NATIONAL OPEN UNIVERSITY OF NIGERIA

SCHOOL OF SOCIAL SCIENCES

COURSE CODE: ECO719

COURSE TITLE: PRINCIPLES OF MICRO ECONOMICS

NATIONAL OPEN UNIVERSITY OF NIGERIA

SCHOOL OF SOCIAL SCIENCES 14/16

Ahmadu Bello Way, Victoria Island Lagos.

ECO719: PRINCIPLE OF MICROECONOMICS

COURSE GUIDE

Course Developers: **1. Mr. AGBEBAKU, HENRY USIOBAIFO**

National Open University of Nigeria,

2. Mr. Abdullahi, S. Araga

National Open University of Nigeria,

Unit Writers: **1. Mr. AGBEBAKU, HENRY USIOBAIFO**

National Open University of Nigeria,

2. Mr. Abdullahi, S. Araga

National Open University of Nigeria,

Course Editor:

Programme Leader: Dr. C. I. OKEKE

National Open University of Nigeria,

Course Coordinator: Mr. ABIANGA, U. EMMANUEL

National Open University of Nigeria,

Victoria Island, Lagos.

1.0 INTRODUCTION

ECO719: Introduction to Principle of Microeconomics is a two credit course for the Post Graduate Diploma in Business Administration Programme. The course consists of sixteen (16) units grouped into four (4) modules. The material has been developed to suit Post-graduate Diploma Students in Business Administration at the National Open University of Nigeria (NOUN) by adopting an approach that highlights the key areas of Microeconomics. The course guide tells you briefly what the course is all about, what course materials you will be using and how you can work your way through these materials. It suggests some general guidelines for the amount of time you are likely to spend on each unit of the course in order to complete it successfully. It also gives you some guidelines on the Tutor Marked Assignments.

2.0 COURSE AIMS

The course 'Principle of Microeconomics' aims to give you an understanding of the techniques in administering and managing business organisations with necessary skills.

3.0 COURSE OBJECTIVES

The objectives of the course are to:

1.   Explain in detail microeconomics as a branch of Economics.

2.   Examine the foundations of microeconomics.

3.   Analyse the basic microeconomic theory.

4.   Examine critically the concept of market structure in abstraction and in real life situation.

5.   Critically examine privatization and commercialization in Nigeria.

In addition, each unit also has specific objectives and Self-Assessment Exercise. The units' objectives are also included at the beginning of a unit; you should read them before you start working through the unit. You may want to refer to them during your study of the unit to check on your progress. You should always look at the unit objectives after completing a unit, in this way, you can be sure that you have done what is required of the unit.

4.0 WORKING THROUGH THIS COURSE

To complete this course, you are required to read the study units, read related books and read other materials provided by the National Open University of Nigeria (NOUN). Each unit contains self-assignment exercises, and at certain points during the course, you will be expected to submit assignments. At the end of the course is a final examination. The course should take you about a total of

about 16 weeks to complete. The course is of four modules; Microeconomics as a Branch of Economics, Foundations of Microeconomics, Microeconomic Theory, and Market Structure. Below are the components of the course, what you have to do and how you should allocate your time to each unit in order to complete the course successfully on time.

5.0 COURSE OUTLINE PROGRAMME PROPOSAL (OPP) FOR ECO719

This course is designed to give students a broad view of what Principles of Microeconomics is all about. The contents are to the emergence of business administration; problems of households, business firms and government in the business world, the economic systems and social change. The basics of business policy formulation and implementation process by individuals, firms and government in business administration.

6.0 COURSE MATERIALS

Major Components of the course are:

1. Course guide;

2. Study units;

3. Textbooks;

7.0 STUDY UNITS

The study units in this course are as follows:

MODULE 1: INTRODUCTION TO THE CONTEX OF MICROECONOMICS

Unit 1: Introducing Economics

Unit 2: Basic Tools in Economic Analysis

Unit 3: Microeconomics

Unit 4: Microeconomics and Choice

Unit 5: Economic Systems and Organisation

MODULE 2: FOUNDATIONS OF MICROECONOMICS

Unit 6: Theory of Demand

Unit 7: Theory of Supply

Unit 8: Elasticity

MODULE 3: INTRODUCTION TO MICROECONOMIC THEORY

Unit 9: The Theory of Consumer Behaviour

Unit 10: Theory of Cost

MODULE 4: MARKET STRUCTURE

Unit 11: Perfect Competition

Unit 12: Monopoly

Unit 13: Monopolistic Competition

Unit 14: Oligopoly

Unit 15: Pricing and employment of Resources

Unit 16: Privatisation and Commercialisation in Nigeria

8.0   ASSESSMENT

There are two aspects to the assessment for this course: The first is the Tutor-Marked Assignment; and secondly, the e-examination. Within each unit are self-assessment exercises, which are aimed at helping you to check your assimilation as you proceed. Try to attempt each of the exercises before finding out the expected answers from the literature.

9.0   TUTOR-MARKED ASSIGNMENT (TMA's)

This is your continuous assessment exercise and its accounts for 30% of your total score. You are expected to answer at least four set of TMA's questions, before you sit for the end of course examination. Your best three TMA's will account for the 30% total score.

10.0   FINAL EXAMINATION AND GRADING

Your course examinations' would earn you 70% which would be added to your TMA score (30%). The time for this examination would be communicated to you.

11.0 SUMMARY

This course, Principles of Microeconomics is designed to give you some knowledge which would help you understand the basic fundamentals, principles and objectives of microeconomics as applied to individuals, business firms and government. After going through this course, you would be in a good position to pass your e-examination at the end of the semester and programme, the knowledge gained could be applied in the execution of managerial duties and to contribute to the development of scholarly thoughts in business/ industrial sector management.

We wish you success in this interesting course and hope you will use what you have learnt, in this Post-graduate diploma Programme as a gateway to Master's degree program in business/industrial sector management/administration.

11.0 REFERENCES/FURTHER READING

Here are some references for further reading that can assist you. At the end of each unit, you will see a list of references related to the topic treated.

Abe I.O., (2000), Intermediate Economics, Mipon Biz. Centre, Lagos

John, Sloman and Alison Wride, (2009), Economics, Seventh Edition, Rotolito Lombarda, Italy.

Paul, A. Samuelson and William, D. Nordhaus (2005), Economics; Eighteenth Edition; Published Mcgraw-Hill International Edition.

Paul, R Krugman and Maurice Obsfeld (2009), International Economics Theory and Policy: Elm St. Publishing Services; 8th Edition.

