disposable Income (After Tax income)
- Corporate Profits (From corporate business)
- Net Interest (paid interest by business)
- Indirect taxes – subsidies (Sales tax, customs duty and other fees – subsidies that the government pays)
- Net business transfer payments (Transfer payments from one business to another)
- Surplus of Government enterprises (Govt entities income) etc

iii) The expenditure approach

The expenditure approach is where you add up all the various types of spending which occurs within an economy. There are 4 different types.

- Consumption (C)

Consumption is all the spending that households do on goods and services. For example, the amount of apples a household purchases; the amount of money spent on healthcare; the amount of money spent purchasing new cars and the money spent on pizza are all examples of consumption spending.

- Investment (I)

Investment is the spending that firms do machinery and equipment to operate their businesses. Examples of investment spending would be a mining company purchases a truck to transport coal; It companies purchasing new computers and the purchase of a new plane for an airline company.

- Government spending (G)

Government spending is the spending that the government conducts within an economy. Examples of government spending include spending on defense; spending on health care; building of roads and education spending.

- Net exports (NX)

Net exports are defined at the purchases of domestically produced goods by foreigners subtracted from the purchases of internationally produced goods by local residents. In essence, it is the value of what is sent overseas minus the value of stuff that comes here.

Therefore, if we add up these 4 components we get:

GDP = C + I + G +NX

This is also called the demand approach to calculating GDP since all these components are demands for goods and services. It is looking at the demand side of the economy.

Other National Accounts

- Gross National Product (GNP) = Gross Domestic Product (GDP) + Net Investment from Non-residents
- Net Domestic Product (NDP) = GNP – Depreciation
- Net National Income at Basic Prices (NNI)= NDP- Taxes less subsidies on factors of production - Indirect taxes less subsidies
- Personal Income = NNI – Undistributed Corporate Profits + Govt. Transfer Payments
- Disposable Income = PI – Personal Taxes

Factors determining national income

i) *The stock of factors of production:* One of the very important factors which influences the size of the national income is the quality and quantity of the country's stock of factors of production. The factors of production are land, labor, capital and organization. Land supplies man with gifts of nature. It provides him with agricultural goods and. raw material for production. The production of land depends upon fertility of the soil, latitude, climate and irrigation system in the country. If the land is fertile and is not handicapped in any way say by salinity, water logging, shortage of rainfall and adverse climate, the size of the national income will be quite large, if the quality of land is poor, the size of the national income will be small.

ii) *Capital:* The volume of production is also very much influenced by the! quality and quantity of capital available in the country. Capital now-a-days is considered to be the lifeblood of the modern industry. If the capital consists of primitive tools, the size of the national income cannot be large. But if modern types of plants are used for production, then they can enhance the productive capacity of a country.

iii) *Labor:* The second factor of production, i.e., labor is by no means less important. This can be judged from it that if land is not aided by human labor, it cannot produce anything except the wild vegetation. The size of the national income greatly depends upon the quality and quantity of labor in the country. If the labor is efficient and its size is consistent with the means of subsistence, the size of the national income will be large and if the labor is underfed, under clothed and under-housed unskilled, and has no ambition to rise, the size of the national income will be small.

iv) *State of technical knowledge:* State of technical knowledge is also one of the very important factors which influence the size of the national income. The methods of production now-a-days have become so much roundabout that unless advance technical knowledge is available in the! country, they cannot be adopted. The roundabout methods of production have considerably increased the production capacity of the country. If the state of technical knowledge is poor in the country, the size of the national income will be small, but if advance technical knowledge is available, then the size of the national income will be large.

v) *Political Stability:* Political instability greatly hampers economic progress. If there is political stability in the country, the production can be maintained at the highest level. The size of the national income will be large. In case of political instability, the production will be adversely affected and so the size of the national income will be small.

vi) *Enterprise:* The size of the national income also greatly depends upon! the number and skill of the entrepreneurs. If the captains of the industries! are efficient, they will combine; the various factors of production to the! optimum proportion and so the volume of total production will be quite large, if managerial skill is lacking in the country, the size of the national income will be small.

Usefulness of National Income Statistics

i) Economic Planning:

National income statistics are the most important tools for long-term and short-term economic planning. A country cannot possibly frame a plan without having a prior knowledge of the trends in national income. The Planning Commission in India also keep in view the national income estimates before formulating the five-year plans. Future forecasts about productive activities in the various sectors of the economy depend upon these data of national income accounts. Data relating to product, expenditure,

income investment, exports, taxation etc., become the basis of scientific economic planning and forecasting.

ii) Economy's Structure:

National income statistics enable us to have a current idea about the structure of the economy. It enables us to know the relative importance of the various sectors of the economy and their contribution towards national income. These figures show whether the economy is predominated by agriculture or by industrial activities. It shows what part of the output goes into capital consumption, foreign investment and, therefore, not available for consumption. It will show that if the current product or surpluses there from are being used in conspicuous consumption, then the present level of high satisfaction is at a huge cost of slowing down economic development. Thus, these data provide a useful analysis of the structure of the economy. From these studies we learn how much income is produced by different sectors and sub-sectors and how much is spent, saved, taxed or invested.

iii) Economic Policy:

National income figures are an important tool of macroeconomic analysis and policy. National income estimates are the most comprehensive measures of aggregate economic activity in an economy. It is through such estimates that we know the aggregate yield of the economy and lay down future economic policy for development.

iv) Budgetary Policies:

Modern governments try to prepare their budgets within the framework of national income data and try to formulate anti-cyclical policies according to the facts revealed by the national income estimates. Even the taxation and borrowing policies are so framed as to avoid fluctuations in national income. In this era of functional finance governments intervene directly by producing deficit or surplus budgets to control depression or inflation. National income data pertaining to taxes, expenditure, debt, etc. clearly show that governments cannot be silent spectators to fluctuating situations in the economy and must intervene through budgetary policies.

v) Inflationary and Deflationary Gaps:

National income and national product figures enable us to have an idea of the inflationary and deflationary gaps. For accurate and timely anti-inflationary and deflationary policies, we need regular estimates of national income. If expected expenditures exceed available output at the best level prices, it shows greater inflationary gap and vice-versa. These inflationary and deflationary gaps are also measured by the amount of saving that the community is prepared to have and the rate of taxes which the government is prepared to impose.

vi) National Expenditure:

National income studies show as to how national expenditure is divided between consumption expenditure and investment expenditure. It enables us to provide for reasonable depreciation to maintain the capital stock of a community. Too liberal allowance of depreciation may prove harmful as it may unnecessarily lead to a reduction in consumption. It also indicates true domestic net investment.

vii) Distribution of Grants-in-Aid:

National income estimates help a fair distribution of grants- in-aid by the federal g6vernments to the state governments and other constituent units. In India, for example. Central Government makes allocations as grants to various states on the basis of data of national income and social accounts. The size of population and other economic factors also constitute the relevant bases but product and income accounts are more important.

viii) Public Sector:

National income figures enable us to know the relative roles of public and private sectors in the economy. If most of the activities are performed by the state, we can safely conclude that public sector is playing a predominant role. Hence, despite of the limitations and conceptual difficulties of national income data and social accounts, their importance can neither be overlooked nor can be minimized in macroeconomics.

ix) Standard of Living:

National income studies help us to compare the standards of living of people in different countries and of people living in the same country at different times. In this way, we can measure the increase and decrease in welfare.

Problems in measuring national income

a) Problem of Double counting

Only final goods and services are included in the national income accounting. But it is very difficult to distinguish between final goods and intermediate goods. Intermediate goods may be used for final consumption.

b) Non-Monetary Transaction

The first problem in national income accounting relates to the treatment of non-monetary transactions such as the services of housewives to the member of their families teaching their own child, working in own farm, fruits and vegetables produced and consumed by households, etc.

c) Petty Production

There is a large number of petty productions and it is difficult to include their production in national income because they do not maintain any account. Family members are engaged in the work and they should not maintain any account.

d) Inadequate and unreliable statistics

Due to lack of required data on various economic activities, national income accounting has become quite a difficult task in developing countries. Even the available has become quite a reliable due to various factors such as geographical condition, etc.

e) Environment damages

No nation prepares account related to the depletion of natural resources in terms of mining minerals, the erosion of soil, the pollution of air, water and soil and so on.

f) Transfer Payments

Individual gets a pension, unemployment, allowance and interest on public loans, but these payments create difficulty in the measurement of national income.

g) Illiteracy and Ignorance

If the majority of people are illiterate and ignorant, they cannot keep the records of production activities accurately. Hence, it is difficult to get the correct information about the production. Circular flow of income and expenditure: Circular flow is the integrated flow of goods and services among different sectors of economy. In other words, it is simple economic model illustrating flow of goods and services and money among different sector of economy.

h) Second- hand Transaction

The transaction of second-hand goods only changes the ownership. They do not reflect additional production. They are excluded from national income because goods were included in national income when they were newly produced and sold first.

2. Keynesian National income determination

[Learning Outcome a]

Keynes's theory of the determination of equilibrium real GDP, employment, and prices focuses on the relationship between aggregate income and expenditure. Keynes used his income-expenditure model to argue that the economy's equilibrium level of output or real GDP may not correspond to the natural level of real GDP. In the income-expenditure model, the equilibrium level of real GDP is the level of real GDP that is consistent with the current level of aggregate expenditure. If the current level of aggregate expenditure is not sufficient to purchase all of the real GDP supplied, output will be cut back until the level of real GDP is equal to the level of aggregate expenditure. Hence, if the current level of aggregate expenditure is not sufficient to purchase the *natural* level of real GDP, then the equilibrium level of real GDP will lie somewhere *below* the natural level.

In this situation, the classical theorists believe that prices and wages will fall, reducing producer costs and increasing the supply of real GDP until it is again equal to the natural level of real GDP.

Factors Determining the National Income (Keynes Theory)

According to Keynes there are two major factors that determine the national income of an economy and are explained as follow;

1. *Aggregate Supply*

Aggregate supply comprises of consumer goods as well as producer goods. It is defined as total value of goods and services produced and supplied at a particular point of time. When goods and services produced at a particular point of time is multiplied by the respective prices of goods and services, it helps us in getting the total value of the national output. The formula for determining the aggregate national income is follows −

Aggregate Income = Consumption(C) + Saving (S)

Few factor prices such as wages, rents are rigid in the short run. When demand in an economy increases, firms also tend to increase production to some extent. However, along with the production, some factor prices and the amount of inputs needed to increase production also increase.

2. *Aggregate Demand*

Aggregate demand is the effective aggregate expenditure of an economy in a particular time period. It is the effective demand which is equal to the actual expenditure. Aggregate demand involves concepts namely aggregate demand for consumer goods and aggregate demand for capital goods. Aggregate demand can be represented by the following formula −

AD = C + I

As per Keynes theory of nation income, investment (I) remains constant throughout, while consumption (C) keeps changing, and thus consumption is the major determinant of income.

Consumption and saving functions

Consumption function

The consumption function is a relationship between current disposable income and current consumption. It is intended as a simple description of household behavior that captures the idea of consumption smoothing. We typically suppose the consumption function is upward-sloping but has a slope less than one. So as disposable income increases, consumption also increases but not as much. More specifically, we frequently assume that consumption is related to disposable income through the following relationship:

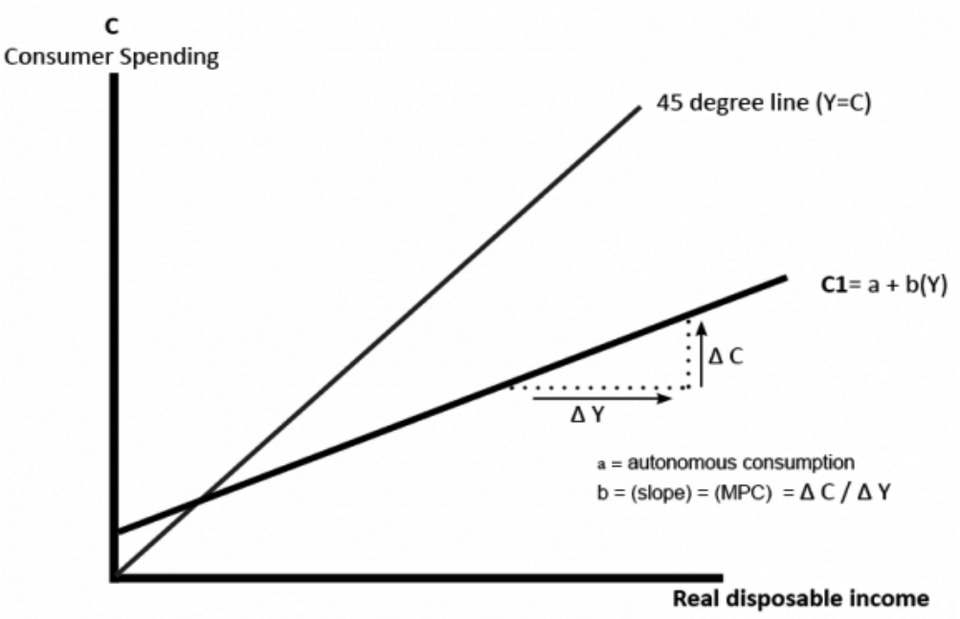
Consumption = autonomous consumption + marginal propensity to consume × disposable income.

$$C = a + b\,Yd$$

The Keynesian consumption function expresses the level of consumer spending depending on three factors.

- Yd = disposable income (income after government intervention – e.g. benefits, and taxes)
- a = autonomous consumption (consumption when income is zero. (e.g. even with no income, you may borrow to be able to buy food))
- b = marginal propensity to consume (the % of extra income that is spent). Also known as induced consumption.

Diagram 55: Consumption function



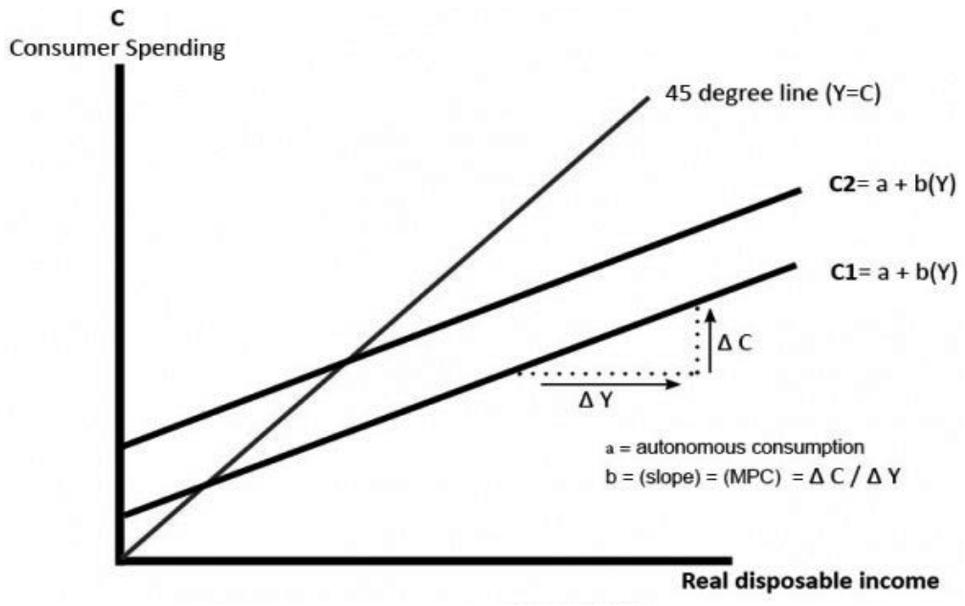
- This suggests consumption is primarily determined by the level of disposable income (Yd). Higher Yd leads to higher consumer spending.
- This model suggests that as income rises, consumer spending will rise. However, spending will increase at a lower rate than income.
- At low incomes, people will spend a high proportion of their income. The average propensity to consume could be one or greater than one. This means people spend everything they have. When you have low income, you don't have the luxury of being able to save. You need to spend everything you have on essentials.
- However, as incomes rise, people can afford the luxury of saving a higher proportion of their income. Therefore, as incomes rise, spending increases at a lower rate than disposable income. People with high incomes have a lower average propensity to spend.

Implications of consumption function

If you cut income tax for those on low income, they tend to have a higher marginal propensity to consume this extra income. Therefore, there is a large increase in spending. People with high incomes will tend to have a lower marginal propensity to consume. If they benefit from a tax cut, they will save a greater proportion.

Shift in the consumption function

Diagram 56: Shift in consumption function



In this diagram, the consumption function has shifted to the upwards (to the left. (C1 to C2). This means consumers are spending a higher % of their income. This could be due to a rise in property prices which increases consumer confidence and lead to higher consumer spending. Also, the consumption function has become steeper. This means the value of b (MPC) has increased. Therefore, people are spending a higher % of their additional income. This could be due to rising confidence, lower saving and easier availability of credit. In this diagram, the consumption function has become steeper. This means the value of b (MPC) has increased. Therefore, people are spending a higher % of their additional income. This could be due to rising confidence, lower saving and easier availability of credit.

Saving function

A mathematical relation between saving and income by the household sector. The saving function can be stated as an equation, usually a simple linear equation, or as a diagram designated as the saving line. This function captures the saving-income relation, the flip side of the consumption-income relation that forms one of the key building blocks for Keynesian economics. The two key parameters of the saving function are the intercept term, which indicates autonomous saving, and the slope, which is the marginal propensity to save and indicates induced saving. The injections-leakages model used in Keynesian economics is based on the saving function.

The saving function can represented in a general form as:

$$S = f(Y)$$

where: S is saving, Y is income (national or disposable), and f is the notation for a generic, unspecified functional form.

$$Y = C + S$$

$$S = Y – C$$

where Y = Disposable income, C = Consumption, and S = Saving

It is often useful to state the saving function using parameters for the consumption function.

$$C = a+bY$$

Thus $S= Y – (a+bY)$

where: C is consumption expenditures, Y again is income, a is the intercept, and b is the slope.

In this case, the saving function can be specified as:

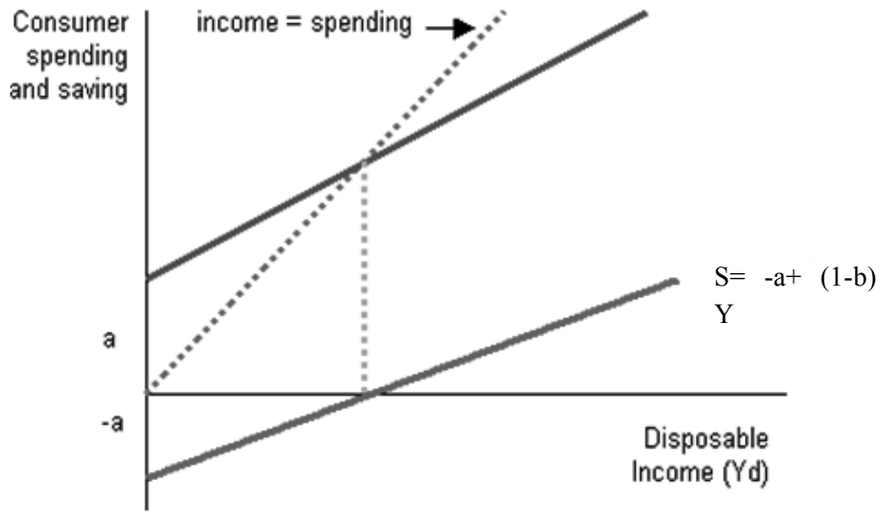
$$S= -a+(1-b)Y$$

The two key parameters that characterize the saving function are slope and intercept.

- Slope: The slope of the saving function (d) measures the change in saving resulting from a change in income. If income changes by Tshs 1, then saving changes by Tshs d. This slope is generally assumed and empirically documented to be greater than zero, but less than one ($0 < d < 1$). It is conceptually identified as induced saving and the marginal propensity to save (MPC).
- Intercept: The intercept of the saving function (c) measures the amount of saving undertaken if income is zero. If income is zero, then saving is Tshs c. The intercept is generally assumed and empirically documented to be negative ($c < 0$). It is conceptually identified as autonomous saving.

However, now the intercept is -a rather than c and the slope is (1-b) rather than d. This alternative specification shows the connection between the saving function and the consumption function. The intercept of the saving function (-a) is the negative of the intercept of the consumption function (a). The slope of the saving function (1-b) is one minus the slope of the consumption function (b), meaning that the sum of the marginal propensity to consume (b) and the marginal propensity to save (1-b) is equal to one, which is just another way of saying that a portion of additional income is consumed and the rest is saved.

Diagram 57: Saving function



Marginal and average propensity to consume and save

i. Average Propensity to Save

An important relationship between income and saving is described by the concept of average propensity to save (APS). Average propensity to save is the proportion of disposable income that is saved (i.e., not consumed). Mathematically

APS = Savings/Disposable Income y = S/Y

Like the average propensity to consume (APC) average propensity to save also generally varies as income increases. As seen above, average propensity to consume (APC) falls as income increases. This implies that average propensity to save will increase as income rises.

Let us derive an important relationship between average propensity to consume and average propensity to save. Restating below the relation that income is either consumed or saved:

$$C+S = Y$$

Dividing both sides by disposable income Y we have

$$C/Y + S/Y = Y/Y = 1$$

Since C/Y is average propensity to consume and S/Y is average propensity to save, we have

APC + APS = 1

APS = 1 – APC

If a society consumes 75 per cent of its disposable income, that is, APC =0.75, then it will save 25 per cent of its disposable income or its average propensity to save (APS) will be 0.25 (1 – 0.75 = 0.25).

ii. Marginal Propensity to Save (MPS)

Whereas average propensity to save indicates the proportion of income that is saved, marginal propensity to save represents how much of the additional disposable income is devoted to saving. The marginal propensity to save is therefore change in savings induced by a change in the disposable income.