Wale, O. and kunle, W., (2002), Introduction to Microeconomics and Application of Differentials Calculus to Economics, Leo Prints Nigeria Ltd.

NATIONAL OPEN UNIVERSITY OF NIGERIA

SCHOOL OF MANAGEMENT SCIENCES

14/16 Ahmadu Bello Way, Victoria Island Lagos

COURSE DEVELOPMENT

Course Code: **MGS 719**

Course Title: **Microeconomics**

Course Developers: 1. **Mr**. **Agbebaku**, **Henry Usiobaifo**

                         National Open University of Nigeria

                         2. Mr. Abdullahi S. Araga

                         National Open University of Nigeria

Course Writers: 1. **Mr**. **Agbebaku**, **Henry Usiobaifo**

                        National Open University of Nigeria

                        2. Mr. Abdullahi S. Araga

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Course Editor:

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                       National Open University of Nigeria

Course Coordinator: **MR**. **ABIANGA, U. EMMANUEL**

                        National Open University of Nigeria

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MODULE ONE

UNIT 1: INTRODUCTION TO ECONOMICS

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1.0 INTRODUCTION

Economics as a field of knowledge is as important as life. In facts, it affects our daily lives. Local, national and international economic issues are discussed daily-issues of prices, interest rate changes, unemployment, and economic recessions among other vital issues. The human race is continually faced with economic problems and difficulties in making reasonably economic decisions. Economic problems of scarcity and choice are constantly manifesting in every sphere of human endeavour. In this chapter, we will attempt to give insight into the subject of Economics. The problem of scarcity, meaning of Economics as well as its main branches will also be discussed.

2. 0 OBJECTIVES

At the end of this unit, you should be able to:

1. Explain the nature and scope of Economics.
2. Explain Scarcity as an economic problem.
3. Define Economics.
4. Enumerate and explain the basic branches of Economics.

3.0 MAIN CONTEXT

3.1 NATURE AND SCOPE OF ECONOMICS

When the word 'economics' is mentioned, people's thought are directed towards money. They think economics is all about money. To an extent, this is true as money is a tool that serves some purposes. The scope of economics however goes beyond money. Economics is concerned about production of goods and services as well as consumption of goods and services. Production is the transformation of inputs into outputs by firms in order to earn profit. Consumption on the other hand is the act of using goods and services: labour, land, raw-materials and capital. It is the truth that consumption of goods and services increases more than production and this situation creates a central economics problem of scarcity. From this one problem emerges other economic problems. Scarcity refers to excess of human wants over what can actually be produced to fulfill these wants (Abe, 2000).

3.2   SCARCITIES AS AN ECONOMIC PROBLEM

Naturally human beings want more of every good thing. For example, everybody, poor or wealthy, wants more money. The very important point to note here is that human wants are unlimited yet the means of satisfying them are limited. Limited amount of goods and services can be produced because productive recourses are limited. These resources include human resources (labour), natural resources (land, raw materials) and manufacture resources (capital). The limited productive resources and unlimited human wants is the sole reason for the existences of the problem of scarcity.

3.3   MEANING OF ECONOMICS

Economics as a field of study has been variously explained and defined. According to Alfred Marshall, "Economics is a study of mankind in the ordinary business of life". It involves all human activities that lead to satisfaction. Adam Smith defined economics as the," Nature and causes of wealth of nations," whereby it "Proposes to enrich both the people and the sovereign". Mill, explained economics as "Nature of wealth and lands which govern its production, distribution and exchange". Lord Robbins (1932), states in one of his book titled "Nature and Significance of Economics Science," defines economics as "The science which studies human behaviour as a relationship between ends and scare means which have alternative uses". Economics as a social science is broadly concerned with efficient allocation of scare resources among the various economic agents- household, individuals, business firm,

government, etc. The problem of scarcity is however central to the study of economics. Other areas of interest include; opportunity cost, choice, satisfaction and maximization.

3.4   TRADITIONAL BRANCHES OF ECONOMICS

Economics is a branch of knowledge that is traditionally divided into two main branches; macroeconomics and microeconomics, where 'macro' means big and 'micro' means small. Macroeconomics or income theory concentrates on the study of economy is a whole that is economics aggregates. It takes care of variables such as overall level of prices, output, and employment in the economy, total national income, total population, interest rates, aggregate demand and supply among others. It deals with important issues as they relate to inflation, stagnation, international trade, economic growth and development.

Microeconomics on the other hand studies the actions of individual units of the economy. These individual units are household, business firms and the government. It studies the relationships between these units in determining the pattern of production and distribution of goods and services. In summary of the above, both macroeconomics and microeconomics are interrelated, interdependent and thus, complement each other (Abe, 2000).

3.5   ANOTHER WAY OF LOOKING AT ECONOMICS

Economics is mainly concerned with consumption and production of goods and services. Another way of stating the above is that economics is concerned with demand and supply of goods and services. In fact, demand and supply are the nucleus of economics. Demand relates to wants while supply relates to available resources to meet the wants. Potential demand for goods and services exceeds potential supply goods and services are limited, this situation still brings about the central economic problem-scarcity.

4.0 CONCLUSION

From the forgoing discussion on introduction to economics, we have seen in this unit that, economics seeks to answer various questions as they relate to human behaviour. It seeks to reduce the impact or effects of the problem of scarcity on human lives by ensuring efficient allocation of resources. To this end, it should be noted that the study of economics is essential to understanding the world around us. Economics helps us in making rational economic decisions. Additionally, the study of economics helps

in ensuring optimum allocation of scare resources in order to meet or satisfy the ever increasing human wants.

5.0 SUMMARY

The foregoing discussions, we can categorically say the following as summary from this unit:

The study of economics centres on scarcity of resources, opportunity cost, and choice, and satisfaction maximization. Economics as a branch of knowledge has been variously explained. One of the definitions sees economics as a science which studies human behaviour as a relationship between ends and Scare which have an alternative uses. Economics is traditionally divided into two main branches, macroeconomics and microeconomics. Macroeconomics deals with aggregate variables such as overall employment level, output, economic growth and development, overall level of prices, etc. Microeconomics is a branch of economics which focuses on the actions of the individual agents in the economy. It studies the action of households, individuals and the government. The concept of demand and supply can also be used in explaining what economics is all about.

6.0   TUTOR MARKED ASSIGNMENT

Could production and consumption take place without money? Give reasons for supporting or opposing this question.

7.0   FURTHER READINGS/REFERENCES

Abe I.O., (2000), Intermediate Economics, Mipon Biz. Centre, Lagos

John, Sloman and Alison Wride, (2009), Economics, Seventh Edition, Rotolito Lombarda, Italy.