Thus,

MPS = $\Delta S/ \Delta Y$

If disposable income increases from Tshs 10,000 to Tshs 12,000 and this causes planned savings to increase by Tshs 500, marginal propensity to save is:

MPS = 500/2000 = 1/4 = 0.25

Since the additional income is either consumed or saved, the sum of marginal propensity to consume and marginal propensity to save is equal to one.

MPC + MPS = 1

This can be mathematically proved as under

From C + 5 = Y, it follows that any change in income (ΔK) must induce either change in consumption (ΔC) or change in saving (ΔS). Thus.

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

Dividing both sides by AK we have

$$\Delta C/\Delta Y + \Delta S/\Delta Y = \Delta Y/\Delta Y = 1$$

$$\Delta S/\Delta Y = 500/2000 = 1/4 = 0.25$$

iv) Average Propensity to Consume (APC)

Average propensity to consume refers to the ratio of consumption expenditure to the corresponding level of income.

APC = Consumption (C) / Income (Y)

Example

If consumption expenditure is Tshs 70 Trillions at national income of Tshs 100 Trillions,

Then: APC =C/Y

70/100 = 0.70,

i.e. 70% of the income is spent on consumption.

v) Marginal Propensity to Consume (MPC)

Marginal propensity to consume refers to the ratio of change in consumption expenditure to change in total income. MPC explains what proportion of change in income is spent on consumption.

MPC = Change in Consumption (ΔC) / Change in Income (ΔY)

Example

If consumption expenditure increases from Tshs 70 Trillions to Tshs 110 Trillions with an increase in income from Tshs 100 Trillions to Tshs 200 Trillions,

Then: MPC = $\Delta C/\Delta Y$

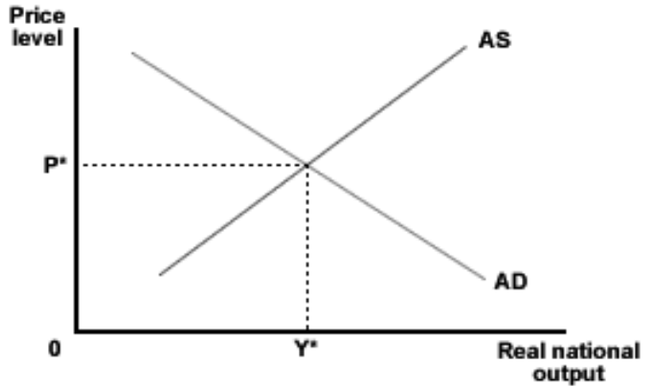
= 110 – 70/200-100 = 40/100= 0.40

i.e., 40% of the incremental income is spent on consumption.

Equilibrium level of national income

To get the equilibrium level of national income, we simply combine the aggregate demand and supply curves. When we impose the AD on the AS (as in Diagram… below) we note that AD is greatest at lower prices, whilst AS is at its highest when prices are higher. The equilibrium, in the macro sense, will occur at the level of real national income or output at which the total planned expenditure on output equals the quantity of goods and services firms are willing and able to supply. This is at an output level of Y* and a price level of P*.

Diagram 58:Macroeconomic equilibrium (classical)

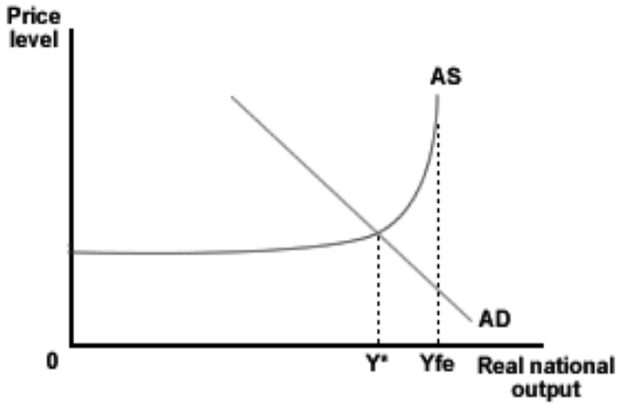


If nothing changes then the economy will be stable at this equilibrium, but any changes in aggregate supply and demand will lead to changes in output and the price level.

Keynesian equilibrium

As we saw in the section on aggregate supply, Keynesian economists argue that the long run aggregate supply curve has a different shape from the neo-classical curve and so they would argue that the diagram for equilibrium will look as in Diagram 56 below.

Diagram 59: Keynesian macro equilibrium

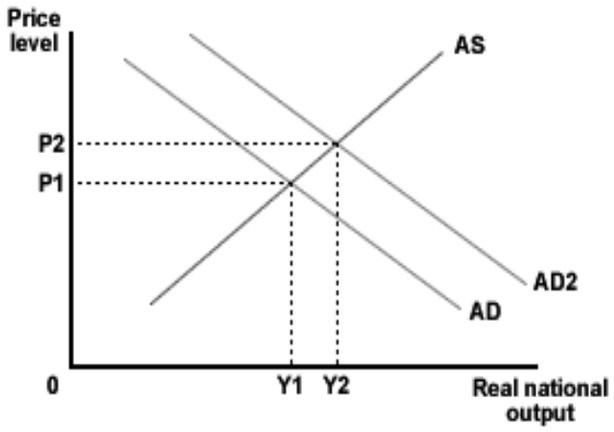


The equilibrium in the economy is at the point where aggregate supply is equal to aggregate demand, although this is not necessarily at the point of full employment (Yfe). In Diagram 59, equilibrium national income (Y*) is below the full employment level of national income (Yfe) and so there will be some unemployment at equilibrium. In fact, Keynesians argue that the economy could settle at any equilibrium - even one with high unemployment, and still be stable. They would therefore argue the case for government intervention to manage the level of aggregate demand and help get the economy to a full employment equilibrium.

The essentials of AD and AS

Both aggregate demand and supply curves are aggregates - that is, they are the total of either all demand or supply within the economy. Aggregate demand slopes downwards as any other demand curve and shows the aggregate demand for real output increases the lower the average price level in the economy. This is the same relationship you studied when looking at individual demand. As with effective demand for individual products a change in any of the components will SHIFT the AD curve to a new position. So, if a country becomes more successful in exporting its products to other countries, the AD line will shift to the right as in the diagram below (Diagram 60). A similar situation would arise if the government stimulated the economy via expansionary fiscal or monetary policy.

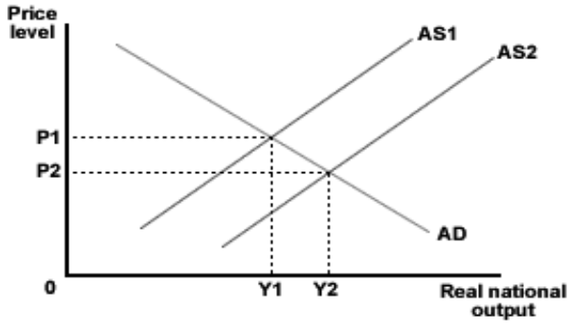
Diagram 60: Increased aggregate demand



The aggregate supply curve shows the total output of goods and services which the firms or producers or suppliers will or plan to supply at a given price level. As we saw previously, a change in any of the determinants of AS, apart from the price level, will shift the AS curve to a new position.

If or when any of these change the curve can shift. In the diagram below (Diagram 61) import prices have fallen and so too have the costs of production - the AS curve has therefore moved to the right (outwards).

Diagram 61: Increased aggregate supply



Have a go at shifting the AD/AS curves for each of the changes below, draw original equilibrium AD and AS curves and show how the equilibrium has changed. Once you have had a go, follow the links to see how you got on.

1. The central bank is concerned about future inflation and so increases interest rates. How will equilibrium have changed?
2. The exchange rate depreciates leading to an fall in export prices and an increase in import prices. How will equilibrium have changed?
3. Consumers are concerned about high levels of debt and reduce spending and increase saving to try to reduce their indebtedness. How will equilibrium have changed?

The expenditure multipliers

The concept of the "multiplier" is at the very heart of Keynesian (and therefore macro in general) macroeconomics. The central notion is that when there is an expenditure the money travels from one party to a second party to a third party to a fourth party and on and on and on. In short, the money is re-spent and hence multiplied.

Example

The Construction of Mfugale Flyover in Dar es Salaam, Tanzania added to the local economy. The initial expenditure by the Tanzania added "X" dollars to the economy as the materials, labor, etc. were paid for. In addition the workers ate meals in the area, purchased gas, some may have traveled from outside the region to come to the area to work and stayed in local motels. The initial expenditure by the state added more money to the economy than the simple cost of the bridge. The initial expenditure was multiplied.
multiplier effect -- national income increases by more that the increase in autonomous expenditure induced and autonomous expenditure

Expenditure may categorizes into two categories:

i. Induced expenditure
ii. Autonomous expenditure.

The distinction is very important for understanding the multiplier because the "induced" expenditure is what causes the total amount spent to be greater than the initial expenditure. autonomous expenditure -- sum of the components of AE that are not influenced by national income induced expenditure -- sum of the components of AE that do vary as national income varies.

The basic aggregate expenditure equation:

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

Illustrates the categories of expenditure. If one of these types of expenditure changes for any non-income related reason, the AE curve will shift. If expenditure increase the curve will shift up, if expenditure declines the curve will shift down. Further, the initial change will be multiplied. The final change in national income will be larger than the initial change in expenditure. The following graph illustrates an increase in investment spending as the result of a presidential election. Business people believe the new administration will view business endeavors more favorably than the previous administration.

Multiplier formula

A mathematical representation of the multiplier process is fairly easy to derive. The derivation is not particularly important, but the formula and a basic understanding of the elements of the formula are important. The formula for the simple income expenditure multiplier is:

$$k = 1 / (1 – MPC)$$

Example

If the MPC = 0.75, the simple multiplier = 4. The higher the MPC, the larger the value of the multiplier because more money is re-spent by each person in the spending chain. If the MPC = 0.9, the simple multiplier = 10.

Self-Examination Questions

1. What is the difference between GDP & GNP? Which one is the bettermeasure of income? Why?

2. Discuss the three approaches of measuring national income? Show that thesethree approaches give identical result.

3. What is the difference between intermediate goods & final goods andservices?

4. Why are the imports subtracted when GDP is calculated in expenditureapproach?

5. Explain why we can not calculate the national product simply by adding upthe production of all firms.

6. Why do the economists use real GDP rather than nominal GDP to gaugeeconomic well-being?

7. Why do you think households' purchase of new housing is included in theinvestment components of GDP rather than the consumption component?

8. Discuss critically GDP as a measure of economic welfare.

9. Consider an economy that consists only of those who bake bread and thosewho produce its ingredients. Suppose that this economy's production is asfollows: 1 million loaves of bread (sold at Tshs. 2,000 each); 1.2 million poundsof flour (sold at Tshs. 1,000 per pound) and 100,000 pounds each of yeast, sugar & salt (all sold at Tshs 1,000 per pound). The flour yeast, sugar & salt aresold only to bakers, who use them exclusively for the purpose of makingbread.
   a) Calculate the total income of the economy.
   b) How much value is added to the flour, yeast, sugar & salt when the bakers turn into bread?

10. The following is the information from the national income accounts for ahypothetical country;

Values in Billions

GDP	Tshs. 6000.00
Gross Investment	Tshs 800.00
Net Investment	Tshs 200.00
Consumption	Tshs 4000.00
Govt. purchases of goods & services	Tshs 1100.00
Govt. Budget Surplus	Tshs 30.00

What isa) NDP b) Net exports c) Govt. taxes minus transfers c) Disposable personal income e) Personal Saving.

Theory of money, Financial Institutions and Monetary Policy

8

Get Through Intro

Students will develop an understanding of what money is and what forms money takes. An understanding of money is important because the quantity of money affects inflation and interest rates in the long run, and production and employment in the short run. First we describe what money looks like, its functions and attributes (in case it is a while since you have seen any up close!?). We then look at the role of banks in creating money, the question of the money multiplier and money supply, and how the central bank controls the quantity of money. We briefly examine the different measures of money, and the role of the commercial banks. Finally we begin to examine motives for holding money, and look at how money demand depends on output, prices and interest rates.

Learning Outcomes

a) Theory of money
- Concept of Money, its functions, Quantity Theory of Money and Credit Creation
- Money Supply and Demand

b) Financial Institutions
- Financial institutions and roles
- Central Bank (Bank of Tanzania), role and its functions
- Commercial Banks-role and functions

c) Financial Markets
- Classification of financial markets
- Money and capital markets
- Primary and secondary markets
- The Stock Market and the Economy
- The Dar es salaam Stock Exchange (DSE)

d) Monetary Policy
- Monetary policy
- Objectives of monetary policy of Tanzania
- Instruments of monetary policy
- Limitations of monetary policy

e) Inflation
- Types of inflation
- Causes of inflation
- Problems caused by inflation
- Measures to cure effects of inflation

1. Theory of money

[Learning Outcome a]

Definition of Money

Money is defined as the medium through which people exchange goods and services. Money is the set of assets in an economy that people regularly use to buy goods and services from other people. It can be any generally accepted means of payment for the delivery of goods or settlement of debt. In the absence of money, goods must be exchanged for each other in a barter system. In addition to its role as means of exchange, money also serves as a unit of account, and a store of value.

Functions of money:

a) *A medium of exchange*: money is given by buyers to sellers when they want to purchase goods and services.
b) *A unit of account*: money is used by people as a yardstick to post prices and record debts.
c) *A store of value*: money is used by people to transfer purchasing power from the present to the future.
d) *Standard of deferred payments*: Payments can easily be made through the medium of money. In other words, it is very difficult to pay back a loan in terms of goods and services. However, with the advent of money the payments of loans or interests can easily be made.

One of the key characteristics of money is that it is a liquid asset. Liquidity is the ease with which an asset can be converted into the economy's medium of exchange. Money is the most liquid asset available. Other assets (such as stocks, bonds, and real estate) vary in their liquidity. When people decide in what forms to hold their wealth, they have to balance the liquidity of each possible asset against the asset's usefulness as a store of value.

Characteristics of good money.

- *Portability* – It should be easily transported from one place to another, even in bulk.
- *Acceptability* – It should be accepted throughout the general region.
- *Durability* – It should be able to withstand thousands of exchanges through its lifetime before it is recycled to produce new money. If durability is a problem, more money will be used to produce more money.
- *Divisibility* – It should be able to offer exact amounts of change after a transaction. This is the reason why we have smaller banknotes and coins to buy goods that are not exactly worth certain amounts.
- *Scarcity* – It should be scarce as too much of it may cause it to become fiat money. Fiat money refers to when money loses its money due to too much of it. This explains how precious and valuable items are not so commonly seen.

Barter Trade System

Before money was invented, people exchanged the goods and services. That they had for goods and services that they wanted. This system of exchanging goods and services without the use of money is known as barter. Barter trade system is the direct trade of goods or services for other goods or services

Advantages of Barter Trade System

i. It is a simple system devoid of the complex problems of the modern monetary system.
ii. There is no question of over or under-production (or of unemployment or over-hill employment) under the barter system since goods are produced just to meet the needs of the society.

iii. The problems of international trade, such as, foreign exchange crisis, adverse balance of payments, do not exist under barter system.
iv. There is no problem of concentration of economic power into the hands of a few rich persons under the barter system because there is no possibility of storing the commodities.
v. Personal and natural resources are ideally utilised to meet the needs of the society without involving any wastage.
vi. The barter system also reaps the benefits of division of labour because it represents a great step forward from a state of self- sufficiency hi which every man has to be a jack of all trades and master of none.

Disadvantages of Barter System

i. Double Coincidence of Wants:

Under barter system, a double coincidence of wants is required for exchange. In other words, the wants of the two persons who desire to exchange goods must coincide. For example, if person A wants to acquire shoes in exchange for wheat, then he must find another person who wants wheat for shoes. Such a double coincidence of wants involves great difficulty and wastage of time in a modern society, it rarely occuTshs In the absence of a double coincidence of wants, the individuals under barter system are compelled either to hold goods for long periods of time, or to make numerous intermediary exchange' ii order to get finally the goods of their choice.

ii. Absence of Common Measure of Value:

Even if it is possible to have the double coincidence of wants, the absence of a common measure of value creates great problem because a lot of time is wasted to strike a bargain. Since there is no common measure in terms of which the value of a commodity can be expressed, the problem arises how much wheat should be exchanged for how many pairs of shoes.

iii. Lack of Divisibility:

Another difficulty of barter system relates to the fact that all goods cannot be divided and subdivided. In the absence of a common medium of exchange, a problem arises, when a big indivisible commodity is to be exchanged for a smaller commodity. For example, if the price of a horse is equal to 10 shirts, then a person having one shirt cannot exchange it for the horse because it is not possible to divide the horse in small pieces without destroying its utility.

iv. The Problem of Storing Wealth:

Under a barter system, there is absence of a proper and convenient means of storing wealth or value, (a) As opposed to storing of generalized purchasing power (in the form of money) in a monetary economy, the individuals have to store specific purchasing power (in the form of horses, shoes, wheat etc.) under the barter system which may decrease in value in the due course of time due to physical deterioration or a change in tastes, (b) It is very expensive to store specific goods for a long time, (c) Again the wealth stored in the form of specific goods may create jealousy and enmity among the neighbors or relatives.

v. Difficulty of Deferred Payments:

The barter system does not provide a satisfactory unit in terms of which the contracts about the deferred (future) payments are to be written. In an exchange economy, many contracts relate to future activities and future payments. Under barter system, future payments are written in terms of specific goods. It creates many problems. Chandler has mentioned three such problems:

a. It may create controversy regarding the quality of goods or services to be repaid in future,
b. The two parties may be unable to agree on the specific good to be used for repayment.
c. Both parties run the risk that the goods to be repaid may increase or decrease in value over the period of contract.

vi. Problem of Transportation:

Another difficulty of barter system is that goods and services cannot be transported conveniently from one place to another. For example, it is not easy and without risk for an individual to take heaps of

wheat or herd of cattle to a distant market to exchange them for other goods. With the use of money, the inconveniences or risks of transportation are removed.

A Brief History of Money

Originally, coins were cut out of gold and other precious metals which had intrinsic value. This means that the value of the coin was equal to the amount of gold used to make that coin. Money that has intrinsic value is called commodity money.

Types of Money:

(a) Commodity Money:

Money is a very old convenience since it is generally accepted as a medium of exchange. In the earliest days of human civilization, commodities were commonly used as money. During the World War II, the British and German prisoners of war camp used cigarettes amongst themselves as the medium of exchange, rather by consensus and not by the fiat of the government.

(b) Metallic Money:

Three metals—silver, copper and gold—were used for the purpose of exchange. Of all the commodities, metals proved its great advantages. More or less, all the attributes of good money (e.g., stability of value, divisibility, cognoscibility, acceptability, etc.) were to be found in money metals. But metallic money had some inherent defects. Firstly, the ascertainment of the quality of metals was a tiresome process. Secondly, divisibility of metals for smaller transactions was highly inconvenient, if not impossible. The invention of coins removed some of these difficulties. The king of a country had kept the right to issue coins with standard weight and quality by stamping his name on them. This is how coins came into existence.

(c) Paper Money:

After coinage, the next stage in the development of money was paper money. Metallic money, made of precious metals, suffers from the disadvantages of being stolen easily. It is both dangerous and inconvenient to carry precious metals from one place to another. European merchants and people kept their gold and silver with goldsmiths for safe custody. Against these deposits of metals, goldsmiths issued a paper- receipt showing a claim of the owners of metals. The receipts that the goldsmiths issued were perhaps the first form of paper money. The depositors used these metals to carry transactions, wherever the situation arose. But it ultimately turned out to be cumbersome transactions. With the passage of time, these goldsmiths were able to generate confidence among depositors as well as general public. Consequently that bit of paper became substitute for metallic money. This document helped the process of transaction easily. Later on, the issue of paper money was left into the hands of the commercial banks. Nowadays, the central bank of a country has been given monopoly power to issue paper notes.

(d) Credit Money:

Another type of money in the modern world is credit money or bank money (cheques, drafts, promissory notes, etc.). It is difficult to imagine a modern economy without credit. Large transactions over the entire country as well as outside the country are credit transactions. With the increase in

(e) Electronic Money or E-Money:

In this age of computer technology, we have entered a new stage of evolution of the payments system with the advent of electronic money, e-money is a money that is stored electronically, i.e., cheques are put in the e-mail. Its important forms are credit cards, debit cards and electronic cheques.

Quantity Theory of Money

Quantity theory of money, economic theory relating changes in the price levels to changes in the quantity of money. Quantity theory of money states that money supply and price level in an economy are in direct proportion to one another. When there is a change in the supply of money, there is a proportional change in the price level and vice-versa.

It is supported and calculated by using the Fisher Equation on Quantity Theory of Money.

M*V= P*T

where,

M = Money supply

V = Velocity of money (the rate at which money is exchanged in an economy)

P = Price level

T = volume of the transactions

Generally, the quantity theory of money assumes that increases in the quantity of money tend to create inflation, and vice versa. For example, if the Bank of Tanzania (BoT) doubled the supply of money in the economy, the long-run prices in the economy would tend to increase dramatically. This is because more money circulating in an economy would equal more demand and spending by consumers, leading to higher prices**.**

If an economy has Tshs 1,000 in total and that money is turned over 3 times during a month, total spending equals Tshs 3,000 that month. If the amount of stuff bought was 100 items, then the average price of each item would be Tshs 3,000 divided by 100 which equals Tshs 30.

M x V = P x T

Tshs 1000 x 3 = Tshs 30 x 100

We can re-arrange the Equation of Exchange to solve for the price level, P:

$$P = \frac{M V}{Q}$$

Therefore, in our economy:

Tshs 30 = (Tshs 1000 x 3)/100

Now let's assume that, the next month, money supply increases from Tshs1,000 to Tshs 2,000, with the velocity of money and the amount of stuff bought staying the same. What would be the effect on the average price level?

P = (Tshs 2000 x 3)/ 100

P = Tshs 60

The average price level has gone up from Tshs 30 to Tshs 60. The average price of goods has gone up *due to the **inflation** of the money supply.*

The next month, the money supply decreases from Tshs 2,000 to Tshs 500, with the velocity of money and the amount of stuff bought staying the same. What would be the effect on the average price level now?

P = (Tshs 500 x 3)/ 100

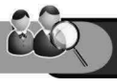
P = Tshs 15

The average price level has gone down from Tshs 60 to Tshs 15. The average price of goods has gone down *due to the **deflation** of the money supply.* This basic example shows the relationship between the level of the money supply in an economy and the average level of prices holding other factors constant (Ceteris paribas).

Credit Creation

Credit creation means that on the basis of primary deposits commercial banks make loans and expand the money supply. It results in multiple expansions of banks demand deposits. It is an open secret that banks advance a major portion of their deposits to the borrowers and keep smaller part of them for the payment to the customers on demand. Even then the customers of the banks have full confidence that their deposits lying in the banks are quit safe and can be withdrawn on demand. The banks exploit this trust of the customers and expand loans several times than the amount of demand deposits possessed by them. This tendency on the part of the commercial banks to make loans several times of the excess cash reserves kept by the bank is called creation of credit.

Process of Credit creation



Example

Suppose there are number of banks, A, B, C etc., each with different sets of depositors Every bank has to keep 20% of cash reserves, according to law, and a person deposits Tshs 100 cash in Bank A. As a result, the deposits of bank A increase by Tshs 100 and cash also increases by Tshs 100.

Balance Sheet of Bank A

Table 9: Process of Credit Creation

Liabilities	Assets
Demand Deposits 100	Cash 100
Total 100	Total 100

Under the double entry system, the amount of Tshs 100 is shown on both sides. The deposit of Tshs 100 is a liability for the bank and it is also an asset to the bank. Bank A has to keep only 20% cash reserve, i.e., Tshs 20 against its new deposit and it has a surplus of Tshs 80 which it can profitably employ in the assets like loans. Suppose bank A gives a loan to X, who uses the amount to pay off his creditors After the loan has been made and the amount so withdrawn by B to pay off his creditors, the balance sheet of bank A will be as follows:

Table 10: Balance Sheet of Bank A

Liabilities	Assets
Demand Deposits 100	Cash 20
	Loan to B 80
Total 100	Total 100

Suppose B purchase goods of the value of Tshs 80 from C and pay cash. C deposits the amount with Bank B. The deposits of Bank A now increase by Tshs 80 and its cash also increases by Tshs 80. After keeping a cash reserve of Tshs16, Bank AA is free to lend the balance of Tshs 64 to anyone. Suppose bank AA lends Tshs 64 to d, who uses the amount to pay off his creditors

Table 11: Balance Sheet of Bank B

Liabilities	Assets
Demand Deposits 80	Cash 16
	Loan to B 64
Total 80	Total 80

Suppose D purchases goods of the value of Tshs 64 from S and pays the amount. S deposits the amount of Tshs 64 in bank C. Bank C now keeps 20% as reserve (Tshs 12.80) and lends Tshs 51.20 to a merchant. And this goes on till nth round then

Table 12: Multiple Expansion process

Bank	Acquired reserves and Deposits	Required Reserves	Excess Reserves	New Money Created
A	100.00	20.00	80.00	80.00
B	80.00	16.00	64.00	64.00
C	64.00	12.80	51.20	51.20
D	51.20	10.24	40.96	40.96
E	40.90	8.19	32.77	32.77
F	32.77	6.55	26.22	26.22
G	26.22	5.24	20.98	20.98
H	20.98	4.20	16.78	16.78
I	16.78	3.36	13.42	13.42
J	13.42	2.68	10.74	10.74
K	10.74	2.15	8.59	8.59
L	8.58	1.72	6.87	6.87
M	6.87	1.37	5.50	5.50
N	5.50	1.10	4.40	4.40
Other Banks	21.97	4.40	17.57	17.57
Total amount of money created by the banking system				**400**

The table shows the following points

- If the cash reserve ratio is 20% and
- the initial deposit is Tsh 100
- The banks create newly created money of Tshs 400.
- The total demand deposits areTshs 500 (initial deposit Tshs 100 + credit creation Tshs 400 = Tshs 500).
- The credit multiplier is the reciprocal of the required reserve ratio.
- Credit multiplier = 1/required reserve ratio
- If reserve ratio is 20%
- Then credit multiplier = 1/0.20 = 5

Limitation on Credit Creation

The commercial banks do not have unlimited power of credit creation. Their power to create credit is limited by the following factors:

- Amount of Cash
- Cash Reserve Ratio
- Banking Habits of the People
- Nature of Business Conditions in the Economy
- Leakages in Credit-Creation
- Sound Securities
- Liquidity Preference
- Monetary Policy of the Central Bank

Money Supply and Demand

The Demand for Money

The demand for money is the relationship between the quantity of money people want to hold and the factors that determine that quantity. In deciding how much money to hold, people make a choice about how to hold their wealth. How much wealth shall be held as money and how much as other assets? For a given amount of wealth, the answer to this question will depend on the relative costs and benefits of holding money versus other assets.

Motives for Holding Money

One reason people hold their assets as money is so that they can purchase goods and services. The money held for the purchase of goods and services may be for everyday transactions such as buying groceries or paying the rent, or it may be kept on hand for contingencies such as having the funds available to pay to have the car fixed or to pay for a trip to the doctor.

(i) Transactions Motive:

People and firms do not need money for its own sake, but because it can fetch them the necessary goods and services. In other words, money is demanded because it is a good medium of exchange. There is a gap between the receipt of wages, salaries or incomes and their expenditure. Not only individuals and households need money to meet daily transactions, but business firms also need it to meet daily requirements like payment of wages, purchase of raw materials and to pay for transport etc. The demand for money for transaction purposes depends upon income and the general level of business activity and the manner of the receipt of income.

(ii) Precautionary Motive:

Individuals, households and business firms find it a good practice to hold money than what is needed for transactions purposes. They hold more money because they want to take proper precautions

against unforeseen future contingencies like sickness, unemployment, accidents, fire, old age etc. An individual who goes shopping will keep more money than what he thinks proper for planned purchases. How much cash a person will hold on account of such unforeseen events will depend upon his psychology and his views about the future and the extent to which he wants protection or insurance against such events. Like individuals, business firms also hold cash to safeguard against future uncertainties.

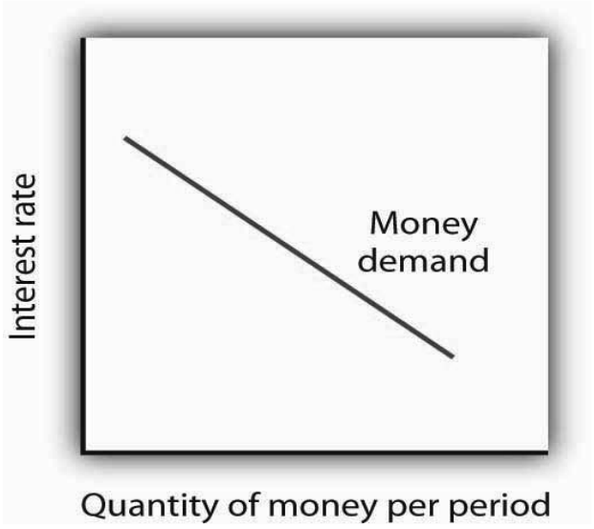
(iii) Speculative Motive:

Sometimes, firm hold high cash balances over the precautionary level of cash balance to take advantage of speculative investment opportunities, to exploit discounts for prompt payments, to improve credit rating etc. Cash surplus companies can acquire the cash starved companies at least cost of acquisition. The company with excessive cash surplus can take steps to improve production and sales ultimately the profitability of the company improves. Some firms who can efficiently manage cash surplus, can seek to deploy surplus cash in short-term marketable investments and money market instruments to get better returns. But it is to be kept in view that idle cash will attract opportunity cost. Purchase of readily marketable securities will enable to earn return on investment, as well as, to maintain the liquidity of the company.

The Demand Curve for Money

The demand curve for money shows the quantity of money demanded at each interest rate, all other things unchanged. Such a curve is shown in Diagram 62 “The Demand Curve for Money.” An increase in the interest rate reduces the quantity of money demanded. A reduction in the interest rate increases the quantity of money demanded.

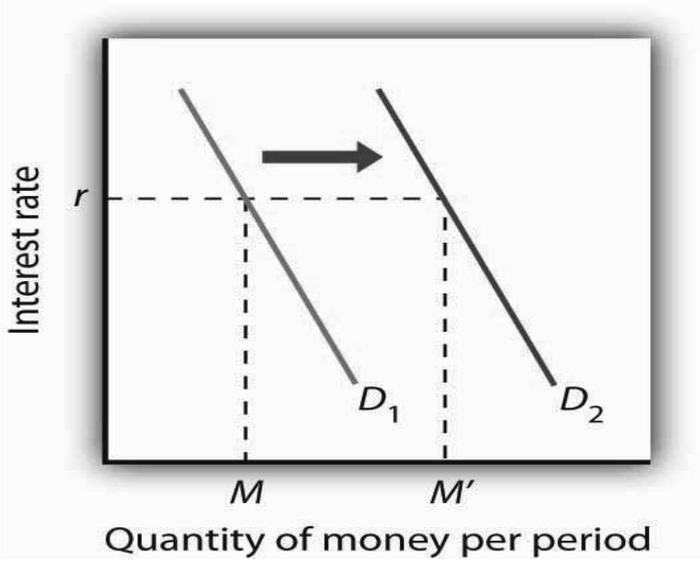
Diagram 62: Demand curve for Money



The relationship between interest rates and the quantity of money demanded is an application of the law of demand. If we think of the alternative to holding money as holding bonds, then the interest rate—or the differential between the interest rate in the bond market and the interest paid on money deposits—represents the price of holding money. As is the case with all goods and services, an increase in price reduces the quantity demanded.

Other Determinants of the Demand for Money

Diagram 63: Determinants of the Demand for Money



In Diagram 63above, an Increase in Money Demand. An increase in real GDP, the price level, or transfer costs, for example, will increase the quantity of money demanded at any interest rate r, increasing the demand for money from D_1 to D_2. The quantity of money demanded at interest rate r rises from M to M′. The reverse of any such events would reduce the quantity of money demanded at every interest rate, shifting the demand curve to the left.

The Supply of Money

There are several definitions of the supply of money. M_1 is narrowest and most commonly used. It includes all currency (notes and coins) in circulation, all checkable deposits held at banks (bank money), and all traveler's checks. A somewhat broader measure of the supply of money is M_2, which includes all of M_1 plus savings and time deposits held at banks. An even broader measure of the money supply is M_3, which includes all of M_2 plus large denomination, long-term time deposits—for example, certificates of deposit (CDs) in amounts over Tshs 100,000. Most discussions of the money supply, however, are in terms of the M1 definition of the money supply.

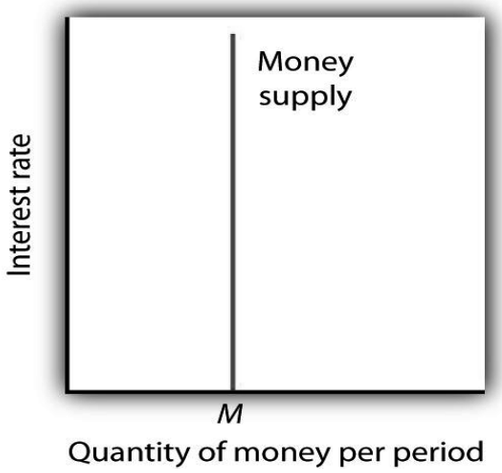
i) M1 = C + DD + OD.
Here C stands for currency (paper notes and coins) detained by the public, DD signify demand deposits in banks and OD denotes other deposits.
ii) M2 = M1 (detailed on top of) + saving deposits with Post Office Saving Banks
iii) M3= M1 + Net Time-deposits of Banks
iv) M4 = M3 + Total deposits with Post Office Saving Institute (excluding National Saving Certificate)

Generally, Money Supply refers to the entire stock of money (of all types) held by the people of a country at a point of time. Money supply includes only that stock of money which is held by people, other than the suppliers of money themselves. In other words, money supply refers to the stock of money held by the public or those who demand money.

The supply curve of money

The supply curve of money shows the relationship between the quantity of money supplied and the market interest rate, all other determinants of supply unchanged.

Diagram 64: Supply of Money curve

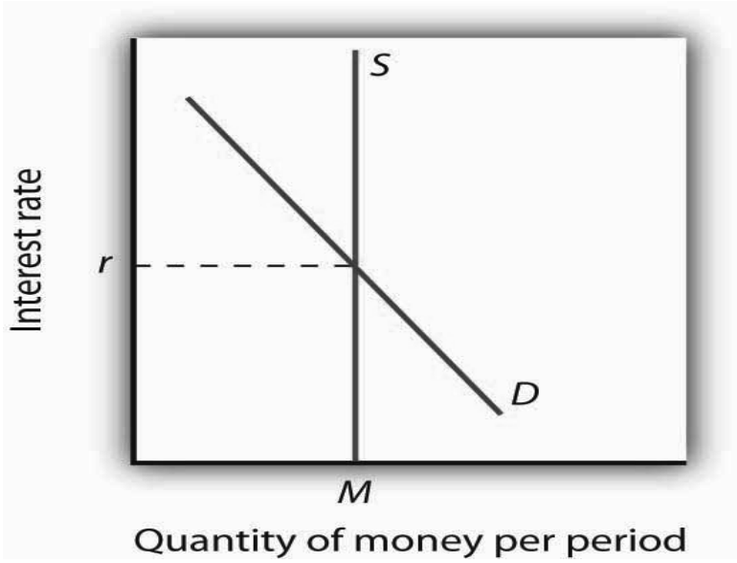


In drawing the supply curve of money as a vertical line, we are assuming the money supply does not depend on the interest rate. Changing the quantity of reserves and hence the money supply is an example of monetary policy.

Equilibrium in the Market for Money

The money market is the interaction among institutions through which money is supplied to individuals, firms, and other institutions that demand money. Money market equilibrium occurs at the interest rate at which the quantity of money demanded is equal to the quantity of money supplied.

Diagram 65: Equilibrium in the Market for Money



2. Financial Institutions

[Learning Outcome b]

A financial institution is an intermediary between consumers and the capital or the debt markets providing banking and investment services. Moreover, financial institutions are organizations that process monetary transactions, including business and private loans, customer deposits, and investments. They're key to the financial intermediation process, whereby financial institutions transfer

funds from those who save money to those who borrow money. Let's take a look at the three main types of financial institutions: depository, non- depository, and investment. A financial institution is responsible for the supply of money to the market through the transfer of funds from investors to the companies in the form of loans, deposits, and investments.

Types of financial Institution

1. Depository Institutions

The depository types of financial institutions include banks, credit unions, saving and loan associations and mutual saving banks

a) Commercial banks

Commercial banks are those financial institutions, which help in pooling the savings of surplus units and arrange their productive uses. They basically accepts the deposits from individuals and institutions, which are repayable on demand. These deposits from individuals and institutions are invested to satisfy the short-term financing requirement of business and industry.

b) Credit Unions

Credit unions are cooperative associations where large numbers of people are voluntarily associated for savings and borrowing purposes. These individuals are the members of credit unions as they make share investment along with deposits. The saving generated from these members are used to lend the members of the union only.

c) Saving And Loan Associations

Saving and loan associations are the financial institutions involved in collecting funds of many small savers and lending these funds to home buyers and other types of borrowers.

d) Mutual Saving Banks

Mutual saving banks are more or less similar to saving and loan associations. They primarily accepts savings of individuals and they are lent to the home users and consumers on a long-term basis.

2. Non-depository Institutions

Non-depository institutions are not banks in real sense. They make contractual arrangement and investment in securities to satisfy the needs and preferences of investors. The non-depository institutions include insurance companies, pension funds, finance companies and mutual funds.

a) Insurance Companies

Insurance companies are the contractual saving institutions which collect periodic premium from insured party and in return agree to compensate against the risk of loss of life and properties.

b) Pension/Provident Funds

Pension funds are financial institutions which accept saving to provide pension and other kinds of retirement benefits to the employees of government units and other corporations. Pension funds are basically funded by corporation and government units for their employees, which make a periodic deposit to the pension fund and the fund provides benefits to associated employees on the retirement. The pension funds basically invest in stocks, bonds and other type of long-term securities including real estate.

c) Finance Companies

Finance companies are the financial institutions that engage in satisfying individual credit needs, and perform merchant banking functions. In other words, finance companies are non-bank financial institutions that tend to meet various kinds of consumer credit needs. They involve in leasing, project financing, housing and other kind of real estate financing.

d) Mutual Funds

Mutual funds are open-end investment companies. They are the associations or trusts of public members and invest in financial instruments or assets of the business sector or corporate sector for the mutual benefit of its members. Mutual funds are basically a large public portfolio that accepts funds from members and then use these funds to buy common stocks, preferred stocks, bonds and other short-term debt instruments issued by government and corporation.

Financial institutions and roles

The primary role of financial institutions is to provide liquidity to the economy and permit a higher level of economic activity than would otherwise be possible. Other roles are such as follow;

a) The major function of financial institutions is to facilitate the allocation and deployment of economic resources both in space and time within an uncertain environment.
b) Financial institutions play the role of intermediaries that facilitate flow.
c) Clearing and settling payments.
d) Providing mechanisms for pooling resources (large-scale indivisible enterprise).
e) Providing ways to transfer economic resources through time and across distances.
f) Managing risk and uncertainty

Central Bank role and its functions

The objective of the central bank is to ensure the internal and external stability of the currency. Internal stability means keeping the purchasing power of the money intact and preventing its deterioration. In other words, it has to maintain the rate of inflation within tolerable limits, if its curtailment is not feasible altogether. External stability implies keeping a balance between export and import or prevention of the foreign exchange value of domestic currency from depreciation. In developing countries, the central bank is also concerned with the progress and development of the economy. It provides financial support to various development programs of the government. The central bank adopts various measures to control the money supply and commercial credit. The bank exercises its authority via different monetary instruments as will be explained below.

The primary function of the central bank is to control the money supply in the economy. It is responsible for issuing currency on behalf of the government. In addition to this primary function, the central bank performs the following duties:

i) It receives the state revenues, keeps deposits of various departments and makes payments on behalf of the government.
ii) It keeps the cash reserves of the commercial banks, acts as a clearing-house for the inter-bank transactions and as a lender of last resort. It supervises the commercial banking system and ensures its smooth running.
iii) It controls the money and capital markets by changing the supply of money and thereby the rate of interest. The objective is to keep equilibrium in these markets.
iv) It is the custodian of the foreign exchange. It has to keep a closer check on the external value of the domestic currency and prevent its deterioration.
v) It is the adviser to the government in all the monetary affairs. It is responsible for the formulation and implementation of the monetary policy.

NB: Students should read about the role and function of Bank of Tanzania as the case study.

Functions of Commercial Banks

i) Receiving deposits from the public. The primary function of commercial banks is receiving of deposits in the form of savings bank account, current account and term deposits from the savers usually from the public.
ii) Giving loans and advances. The second major function of the commercial banks is giving loans and advances to the all types of persons, particularly to businessmen and investors, against personal security, gold and sliver and other movable and immovable assets. The bank

advances loans in the form of cash credit, call loans, overdraft and discounting bills of exchange to businessmen.

iii) Credit creation. Credit creation is one of the most important functions of the commercial banks. Like other financial institutions, they aim at earning profits. For this purpose they accept deposits and advance loans by keeping small cash in reserve for day-to-day transactions.

iv) Financing foreign trade. The commercial banks finance foreign trade of its customers by accepting foreign bills of exchange and collecting them from foreign banks. It also transacts other foreign exchange business and buys and sells foreign currency.

v) Transfer of funds. Commercial banks will help the customers to transfer their money from one account to another account, from one place to another place through cheques. Now the transfer of funds from one place to another place, or from one party account to another party account or one bank to another bank is done through Electronic Fund Transfer (EFT).

vi) Agency functions. The commercial banks act as agents for customers to buy and sell shares, securities on their behalf. It pays subscriptions to insurance premiums, mutual funds, rent, water taxes, electricity bills etc on behalf of its clients. It also acts as a trustee and executor of the property and will of its customers.

vii) Miscellaneous functions. The miscellaneous functions performed by the commercial banks are: it provides safety locker facility, making and receiving payments on behalf of its depositors, issuing letters of credit and traveller's cheques etc.

3. Financial markets

[Learning Outcome c]

Financial markets, from the name itself, are a type of marketplace that provides an avenue for the sale and purchase of assets such as bonds, stocks, foreign exchange, and derivatives.

Classification of financial markets

There are so many financial markets; every country is home to at least one, though they vary in size. Some are small while some others are internationally known, such as the Dar es Salaam Stock Exchange, Nairobi Stock Exchange and New York Stock Exchange (NYSE) that trades trillions of dollars on a daily basis. Here are some types of financial markets.

1. Stock market

The stock market trades shares of ownership of public companies. Each share comes with a price, and investors make money with the stocks when they perform well in the market. It is easy to buy stocks. The real challenge is in choosing the right stocks that will earn money for the investor. There are various indices that investors can use to monitor how the stock market is doing. When stocks are bought at a cheaper price and are sold at a higher price, the investor earns from the sale.

2. Bond market

The bond market offers opportunities for companies and the government to secure money to finance a project or investment. In a bond market, investors buy bonds from a company, and the company returns the amount of the bonds within an agreed period, plus interest.