Paul, A. Samuelson and William, D. Nordhaus (2005), Economics; Eighteenth Edition; Published Mcgraw-Hill International Edition.

Paul, R Krugman and Maurice Obsfeld (2009), International Economics Theory and Policy: Elm St. Publishing Services; 8th Edition.

Wale, O. and kunle, W., (2002), Introduction to Microeconomics and Application of Differentials Calculus to Economics, Leo Prints Nigeria Ltd.

UNIT 2: BASIC TOOLS IN ECONOMIC ANALYSIS

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1.0 INTRODUCTION

In the last section you had an idea amount what introduction to economics is all about. This unit takes you a step further into the concept of basic tools in economics analysis. In this unit, the focus is on economics theories are built on some assumptions, hypothesis or facts. These theories are formulated to explain different situations or phenomenon. They try to establish and critically examine the type of relationship that exists between two or more variables. In the course of formulation of economics theories, several tools are used by experts. At the centre of the tools of economic analysis is Mathematics. Mathematics is a major tool of economic analysis in modern times. It is often seen as the second language for every student of economics. Geometry, a very important branch of Mathematics helps in pictorial presentation of economics behaviours: Graphs and diagrams help in providing explanation to relationship between or among variables; this facilitates easy assimilation of economics

concepts. In modern times, Calculus, Matrix, Algebra and Derivatives are used as basic economic tools to explain difficult and complicated topics (concepts) of economic theories and models. The use of Mathematics as an economic tool guarantees precision and accuracy. In this unit, we will get acquainted with terms such as Variables, Ceteris Paribus, Functions, Equations, Identifies, Graphs, Diagrams, Lines, Curves, Slope, and Limits and so on. These are the basic tools of economic analysis.

2.0 OBJECTIVES

At the end of this unit, you should be able to explain the following:

(a)   Basic tools of economic analysis:
(b)   Variables, Ceteris, Paribus, Functions, Equations, Identities,
(c)   Graph, Diagrams, Lines, Curves, Slope, Limits,
(d)   Derivatives and Time Series.

3.0 MAIN CONTEXT

3.1 VARIABLES

Various variables are used in economic analysis. A variable refers to an important thing which magnitude can change. It assumes different values at different times or places. The importance of variables in economic theories and models cannot be overstressed. The basic variables that are used in Economics include; income, expenditure, savings, interest, profit, investment, consumption, imports, exports, and cost. Every variable has a unique symbol. There exists two type of variables-endogenous and exogenous. An endogenous variable is that variable that is explained within a theory. An exogenous variable on the other hand is determined by factors outside the theory. It is also influenced by endogenous variables.

3.2 CETERIS PARIBUS

The phrase 'Ceteris Paribus' is of Latin origin. It means "all other things remaining the same" or "all relevant factors being equal". In Economics, this phrase is often used to assume that all other factors remain the same, while explaining or analyzing the relationship that exists between any two variables. The Ceteris Paribus assumptions are made because of complexities that exist in real life situation. It is important to make such assumptions for the sake of convenience. It should also be noted that without the assumption, it will be difficult for us to reach an agreement on economic relations, sequences and

conclusions. In fact, a number of variables interact simultaneously at a given time. For example, in explaining the relationship between demand and price, there are, without doubt, other factors that influence demand other than price. In painting a clearer picture about the relationship, the concept of Ceteris Paribus is employed in order to eliminate the interrupting influences of other variables by assuming them to remain constant. The assumption of Ceteris Paribus thus eliminates the influence of other factors which may get in the way of establishing a scientific statement regarding the behaviour of economic variables.

3.3 FUNCTIONS

A function is a mathematical expression of the relationship between two or more economic variables. Technically, a function is used to analyze and symbolizes a relationship between variables. A function explains the link between the dependent and independent variable by clearly explaining how the value of one variable can be found by specifying the value of other variable. For example, the relationship between quantity demanded of a commodity and the price of the commodity can be expressed functionally as: $D = f(P)$ where D = Quantity demanded and P = Price. Functions are classified into two, namely; explicit function and implicit function. For explicit function, the value of one variable depends on the other in a definite form. While implicit function is one in which the variables are interdependent.

3.4 EQUATIONS

The functional relationship between economics variables can be expressed verbally. Equation results, when the verbal expressions are translated into algebraic form. The term equation is a statement of equality of two expression or variables. The two expression of an equation are called the sides of the equation. The sides are left hand side (LHS) and right hand side (RHS). Equations are used to calculate the value of an unknown variable. An equation depicts the relationship between the dependent and independent variables. Each equation is a concise statement of a particular relation. An example of economic equation is the consumption function; $C = a+bc$. Here, the value of a (autonomous consumption) is positive while the value of b (induced consumption) is o<b<l.

3.5 IDENTITIES

An identity explains an equilibrium condition or a definitional condition. A definitional identify explains that two alternative expressions have exactly the same meaning. For example, total profit (π) is the excess of total revenue (TR) over total cost (TC), i.e.π TR-TC. Also ☐vings is seen at the difference

between income (Y) and consumption (C), i.e. S $\equiv$ Y-C. Note that the three-bar sign ($\equiv$) is the symbol for an identity. Also note that identities are mere "truisms" they cannot form the basis of any theory.

3.6 GRAPHS AND DIAGRAMS

A graph or a diagram is used to represent the relationship between two or more sets of data or variables that are related to one another. Graph is the most commonly used tool in modern economics. The use of graph helps eliminate the complexities that might arise in providing better understanding of economic generalization. Graph presents a pictorial illustration of an abstract idea. It is also useful for accuracy and precision. A graph is drawing on the XY-plane. The horizontal line is termed as X axis and the vertical line termed as Y axis. The point of intersection between X and Y axis is termed as the origin point. The XY-plane looks like this:
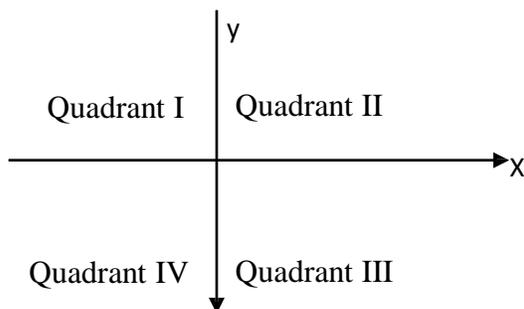
Source: Abe, (2000).