3. Commodities market

The commodities market is where traders and investors buy and sell natural resources or commodities such as corn, oil, meat, and gold. A specific market is created for such resources because their price is unpredictable. There is a commodities futures market wherein the price of items that are to be delivered at a given future time is already identified and sealed today.

4. Derivatives market

Such a market involves derivatives or contracts whose value is based on the market value of the asset being traded. The futures mentioned above in the commodities market is an example of a derivative.

Functions of the Markets

The role of financial markets in the success and strength of an economy cannot be underestimated. Here are four important functions of financial markets:

1. Puts savings into more productive use

As mentioned in the example above, a savings account that has money in it should not just let that money sit in the vault. Thus, financial markets like banks open it up to individuals and companies that need a home loan, student loan, or business loan.

2. Determines the price of securities

Investors aim to make profits from their securities. However, unlike goods and services whose price is determined by the law of supply and demand, prices of securities are determined by financial markets.

3. Makes financial assets liquid

Buyers and sellers can decide to trade their securities anytime. They can use financial markets to sell their securities or make investments as they desire.

4. Lowers the cost of transactions

In financial markets, various types of information regarding securities can be acquired without the need to spend.

Importance of Financial Markets

(1) Mobilization of Savings and their Channelization into more Productive Uses:

Financial market gives impetus to the savings of the people. This market takes the uselessly lying finance in the form of cash to places where it is really needed. Many financial instruments are made available for transferring finance from one side to the other side. The investors can invest in any of these instruments according to their wish.

(2) Facilitates Price Discovery:

The price of any goods or services is determined by the forces of demand and supply. Like goods and services, the investors also try to discover the price of their securities. The financial market is helpful to the investors in giving them proper price.

(3) Provides Liquidity to Financial Assets:

This is a market where the buyers and the sellers of all the securities are available all the times. This is the reason that it provides liquidity to securities. It means that the investors can invest their money, whenever they desire, in securities through the medium of financial market. They can also convert their investment into money whenever they so desire.

(4) Reduces the Cost of Transactions:

Various types of information are needed while buying and selling securities. Much time and money is spent in obtaining the same. The financial market makes available every type of information without spending any money. In this way, the financial market reduces the cost of transactions.

Capital and money markets

Capital and money markets are the platform where governments and numerous corporations raise money from stakeholders in return for the promise of future revenues.

1. *Capital market*:

Capital market is the market where investment instruments like bonds, equities and mortgages are traded. It is a market which deals in long-term loans. It supplies industry with fixed and working capital and finances medium-term and long-term borrowings of the central, state and local governments. Major function of this market is to make investment from stockholders who have excess funds to the ones who are running a scarcity. The capital market provides both long term and overnight funds.

Various types of financial instruments that are traded in the capital markets are as under:

- Equity instruments
- Credit market instruments
- Insurance instruments
- Foreign exchange instruments
- Hybrid instruments
- Derivative instruments

There are two types of capital market which include Primary market and Secondary market

a) *Primary Market:*

Primary Market is that market in which shares, debentures and other securities are sold for the first time to collect long-term capital. This market is concerned with new issues. Therefore, the primary market is also called new issue market. In this market, the flow of funds is from savers to borrowers (industries), therefore, it helps directly in the capital formation of the country. The money collected from this market is normally used by the companies to improve the plant, machinery and buildings, for extending business, and for establishing new business unit.

Features of Primary Market:

- The first characteristic of the primary market is that it is related with the new issues. Whenever a company issues new shares or debentures, it is known as Initial Public Offer.
- Primary market is not the name of any particular place but the activity of bringing in new issues.
- It has several Methods of Floating Capital.

Benefits of Primary Market:

- Manipulation of price is smaller so investment in primary market is safer.
- No need to time the market the investors get the share at the same price.
- It is secure because of primary research data is collected directly by the organization that deploys the research
- The company receives the money and issues new security certificates to the investors.

b) *Secondary market:*

The secondary market is that market in which the buying and selling of the formerly issued securities is done. The transactions of the secondary market are usually done through the medium of stock exchange. The main aim of the secondary market is to create liquidity in securities.

Features of Secondary Market:

- It Creates Liquidity
- It Comes After Primary Market
- It Has A Particular Place
- It Boosts New Investments

Benefits of Secondary Market:

- The investors can recover their investments to a certain extent, provided their economic status undergoes a change.
- In such cases the investors may refrain from making long term investments.
- Investor can get large interest by invest for a longer period of time.
- Activities in the Secondary Market:
- Trading of securities
- Risk management
- Clearing and settlement of trades
- Delivery of securities and funds

2. *Money market:*

Money market is a tool that manages the lending of short term funds (less than one year). It is a subdivision of the financial market in which financial instrument with high liquidity and very short maturities are traded. There are several money market instruments, including treasury bills, commercial paper, bankers' acceptances, deposits, certificates of deposit, bills of exchange, repurchase agreements, federal funds, and short-lived mortgage-, and asset-backed securities.

Major functions of money market:

- It furnishes to the short-term financial needs of the economy.
- It helps the RBI in effective implementation of monetary policy.
- It provides mechanism to achieve equilibrium between demand and supply of short term funds.
- It helps in allocation of short term funds through inter-bank transactions and money market Instruments.
- It also provides funds in non-inflationary way to the government to meet its deficits.
- It expedites economic growth.

Feature of money market:

- Constituents of Money Market
- Heterogeneous Market
- Dealers of Money Market
- Short-term Loans
- Different from Capital Market
- Association with Big Cities
- Change with Place and Time

The Stock Market and the Economy

The stock market refers to the collection of markets and exchanges where regular activities of buying, selling and issuance of shares of publicly-held companies take place. Such financial activities are conducted through institutionalized formal exchanges or over-the-counter (OTC) marketplaces which operate under a defined set of regulations. Stock Market is one of the most vigorous sector which plays an important role in contributing to the wealth of an economy.

The Role of the Stock Exchange in the Economy

Raising Capital: Stock markets are, first and foremost, financial institutions established to help businesses and entrepreneurs come together to buy, sell and trade shares for the purpose of providing capital to enterprises that need it. Were it not for stock exchanges, entrepreneurs would be left to their own devices to find investors, and consumers could wind up at the mercy of unlicensed and unregulated financial products with no oversight. Emerging from the stock market system are unique financial terms and concepts including initial public offerings, or IPOs, an international acronym for new business stock introductions.

Servicing Investors: Another role of stock markets is to act as an intermediary for large and small investors seeking to make money outside the realm of standard banking institutions. The role of a stock exchange in an economy is to maximize return on savings that might otherwise languish in static bank accounts with low returns. Stock exchanges promise and often deliver higher profits, and in return, investors receive measures of assurance, diverse opportunities and flexibility. Further, a stock exchange offers investors assurances via formal oversight on investments.

Indicator of Health: A stock exchange can serve as a barometer of a nation's fiscal health, broadcasting the ups, downs, trends and shifts of the domestic economy. According to financial website UpDown's Investment Education Center, the relationship between a society and its stock exchange is so deeply embedded that analysts can influence both the domestic economy and the stock market it relies on by signaling optimistic outlooks for even just one of the two.

Financial Accountability: Sophisticated financial market systems require credibility and accountability if they are to function on behalf of businesses and investors as interested in ethics as they are in profits. For this reason, a stock exchange benefits from a formal structure upheld by rules, laws and regulations. Management and operational standards set by governments, bureaus and agencies overseeing stock exchange operations add authority and oversight to the institution, giving stockholders, investors and businesses checks and balances necessary for investor confidence.

Economic Effects: The direct effect of stock market activity can impact a nation's economy in multiple ways. Stocks fall, spending stops, consumers lose confidence and a nation's financial state begins to falter. Conversely, stocks rise, confidence spreads, spending and investments grow. A nation's mood can rise or fall on stock market activity and performance, which shows how important the role played by a stock exchange can be in a society's social and fiscal fabric.

Expanded Diversity: If one of the stock market's roles is to bring together like-minded investors, exchanges also serve as fiscal melting pots, giving minority businesses an opportunity to place shares of new company assets before potential stakeholders who might not otherwise learn about diverse new products were it not for the exchange. Few economies can hope to flourish without infusions of new ideas, systems and opportunities -- all represented by cash -- which is why this confluence of financial needs and wants regularly merges on the floor of a vibrant stock exchange.

Dar es salaam Stock Exchange

Students should study the DSE functions, challenges and its role on the Tanzania's Economy

4. Monetary policy

[Learning Outcome d]

Monetary policy is how a country controls its money supply. Central banks are typically in charge of monetary policy. If things aren't going well—unemployment is high, growth is low—then more money flowing around the economy makes it easier for people to get loans to make big investments, which helps the economy get going again. This is called expansionary or loose monetary policy.

But when things are going really well, there can sometimes be a problem of inflation, where prices for everything steadily increase. In these situations the central bank may want to pull some money out of the system. The idea is that with less money in the economy, each unit is more valuable. So by decreasing the money supply, a central bank can prop up the value of its money and stop inflation.

Objectives of Monetary Policy

(1) Neutrality of Money:

Those who advocate neutral money maintain that the variations in the quantity of money can generate oscillations in the economic system. If the banks follow a cheap money policy, bring down the rates of interest, create more money and dishoarding of idle assets, it will bring, in turn, a state of prosperity.

(2) Exchange Stability:

The traditional objective of monetary policy has been the achievement of stable exchange rates.

(*3) Full Employment:*

Full employment has been ranked among the foremost objectives of monetary policy. It is an important goal not only because unemployment leads to wastage of potential output, but also because of the loss of social standing and self-respect.

(4) Price Stability:

One of the policy objectives of monetary policy is to stabilize the price level. Both economists and laymen favor this policy because fluctuations in prices bring uncertainty and instability to the economy.

(5) Economic Growth:

One of the most important objectives of monetary policy in recent years has been the rapid economic growth of an economy. Economic growth is defined as “the process whereby the real per capita income of a country increases over a long period of time.”

(6) Balance of Payments:

Another objective of monetary policy since the 1950s has been to maintain equilibrium in the balance of payments.

Monetary Policy Instruments

Monetary policy comprise the use of certain tools and instruments by the monetary authorities (usually the central bank of each country) by which they are able to directly influence the money supply (currency in circulation plus demand deposits in banks) in the economy, and by extension, through the monetary transmission mechanism, to influence the real side of the economy, in other words, income and employment conditions. The key monetary tools in the hands of central banks are:

i. Required Reserves (RR): This is the ratio of deposits that banks are required to hold in cash form), which influences the size of the money multiplier and ultimately the money creation potential of the banking system. Raising or lowering the RR, the central bank can indirectly decrease or increase, respectively, the amount of money in the economy, by affecting the money creation capability of commercial banks. This is not frequently used. Reserve requirements change only irregularly and over long periods of time to reflect changing banking habits of people and to make the banking system more efficient.

ii. Discount Rate: This is the rate determined by the central bank with which it lends money to commercial banks, which affects short-term interest rates in the banking system, and therefore the cost of borrowing for the public. If the central bank wants to impose a restrictive (expansionary) monetary policy, it raises (lowers) the discount rate making it thus more expensive (less expensive) for commercial banks to raise needed liquidity. The discount rate directly affects the market interest rate banks charge their customers for loans as well as the rate they offer for attracting deposits. The interest rate that banks borrow from the central bank).

iii. Open Market Operations: This is the buying and selling of government securities by the central bank in the open market (the primary market). We briefly examined this above when we talked about the money creation process. This is the most frequently used policy

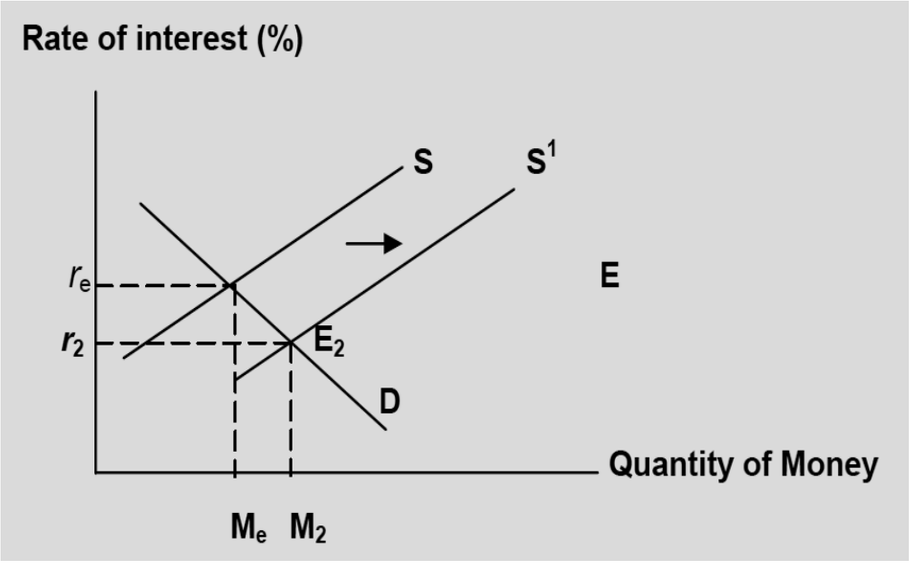
instrument and perhaps one of the most effective. Central banks auction government securities (short-term Treasury bills and medium and long-dated bonds) on regular intervals (usually on a monthly, or even bi-weekly basis).

iv. Credit controls and moral suasion (not frequently used in developed economies). We have examined that when the central bank buys government securities on the open market it creates bank reserves. This in turn begins a multiple expansion of the money supply. This process shifts the money supply curve to the right, indicating that there is now surplus liquidity in the banking system. In their attempt to loan out as much of the excess money balances, profit-making commercial banks would compete amongst themselves and in the process would offer lower interest rates to their custome Tshs A new equilibrium of the money market would take place at r2 and M2, as shown in the Diagram 66 below. We see thus that open market operations can and do affect the level of market interest rates.

v. Selective credit controls are used to influence specific types of credit for particular purposes. They usually take the form of changing margin requirements to control speculative activities within the economy. When there is brisk speculative activity in the economy or in particular sectors in certain commodities and prices start rising, the central bank raises the margin requirement on them.

vi. Prudential Guidelines: The Central Bank may in writing require the Deposit Money Banks to exercise particular care in their operations in order that specified outcomes are realized. Key elements of prudential guidelines remove some discretion from bank management and replace it with rules in decision making.

Diagram 66: Shift in Supply for Money



All the above policy instruments work indirectly in affecting the money supply and the level of interest rates by impacting on the money-creation ability of commercial banks. There are also some other less frequently used measures that a central bank may be forced to take. One such measure is the absolute restriction of credit expansion, which imposes a certain amount by which the loans may expand in a given period. This may be for the total credit expansion or may be specified separately for each sector of the economy. Moral suasion is another measure by which the central bank may contact directly the banks (through the media, by circulars or direct phone calls, or by sending bank examiners to commercial banks) to persuade them to follow the desired credit policy in order for monetary policy to be on target.

Limitations of monetary policy

1. It does not guarantee economy recovery.

Economists who criticize the Federal Reserve on imposing monetary policy argue that, during recessions, not all consumers would have the confidence to spend and take advantage of low interest rates, making it a disadvantage.

2. It is not that useful during global recessions.

Proponents of expansionary monetary policy state that even if banks lower interest rates for consumers to spend more money during a global recession, the export sector would suffer. If this is the case, export losses would be more than what commercial organizations could earn from their sales.

3. Its ability to cut interest rates is not a guarantee.

Though a monetary policy is said to allow banks to enjoy lower interest rates from the Central Bank when they borrow money, some of them might have the funds, which means that there would be insufficient funds that people can borrow from them.

4. It can take time to be implemented.

With things expected to be done immediately in these modern times, implementing a monetary can certainly take time, unlike other types of policies, such as a fiscal policy, that can help push more money into the economy faster. According to experts, changes that are made for a monetary policy might take years before they begin to take place and make changes felt, especially when it comes to inflation.

5. It could discourage businesses to expand.

With this policy, interest rates can still increase, making businesses not willing to expand their operations, resulting to less production and eventually higher prices. While consumers would not be able to afford goods and services, it would take a long time for businesses to recover and even cause them to close up shop. Workers would then lose their jobs.

Inflation

Inflation is a sustained rise in the general price level. Inflation exists when money supply exceeds available goods and services. Or inflation is attributed to budget deficit financing. A deficit budget may be financed by the additional money creation. But the situation of monetary expansion or budget deficit may not cause price level to rise. Hence the difficulty of defining ‘inflation’.

Types of Inflation

a) Creeping Inflation

If the speed of upward thrust in prices is slow but small then we have creeping inflation. To some, a creeping or mild inflation is one when annual price rise varies between 2 percentage and 3 percentage If a rate of price rise is kept at this level, it is con-sidered to be helpful for economic development. Others argue that if annual price rise goes slightly beyond 3 p.c. mark, still then it is considered to be of no danger.

b) Walking Inflation

This type of strong, or pernicious, inflation is between 3-10 percent a year. It is harmful to the economy because it heats up economic growth too fast. People start to buy more than they need, just to avoid tomorrow's much higher prices. This drives demand even further so that suppliers can't keep up. More important, neither can wages. As a result, common goods and services are priced out of the reach of most people.

c) Galloping Inflation

When inflation rises to 10 percent or more, it wreaks absolute havoc on the economy. Money loses value so fast that business and employee income can't keep up with costs and prices. Foreign investors avoid the country, depriving it of needed capital. The economy becomes unstable, and government leaders lose credibility. Galloping inflation must be prevented at all costs.

d) Hyperinflation

Hyperinflation is when prices skyrocket more than 50 percent a month. It is very rare. In fact, most examples of hyperinflation have occurred only when governments printed money to pay for wars. Examples of hyperinflation include Germany in the 1920s, Zimbabwe in the 2000s, and Venezuela in the 2010s. The last time America experienced hyperinflation was during its civil war.

Problems caused by inflation

- Income redistribution: One risk of higher inflation is that it has a regressive effect on lower-income families and older people in society. This happen when prices for food and domestic utilities such as water and heating rises at a rapid rate.

- Falling real incomes: With millions of people facing a cut in their wages or at best a pay freeze, rising inflation leads to a fall in real incomes.

- Negative real interest rates: If interest rates on savings accounts are lower than the rate of inflation, then people who rely on interest from their savings will be poorer.

- Cost of borrowing: High inflation may also lead to higher borrowing costs for businesses and people needing loans and mortgages as financial markets protect themselves against rising prices and increase the cost of borrowing on short and longer-term debt. There is also pressure on the government to increase the value of the state pension and unemployment benefits and other welfare payments as the cost of living climbs higher.

- Risks of wage inflation: High inflation can lead to an increase in pay claims as people look to protect their real incomes. This can lead to a rise in unit labour costs and lower profits for businesses.

- Business competitiveness: If one country has a much higher rate of inflation than others for a considerable period of time, this will make its exports less price competitive in world markets. Eventually this may show through in reduced export orders, lower profits and fewer jobs, and also in a worsening of a country's trade balance. A fall in exports can trigger negative multiplier and accelerator effects on national income and employment.

- Business uncertainty: High and volatile inflation is not good for business confidence partly because they cannot be sure of what their costs and prices are likely to be. This uncertainty might lead to a lower level of capital investment spending.

Causes of Inflation

i) Demand-pull inflation

Demand pull inflation occurs when aggregate demand is growing at an unsustainable rate leading to increased pressure on scarce resources and a positive output gap. When there is excess demand, producers can raise their prices and achieve bigger profit margins. Demand-pull inflation becomes a threat when an economy has experienced a boom with GDP rising faster than the long-run trend growth of potential GDP. Demand-pull inflation is likely when there is full employment of resources and SRAS is inelastic

Main causes of Demand-Pull Inflation=

- A depreciation of the exchange rate increases the price of imports and reduces the foreign price of a country's exports. If consumers buy fewer imports, while exports grow, AD in will rise – and there may be a multiplier effect on the level of demand and output
- Higher demand from a fiscal stimulus e.g. lower direct or indirect taxes or higher government spending. If direct taxes are reduced, consumers have more disposable income causing demand to rise. Higher government spending and increased borrowing creates extra demand in the circular flow
- Monetary stimulus to the economy: A fall in interest rates may stimulate too much demand – for example in raising demand for loans or in leading to house price inflation. Monetarist economists believe that inflation is caused by “too much money chasing too few goods" and that governments can lose control of inflation if they allow the financial system to expand the money supply too quickly.

ii) Cost-push inflation

Cost-push inflation occurs when firms respond to rising costs by increasing prices in order to protect their profit margins.

Main causes of Cost-push inflation

- Component costs: e.g. an increase in the prices of raw materials and other components. This might be because of a rise in commodity prices such as oil, copper and agricultural products used in food processing. A recent example has been a surge in the world price of wheat.

- Rising labour costs - caused by wage increases, which are greater than improvements in productivity. Wage costs often rise when unemployment is low because skilled workers become scarce and this can drive pay levels higher. Wages might increase when people expect higher inflation so they ask for more pay in order to protect their real incomes. Trade unions may use their bargaining power to bid for and achieve increasing wages, this could be a cause of cost-push inflation.

- Expectations of inflation are important in shaping what actually happens to inflation. When people see prices are rising for everyday items they get concerned about the effects of inflation on their real standard of living. One of the dangers of a pick-up in inflation is what the Bank of England calls “second-round effects" i.e. an initial rise in prices triggers a burst of higher pay claims as workers look to protect their way of life. This is also known as a “wage-price effect".

- Higher indirect taxes – for example a rise in the duty on alcohol, fuels and cigarettes, or a rise in Value Added Tax. Depending on the price elasticity of demand and supply for their products, suppliers may choose to pass on the burden of the tax onto consumers.

- A fall in the exchange rate – this can cause cost push inflation because it leads to an increase in the prices of imported products such as essential raw materials, components and finished products
- Monopoly employers/profit-push inflation – where dominants firms in a market use their market power (at whatever level of demand) to increase prices well above costs.

Measures to cure effects of inflation

1. *Monetary Measures:*

Monetary measures aim at reducing money incomes.

a) Credit Control:

One of the important monetary measures is monetary policy. The central bank of the country adopts a number of methods to control the quantity and quality of credit. For this purpose, it raises the bank rates, sells securities in the open market, raises the reserve ratio, and adopts a number of selective credit control measures, such as raising margin requirements and regulating consumer credit. Monetary policy may not be effective in controlling inflation, if inflation is due to cost-push factors. Monetary policy can only be helpful in controlling inflation due to demand-pull factors.

b) Demonetization of Currency:

However, one of the monetary measures is to demonetize currency of higher denominations. Such a measures is usually adopted when there is abundance of black money in the country.

c) Issue of New Currency:

The most extreme monetary measure is the issue of new currency in place of the old currency. Under this system, one new note is exchanged for a number of notes of the old currency. The value of bank deposits is also fixed accordingly. Such a measure is adopted when there is an excessive issue of notes and there is hyperinflation in the country. It is a very effective measure. But is inequitable for its hurts the small depositors the most.

2. Fiscal Measures:

Monetary policy alone is incapable of controlling inflation. It should, therefore, be supplemented by fiscal measures. Fiscal measures are highly effective for controlling government expenditure, personal consumption expenditure, and private and public investment.

The principal fiscal measures are the following:

a) Reduction in Unnecessary Expenditure:

The government should reduce unnecessary expenditure on non-development activities in order to curb inflation. This will also put a check on private expenditure which is dependent upon government demand for goods and services. But it is not easy to cut government expenditure. Though this measure is always welcome but it becomes difficult to distinguish between essential and non-essential expenditure. Therefore, this measure should be supplemented by taxation.

b) Increase in Taxes:

To cut personal consumption expenditure, the rates of personal, corporate and commodity taxes should be raised and even new taxes should be levied, but the rates of taxes should not be so high as to discourage saving, investment and production. Rather, the tax system should provide larger incentives to those who save, invest and produce more.

c) Increase in Savings:

Another measure is to increase savings on the part of the people. This will tend to reduce disposable income with the people, and hence personal consumption expenditure. But due to the rising cost of living, people are not in a position to save much voluntarily.

d) Surplus Budgets:

An important measure is to adopt anti-inflationary budgetary policy. For this purpose, the government should give up deficit financing and instead have surplus budgets. It means collecting more in revenues and spending less.

e) Public Debt:

At the same time, it should stop repayment of public debt and postpone it to some future date till inflationary pressures are controlled within the economy. Instead, the government should borrow more to reduce money supply with the public.

Self-Examination Questions

1. Give the meaning of money.
2. What are the primary functions of money?
3. What is the Quantity Theory of Money?
4. What is barter trade system?
5. Define money supply.
6. State the components of money supply.
7. Define a central bank and explain its functions with practical examples.
8. Define Cash Reserve Ratio (CRR)?
9. What are the costs of inflation?
10. What causes hyperinflations?

9

Public Finance and Fiscal Policy

Get Through Intro

The goal is to develop students' analytical and consulting skills in the area of public finance. The course is targeted to those students whose major is in public administration, business-government relations, or management in the service industry (education, health care, culture, etc.).Students examine the rationale for government intervention in a market economy, the assessment of public policy, and the impact of government expenditures and taxation on the economy and the citizenry. Topics include government activities, externalities, public goods, social security, fiscal deficits and public debt, principles of taxation, incidence and effects of taxation, and optimal taxation.

Furthermore, the goal of thistopic is to study fiscal policy in a macroeconomic context, using dynamic equilibrium models. We study how to tax, who to tax, and when to tax. We discuss issues of efficiency, countercyclical policy along the business cycles, when to issue debt and what kind of debt. Automatic stabilizers. These issues are all crucial to the understanding of macroeconomics in general and, in particular, in the current context where the fiscal stance of several countries leads to a lot of uncertainty. We study these issues in dynamic equilibrium models, study issues of fiscal sustainability, and interactions between fiscal and monetary policy and empirical measurements of effects of taxation and debt.

Learning Outcomes

a) Public Finance
- Public expenditure
- Factors which influence a country's size of Govt. expenditure
- Canons of public expenditure
- Government budget
- Public debt
- Types of public debts
- Burden of public debt.

b) Fiscal Policy
- Definition
- Role of the Fiscal Policy
- Source of Government Revenue
- Kinds/types of taxes
- Effects of taxes
- Determination and administration of tax in Tanzania

1. Public Finance

[Learning Outcome a]

The field of economics that analyzes government taxation and spending policies; Public Sector Economics and Public Economics

Public finance is a field of economics concerned with how a government raises money, how that money is spent and the effects of these activities on the economy and society. It studies how governments at all level snational, state and local provide the public with desired services and how they secure the financial resources to pay for these services.

Importance of Public Finance

1. Provision of public goods: For providing public goods like roads, military services and street lightsetc. public finance is needed. Business firms will have no incentive to produce such goods, as they get no payment from private individuals.

2. Public finance enables governments to tackle or offset undesirable side effects of a market economy. The side effects are called spill overs or externalities. For example, pollution. The governments can introduce recycling programmes to lessen pollution or they can make laws to restrict pollution or impose pollution charges or taxes on activities that bring about pollution.

3. Public finance helps governments to redistribute income. To reduce the inequality in the economy, the governments can impose taxes on the richer people and provide goods and services for the needy ones.

4. Public finance provides many a programme for moderating the incomes of the rich and the poor. Such programmes include social security, welfare and other social programmes.

5. The acceptance of the principle of welfare state, the role of public finance has been increasing. Modern governments are no more police states as the classical economists viewed.

6. As the scope of state participation in the economic activity is widening, the scope of public finance has also been increasing. Generation of employment opportunities, control of economic fluctuations like boom and depression, maintaining economic stability etc. are some of the thrust areas of the governments through fiscal operations.

Subject Matters of Public Finance

The subject matters of Public Finance can be broadly classified in to five categories a) Public revenue b) Public expenditure c) Public debt d) Financial administration e) Economic stabilization and f) Federal Finance.

a) Public Revenue:

The income of the states is referred to as Public Revenue. In this branch, we study the various ways of raising revenue by the public bodies. We also study the principles and effects of taxation and how the burden of taxation is shared among the various classes of society etc.

b) Public Expenditure

It deals with the principles and problems relating to the allocation of public spending. We study the fundamental principles governing the flow of public funds in to different channels, classification and justification of public expenditure; expenditure policies of governments and themeasures adopted for welfare state etc.

c) Public Debt

The governments borrow when its revenue falls short of its expenditure. Public debts is a study of various principles and methods of raising debts and their economic effects. It also deals with the methods of repayments and managements of public debts.

d) Financial Administration

It deals with the methods of Budget preparation, various types of Budgets, war Finance, Development Finance etc. Thus, financial administration refers to the mechanism by which the financial functions are carried on. In other words, financial administration studies the organizing and disbursing of the finances of the State.

e) Economic stabilization and Growth

The use of Public revenue and Public expenditure to secure stability in levels of prices by controlling inflationary as well as deflationary pressures is studied. Similarly the income and expenditure policies adopted by the government so as to attain full employment, optimum use of resources, equitable distribution of income etc. are also studied.

Public expenditure

Public expenditure refers to the expenses of public authorities like the Central, state and local governments. Public expenditure occupies a very important place in the study of public finance. It is the end of all financial activities of the government. Public expenditure is incurred basically to maximize social welfare. Classification of public expenditure refers to the systematic arrangement of different items on which the government incurs expenditure.

1. Revenue and Capital Expenditure:

A. **Revenue Expenditures** are recurrent or consumption expenditures incurred on public administration, defence forces, public health and education, maintenance of government machinery, subsidies and interest payments. These expenditures are recurrent in nature and they do not create any capital assets. Revenue expenditure is classified into development and non-development expenditure

i) **Development Expenditure**: The part of revenue expenditure that directly or indirectly contributes to the development of the country is known as development revenue expenditure. It includes expenditures on the maintenance and functioning of social and community services and physical infrastructure. For example, maintenance of education and public health infrastructure like schools, hospitals, irrigation facilities, electricity boards etc.

ii) **Non-Development Expenditure**: The part of revenue expenditure that may not directly contribute to economic development is known as non-development revenue expenditure. They include expenditures on the maintenance of defence establishments, administrative expenditure, interest payments, payment of old age pension etc.

B. **Capital Expenditures** are incurred on building durable assets, like highways, multipurpose dams, irrigation projects, buying machinery and equipment. They are a non-recurring type of expenditure in the form of capital investments. Such expenditures are expected to improve the productive capacity of the economy.

i) **Not all capital expenditures are productive**. Non-development capital expenditure on defence establishment which does not have any direct impact on economic development but is necessary for the security of the nation.

ii) Capital expenditures on social infrastructure like government schools, hospitals, primary health centers may not generate revenue and therefore cannot be termed productive in that sense, but they indirectly contribute to improving productivity.

2. *Productive and Unproductive Expenditure*

   a) Productive Expenditure: Expenditure on infrastructure development, public enterprises or development of agriculture increase productive capacity in the economy and bring income to the government through tax and non-tax revenues. Thus they are classified as productive expenditure.

   b) Unproductive Expenditure: Expenditures in the nature of consumption, such as defence, interest payments, expenditure on law and order, public administration do not create any productive asset which can bring income or returns to the government. Such expenses are classified as unproductive expenditures.

3. *Non-Transfer and Transfer Expenditure*

   a) Non-transfer Expenditures: Are incurred for buying or using goods and services. These include expenditure on defence, education, public health etc. Investment expenditures on capital assets are also non-transfer expenditures as the government gets capital goods and assets in return for them.

   b) Transfer Expenditures: Refer to those expenditures against which there is no corresponding transfer of real resources i.e. goods or services. These include expenditures incurred on old age pension, unemployment allowance, sickness benefits, interest payments on public debt and subsidies.

4. *Plan and Non-Plan Expenditure:*

   a) Plan Expenditures: Refer to the spending of the annual funds allocated by the Central government for development schemes outlined in the ongoing Five Year Plan. For example: Industrial Development, Agricultural Development, Infrastructure, Education & Health etc.

   b) Non-Plan Expenditures: Include all those expenditures of the government that are not included in the ongoing Five-Year Plan. They include both development and non-development expenditure. Part of the expenditure is obligatory in nature e.g. interest payments, pensions etc. and a part is essential obligation e.g. defence and internal security.

Factors which influence a country's size of Government expenditure

a) Size of the Country and Population:

We see an expansion of geographical area of almost all countries. Even in no-man's land one finds the activities of the modern government. Assuming a fixed size of a country, developing world has seen an enormous increase in population growth. Consequently, the expansion in adminis-trative activities of the government (like defence, police, and judiciary) has resulted in a growth of public expenditures in these areas.

(b) Defence Expenditure:

The tremen-dous growth of public expenditure can be attributed to threats of war. No great war has been conducted in the second half of the twentieth century. But the threats of war have not vanished; rather it looms large. Thus, mere sovereignty, demands a larger allocation of financial sources for defence preparedness.

(c) Welfare State:

The 19th century state was a 'police state' while, in 20th and 21st centuries modern state is a 'welfare state'. Even in a capitalist framework, socialistic principles are not altogether discarded. Since socialistic principles are respected here, modern governments have come out openly for socio-economic uplift of the masses. Various socio-economic programmes are undertaken to promote people's welfare. Modern governments spend huge money for the purpose of economic development. It plays an active role in the production of goods and services. Such investment is financed by the government. Besides development activities, welfare activities have grown tremendously. It spends money for providing various social security benefits. Social sectors like health, education, etc., receive a special treatment under the government patronage. It builds up not only social infrastructure but also economic infrastructure in the form of transport, electricity, etc. Provision of all these require huge finance. Since a hefty sum is required for financing these activities, modern governments are the only providers of money. However, various welfare activities of the government are largely shaped and influenced by the political leaders

(d) Economic Development:

Modern government has a great role to play in shaping an economy. Private capitalists are utterly incapable of financing economic development of a country. This incapacity of the private sector has prompted modern governments to invest in various sectors so that economic development occurs. Economic development is largely conditioned by the availability of economic infrastructure. Only by building up economic infrastructure, road, transport, electricity, etc., the structure of an economy can be made to improve. Obviously, for financing these activities, government spends money.

(e) Price Rise:

Increase in government expenditure is often ascribed to inflationary price rise.

Canons of public expenditure:

i. *The Principle of Maximum Social Advantage:* The government expenditure should be incurred in such a way that it should give benefit to the community as a whole. The aim of the public expenditure is the provision of maximum social advantage. If one section of the society or one particular group receives benefit of the public expenditure at the expense of the society as a whole, then that expenditure cannot be justified in any way, because it does not result in the greatest good to the public in general. So we can say that the public, expenditure should secure the maximum social advantage.

ii. The Principle of Economy: The principle of economy requires that government should spend money in such a manner that all wasteful expenditure is avoided. Economy does not mean miserliness or niggardliness. By economy we mean that public expenditure should be increased without any extravagance and duplication. If the hard-earned money of the people, collected through taxes, is thoughtlessly spent, the public expenditure will not confirm to the cannon of economy.

iii. The Principle of Sanction: According to the principle, all public expenditure should be incurred by getting prior sanction from the competent authority. The sanction is necessary because it helps in avoiding waste, extravagance, and overlapping of public money. Moreover, prior approval of the public expenditure makes it easy for the audit department to scrutinize the different items of expenditure and see whether the money has not been overspent or misappropriated.

iv. The Principle of balanced Budgets: Every government must try to keep its budgets well balanced. There should be neither ever recurring surpluses nor deficits in the budgets. Ever recurring surpluses are not desired because it shows that people are unnecessarily heavily taxed. If expenditure exceeds revenue every year, then that too is not a healthy sign because this is considered to be the sign of financial weakness of the country. The government, therefore, must try to live within its own means.

v. The Principle of Elasticity: The principle of elasticity requires that public expenditure should not in any way be rigidly fixed for all times. It should be rather fairly elastic. The public authorities should be in a position to vary the expenditure as the situation demands. During the period of depression, it should be possible for the government to increase the expenditure so that economy is lifted from low level of employment. During boom period, the state should be in a position to curtail the expenditure without causing any distress to the people.

vi. No unhealthy effect on Production and Distribution: The public expenditure should be arranged in such a way that it should not have adverse effect on production or distribution of wealth in the country. Public expenditure should aim at stimulating production and reducing inequalities of wealth distribution. If due to unwise public spending, wealth gets concentrated in a few hands, then its purpose is not served. The money really goes waste then.

Budgeting

Budget refers to an estimated statement. It is prepared by companies as well as government. It is for the purpose of attaining some goal. Budget can be defined as a financial and / or quantitative statement prepared and approved prior to a defined period of time of the policy to be pursued during that period for the purpose of attaining a given objective. It may include income, expenditure and employment of capital. It is often used for control purpose.

Types of Government Budget

i. Balanced Budget

A government budget is said to be a balanced budget if the estimated government expenditure is equal to expected government receipts in a particular financial year. Advocated by many classical economists, this type of budget is based on the principle of “living within means.” They believed the government’s expenditure should not exceed their revenue.
Though an ideal approach to achieve a balanced economy and maintain fiscal discipline, a balanced budget does not ensure financial stability at times of economic depression or deflation. Theoretically, it’s easy to balance the estimated expenditure and anticipated revenues but when it comes to practical implementation, such balance is hard to achieve.

Merits of a Balanced Budget

- Ensures economic stability, if implemented successfully.
- Ensures that the government refrains from imprudent expenditures.

Demerits of a Balanced Budget

- Unviable at times of recession and does not offer any solution to problems such as unemployment.

ii. *Deficit Budget*

A government budget is said to be a deficit budget if the estimated government expenditure exceeds the expected government revenue in a particular financial year. This type of budget is best suited for developing economies, such as India. Especially helpful at times of recession, a deficit budget helps generate additional demand and boost the rate of economic growth. Here, the government incurs the excessive expenditure to improve the employment rate. his results in an increase in demand for goods and services which helps in reviving the economy. The government covers this amount through public borrowings (by issuing government bonds) or by withdrawing from its accumulated reserve surplus.

Merits of a Deficit Budget

- Helps in addressing public concerns such as unemployment at times of economic recession.
- Enables the government to spend on public welfare.

Demerits of a Deficit Budget

- Can encourage imprudent expenditures by the government.
- Increases burden on the government by accumulating debts.

iii. *Surplus Budget*

A government budget is said to be a surplus budget if the expected government revenues exceed the estimated government expenditure in a particular financial year. This means that the government's earnings from taxes levied are greater than the amount the government spends on public welfare. A surplus budget denotes the financial affluence of a country. Such a budget can be implemented at times of inflation to reduce aggregate demand.

Budgetary Control

It is a process in which budget is set and actual is compared with budget to analyse variances. It means the establishment of budgets relating the responsibilities of executives to the prerequisite of policy and the continuous evaluation of actual with budgeted results either to secure by individual action the objective of that policy or to provide a base for its revision.

Objectives of Budget

i. Planning:
A set of targets/goals is often essential to lead and focus individual and group actions. Planning not only motivates the employees but also improves overall decision making.

ii. Directing:
Business is very complex and requires more formal direction and coordination. Once the budgets are in place they can be used to direct and coordinate operations in order to achieve the stated targets.

iii. Controlling:
The actual performance can be compared with the planned targets. This provides prompt feedback about performance. budget also prevents unplanned adhoc expenditure.

Advantages of Budgetary Control System

- Enables the managers/ administrators to conduct activities in efficient manner.Provides yardstick for measuring and evaluating the performance of individuals and their departments.
- Reveals the deviations, from the budget by comparing with actuals; Helps in prompt review process.
- Creates suitable conditions for the implementation of standard costing system.
- Acts as systematic base for framing future policies and targets.
- Inculcates the feeling of cost consciousness and goal orientation.
- Leads to effective utilization of various resources, as the activities are planned and executed effectively.

Components of Budgetary Control System

- Physical Budgets: Those budgets which contains information in terms of physical units about sales, production etc. for example, quantity of sales, quantity of production, inventories and manpower budgets are physical budgets.

- Cost budgets: Budgets which provides cost information in respect of manufacturing, selling, administration etc. for example, manufacturing cost, selling cost, administration cost and research and development cost budgets are cost budgets.

- Profit budgets: Budgets which enables in the ascertainment of profit, for example, sales budget, profit and loss budget, etc.

Public Debt/Borrowing

Public debt, sometimes also referred to as government debt, represents the total outstanding debt (bonds and other securities) of a country's central government borrowdd to finance the deficit budget. It is often expressed as a ratio of Gross Domestic Product (GDP). Public debt can be raised both externally and internally, where external debt is the debt owed to lenders outside the country and internal debt represents the government's obligations to domestic lenders. Public debt is an important source of resources for a government to finance public spending and fill holes in the budget. Public debt as a percentage of GDP is usually used as an indicator of the ability of a government to meet its future obligations.

Types of Public Debt

1. Internal and External Debt:

Public loans floated within the country are called internal debt. Public borrowings from other countries are referred as external debt. External debt represents a claim of foreigners against the real income (GNP) of the country, when it borrows from other countries and has to repay at the time of maturity. External public debt permits import of real resources. It enables the country to consume more than it produces.

2. Productive and Unproductive Debt:

Public debt is said to be productive or reproductive, when government loans are invested in productive assets or enterprises such as railways, irrigation, multipurpose projects etc., which yield a sufficient income to the public authority to pay out annual interest on the debt as well as help in repaying the principal in the long run. As such, a productive public debt is self-liquidating in nature; so the community experiences no net burden of such debt. An unproductive debt, on the other hand, is one which does not add to the productive assets of a country. When the government borrows for

unproductive purposes like financing a war, or for lavish expenditure on public administration, etc., such public loans are regarded as unproductive. Unproductive loans do not add to the productive capacity of the economy, so they are not self-liquidating. Unproductive public loans thus cast a net burden on the community, as for their servicing and repayment purpose, government will have to resort to additional taxation.

3. Compulsory and Voluntary Debt:

When government borrows from people by using coercive methods, loans so raised are referred to as compulsory public debt. Under the Compulsory Deposit Scheme in India, tax-payers have to compulsorily deposit a prescribed amount and defaulters are punished. This is a case of compulsory debt. Usually, public borrowings are voluntary in nature. When the government floats a loan by issuing securities, members of the public and institutions like commercial banks may subscribe to them.

4. Redeemable and Irredeemable Debts:

On the criterion of maturity, public debts may be classified as redeemable or irredeemable. Loans which the government promises to pay off at some future date are called redeemable debts. For redeemable debts, the government has to make some arrangement for their repayment. They are, therefore, terminable loans.

5. Short-term, Medium-term and Long-term loans:

According to their duration, redeemable loans may further be classified as short-term, medium-term or long--term debts. Short-term debts mature within a short period say, of 3 to 9 months. For instance, Treasury Bills are an instrument of credit extensively used as a means of short-term (usually 90 days) borrowing by the government, generally, for covering temporary deficits in the budgets. Interest rates on such loans are generally low. Long-term debts, on the other hand, are those repayable after a long period of time, generally, ten years or more. For development finance, such loans are usually raised by the government. Long-term loans usually bear a high rate of interest.

6. Funded and Unfunded Debt:

Funded debt is, in fact, a long-term debt, exceeding the duration of at least a year. It comprises securities which are marketable on the stock exchange. Funded debt in its proper sense is, however, an obligation to pay a fixed sum of interest, subject to the option of the government to repay the principal. In such debts, the creditor bond-holder has no right to anything but the interest. Unfunded debts, on the other hand, are for a comparatively short duration. They are generally redeemable within a year. Unfunded debts are, thus, incurred always in anticipation of public revenue, a temporary measure to meet current needs.