In the first quadrant, X and Y have positive values, in the second quadrant the values of X are negative while Y has positive values, values of X and Y are negative in the third quadrant and in the fourth quadrant, Y has negative values and X positive values. Generally, economic theories are dealt with in the first quadrant which is called positive quadrant. Diagrams may be in the form of figures as with the circular flow of national income. Graphs are quite meticulous whereas diagrams can be based on abstraction.

3.7 LINES AND CURVES

A line is a continuous mark made on a surface while a curve is a line or surface of which no part is straight or flat. Technically, the functional relationship between economics variables may be linear or non-linear. A straight line depicts a linear relationship between the variables while a curve presents a non-linear relationship between the variables. For example, the consumption function, C = a+b Y when

plotted show that there exists a linear relationship between consumption and income. The demand and supply curves are good example of the use of curves in economic analysis.

Source: Abe, (2000)

3.8 SLOPE

Slope is a vital tool of economic analysis in modern times. It indicates the magnitude or amount of change in one variable due to a change in other variable. Slope refers to the amount of change in the variable measured on the vertical or Y axis per unit change in the variable measured on the horizontal or X-axis. It is expressed as $\Delta y/\Delta x$ where Δ (delta) is read as change. The slope of a curve is an exact numerical measure of the relationship between the changes in the variable y to change in the variable x. Slope is also widely termed as 'the rise over the run'.

For a straight line, slope is always vertical distance/horizontal distance. The slope of a straight line can be positive or negative.

The diagram below explains this:
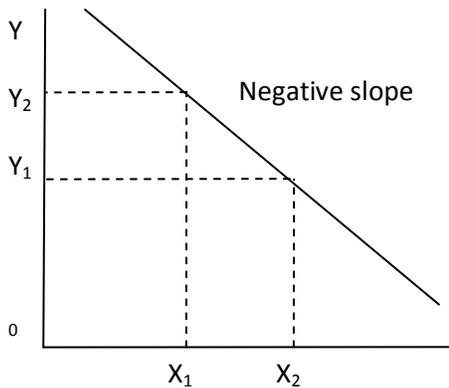
Fig. A Slope $= \frac{\Delta y}{\Delta x} = \frac{y2-y1}{x2-x1}$
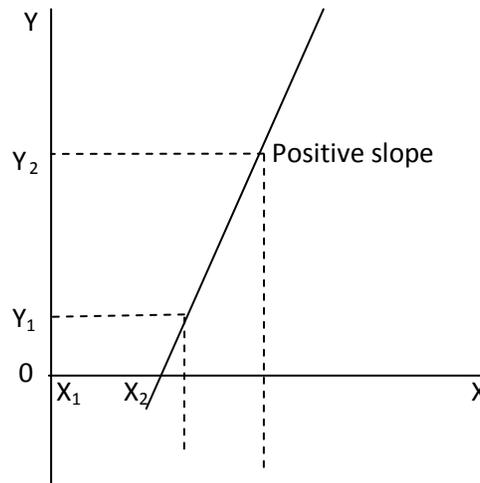
Fig. B Slope $= \frac{\Delta y}{\Delta x} = \frac{y_2-y_1}{x_2-x_1}$

Source: Abe, (2000).

Figure: A depicts a negative relationship between variables x and y while Figure B show a positive relationship between variables x and y.

The slope of a non-linear curve change at various points, in order to calculate or measure the slope of a non-linear curve at a given point, a tangent is drawn at the point and the slope is then measured as the vertical distance over the horizontal distance.

The basic properties of slope are as follows:

1. It can be measured numerically.
2. The slope of a straight line remains uncharged through-out the curve.
3. For a non-linear curve, the slope changes through-out the curve.
4. Slope as a vital tool in economic analysis can help in explaining the type of relationship (positive or negative) that exists between two variables.

4.0 CONCLUSION

Economics theory aims at models formulation for the explanation of economic behaviour of the various economic agents (consumers, firms, government) and also seeks to describe how these individual units integrate with one another. A model is a simplified representation of a situation. The formulation of a

model requires adequate knowledge of the situation which model is to be formulated. A model should be made in such a way that it can be tested, verified and compared to true economic facts or situations.

5.0 SUMMARY

Economic theories are built on some consumptions or hypotheses. Economic theories seek to explain different situations or phenomenon. Mathematics is the major tool of economic analysis in modern times. Branches of mathematics like Geometry, Calculus, Matrix, Algebra and Derivatives are used in economic analysis in modern times. The basic tools in economic analysis are: variables, ceteris paribus, functions, equations, identities, graphs, diagrams, lines, curves, slope, limits, derivatives and time series. The values of variables change over time. The basic variables in economic analysis are: income, expenditure, savings, interest, profit, investment, consumption, imports, export and cost. Ceteris Paribus is a Latin Phrase meaning, "all things being equal". Functions, equations, identities, graphs, diagram, lines, curves, slope, etc describe the relationship between variables.

6.0 TUTOR MARKED ASSIGNMENT

Other tools in economic analysis are; limits, and derivatives time series, write short note on these tools.

7.0 FURTHER READINGS/REFERENCES

Abe I.O., (2000), Intermediate Economics, Mipon Biz. Centre, Lagos

John, Sloman and Alison Wride, (2009), Economics, Seventh Edition, Rotolito Lombarda, Italy.

Paul, A. Samuelson and William, D. Nordhaus (2005), Economics; Eighteenth Edition; Published Mcgraw-Hill International Edition.

Paul, R Krugman and Maurice Obsfeld (2009), International Economics Theory and Policy: Elm St. Publishing Services; 8th Edition.

Wale, O. and kunle, W., (2002), Introduction to Microeconomics and Application of Differentials Calculus to Economics, Leo Prints Nigeria Ltd.

UNIT 3: MICROECONOMICS

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1.0 INTRODUCTION

In the last section you had an idea amount what basic tools in economics analysis is all about. This unit takes you a step further into the concept microeconomics. In this unit, the focus is on Economics functions in two levels-micro and macro. The micro level helps provide answers to certain very important questions like: How do consumers between different goods? What are the basic economic problems of every society? Why do some firms make large profits? Etc. The unit considers the meaning of microeconomics, its impact and importance as well as its basic underlying principles.

2.0 OBJECTIVES

At the end of this unit, you should be able to:

(a). Define Microeconomics

(b). Explain in detail the impact and importance of microeconomics, and,

(c). State and explain briefly the basic principles of microeconomics.