Burden of Public Debt

- Increases inequality: Purchasing power transfers from poor to rich.
- Adversely affects the ability and desire to work, save and invest
- Transfer purchasing power from young to older generation.
- Burden of unproductive debt: not self-liquidating
- Reduces private investment.
- Direct money burden: The size of the burden would depends on the rate of interest and amount of the loan incurred.
- Direct Real burden: It is measured in terms of loss of welfare suffered by people of the debtor of the country due to repayment of debt.
- Indirect money burden and Indirect Real burden : This is measured in terms of effect on the production and allocation of resources.
- Burden of unproductive foreign debt :The magnitude depends upon whether the debt is incurred for productive purpose or unproductive purpose. If incurred for unproductive purpose it will create greater burden on the community.
- Foreign currency burden increases

Redemption of Public Debt

Refers to escaping from the burden of public debt.

Various methods of Debt Redemption are as follows:

a) Repudiation: Writing off the loans i.e. not repaying
b) Refunding: Issue of new bonds and securities by the govt. to repay the matured loans
c) Conversion: Refers to a process by which public debt with higher interest is converted to a debt of lower interest rate.
d) Capital levy: Refers to a very heavy once for all tax on capital assets, property and wealth
e) Sinking Fund: Accumulating a part of public revenue every year for the repayment of debt. The most systematic and best method for debt redemption.
f) Surplus budget: When Public revenue is more than public expenditure there is a surplus budget. The surplus budget is used to clear off the public debts.

2. Fiscal Policy

[Learning Outcome b]

Fiscal policy is the use of government spending and taxation to influence the economy. Governments typically use fiscal policy to promote strong and sustainable growth and reduce poverty. The role and objectives of fiscal policy have gained prominence in the current crisis as governments have stepped in to support financial systems, jump-start growth, and mitigate the impact of the crisis on vulnerable groups.

The Role of Fiscal Policy

- Fiscal policy and short-term demand management
- The impact of automatic stabilizers
- Fiscal policy and its impact on potential output
- Evaluation of Fiscal Policy

Role of the Fiscal Policy

- Short-Term Stabilization: One of the big functions of fiscal policy is to stabilize the economy on a year-by-year or period-by-period basis. If the economy is sluggish or in crisis, the government might roll out some combination of spending and tax relief to help get things moving again. That's called a loose or expansionary approach.

- Longer-Term Development: Speeding up a slow economy and slowing down a fast one are both short-term objectives, but they share the same goal: creating a stable framework for long-term growth. If the economy never becomes too hot or too cold, companies like yours can make long-term plans in the secure knowledge that you won't be blindsided by a disastrous economic meltdown.

- Allocating and Distributing Resources: Any national government commands pretty substantial revenues, and that's especially true of the United States. One of the key things fiscal policy tries to do is allocate and distribute those resources in a way that creates the greatest benefit for the economy, and the country, as a whole. A large portion of the government's resources go to defense and national security, for example, which protect every citizen.

- Maximizing Employment: A fourth goal of fiscal policy is full employment, which is closely linked to the other goals. A stable and growing economy generates jobs as a side effect – and high levels of employment mean there are plenty of people with paychecks to spend. That stimulates local economies, which helps companies grow, which in turn creates more employment

Sources of Government Revenue

1. Tax

A tax is a compulsory levy imposed by a public authority against which tax payers cannot claim anything. It is not imposed as a penalty for only legal offence. The essence of a tax, as distinguished from other charges by the government, is the absence of a direct quid pro quo (i.e., exchange of favour) between the tax payer and the public authority.

Kinds/types of taxes

Direct Tax

A Direct tax is a kind of charge, which is imposed directly on the taxpayer and paid directly to the government by the persons (juristic or natural) on whom it is imposed. A direct tax is one that cannot be shifted by the taxpayer to someone else. The some important direct taxes imposed in India are as under:

a) *Income Tax:* An income tax is a tax that governments impose on income generated by businesses and individuals within their jurisdiction.
*b) Corporation Tax:*An assessment levied by a government on the profits of a company. The rate of corporate income tax paid by a business varies between countries, although since corporations are legal entities distinct from their owners and operators, they are typically taxed as if they were people.
c) *Property Tax:* Property tax or 'house tax' is a local tax on buildings, along with appurtenant land, and imposed on owners. The tax power is vested in the states and it is delegated by law to the local bodies, specifying the valuation method, rate band, and collection procedures.
d) *Transfer taxes:* The most common form of transfer taxes is the estate tax. Such tax is levied on the taxable portion of the property of a deceased individual, including trusts and financial accounts. A gift tax is also another form wherein a certain amount is collected from people who are transferring properties to another individual.

Indirect Tax:

An indirect tax is a tax collected by an intermediary (such as a retail store) from the person who bears the ultimate economic burden of the tax (such as the customer). An indirect tax is one that can be shifted by the taxpayer to someone else. An indirect tax may increase the price of a good so that consumers are actually paying the tax by paying more for the products. The some important indirect taxes imposed in India are as under:

a) *Customs Duty:* A tax levied on imports (and, sometimes, on exports) by the customs authorities of a country to raise state revenue, and/or to protect domestic industries from more efficient or predatory competitors from abroad.
b) *Excise Duty*: An excise tax is an indirect tax charged by the government on the sale of a particular good or service.
c) *Service Tax:* Service tax is a tax levied by the government on service providers on certain service transactions, but is actually borne by the customers.
d) *Value added tax (VAT):* Indirect tax on the domestic consumption of goods and services, except those that are zero-rated (such as food and essential drugs) or are otherwise exempt (such as exports). It is levied at each stage in the chain of production and distribution from raw materials to the final sale based on the value (price) added at each stage.

Effects of tax

a) Effects of Taxation on Production:

Taxation can influence production and growth. Such effects on production are analysed under three heads:

i. effects on the ability to work, save and invest
ii. effects on the will to work, save and invest
iii. Effects on the allocation of resources.

b) Effects on the Ability to Work Save:

Imposition of taxes results in the reduction of disposable income of the taxpayers. This will reduce their expenditure on necessaries which are required to be consumed for the sake of improving efficiency. As efficiency suffers ability to work declines. This ultimately adversely affects savings and investment. However, this happens in the case of poor persons.

c) Effects on the will to Work, Save and Invest:

The effects of taxation on the willingness to work, save and invest are partly the result of money burden of tax and partly the result of psychological burden of tax. Taxes which are temporarily imposed to meet any emergency (e.g., Kargil Tax imposed for a year or so) or taxes imposed on windfall gain (e.g., lottery income) do not produce adverse effects on the desire to work, save and invest. But if taxes are expected to continue in future, it will reduce the willingness to work and save of the taxpayers.

d) Effects on the Allocation of Resources:

By diverting resources to the desired directions, taxation can influence the volume or the size of production as well as the pattern of production in the economy. It may, in the ultimate analysis, produce some beneficial effects on production. High taxation on harmful drugs and commodities will reduce their consumption.

e) Effects of Taxation on Income Distribution:

Taxation has both favorable and unfavorable effects on the distribution of income and wealth. Whether taxes reduce or increase income inequality depends on the nature of taxes. A steeply progressive taxation system tends to reduce income inequality since the burden of such taxes falls heavily on the richer persons. But a regressive tax system increases the inequality of income. Further, taxes imposed heavily on luxuries and non-essential goods tend to have a favorable impact on income distribution. But taxes imposed on necessary articles may have regressive effect on income distribution.

Canons of taxation

The 'canons of taxation' were first developed by Adam Smith as a set of criteria by which to judge taxes. They are still widely accepted as providing a good basis by which to judge taxes. Smith's four canons were:

- The cost of collection must be low relative to the yield
- The timing and amount to be paid must be certain to the payer
- The means and timing of payment must be convenient to the payer
- Taxes should be levied according to ability to pay
- A tax must not hinder efficiency or should involve the least loss of efficiency
- A tax should be compatible with foreign tax systems
- Tax should automatically adjust to changes in the rate of inflation (particularly important in high inflation economies).

Important definitions of tax

- Tax evasion – illegal manipulation of one's affairs in order to reduce the taxes due.
- Tax avoidance – manipulation of one's affairs within the law in order to reduce the tax dues.
- Tax planning – arranging one's affairs to take advantage of the obvious and often intended effects of tax rules in order to maximize one's after-tax returns.

2. Rates:

Rates refer to local taxation, i.e., taxation levied by (or for) local rather than central government. Normally rates are proportional to the estimated rentable value of business and domestic properties. Rates are often criticised as being unrelated to income.

3. Fees:

Fee is a payment to defray the cost of each recurring service undertaken by the government, primarily in the public interest.

4. License fee:

A license fee is paid in those instances in which the govern-ment authority is invoked simply to confer a permission or a privilege.

5. Surplus of the public sector units:

The government acts like a business- person and the public acts like its customers. The government may either sell goods or render services like train, city bus, electricity, transport, posts and telegraphs, water supply, etc. The government also earns revenue from the production of commodities like steel, oil, life-saving drugs, etc.

6. Fine and penalties:

They are the charges imposed on persons as a punishment for contravention of a law. The main purpose of these is not to raise revenue from the public but to force them to follow law and order of the country.

7. *Gifts and grants*:

Gifts are voluntary contribution from private individu-als or non-government donors to the government fund for specific purposes such as relief fund, defence fund during war or an emergency. However, this source provides a small portion of government revenue.

8. Printing of paper money:

It is another source of revenue of the govern-ment. It is a method of creating extra resources. This method is normally avoided because if once this method of financing is started, it becomes difficult to stop it.

9. Borrowings:

Borrowings from the public are another source of govern-ment revenue. It includes loans from the public in the form of deposits, bonds, etc. and also from the foreign agencies and organisations.

Tax administration in Tanzania

Students should read about (Formation of Tanzania Revenue Authority and its role, Tax administration reforms, Challenges and Strategies)

Self-Examination Questions

1. Explain importance of Budgeting with practical examples from Tanzania.
2. What are the major sources of government revenue
3. Taxation is often justified by the need to correct market failure.
4. Describe two other reasons why the government has a need to charge taxation.
5. Define the terms ‘excise’ and ‘customs duties’ and identify how each is used to affect economic behaviour.
6. Higher tax rates are often cited as necessary to reduce a government deficit
7. Define the terms ‘public deficit’ and ‘public debt’, explaining the relationship between them.

10

International Trade Theory and Policy

Get Through Intro

The reason for the emergence of international trade is that the human wants are varied and unlimited and no single country possesses the adequate resources to satisfy all these wants. Hence there arises a need for interdependence between countries in the form of international trade. So in order to make effective utilisation of the world's resources international trade is to be boosted and the problems faced by the countries should be dealt with. No country is self-sufficient in producing all the required goods and services from its own resources. This problem can be solved through international trade where the countries obtain those goods which it cannot produce or cannot produce as cheaply as possible in another country. However this is not the only basis for doing international trade, there are other reasons also. Trade economists have laid down different theories for international trade. This topic willguide youto understand how to different concepts and theories of International Trade

Learning Outcomes

a) Introduction to International Trade
- Free trade and protectionist
- Terms of trade
- Reasons for unfavorable terms of trade for LDCs
- Theories of International Trade (comparative and absolute advantage)
- Trade policy (Import Tariffs, Export Subsidies, Quotas and Non-Tarrif Barriers)
- Tanzania trade policies and strategies

b) Overview of Regional Integration (EAC,COMESA, ECOWAS, SADC, EU)

1. Introduction to International Trade

[Learning Outcome a]

Definition of International Trade

Exchange of raw materials and manufactured goods (and services) across national borders

Reasons for International Trade.

Following points explain the need and importance of International trade to a nation:

- *Division of labor and specialization*: International trade leads to division of labor and specialization at the world level. Some countries have abundant natural resources thus they should export raw materials and import finished goods from countries which are advanced in skilled manpower. Thus International trade gives benefits to all the countries and thereby leading to division of labor and specialization.

- *Optimum allocation and utilization of resources*: Due to specialization, unproductive lines can be eliminated and wastage of resources can be minimized or avoided. In other words, resources are channelized for the production of only those goods which would give highest returns. Thus there is rational allocation and utilization of resources at the international level due to foreign trade.

- *Equality of prices:* Prices can be stabilized by International trade. It helps to keep the demand and supply position stable, which in turn stabilizes the prices.

- *Availability of multiple choices*: International trade helps in providing a better choice to the consumers. It helps in making available new varieties to consumers all over the world, thus giving the consumers a wide variety of options to choose from.

- *Ensures quality and standard goods:* International trade is highly competitive in order to maintain and increase the demand for goods, the exporting countries have to keep up the quality of goods. Thus International trade ensures that the quality and standardized goods are produced.

- *Raises Standard of Living of the people*: Imports can facilitate standard of living of the people. This is because people can have a choice of new and better varieties of goods and services. By consuming new and better varieties of goods, people can improve their standard of living.

- *Generate employment opportunities:* International trade helps in generating employment opportunities, by increasing the mobility of labor and resources. It generates direct employment in import sector and indirect employment in other sector of the economy. Such as Industry, Service Sector (insurance, banking, transport, communication), etc.

- *Facilitate economic development:* Imports facilitate economic development of a nation. This is because with the import of capital goods and technology, a country can generate growth in all sectors of the economy, i.e. agriculture, industry and service sector.

- *Assistance during natural calamities:* During natural calamities such as earthquakes, floods, famines, etc., the affected countries face the problem of shortage of essential goods. International trade enables a country to import food grains and medicines from other countries to help the affected people.

- *Maintains balance of payment position:* Every country has to maintain its balance of payment position. Since every country has to import which results in outflow of foreign exchange, it also deals in export for the inflow of foreign exchange.

- *Brings reputation and helps earn goodwill*: A country which is involved in exports earns goodwill in the international market.

- *Promotes World Peace:* International trade brings countries closer. It facilitates transfer of technology and other assistance from developed countries to developing countries. It brings different countries closer due to economic relations arising out of trade agreements. Thus, International trade creates a friendly atmosphere for avoiding wars and conflicts. It promotes world peace as such countries try to maintain friendly relations among themselves.

Theories of International Trade

International trade theories are simply different theories to explain international trade. Trade is the concept of exchanging goods and services between two people or entities. International trade is then the concept of this exchange between people or entities in two different countries.

Theory of Mercantilism

Developed in the sixteenth century, mercantilism was one of the earliest efforts to develop an economic theory. This theory stated that a country's wealth was determined by the amount of its gold and silver holdings. In it's simplest sense, mercantilists believed that a country should increase its holdings of gold and silver by promoting exports and discouraging imports. In other words, if people in other countries buy more from you (exports) than they sell to you (imports), then they have to pay you the difference in gold and silver. The objective of each country was to have a trade surplus, or a situation where the value of exports are greater than the value of imports, and to avoid a trade deficit, or a situation where the value of imports is greater than the value of exports.

Absolute cost advantage (By Adam Smith)

A country will engage in International Trade if producing a good with fewer inputs (capital, labor, land, raw materials, etc.) per unit of output than other countries. If input prices are the same in two countries, the country with an absolute advantage in a good will have a lower unit cost of production for that good country should produce and export products in which it has an absolute advantage. A country should import products in which it has an absolute disadvantage.

Table 13: Per unit cost of production (Tshs.)

Country	Cotton	Tea
Tanzania	5	10
Kenya	10	5

Tanzania has absolute cost advantage in the production of cotton and Kenya in the production of tea. Both countries will gain if India produces and exports cotton and Indonesia produces and exports tea.

Comparative cost advantage (By David Ricardo)

Many questions may come in mind after reading the absolute advantage theory that what would happen if a country has absolute advantage in all the products or no absolute advantage in any of the

product. How such a country would benefit from trade? The answers of these questions was given by David Ricardo in his theory of comparative advantage, which states that trade can be beneficial for two countries if one country has absolute advantage in all the products and the other country has no absolute advantage in any of the products. Focus on comparative cost advantage not on absolute cost advantage. Each country specialises in the production of that commodity in which its comparative cost of production is the least. A country will export those commodities in which its comparative costs are less. A country will import those commodities in which its comparative costs are high. According to Ricardo, "…a nation, like a person, gains from the trade by exporting the goods or services in which it has its greatest comparative advantage in productivity and importing those in which it has the least comparative advantage.

Suppose there are two countries Tanzania and Kenya, producing two commodities Coffee and Cotton with labor as the only factor of production. Now assume that both the countries have 200 laborers and they use 100 laborers to produce Coffee and 100 laborers to produce Cotton.

Table 14: production of Coffee and Cotton in Tanzania and Kenya before trade

Country	Coffee	Cotton
Tanzania	20	15
Kenya	40	10

Table 14 depicts that Tanzania can produce 20 units; whereas, Kenya can produce 15 units of Coffee by using 100 laborers. In addition, Tanzania can produce 40 units; whereas, Kenya can produce 10 units of Cotton by employing 100 laborers. Thus, Tanzania has absolute advantage in producing both the products. As already discussed, Tanzania employs same number of laborers (100 laborers in production of each good) in producing both Coffee and Cotton; however, the production of Cotton is more than the production of Coffee. By using Opportunity costs;

Table 15: Opportunity costs of production of Coffee and Cotton in Tanzania and Kenya before trade

Country	Coffee	Cotton
Tanzania	20 (15/20)=0.75	**15 (20/15)=1.33**
Kenya	**40(10/40)=0.25**	10 (40/10)=4

It shows that Tanzania has comparative advantage in producing Cotton (this is because Tanzania has low opportunity costs of producing cotton as compared to Kenya). Similarly, Kenya also employs same number of laborers (100 laborers in production of each good) in manufacturing Coffee and Cotton; however, its production of Coffee is more than the Cotton. It indicates that Kenya has comparative advantage in manufacturing Coffee (this is because Kenya has low opportunity costs of producing Coffee as compared to Tanzania).

Free trade and protectionist

Free trade

Free trade, also called laissez-faire, a policy by which a government does not discriminate against imports or interfere with exports by applying tariffs (to imports) or subsidies (to exports). A free-trade policy does not necessarily imply, however, that a country abandons all control and taxation of imports and exports.

Importance of Free Trade

- *Increased Economic Growth:* Even when taxes, tariffs, and other restrictions on trade are highly regulated instead of being fully eliminated, there is an economic benefit to all parties involved.

- *More Dynamic Business Climate*: Often, businesses were protected before the agreement. These local industries risked becoming stagnant and non-competitive on the global market. With the protection removed, they have the motivation to become true global competitors.

- *Lower Government Spending*: Many governments subsidize local industry segments. After the trade agreement removes subsidies, those funds can be put to better use.

- *Foreign Direct Investment:* Investors will flock to the country. This adds capital to expand local industries and boost domestic businesses.

- *Expertise:* Global companies have more expertise than domestic companies to develop local resources. That's especially true in mining, oil drilling, and manufacturing. Free trade agreements allow global firms access to these business opportunities. When the multinationals partner with local firms to develop the resources, they train them on the best practices. That gives local firms access to these new methods.

- *Technology Transfer:* Local companies also receive access to the latest technologies from their multinational partners. As local economies grow, so do job opportunities. Multi-national companies provide job training to local employees.

Disadvantages of Free Trade

- *It causes employment opportunities to be outsourced*: Global companies may bring more expertise and better practices to a local industry, but who gets those jobs? Free trade causes jobs to be outsourced because international workers are either more experienced, cheaper to hire, or are willing to work with fewer safety protections. Tariffs and taxation policies help to reduce labor outsourcing because it keeps product pricing at competitive levels.

- *There are reduced IP protections*: Intellectual property rights may not be taken as seriously by foreign governments or competitors as they are domestically. Inventions, patents, and processes may be copied in an environment of free trade and that reduces the potential of a company being able to create good jobs at fair wages. Even when these protections are in place, there is no guarantee that a foreign government will enforce the laws with the same rigor as a domestic government

- *There are often sub-standard working conditions:* Emerging markets and developing countries do not usually have the same laws in place that guard worker salaries and working conditions. Some markets even allow for children to be hired for heavy labor and factory positions that are sub-standard at best. Because free trade puts a point of emphasis on the lack of restrictions, it can promote poor working conditions that people are forced to endure if they wish to earn a living for their family.

- *It does not usually protect the environment:* Many free trade opportunities are based on the availability of natural resources. This causes the fastest harvesting methods possible to be used, such as clear-cutting or strip mining, and that can create long-term damage for local environments. It also means that natural resources are quickly depleted for the local population. An economy that is built on this process will often fail because once the resources are gone, there is nothing left to trade.

- *Free trade reduces revenues:* When free market principles can operate without being checked, revenues typically reduce because of high competition levels. This helps large countries, organizations, and entities because they are already priced into an economy of scale. Smaller countries, companies, and entities must find ways to replace the revenues they lose and this is not always possible.

- *It encourages urbanization:* There are two farms. One is a small family operation, while the other is a factory farm operation. The factory farm receives the same subsidies as the family operation, but because they produce many more products, they receive much more help from the government. This allows them to sell products at lower prices, which stores like because it generates more sales. Eventually, the family farm must either find its own niche to compete or the workers must look for employment elsewhere. That is why free trade often encourages urbanization.

Trade Protectionism

Trade protectionism is defined as a nation, or sometimes a group of nations working in conjunction as a trade bloc, creating trade barriers with the specific goal of protecting its economy from the possible perils of international trading. This is the opposite of free trade in which a government allows its citizenry to purchase goods and services from other countries or to sell their goods and services to other markets without any governmental restrictions, interference, or hinderances. The objective of trade protectionism is to protect a nation's vital economic interests such as its key industries, commodities, and employment of workers.