3.0 Main Context

3.1 MEANING OF MICROECONOMICS

Micro is a word that comes from the Greek NIKPOG (micros), meaning "small". It is the direct opposite of Macro which means "big". The term Microeconomics is employed to describe a branch of Economics

which deals with the analysis of the objectives and decisions of individual constituents of an economy. It seeks to analyze the economic behaviors or the various key players in an economy. These key players include the households (consumers), business firms and entrepreneurs. Applying Microeconomic principle is of paramount importance and significance in describing, analyzing, correlating and explaining the behaviors of the afore-mentioned constituents of the economy.

3.2 OBJECTIVES OF MICROECONOMICS

Microeconomics is concerned with the allocation of scarce resources. This it does by answer the basic economic questions of what to produce, how to produce and for whom to produce. The extent to which these questions are answered depends largely on the society's objectives. Two major objectives can be identified: efficiency and equity.

(a) **Efficiency:** For economic efficiency to be achieved in any society certain pertinent conditions must be met. The first condition is productive efficiency. This simply means that outputs are produced minimum cost. Secondly, there must be efficiency in consumption. Consumers allocate or spend their income in such a manner that guarantees maximum satisfaction and thirdly, efficiency in specialization and exchange. This simply means that firms specialize in their pattern or production to produce goods for sale to consumers and individuals specialize in doing jobs in order to buy goods, and;

(b) **Equity:** Equity exists in the economy when income is distributed in such a way that is considered to be fair or just. It should be noted that an equitable distribution is not the same as an equal distribution and that different people have different views on what is equitable.

3.3 THE IMPACT AND IMPORTANCE OF MICROECONOMICS

Microeconomics as an aspect of economics seeks to analyze the behaviors of individuals, business firms with in an economic environment. It deals with the allocation and distribution of personal income. It also takes into consideration the determination of prices of goods and services. Microeconomics as the name indicates tends to offer explanations about a given aspect of the economy. Additionally, microeconomics seeks to explain the fundamental economic problems of every society as they affect the needs of individuals, the technology to be employed in the production of goods and services and how scarce/limited resources are to be allocated.

3.4 BASIC PRINCIPLES OF MICROECONOMICS

Microeconomics is based on certain principles that connote the basic principles of microeconomics John and Wride, (2009). These principles are enumerated as follows:

- Scarcity, choice, want and opportunity cost.
- Fundamental economic problems
- The theory of consumer behavior
- Theory of demand and supply
- Theory of price
- Theory of elasticity
- Factors of production
- Theory of cost
- Imperfect competition
- Price discrimination
- Monopolistic competition

4.0 CONCLUSION

We can say that, Microeconomic theory is very useful in economic analysis. The theory carefully explains and analyses how economics functions at the micro level. In doing so it provides reasonable solutions to the problems of scarcity, choice and want among others. It also analyzes the actions of firms in relation to profit maximization and the impact of this on households.

5.0 SUMMARY

Economics as a subject has two main branches- microeconomics and macroeconomics. Microeconomics which is what this book centres on deals with the activities of individual units within the economy: firms, industries, consumers, workers etc. choices have to be made since resources are scarce as against the ever increasing human wants. Every society is confronted with the fundamental economic problem of what is to produce, how to produce and for whom to produce. The basic objective of microeconomics is to ensure economic efficiency, and equity. Economic efficiency has three main branches- productive efficiency, consumption efficiency and efficiency in specialization and exchange. The basic principles of microeconomics include theory of demand and supply, perfect competition and monopoly, imperfect competition, theories of the firm and the theory of income distribution.

6.0   TUTOR MARKED ASSIGNMENT

1.   Microeconomics is concerned with the allocation of scarce resource: with the answer of the what, how and for who questions. How will you explain Macroeconomics?

2.   What main objectives does microeconomics seek to achieve?

7.0   FURTHER READINGS/REFERENCES

Abe I.O., (2000), Intermediate Economics, Mipon Biz. Centre, Lagos

John, Sloman and Alison Wride, (2009), Economics, Seventh Edition, Rotolito Lombarda, Italy.

Paul, A. Samuelson and William, D. Nordhaus (2005), Economics; Eighteenth Edition; Published Mcgraw-Hill International Edition.

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Wale, O. and kunle, W., (2002), Introduction to Microeconomics and Application of Differentials Calculus to Economics, Leo Prints Nigeria Ltd.

UNIT 4: MICROECONOMICS AND CHOICE

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1.0   INTRODUCTION

In the last section you had an idea amount what microeconomics is all about. This unit takes you a step further into what microeconomics and choice is all about. In this unit, the focus is on how human by nature are greedy and selfish. Every man would love to have everything in abundance- food, clothing, shelter etc, but this is constrained with the problem of resources scarcity. Thus, choices have to be made. There are three major choices that must be made in every society: choice of what to produce, how to produce and for whom to produce. These three choices are fundamental and all societies have to make these choices regardless of who is making them- individuals, groups or the government. This unit however seeks to define want, scarcity, choice, scale of preference and opportunity cost. The links between scarcity and choice, choice and opportunity cost will be established. The fundamental economic problems of every society (what, how and for whom questions) will be analyzed in detail and light would be shed on the concept of efficient utilization of resources.

2.0   OBJECTIVES

After reading this unit, you should be able to:

(a)   Define want, scarcity, choice, scale of preference and opportunity cost.
(b)   Establish the link between choice and opportunity cost.
(c)   Analyze the problem of scarcity and choice.
(d)   Discuss the fundamental economic problems of every society, and.
(e)   Explain the concept of efficient utilization of resources.

3.0 MAIN CONTEXT

3.1 MEANING OF WANT, SCARCITY, CHOICE, SCALE OF PREFERENCE AND OPPORTUNITY COST.

(a) WANT

Want literally refers to desire or wish to have something. It is the need required to be attended to. From an economic perspective, want means the desire to own or have goods or services or both at a particular period of time in order to obtain satisfaction. The basic wants of every human are food, shelter and clothing. Though these are the basic ones, economically and naturally, human wants are unlimited or better still insatiable. Consequently, as one need is met, other needs arise.

(b) SCARCITY

Human wants are unlimited and there are limited resources to satisfy these wants. Scarcity as an economic concept is the concept adopted to explain limited supply of resources to meet the unlimited and ever increasing human wants. Scarcity is an economic situation in which the available resources are in adequate to meet the wants of the people. For example, while the Nigerian population is increasing year in, year out, there has not been an equivalent increase in the number of housing facility provided by the government. Scarcity is the heart of economics. We face scarcity as individuals and the same applies to nations.