There are various methods of trade protectionism whose goal is to protect a nation's economic well-being. These include:

- **Tariffs** which are a tax on imports from other countries and foreign markets. Here, the government imposing the tariff is looking to restrict imports of foreign goods and services, protect its own industries and companies manufacturing such items and raise tax revenues. Tariffs could be specific in which there is a fixed tax rate or fee for each unit of a product or commodity brought into a nation. There are also ad valorem tariffs which are set as a proportion of the value of the imported product.

- **Quotas** are a direct restriction on the number of certain goods, products, and commodities that may be permitted to be imported into a nation. This import quota is generally enforced by the issuance of import licenses to a certain group of persons or companies. There is also voluntary export restraint (VER) that acts as a trade quota imposed by an exporting nation. VERs can also come in the form of political pressure on a nation by another country in order to stop the export of goods or commodities.

- **Subsidies** are government payments to domestic producers. This can come in the form of cash payments, low-to-no interest loans, tax breaks, and government ownership of common stock in domestic companies. Subsidies help domestic producers by having extra cash available for production of goods thereby lowering manufacturing costs and allowing these same companies to gain foreign markets.

- **Local content requirements** may be imposed by a nation seeking to decrease imports by setting a manufacturing requirement in which a stated part or parts of a product must be made domestically. This occurs by having a percent of a product manufactured domestically or that in value terms, such as 85 percent of its value, must be made locally.

- **Administrative trade policies** consist of bureaucratic rules, laws, and regulations designed to create serious difficulties for an importer of goods or commodities into a particular nation. Formal trade barriers can come in the form of onerous rules, regulations, administrative

requirements, and paperwork to be completed. Informal trade barriers include the inspection of every product, good, and commodity entering a nation in order to check for disease or suspicious content. This can take time, effort, and may often severely damage the item being inspected. Administrative policies can also involve setting high-level health and safety standards and difficult-to-obtain import licenses for foreign producers.

- **Antidumping policies** are enacted by a nation in order to prevent the selling of goods in a foreign market at a price far below their production costs in order to gain a substantial share of that nation's market. Anti-dumping rules can also include regulations prohibiting the sale of goods, products, or commodities below its fair market value.

- **Exchange rate controls** can be used to make a nation's product cheaper abroad by lowering the value of its currency in the foreign exchange markets. The premise is that a nation can sell its currency in foreign exchange markets to the point where its loses value against other currencies. This will cause the price of imports to rise while lowering the cost of its exports. This will help a nation, whether developed or developing, increase the opportunity to sell its products and goods in foreign markets.

Reasons for Trade Protectionism

- Protecting jobs and industries is a political argument for trade protectionism from the viewpoint that protecting worker's livelihood and the industries and the firms that employ them are vital to a nation's economic growth and well-being. The premise is that without trade protectionism a nation could lose long-established industries and companies that first made a product in a particular nation. This will eventually result in the loss of jobs, rising unemployment, and eventual decrease of a nation's gross domestic product (GDP).

- National security is used for trade protectionist policies since the industries involved include defense-related companies, high-tech firms, and food producers. The argument here is that industries such as aerospace, advanced electronics, and semi-conductors are vital components of national defense policy and that relying on foreign manufacturers would seriously affect a nation's defense in time of war. By having manufacturing for defense items protected from foreign competition, trade protectionism is necessary for a nation's existence.

- Protecting consumers is an argument used by policymakers to protect consumers from unsafe imported products. Consumer advocates, domestic manufacturers, and certain policymakers claim that foreign-made goods may fail to follow requirements for product safety in the manufacturing and distribution process. This could result in serious illness, unsafe products, and even possibly death of the consumer. Domestic manufacturers argue that if they must follow government-imposed safety and production requirements then foreign producers must also do so.

- The infant industry argument was first put forth by Alexander Hamilton in 1792. This idea states that new manufacturers have an extremely difficult time competing against well-established, well-funded, extremely profitable companies in developed countries. New manufacturers in developing nations may not have the economic and financial resources, as well as the technology, physical equipment, and research and development expertise to compete against older, established firms. In order that infant industries and new companies gain market-share and a competitive edge against well-established firms, governments must put into place short-term support mechanisms for these infant industries until they have reached a level so they can compete with foreign companies. It can also be argued that a developing nation in attempting to diversify its economy, must protect its infant industries. Government intervention of an infant industry may come in the form of tariffs, subsidies, administrative trade policies, or quotas.

Terms of Trade

The terms of trade may be defined as the ratio of a price index of a country's exports to a price index of its imports over a given period:

$$ToT = P_{EX}/P_{IM} \quad or \quad ToT = P_{EX}/P_{IM} \times 100\%$$

where P_{Ex} represents the price index of exports and P_{Im} the price index of imports. By as much as its final ratio is higher than 1, or in percentage terms higher than 100%, so a country reports a higher increase in value arising from its development in foreign trade prices. According to economic theory, ToT should be greater than 1, in other words, the terms of trade should improve for those countries which lead the way in applying the results of scientific and technological progress in production. Most countries, however, are late in adjusting to economic and technical trends, and therefore report ToT of less than 1.The calculation of the terms of trade depends on the use of a price index that measures export and import prices.

In 2014, the island of Tanzania had an index of export prices of 15% (115) over the previous year and an index of import prices of 7% (107) over the previous year.

Tanzania's TOT = 115 / 107 X 100 = 107.5

The results show an improvement of 7.5% in the TOT. TOTs in excess of 100 are said to be improving, while TOTs below 100 are said to be deteriorating.

Note: 15% becomes 115 in the formula because it is “over” the previous year, the previous year being 100

Reasons for deteriorating (unfavourable terms of trade)

1. High Cost-ratios:

This happens to the countries that have high cost-ratios on account of the low productivity of factors of production.

2. Backward Technology:

Countries which are in a backward state of technology; hence, their relative productivity is low, so the cost of production and domestic price-structure is relatively high. This puts the poor country at a disadvantageous bargaining position, consequently the terms of trade are settled in favour of the advanced country.

3. Primary Products:

Countries which depends on agrarian economics. Their exports consist of primary products and imports consist of capital goods. Again in these countries agricultural production is very much prone to the operation of the law of diminishing returns due to lack of mechanisation and agricultural reforms. On the other hand, industrial production in advanced countries is subject to the law of increasing returns due to improved and changing technology. Thus, terms of trade between the exchange of primary products and industrial products are always settled in favour of the latter and against the former.

4. High Population Growth:

Countries which are over-populated and their growth rate is also high. Consequently, there is a high internal demand for the goods produced in general which causes low exportable surplus with these

countries. Again, the relative import demand of these countries is also high and inelastic. This causes their terms of trade to deteriorate.

5. Greater Dependency:

Countries which are greatly dependent for their capital goods requirement and other needs on the advanced countries. They have no other alternative in view of the absence of import substitution. While, advanced countries are least dependent on the poor countries as they are capable of producing import substitutes. Hence, poor countries have always weak bargaining power, so they have to accept even terms of trade which are very much against their interest.

6. Lack of Import Substitutes :

Countries which are greatly dependant on the other countries for their imports and have not developed import substitutes. Might lead to weak bargaining position in the international trade.

7. Low income elasticity of demand for primary commodities - as real world incomes have grown, the demand for primary commodities has increased less than proportionately

2. Regional integration

[Learning Outcome b]

Regional integration is the process by which two or more nation-states agree to co-operate and work closely together to achieve peace, stability and wealth. Usually integration involves one or more written agreements that describe the areas of cooperation in detail, as well as some coordinating bodies representing the countries involved.

This process is overseen by the governments of the specific states. Regional cooperation can take different forms, depending on the objectives of the states that are involved.1 States may want to come together for economic reasons or even further to form a political alliance or union. History shows us, many states across the globe enter into regional agreements for economic purpose. In Africa in particular, there has been a clamour and trend towards integration with numerous regional blocs being formed in various regions of the continent. The Africa Union recognizes eight regional economic communities (REC)- Arab Maghreb Union (AMU), Common market for Eastern and Southern Africa (COMESA), Community for sahel-saharan states (CEN-SAD), East Africa Community (EAC), Economic community of central Africa states (ECCAS), Intergovernmental Authority ondevelopment (IGAD) and Southern African Development Community (SADC).

The decision to form or enter a regional economic community is based on many considerations for example, in many parts of Africa and the world the coming together of different sovereign states will be based on shared cultural, political, economic and societal values as well as shared history of association or cooperation.

Levels of Regional Integration

There are five levels. Free trade area is the lowest extent of national integration, political union the greatest. Each level of integration incorporates the properties of those levels that precede it.

1. Free Trade Area

a) Countries remove all barriers to trade among members, but each country determines its own barriers against nonmembers.
b) Policies differ greatly against nonmember countries from one country to another. Countries in a free trade area also establish a process to resolve trade disputes between members.

2. *Customs Union*

a) Countries remove all barriers to trade among members but erect a common trade policy against nonmembers.
b) Differs from a free trade area in that members treat all nonmembers similarly. Countries might also negotiate as a single entity with other supranational organizations such as the WTO.

3. *Common Market*

a) Countries remove all barriers to trade and the movement of labor and capital between themselves, but erect a common trade policy against nonmembers.
b) Adds the free movement of important factors of production such as people and cross-border investment. Requires cooperation in economic and labor policy, so is very difficult to attain.

4. *Economic Union*

a) Countries remove barriers to trade and the movement of labor and capital, erect a common trade policy against nonmembers, and coordinate their economic policies.
b) Requires members to harmonize their tax, monetary, and fiscal policies, create a common currency, and concede a certain amount of sovereignty to the supranational organization.

5. *Political Union*

a) Countries coordinate aspects of economic and political systems.
b) Members accept a common stance on economic and political policies regarding nonmember nations. Nations are allowed a degree of freedom in setting certain political and economic policies within their territories.

Benefits of Regional Integration

- *Trade Creation:* Increase in the level of trade between nations that results from regional economic integration.
- *Greater Consensus:* The Benefits of trying to eliminate trade barriers in smaller groups of countries.It can be easier to gain consensus from fewer members as opposed to.
- *Political Cooperation:* Be political benefits from efforts toward regional economic Integration. A group of nations can have significantly greater political weight than each nation has individually.
- *Employment Opportunities*: Expand employment opportunities by enabling people to move from one country to another. Simply to earn a higher wage.

Drawbacks of Regional Integration

- *Trade diversion:* Diversion of trade away from nations not belonging to a trading bloc and toward member nations.
- *Shifts in Employment*: Industries requiring mostly unskilled labor.
- *Loss of National Sovereignty:* Successive levels of integration require that nations surrender more of their national sovereignty.

Assignment

Students should study Regional Integrations particularly EAC, SADC, ECOWAS, COMESA and EU. At the end of this assignment students have a clear understanding of objectives, challenges, benefits and drawbacks of each integration.

Self-Examination Questions

1. What is International Trade
2. What are the benefits of International Trade
3. With examples explain the major theories of International Trade
4. Briefly explain the major steps/levels of Regional Intergration
5. What are the challenges that lead to unfavourable terms of trade in most Least Developing Countries
6. With examples explain the methods used by government for Trade protectionism
7. Consider two countries (Tanzania and the Uganda) that use labor as an input to produce two goods: Banana and Tea.
    - In Tanzania, one hour of a worker's labor can produce either 5 cloths or 10 Banana.
    - In the Uganda, one hour of a worker's labor can produce either 20 cloth or 20 Tea.

Table 16: Production of Tea and Banana of Tanzania and Kenya before trade

Country	Tea	Banana
Tanzania	5	10
Uganda	20	20

How will this two countries trade and which goods should they exchange

11

Unemployment

Get Through Intro

Unemployment is a key economic indicator because it signals the (in)ability of workers to readily obtain gainful work to contribute to the productive output of the economy. More unemployed workers mean less total economic production will take place than might have otherwise. And unlike idle capital, unemployed workers will still need to maintain at least subsistence consumption during their period of unemployment. This means the economy with high unemployment has lower output without a proportional decline in the need for basic consumption. High, persistent unemployment can signal serious distress in an economy and even lead to social and political upheaval. The goal of this topic is to provide an understanding to the students on issues related to Unemployment with practical case studies and discussion.

Learning Outcomes

a) Employment and unemployment concepts

- Types of unemployment
- Causes of unemployment
- Policies to reduce unemployment
- Projection of employment and unemployment of Tanzania and the World

1. Employment and unemployment concepts [Learning Outcome a]

Unemployment occurs when a person who is actively searching for employment is unable to find work. Unemployment is often used as a measure of the health of the economy. The most frequent measure of unemployment is the unemployment rate, which is the number of unemployed people divided by the number of people in the labor force.

Unemployment occurs when workers who want to work are unable to find jobs, which means lower economic output, while still requiring subsistence. High rates of unemployment are a signal of economic distress, but extremely low rates of unemployment may signal an overheated economy. Unemployment can be classified as frictional, cyclical, structural, or institutional. Unemployment data are collected and published by government agencies in a variety of ways.

This brings up the issue of the various definitions: the *labour force,* the *participation rate*, and the *unemployment rate.*

Labour force: People with a job or registered as looking for work. It is the total number of workers,including both the employed and the unemployed.

$$\text{Labor force} = \text{Number of employed} + \text{Number of unemployed}$$

Participation rate: the fraction of the population of working age who are in the labour force. It is
the percentage of the adult population that is in the labor force.

$$\text{Labor - force participation rate} = \frac{\text{Labor force}}{\text{Adult population}} \times 100\%$$

Unemployment rate: the fraction of the labour force without a job but registered as looking for work. It is the percentage of the labor force that is unemployed.

$$\text{Unemployment rate} = \frac{\text{Number of unemployed}}{\text{Labor force}} \times 100\%$$

Types of Unemployment

There are many categories of unemployment that are present around and here are a few types of unemployment with details.

1. *Structural unemployment:*

As per the structural unemployment definition, the market economies always have some kind of changes that takes place. In that manner, demand increases for certain job skills whereas others are outdated and mostly less demanded. A simple example is that after the evolution of automobiles there is high demand for automobile mechanics and reduced demand for farriers. In this kind of employment, there is a mismatch in the various categories of jobs that are offered which are related to skills, education, experience, offers, and also the geographical location of the employees.

2. Frictional unemployment:

As per the frictional unemployment definition, this type of unemployment occurs due to the people who try to switch over from one job to the other. There are people who look out for better jobs. As they are aware of the complete information, it takes time for them to settle down in new jobs and hence frictional unemployment occurs. In the same manner, there may be people who are moving into new geographic locations and they may consume time to get settled into a new job.

3. Cyclical unemployment

As per the cyclical unemployment definition, when there is an overturn in the complete business activity, this type of unemployment occurs. It is also mentioned that complete unemployment is not the same as zero unemployment. In the market economy, there is certain unemployment that is considered as the efficient labor market. By considering frictional and structural factors, full employment is one level of employment that is present when employment is normal.

4. Voluntary and involuntary unemployment

Unemployment is categorized into voluntary and involuntary unemployment. Voluntary employment is where the individual leaves the jobs willingly and looks out for new jobs. Involuntary employment is one where unemployment takes place due to people who get laid off or fired off from the jobs and they need to find a new job.

5. Demand deficient unemployment

When there is a deficiency of aggregate demand, with demand which is insufficient to generate full employment it is mentioned as demand deficient employment.

6. Regional unemployment

When the local areas of the economy are affected by structural unemployment, then it is mentioned as regional unemployment.

7. Classical unemployment

When wages for the employees are too high, then they are classified as classical unemployment. The economic theory before the 1930's was dominated by this classical unemployment. Due to the un-acceptance of low wages, the workers were blamed and also they insisted for high wages. The other name for classical unemployment is real wage unemployment.

8. Seasonal unemployment

The prevalence of seasonal unemployment is because few industries produce and distribute their goods only at specific times in a year.

Tourism, farming, and construction are a few industries where seasonal unemployment occurs.

9. Casual unemployment

In industries where workers are appointed on day to day basis such as agriculture, construction, catering etc. have more chances for unemployment as they recruit employees on a contract basis and can be terminated at any time. Once the contract of workers ends at specified time, then he needs to find a new job in the same industry which has started somewhere else.

10. Technological unemployment

At times of introducing new machinery, labor saving devices, following new methods for production may lead to the replacement of employees by machine. This is called technological

unemployment.Technological improvement can pave the way to structural unemployment in an economy. This is usually described as structural unemployment. The main reason for technological unemployment is by the introduction of machinery. This is considered as a temporary aspect.

11. Chronic unemployment

Chronic unemployment occurs when a country has unemployment for the long term. Malicious poverty is a reason for chronic unemployment in underdeveloped countries. The main reasons for chronic unemployment in many underdeveloped countries are low capital formation, high population growth, under-utilization and primitive stage of technology.

12. Disguised unemployment

Disguised unemployment is associated with abundant manpower, when employees with very minimal or zero marginal productivity are removed, it would not affect the total output.For example, a piece of land is given to four people where they are able to cultivate and product in an effective manner.If there are six workers employed for the same land and two workers do not contribute and their marginal, productivity would be zero. By eradicating these two workers, there will not be any impact on the output.

Theories of Unemployment

1. Classical Unemployment Theory

Several schools of thought in economics such as classical economics and the Austrian School of economics argue that unemployment increases with government regulation or intervention. Their arguments collectively form the classical unemployment theory. There are different ways regulations and interventions contribute to unemployment. For example, raising the minimum wage increases the labor costs more than the economic value of the actual labor, especially the value of jobs that merely require low competencies. Businesses respond to these minimum wage laws by refusing to hire more laborers to reduce their costs and optimize their operations. Labor laws that restrict layoffs or downsizing, promote the security of tenure, and mandate the provision of benefits beyond wages are another example. Some businesses are less likely to hire or expand their workforce because of the legal and financial risks stemming from stringent labor laws.

2. Implicit Contract Theory'

The implicit contract theory specifically claims that labor contracts and labor laws make it difficult for employers to cut the wage of their existing laborers. Hence, during a recession in which businesses need to save costs and optimize their operations, they usually choose to layoff their laborers or downsize their workforce instead of implementing wage reductions.

3. Efficiency Wage Theory

Renowned economist Alfred Marshall introduced the term "efficiency-wages" in his 1890 book "Principles of Economics" to indicate the equivalent wage per efficiency unity of labor. Proponents of this preliminary concept argued that employers should pay their workers differently based on their efficiency. In other words, a more efficient worker should have a higher wage than a less efficient worker. The Marshallian concept evolved until it became the efficiency wage theory. It argues that businesses can operate more efficiently and become more productive if they provide wages above the equilibrium level. To be specific, increasing wages beyond the current labor benchmark could lead to better efforts from the employees, decrease employee turnover, attract highly competent employees, and promote the wellbeing of employees.

However, there is a downside to paying high wages beyond the equilibrium level. A high-paying employer will naturally attract more employees. Other employers might also offer higher payouts to keep up with the competition in the labor market. Unemployment might transpire if this practice becomes widespread because it not only makes labor costlier, thus compelling employers not to expand their workforce, but also creates unrealistic expectations in the labor market in which employees would not dare offer to work for lower wage and employers would rather stay away from hiring individuals offering work for a lesser payout because such might be an indicator of incompetence.

4. Keynesian Theory of Unemployment

Keynesian economics provides an alternative theory of unemployment. John Maynard Keynes and adherents of the Keynesian school of thought have explained that unemployment occurs when there is not enough aggregate demand in the economy. After all, if demands for goods and services decrease, then there is a lesser need for production and consequently, lesser needs for workers.

Take note that Keynesian economics also argues that market economies or capitalist economic systems naturally undergo a boom-and-bust cycle. Low aggregate demand and unemployment characterize the bust phase of the economy. Employment rate will normalize if the economy manages to reenter the boom phase. Hence, the Keynesian theory of unemployment serves as the basis for explaining cyclical unemployment because it describes the effects of frequent shifts in business and economic cycle on the labor market.

Because of the cyclical nature of unemployment and based on one of the primary tenets of Keynesian economics about the importance of government interventions, the Keynesian theory of unemployment recommends government-driven aggregate demand to reduce unemployment, promote consumer confidence, and revitalize production during economic recessions. Government intervention was demonstrated during the Great Depression and the 2008 Financial Crisis.

5. Marxian Theory of Unemployment

Somehow similar to the Keynesian theory, the Marxian theory of unemployment also believes that there is a relationship between economic demand and employment rate. In his manuscript “Theories of Surplus Value,” German philosopher and economist Karl Marx argued that unemployment is not only inherent in a capitalist system but also necessary.

Marx specifically argued that the purpose of the proletariat or the class of wage earners in a capitalist system is to provide a “reserve army of labor” necessary to create downward pressure on wages. He divided further this class into two subgroups: the surplus labor or the employed individuals and the under-employment or the unemployed individuals.

Nevertheless, members of this reserve army of labor compete for scarce jobs while driving wages lower and lower. The capitalist system allows capitalists or the owners of the means of production to manipulate the labor market by perpetuating unemployment and thus, limit the capacity of laborers to demand higher and fairer wages. The situation also demonstrates the theory of alienation of Marx in which workers are alienated from other workers, as well as from their species-essence.

Causes of Unemployment

Unemployment is caused by many factors in a modern market economy:

- Rapid technological change
- Business cycle or recessions
- Seasonal factors (in some industries particularly such as changes in tastes and climatic conditions which affects demand for certain products and services)

- Individual perceptions and willingness to work and search for jobs
- Their values and attitudes towards some jobs and about employers
- Accessibility for retraining and acquisition of work skills

Effects or Consequences of Unemployment

1. Affects the economy of a region very negatively

It is rather interesting to note that the global economic crisis is not merely a cause but also an effect of unemployment. Once people are unemployed the government of a country becomes responsible for providing the people with amenities and facilities which they cannot afford. So when so many people of a country are unemployed it automatically results in recession.