(c) CHOICE

Choice is an intrinsic phenomenon. It is based on the economic decision of an individual. Choice arises because of many human wants and shortage of resources to satisfy these wants. In other words, choice arises as a result of scarcity of resources. Choice simply means selecting or choosing some needs for satisfaction out of many others based on personal conviction of an individual that the selected needs are superior to others or pressing when compared with others and so must be satisfied before others. It is naturally impossible for a person to satisfy all his needs as soon as they arise; the only option is to make selections or choices. However, making right choices requires a high level of rationality and ranking of needs in order of importance or significance. The fact is that every time we do something, we are making a choice between alternatives.

(d) SCALE OF PREFERENCE

In order to make reasonable choices, there is need for arrangement, organization or ranking of wants in order of importance. Scale of preference is the representation or listing of wants in order of relative importance. Ranking of human wants will help an individual to make rational choices in the faces of unlimited wants and limited resources. The use of scale of preference in making rational choices cannot be overstressed. Apart from the fact that it helps an individual to rank his needs or wants in order of relative significance, it brings about efficient utilization of limited available resources. Scale of preference helps an individual in making rational economic decisions by making choices that satisfy his pressing and most important wants.

(e) OPPORTUNITY COST

Since all human wants cannot be satisfied, some wants are left to be satisfied probably in the future when the 'important' ones have been met. Opportunity cost refers to the needs that are left unsatisfied in order to satisfy another more pressing one. It is the alternative forgone or sacrifice made in order to satisfy another want. For example, a student wants to buy a pair of shoes and a bag which cost N150 each and has only N150 which is half of what is needed to buy the two articles, due to scarcity of resource (Here money), he has to make a choice of what he wants more between the two articles or what article he considers pressing to him. If he decides to choose a bag, the opportunity cost is the pair of shoes forgone. Opportunity cost as a microeconomic concept is very important as it involves the allocation of limited resources to key areas that are considered very important at a particular period of time. Besides, the concept of opportunity cost is central to microeconomics, because it helps an individual to be rational and thereby make judicious use of scarce resources. The concept of opportunity cost is also very important to firms and government. It enables business firms to be prudent in the allocation of its resources for optimum productivity. It also helps the government in the aspect of resources allocation, budgeting and economic planning.

3.2 CHOICE AND OPPORTUNITY COST

Making choice involves sacrifices. For example, the more money you expend on food, the less you will have to spend on other goods. In other words having a thing involves sacrificing another. Opportunity cost simply means the cost of any activity measured in terms of best alternative forgone. Opportunity cost is the basis for choice and as much as possible, for the concept of opportunity cost to be reasonable, a consumer or producer should make rational choices. Rational choices involve weighing up the benefit of any activity against its opportunity cost.

Technically, making rational choices involves weighing up marginal costs and marginal benefits. Marginal costs refer to additional cost of doing one more unit or a little more of an activity. Marginal benefit on the other hand, is the additional benefits of doing one more unit or a little of an activity.

3.3 PROBLEMS OF SCARCITY AND CHOICE

Scarcity and choice are the major problems faced by every economy-primitive or modern. Modern economics of the world are characterized by thousands of complex production and consumption

activities. Primitive economics are not, but the decisions that must be made in such economics are not very different from those made in modern economics.

Resources are scarce. The available resources must be efficiently allocated and utilized in order to reduce the impact of scarcity of resources on the people and the economy. This search for efficient allocation and utilization of scarce resources creates some problems which are loosely referred to as the basic or fundamental economic problems of society. These problems are faced by every society irrespective of the economic system practiced- capitalism, socialism or mixed economy.

3.4 FUNDAMENTAL ECONOMIC PROBLEMS

The fundamental economic problems are:

(a) WHAT TO PRODUCE

Every society is faced with the problem of what goods and services are to be produced and in what quantities. The fundamental problem centres on the allocation and distribution of scarce resources among different alternative uses. This problem arises basically because human wants are numerous but the resources to satisfy them are in short supply. Available resources should not be wasted or used anyhow. The resources should be used based on rational economic decisions. Every economy must have strategies or mechanism by which the problem of resources allocation is tackled.

(b) HOW TO PRODUCE

This second fundamental question seeks to address the method by which goods and services are produced. The decision to produce involves three major concepts namely: determining the resources to be used in production, those to produce the commodities as well as the production technique or method to use in getting the commodity produced. Production method could be labour-intensive or capital-intensive. Making sound decision on which production method to be adopted, is very important in answering the question of how to produce. However, economists suggest that the method of production that costs less should be used in production of goods and services.

(c) FOR WHOM TO PRODUCE

After determining what to produce, the method to use in producing it, it is of utmost importance to also determine the people that need the commodity that is being produced. In other words, it is paramount to decide on the market. Goods and services are produced mainly to satisfy human wants and producers of goods and services rely on the consumers who buy their products. When a producer produces a commodity that is not needed in the society, then he has not made appropriate economic decision. Determining whom to produce for will help the production circle to run smoothly. The society will also decide on how goods and services produced are supplied or distributed among members.

(d) WHERE TO PRODUCE

Production should not just be done anywhere. Every society will also have to decide the place where production of goods and services should take place. A rational society will produce goods and services in a place or location where the cost of production is low when compared with others. The decision here should be made based on the average cost of production at each location or place.

3.4   THE CONCEPT OF EFFICIENCY UTILIZATION OF RESOURCES

Today, the problem in most Less Developed Countries (LCDs) of the world is either of resources under-utilization or over-utilization. Human wants are very numerous and resources are in short supply. In this kind of situation, the way out is the use of available resources optimally. Efficient use of limited available resources will help in obtaining maximum output from such resources. Efficient utilization of resources is measured by the satisfaction consumers derived from goods and services they buy in terms of quality, quantity, and value for money spent on such goods and services. If maximum satisfaction is derived by consumers, the resources are efficiently utilized and vice-versa.

4.0   CONCLUSION

Making choices (rational choices) is something individuals, groups and government cannot do without in order to minimize the harsh effect of scarcity of resources. Making rational choices will also help to provide solutions to the fundamental economic problems of every society. Rational choice making will also enhance efficient utilization of resources. The key however to making rational choices is weighing marginal costs against marginal benefit.

5.0   SUMMARY

Choice as an intrinsic phenomenon, it means selecting or choosing some needs for satisfaction out of many others based on personal conviction of an individual that the selected needs are superior to others. Making rational choice requires weighing up the benefit of any activity against its opportunity cost.

Opportunity cost is the basis for choice. It is what you give up in order to do something. It is the cost of doing something measured in terms of the best alternative forgone.

The fundamental economic problems of every society are: what to produce, How to produce and for whom to produce.

Resources are said to be efficiently utilized they are used in such a way that will give optimum satisfaction to consumers in terms of the quality and the value of money spent of such goods and services produced.

6.0   TUTOR MARKED ASSIGNMENT

How would you make a rational choice between two jobs A and B, if A is more pleasant but pays less than B?

7.0 FURTHER READING/REFERENCES

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UNIT 5: ECONOMIC SYSTEM AND ORGANIZATION

Table of Content

1.0   INTRODUCTION

In the last section you had an idea of what micro economic and choice is all about. In this unit the focus will be on economic system and organization. This unit presents the basic concept of economic systems and organization. Aspects discussed include: the meaning of economic system, characteristics of various economic systems, and functions of economic systems and types of economic systems. An attempt is also made to compare the various types of economic systems with one another.

2.0   OBJECTIVES

At the end of this unit, you should be able to:

a)   Define an economic system.

b)   State and explain the basic characteristics of economic systems.

c)   List and explain in detail, the types of economic systems

d)   Write a short note on each of the fundamental economic questions.

3.0   MAIN CONTEXT

3.1 DEFINITION OF ECONOMIC SYSTEM

Every country of the world is blessed with diverse of resources- human and natural. These sources are used for the production of goods and services in order to meet the needs of the people. By economic system, we mean the way or manner in which the resources of a country are used to produce goods and services and the process involved in the distribution of goods and services produced for consumption.

3.2   CHARACTERISTICS OF ECONOMIC SYSTEMS

Characteristics of economic system mean the same as attributes or features of economic system. However, economic systems are characterized by the following:

- Role of government
- Freedom of choice
- Ownership of resources and factors of production
- Price determination
- Profit gainers

(a) ROLE OF GOVERNMENT

In every economic system consumers and producers are the ones that make decisions that shape the economy. Government activities are however very important to keep the economy working. The government guides the overall pace of economic activity, maintain steady growth, and reduce unemployment and inflationary rates. This the government does by applying suitable microeconomics policy one of which could take the form of adjusting spending and tax (Facial policy) or managing the money supply and controlling the use of credit (monetary policy), it can slow down or speed up an economy's rate of growth.

(b) FREEDOM OF CHOICE

In microeconomics, freedom of choice is often employed to describe the freedom of economic agents (consumers, producers and government) to allocate their resources as they see it fit. This includes the freedom to buy any goods or services and freedom to engage employment available them. However, economic freedom to choose largely depends upon market competition. Since buyers available options are usually the result of various factors controlled by sellers, such as overall quality of a product or a

service and advertisement. In the event that a monopoly exists, the consumer no longer has the freedom to choose to buy from a different producer.

(c) OWNERSHIP OF RESOURCES AND FACTORS OF PRODUCTION

Firms often own land and capital but not the labour working on it. The ownership of factors of production (land, labour and capital) by a firm depends to a great extent on which factors, as well as the type of economy in which a firm operates. In a market-based economy, such as that of the United States of America, firms may own land and capital but do not own labour. Greg Markin of Harvard University, dense factors of production as the inputs used to produce goods and services. These inputs (factors) comprise land, labour and capital. Land consists of all natural gifts of nature. Capital consists of the buildings that occupy land and the machines and equipment used in production. Under a socialist economy, the government, rather than firms, owns land and capital. Labour works for the government or for government controlled firms. In a mixed economy, both the government and private firms own land and capital. In all the systems, land and capital may be owned but labour is not owned but hired.

(d) PRICE DETERMINATION

It has been said by economists that price is the nexus between demand and supply. Economists also agree that price is actually set or fix by market forces, balancing supply and demand in order to optimize output and reducing waste. Economists explain that price determination is a rational process which is very easy to calculate.

(e)   PROFIT GAINERS

Another very important feature of an economic system is profit gainers. Profit gainers include investors and entrepreneurs. They put their resources into production in order to make profit. They seek to make profit through subsidies, protectionism, government contracts or other such favorable arrangements.

3.3   FUNCTIONS OF ECONOMIC SYSTEM

Every economic system performs certain very important functions. The basic economic function of every economic system is allocation of resources. Allocation of resources is the scientific management of production line, exchange and consumption. Allocation of resources centres on the right sharing of resources among competing sectors. Regardless of the type of economy, be it capitalist, command or mixed, decisions have to be made in the area of how resources are allocated. Other functions are organization of resources, distribution of finished goods and services, promotion of economic progress

and the maintenance of economic stability. This means that economic systems provide answers to the questions of what to produce, how to produce and for whom to produce.

3.4 TYPES OF ECONOMIC SYSTEMS

The four main types of economic systems are:

Traditional Economy

Free market/Capitalist Economy

Planned/Socialist/Command Economy

Mixed Economy

(a) TRADITIONAL ECONOMY

The traditional economy was fundamentally based on traditions and customs. Here, barter was the main stay of the economy and every economic player existed on a subsistence level. The fundamental economics question of what to produce. How to produce and for whom to produce were answered by customs and traditions. Economic resources were owned or controlled by a Sovereign or Fenda-lord.

The following are the advantages and disadvantages of traditional economy.

Advantages:

The traditional economy has its own advantages. Some of them are:

1.   Every member of the society is a major playmaker. They participate fully in economic activities. Every member knows what they are to do.
2.   There exists a strong social network among every member of the society.
3.   Positions and hierarchy are already established within the society.
4.   Traditional and customs provide answer to basic economic questions of every society.
5.   Life and business activities are stable, decent, predictable and continuous.

Disadvantages:

1.   There is technological problem as it does not take technological change.
2.   There is little or no promotion of scientific and intellectual development.
3.   There is often inefficient and inadequate provision of goods and services.
4.   Since the society is primitive, it is often very slow to change.

5. There is little or no room for skill development. There is also inefficient use of skill in relation to the factors of production.

(b) FREE MARKET/CAPITALISM

In a free market economy (i.e. a capitalist economy) the government lays little role in economic activities. There is high freedom for individuals to own factors of production. The private sector provides answers to the fundamental economic questions. There is consumer sovereignty and the maximization of profit is the main goal of owners of factors of production. Price is determined mainly by the workings of the forces of demand and supply. In this economic system entrepreneurs adopt only the economically most efficient methods of production and goods will be produce where labour is the cheapest.