2. Reduces the spending power of both the employed as well as unemployed

Once people are unemployed they are naturally unwilling to have any purchasing power. However besides the unemployed, even those who are employed are unwilling to spend a lot of money, simply because they fear that if things get worse and the company closes down they too might end up losing their jobs.

3. Makes the individual feel very depressed

In addition to affecting the country and society it also negatively effects the individual who begins to second guess all his decisions as well as his personal worth at such a time.

4. It is a cause of distress to the entire family

When someone in the family is unemployed, it is usually not just that one person but the entire family which is affected and has to suffer.In addition to money being scarce in the family, the family also has to cater to the emotional needs of the person who is unemployed.

5. Increase in crime in the country

Of all the negative effects of unemployment, one of the worst effects is that it leads to an increase in crime in the country. When bread winners in a family are unable to provide for their loved ones, they have no option but to resort to crime as well as fowl means in order to feed their family members. At such a time when people are unable to keep body and soul together, their conscience seizes to function and they do what seems correct to them at the moment as well as under the given circumstances. It is often said that desperate times call for desperate measures and that is the motto which such people choose to live by.

Selected Policies to reduce Unemployment

1. Government programs can help to reduce the amount of frictional unemployment.

2. These programs include:

a. Government-run employment agencies that give out information on job vacancies.

b. Public training programs that aim to ease the transition of workers from declining to growing industries and to help disadvantaged groups escape poverty.

3. Critics of these programs argue that the private labor market will do a better job of matching workers with employers and therefore the government should not be involved in the process of job search.

Projection of employment and unemployment of Tanzania and the World

Tanzania: Unemployment rate: For that indicator, The World Bank provides data for Tanzania from 1991 to 2018. The average value for Tanzania during that period was 3.62 percent with a minumum of 2.12 percent in 2014 and a maximum of 5.1 percent in 2001. See the global rankings for that indicator or use the country comparator to compare trends over time.The unemployment rate in Tanzania and other countries is defined as the number of unemployed people as percent of the labor force. The labor force includes the people who are either employed or unemployed, i.e. who don't have a job but are actively looking for one. The labor force does not include people who are not looking for work, children, and the retired.

The unemployment rate seldom declines below 4-5 percent even during boom times. There are always people who move between different sectors of the economy or between cities. When the economy goes into recession, then unemployment can reach much higher numbers, sometimes even in the double digits.

NB: Students should read different current policies and strategies by governments and other stakeholders to reduce unemployment in Tanzania and World

Self-Examination Questions

1. Which of the following would be included as a member of the labor force?

a. A full time college student.

b. A recent high school graduate looking for a first job.

c. A homemaker contributing 15 hours per week as a volunteer worker in a hospital.

d. A retired school teacher collecting social security benefits.

2. Which of the following people would be considered unemployed?

a. A full-time college student.

b. A recent high school graduate looking for a first job.

c. A retired school teaching collecting social security benefits.

d. A homemaker contributing 15 hours per week as a volunteer worker in a hospital.

3. Which one of the following persons would NOT be considered unemployed?

a. An auto worker vacationing in Florida during the layoff period, before the production of new model begins next month. He does not know for sure whether he will be called back to work when this happens, and looked for a new job last week.

b. A college student actively searching for a summer job.

c. A construction worker who has given up looking for work after 18 months without a job.

d. A retiree actively looking for part-time work to supplement Social Security income.

4. The labor force participation rate measures the number of people:

a. In the labor force.

b. In the labor force as a percentage of the total population.

c. In the labor force as a percentage of the population at least sixteen years old.

d. Who are working as a percentage of the labor force.

5. Unemployment caused by a recession is called
a. Frictional unemployment.
b. Cyclical unemployment.
c. Natural unemployment
d. Structural unemployment.

6. Frictional unemployment often occurs when
a. The economy enters a recession.
b. People first enter the labor force.
c. People are discriminated against.
d. People lose a job because their skills are no longer needed.

7. Workers at a steel plant are laid off because the economy is weak and the demand for products requiring steel has fallen. What type of unemployment best describes the workersituation?
a. Cyclical unemployment.
b. Full unemployment.
c. Structural unemployment.
d. Frictional unemployment.

Answers

1. B 2. B 3. C 4. C 5. B 6. B 7. A

12

Business Cycle

Get Through Intro

In 1946, two economists and authors - Arthur Burns and Wesley Mitchell - articulated a concept that had been present in economics for some time. While the idea that economies experienced phases of growth and contraction wasn't new - the Federal Reserve had been trying to actively manage those periods for 30 years. This was the first time it was given a name: the business cycle.

A cycle is simply a series of events that occurs in some repetitive pattern. When thinking about the business cycle, picture a series of waves. A horizontal line represents the baseline, or the water level, and as waves occurs, the water level peaks higher than the baseline, and each peak has a bottom, or a trough, on each side of it. When the wave grows from the trough to the peak, it is growing, and when it falls from the peak to the trough, it is contracting. This is the pattern the business cycle follows. This topic aim to expose students with different phases of Business Cycle with clear understanding of each phase.

Learning Outcomes

a) Business cycle

- Characteristic features of business cycle
- Various phases of a business cycle
- Theories on business cycle

Business Cycle

[Learning Outcome a]

Introduction to Business Cycles

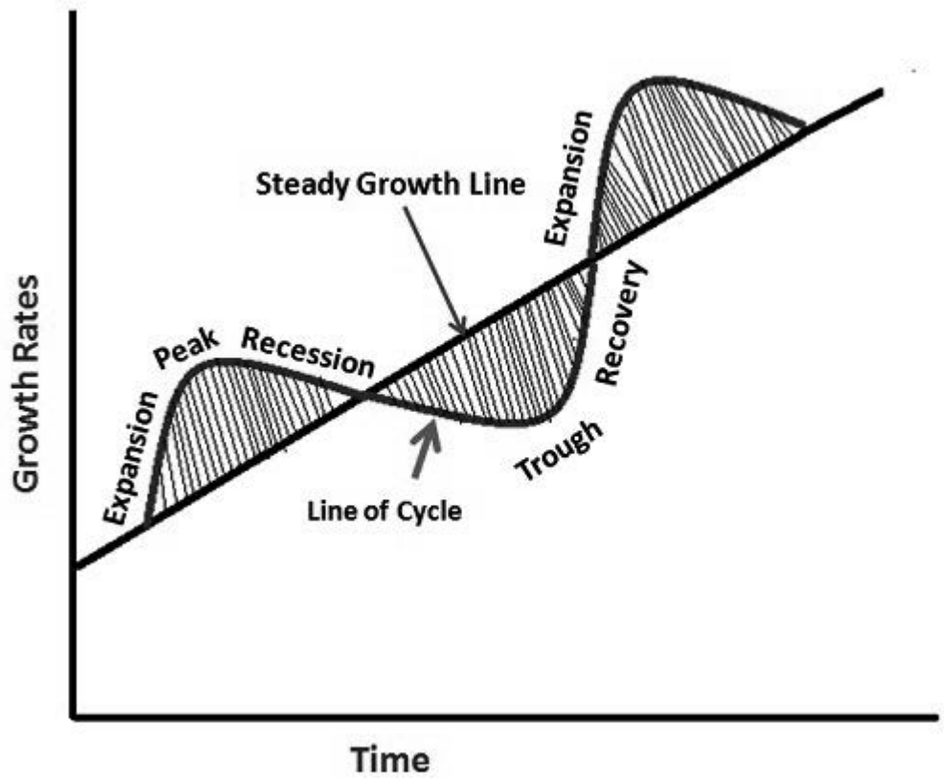
The business cycle is a central concern in macroeconomics, because these fluctuations have such profound effects. The two basic questions are: What causes business cycles? How policymakers should respond to cyclical fluctuations? The answer depends on one's view of how quickly the economy adjusts to shocks; i.e., a Keynesian or classists view. On policy, it will also depend on whether the economy has a fixed or flexible exchange rate.

Classical economists view business cycles as representing the economy's best response to disturbances in production and spending. The modern version is called the Real Business Cycle theory (RBC). Keynesian economists argue that because wages and prices adjust slowly, disturbances in production and spending may drive the economy away from its most desirable level of output and employment for long periods of time.

Definition of Business Cycle

The business cycle is the periodic fluctuations in economic activity measured by changes in real GDP

Diagram 67: Business Cycle



1. *Prosperity- Expansion and Peak (Boom):*

In the Diagram 67 above, the steady line shows the growth of the economy when there is no business cycle. But as soon as the line of cycle moves up the steady line of growth the economy enters into expansion or prosperity phase. The prosperity phase is characterized by increased output, employment, investment, profits, sales, aggregate demand, bank credit, wholesale and retail prices and rise in the standard of living. In the later stages of prosperity, the inputs start falling short of their demand due to which the price of the inputs, both labor, and raw materials increases. As a result of which the cost of production also increases. With the increase in the price of the goods and services, the households curtail their consumption expenditure, and thus the demand becomes stagnant or declines. This shows that economy has reached its peak. Thus, as long as the situation permits the expansion continues with a multiplier effect, but however the growth rate reaches the peak point and then eventually slows down.

2. *Turning –Point and Recession:*

Once the economy reaches the peak it starts slowing down, and the demand declines or becomes stagnant. We can say, that phase of recession begins when the downswing of the growth rate becomes rapid and steady. The recession is characterized by decreased investments, bank credits, stock prices, rise in the unemployment, etc.
The discrepancy between the supply and demand rises as some producers unaware of the recession keeps on producing the commodities. After a point of time, when they realize that their stock is being piled up they believe in being indulged in 'over-investment' and 'over production'. And as a result, they give up their future investment plans, orders placed for raw materials, equipments, and other inputs are canceled. The demand for labor decreases and rather the temporary and casual workers are laid off thereby increasing the unemployment in the economy. As long as, the growth rate exceeds or is equal to the steady growth rate; the economy is in the phase of prosperity-high or low. But as soon as the growth rate falls below the steady growth rate the economy enters into the depression phase.

3. *Depression and Trough:*

The economy reaches the depression phase when the economic activities slide below their normal level. This phase is characterized by a drastic reduction in the national income and other expenditures, prices of consumer goods decline steadily, unemployment increases as workers lose their jobs, bank credit decreases, debtors find difficult to pay off their debts, etc.
When the economy reaches the depth of the depression is said to have reached the trough phase. At this phase, even the expenditure incurred in maintenance is postponed in view of excess production capacity. The weaker firms are weeded out of the market. This marks the end of depression process.

4. *Recovery and Expansion*

During the phase of recovery, some firms either plan additional investments or undertake the renovation programs to come back into the market. With these, the construction activities get a boost in both the consumer and capital goods sector. The individuals who had postponed their plans for constructing the house undertake the task now. As a result of which, more and more employment is generated in the construction sector. As the employment increases the total wage income also increases at a higher rate than the employment rate. Thus, with the rise in the wage income, the consumption expenditure also increases and in return the businessman boost their production to realize higher profits from the sale of their commodities.

Over a period of time, the factors of productions become fully utilized, the wages and the price of other inputs move upward rapidly and investors seek the best alternative investment opportunities. With the increase in the price of inputs, the number of related developments also takes place such as businessmen start increasing their inventories; consumer starts buying more and more durable commodities. Thus, with the process catching up, the economy again enters into the prosperity and expansion phase.

Features of Business Cycle

a) Fluctuation of "aggregate economic activity" – so not just GDP.
b) Expansions and contractions.
c) Contraction (recession or depression)
   - Trough (a turning point)
   - Expansion (boom)
   - Peak (a turning point)
d) Co-movement.

Prices, productivity, investment and unemployment have regular patterns of behaviour.

e) Recurrent but not periodic. It does not occur at regular, predictable intervals and does not last for fixed, predetermined length of time.
f) Persistence.

Once an expansion or contraction begins it tends to continue for a period of time.

Theories of Business Cycle

a) Pure Monetary Theory

The Pure Monetary Theory was proposed by Hawtrey, according to him the changes in the money flows in the economy cause the fluctuations in the level of economic activities. Thus, this theory posits that the business cycle is caused due to the fluctuations in the monetary and credit markets.The fluctuations in the supply of money and the bank credit are the main causal factor of a cyclical process. With an increased supply of money, the prices rise, profit increases, total output increases and thus overall growth takes place. On the other hand, if the supply of money falls, then the price fall, profits decline, total output falls as production activities become sluggish, and the economy enters into the depression phase.

The pure monetary theory is criticized on the following grounds:

- The monetary factors, though, are the major contributors to business fluctuations, the business cycles are not purely a monetary phenomenon. The fluctuations in the economic activities are also seen due to the non-monetary factors like aggregate demand, expectations of the businessmen, demand for new investment, etc.
- Although, the monetary factors play a crucial role in the cumulative process of contraction and expansion, it is not efficient enough to fully explain the turning points. In fact, at turning points, the non-monetary factors are seen to have played an important role

b) Monetary Over-Investment Theory

The Monetary Over-Investment Theory posits that imbalance between the actual and desired investments, i.e. actual investments exceeding the desired investments, explain the fluctuations in the economic activities.The monetary over-investment theory was proposed by Hayek, who stresses that in order to maintain economy's equilibrium the pattern of investments should correspond to the consumption pattern. And in order to keep the economy in stable equilibrium, it is necessary to have the voluntary

savings equal to the actual investments. This theory asserts that total investments should be distributed among various industries in such a way that each industry produces only as much as the consumer demands. Thus, in every industry, the supply is equal to the demand. Given these equilibrium conditions, there will be no tendency to increase the consumption and hence the economy remains in the state of stable equilibrium.
The following are the major criticisms of monetary over-investment theory:

- It is assumed that when the market rate is lower than the natural rate (at which the demand for and supply of goods is equated), the new bank credit is extended to the capital goods industries. This is possible only under the situation of full employment. But, however, the business cycles have occurred even when the resources are not completely employed.
- This theory lays emphasis on the change in the interest rate as the major determinant of investment and ignores other important factors, such as cost of capital equipment, businessman's own expectations, etc.

c) Schumpeter's Theory of Innovation

Schumpeter's Theory of Innovation is in line with the other investment theories of the business cycle, which asserts that the change in investment accompanied by monetary expansion are the major factors behind the business fluctuations, but however, Schumpeter's Theory posits that innovation in business is the major reason for increased investments and business fluctuations. According to Schumpeter, the cyclical process is almost exclusively the result of innovation in the organization, both industrial and commercial. By innovation he means, the changes in the methods of production and transportation, production of a new product, change in the industrial organization, opening up of a new market, etc. The innovation does not mean invention rather it refers to the commercial applications of new technology, new material, new methods and new sources of energy.

The Schumpeter's theory of innovation suffers from the following criticisms:

- It is not only difficult but also unavailing to perform the objective evaluation of Schumpeter's theory of the business cycle because its arguments are more based on the sociological factors rather than the economic factors.
- Schumpeter's theory is not basically different from the over-investment theory; it differs only in the respect of the cause of variation in investment when the economy is in stable equilibrium.

d) Keynesian theory

Keynesian theory is based on fluctuations in aggregate demand under the influence of fluctuations in investment and consumption expenditures (employment is determined by the aggregate demand in the short run). These fluctuations may be caused by pessimistic expectations of businesses and households, or by fluctuations in wealth (e.g. a decrease in the prices of securities). The decrease in these expenses is not accompanied by an increase in other expenses, as neoclassical economics anticipated on basis of Say´s law of markets. According to Say´s law of markets every supply generates any adequate demand, as manufacturers produce to sell in the wake, and therefore aggregate supply equals aggregate demand. Explanation of fluctuations in real output due to fluctuations in investment and consumer spending is accompanied by Keynesian assumptions.

e) Theory of real business cycles

Theory of real business cycles focuses on the supply side of the economy. The theory distinguishes between the initial impuls of expansion phase or contraction phase of business cycle and business cycle inertia mechanism. Business cycles are invoked by real external shocks. These are the factors affecting particularly inputs productivity - technological change, government spending, as well as climate change, etc. The theory rejects the effects of changes in the nominal money supply growth affecting the product.

Money is endogenous factor and its development adapts product development and not vice versa. The mechanism of inertia of economic cycles is in this theory based on stimulation of economic entities to higher activity growth in real income, or vice versa. Product fluctuation is explained by changes in the volume of labor employed. The volume of work employed depends on the willingness of employees to work in “good times”, when the real incomes areat a high level. If real incomes are low, workers prefer leisure time in “bad times”. This is called “inter-temporal substitution” between work and free time. In the “good times” savings increase.

Consumes spend less and say more, if the interest rate is growing. Therefore, it is possible to increase investment and the initial shock spreads in the future. If the initial shock begins to wear off, real income will fall and cause a downturn in economic activity. This theory is an equilibrium business cycle theory. The labor market is expected to exhibit only the existence of voluntary unemployment. Supply of labor equals the labor demanded. The economy operates at the level of potential output and fluctuations in the economy mean the fluctuations of potential output.

Self-Examination Questions

1. Define a business cycle.
2. Identify the labels for the following periods in the business cycle as indicated in the above diagram:

a) Upswing or expansion
b) Length or duration of a cycle

3. At which point/phase in the above diagram will unemployment be at its highest?
4. What are the four phases of a business cycle?
5. Explain how business investment may affect the business cycle.
6. Using the diagram – What happens after a peak in a business cycle?
7. Describe how innovation and/or random events might cause business cycles?

13

Overview of Tanzanian Economy

Get Through Intro

The aim of this topic is equip students with economic history and contemporary issues of Tanzania Economy.

Learning Outcomes

- **Understanding of Tanzania's Economy (History and contemporary issues)**
- **Major Economic sectors of the Economy**
- **Policies and Strategies for Economic development**

Tanzanian economy has undergone major changes since the policy reforms of the 1980s. The driving force behind these economic reforms was the increased openness of the Tanzanian economy to globalization. In the process, Tanzania has transformed from a low-growth to a high-growth economy. For example, in recent years the economy's growth rate has been consistently above 7%, which, in combination with population growth of 2.7%, leaves a significant margin of 4.3% or more for growth in income per capita. Economic growth implies accumulation: not just the rate of accumulation but also the ways in which accumulation fuels the nature of productivity and employment growth across and within the productive sectors of the economy. Therefore, accumulation and structural change together propel the process of economic growth.

Understanding of Tanzania's Economy

Economic Histroy of Tanzania

Tanzanians celebrated much with the gain of independence in 1961. Tanzania has undergone many policy changes since independence, first of all under the ujamaa policy and more recently through a steady process of liberalisation, which started in the early 1980s but is more commonly perceived as commencing with the agreement with the IMF in 1986. In the Ujamaa era all major means of production were meant to serve the interests of all the population through the guide and control of the government. However, nineteen years later, the Ujamaa policy was abandoned as it failed to deliver as planned, and therefore made room for neoliberalism which enabled historical economic growth but which, however, fails to reduce poverty significantly especially in the rural areas. The country through the development vision 2025 intends to become a middle income country. Few years before the set time, Tanzania is still poor and seems to be far from the target.

(Students should read about challenges of each stage of economic development from Indendpendency to date)

Readings

- Martin Mandalu, DR Thakhathi, and Hofisi Costa, "Investigation on Tanzania's Economic History since Independence: The Search for a Development Model." *World Journal of Social Sciences and Humanities*, vol. 4, no. 1 (2018): 61-68. doi: 10.12691/wjssh-4-1-4.

- Marc Wuyts and Blandina Kilama (2014). 'The Changing Economy of Tanzania: Patterns of Accumulation and Structural Change'. Working Paper 14/3, Dar es Salaam, REPOA

- Ngowi, P.H. (2009), Economic Development and change in Tanzania since independence: The Political leadership factor. *African Journal of Political Science and International Relations* 3(4): 259-267

- Potts, D. (2005). Policy Reform and the Economic Development of Tanzania. University of Bradford, Bradford Centre for International Development. BCID Research Paper No. 14.https://bradscholars.brad.ac.uk/bitstream/handle/10454/3031/Researchpaper14Potts.pdf?sequence

Economic Strategy and Structural Adjustment Program in Tanzania

Structural adjustment programs attempt to correct economic imbalances and improve efficiency of developing and transitional economies, thereby setting the state for further development. Tanzania got her independence in 1961 at that time it was under the leadership of Julius K. Nyerere, Tanzania adopted and practiced socialism even though, the country was a multi-ethnic society, all the groups were united by the language of Kiswahili introduces by Nyerere.

Background to the Introduction of S.A.P in Tanzania
In the late 1970s and 1980s, there were problems in the economies of developing countries, especially Tanzania making her one of the poorest country in the world. During and after colonialism, the main export of Tanzania were raw materials such as sisal, cotton, coffee, tea etc. about 80% of the population were employed in the agricultural sector while agricultural products provides about 60% of the GDP, during the 1960s and 1970s, Tanzania introduces self-reliance policies; these includes the policy of indigenization introduced in 1967, this policy help villages to obtain markets of their products improved infrastructures health and educational services

Assignment

(Students should read origin of Tanzania Economic Crisis, The politics of Reforms, Reforms process, Impact of the reforms and its challenges)

Readings

Van Arkadie, B. (1995). Economic strategy and structural adjustment in Tanzania. World Bank, Private Sector Development Department.http://documents.worldbank.org/curated/pt/649601468765032908/pdf/multi0page.pdf

Sectorial Perspective

Students should read and familiarize themselves with the specific economic sectors of Tanzania specifically its overview, activities, challenges and success.

I. Financial Service
II. Extractive Industry
III. Oil and Gas
IV. Technology, Media and Telecommunications
V. Agriculture and Industrialization
VI. Infrastructure and Transport
VII. Public sector

Policies and Strategies for Economic development

An overview, Objectives, Priority Areas and Strategy of MKUKUTA 1 and 2, TDV 2025,