Advantages:

1. Producers and consumers of goods and services have choices. Producers are free to produce what the consumers demand and the consumers are also free to spend their money as they see it fit.
2. The economic decision of what to produce is made determines by the forces of demand and supply. Hence, there is greater participation in the decision-making process.
3. Prices of goods and services are determined by the price mechanism (workings of forces of demand and supply).
4. The government does not interfere in economic activities in any way.
5. Resources are efficiently used, since they are allocated to production areas that are profitable.
6. There is high level of competition among business firms. This improves quality of goods and services produced lower prices and encourage the use of technology and innovation.

Disadvantages:

1. It limits competition among firms. A few giant firms may dominate an industry. These firms may charge high prices and make large profits. Consumers face oppression and cheating. These firms, rather than seeking to satisfy or meet the wishes of consumers may result to advertisement as way of persuading consumers.
2. Absence of competition and abnormal profit may lead to inefficiency of firms.
3. The free-market economic system brings about concentration of wealth in the hands of few individuals. Power, property and resources may be unequally distributed. Those who have power, property and resources will gain at the expense of those without.

4. The activities of some firms have for reaching effects. For example, production activities of some firms may lead to environmental pollution.

5. A free-market economy may bring about macroeconomic instability. It may lead to economic recession and inflation.

(c) PLANNED/SOCIALIST/COMMAND ECONOMY

A planned economy is an economic system in which production and investment decisions are made by central authority, usually by a public body such as a government agency. Command economy as it is also known, is usually associated with a socialist or communist economic system, where land and capital are collectively owned. In a centrally planned economy, planners would decide on the allocation of resources between current consumption and investment for the future. They would also take into consideration what would be produced and direct lower-level enterprises and ministries to produce those goods in accordance with democratically-determined national and social objectives. Besides, at the microeconomic level, planners decide on output of each on industry and firm, the methods and techniques that will be used in production as well as labour and other resources required by each industry and firm. Additionally, the planners decide on the distribution of output between consumers. This decision is based on the aims of the government. The government may distribute goods according to its judgment of people's needs; or it may give more to those who produce more thereby providing an incentive for people to work harder. The government may also distribute goods and services directly.

Advantages:

1. It is possible and easy for the government to take an overall view of the economy. National resources could be channeled into specific areas in order to achieve specific national goals.

2. High rate of investment could help specific up the rate of economic growth.

3. The rate of unemployment could be reduced if the government plans the allocation of labour resources in line with production requirements and labour skills.

4. Centrally planned economy helps in reducing the problem of income inequality. National income could be distributed in such a way that would guarantee equality and fairness.

Disadvantages:

1. A centrally planned economy deprives workers and consumers of certain level of freedom. Since the state has absolute control over resources allocation, workers would have no choice of where to work and consumers will have no choice of what to buy.

2.   The government might enforce its plans and policies even if they were unpopular and this does not have significant influence on the welfare of the citizens.

3.   The task of collecting, organizing and analyzing information becomes larger and more complex. The execution of complex plans could be costly and time wasting.

4.   Devising the best way or incentives to make workers and managers to be more productive and efficient without a reduction in quality is also a very difficult to make in a command economy.

(d) MIXED ECONOMY

Free-market and command economics have bundles of shortcomings associated with them. In real world situation, economics is a mixture of the systems. These two systems merge to form what is known as mixed economy. A mixed market economy is an economy in which there exists some government intervention. It is an economic system in which both the state and private sector direct the economy thereby reflecting features of both free-market and planned economics. Most mixed economics can be described as market economics with strong regulatory oversight by the state. In mixed market economics, the government may control the relative prices of goods and inputs by taxing or subsidizing them or by direct price controls. Relative incomes could also be controlled by the use of income taxes, welfare payments or direct controls over wages, rents, profits etc. The government may also control the pattern of production and consumption by the use of appropriate legislation. It should be noted that though government can intervene in the economy to fix it, however, the government is not perfect and its intervention could be beneficial or bring about some adverse consequences.

4.0   CONCLUSION

The foregoing revealed that, every economic system has its basic features, merits and demerits. The four economic systems all focus on how scarce resources could be allocated in such a way that optimum satisfaction would be derived. They seek to provide solution to the fundamental economic problems of every society using considerably different approaches and methods.

5.0   SUMMARY

Different countries adopt different economic systems. The type of economic system practiced by a country depends on the degree such a country relies on the market or the government to allocate resources. It is the extent to which government intervenes in an economy that distinguishes one economy from the other. The traditional economic system relies on barter as a tool of resources allocation while taking into consideration the traditions and customs of the people. The free-market

economy depends on price mechanism. In this economy, demand and supply interact to fix prices. This market is void of government control and so it works automatically. It creates room for competition which may in turn affect the economy positively or negatively. The state makes all economic decisions in a command economy. It decides on the quantity of resources to be allocated, the output of an industry, methods and techniques to be employed in production and how output will be distributed. It opens avenue for easy and speedy address of various national economic goals. These goals include how to achieve economic growth, tackle unemployment and reduce inequality. A mixed economy combines then basic features of free-market and command economics. It mixes the actions of the market and government.

6.0   TUTOR MARKED ASSIGNMENT

1.   What type of economic system do you think operates in Nigeria? Give reasons for your answer.
2.   All real-world economics are a mixture of two systems- capitalism and socialism. Explain this statement.

7.0   FURTHER READINGS/REFERENCES

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MODULE TWO:

UNIT 6: THEORY OF DEMAND

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1.0   INTRODUCTION

In the last unit you had an idea about what economic systems and organization is all about. This unit will takes you a step further into the concept of theory of demand. In this unit, the focus is on a free market economy, the forces of demand and supply work together in determining prices. Prices play a key role in determining the actions of consumers and producers at a particular period of time. This unit and the following one examines in detail the 'price mechanism'. Here we consider the meaning of demand, its

law, demand schedule and curve. Attention will also be giving to factors influencing demand, change in demand and change in quantity demanded among other very important concepts relating to the concept– demand.

2.0   OBJECTIVES

At the successful completion of this unit, you should able to.

(a) Establish the relationship between and price.

(b) Define the demand curve and explain how it is derived.

(c) State and explain other factors that influence or determine demand other than price.

(d) Explain and distinguish between movements along and shifts in the demand curve.

3.0 Main Context

3.1 MEANING OF DEMAND

Demand may be defined as the quantity of goods and services a consumer is willing and able to buy, at given price and at a particular period of time. However, the quantity of a commodity or service that could be bought at a particular period of time is a function of some factors i.e., $Qd = E$ (Price of the commodity, population, price of substitutions, income, Taste, etc). The price of a commodity is the amount of money or any other thing you have to pay for the commodity. Want and demand are not synonymous in this context. For instance, everybody wants a house, but not everybody has the money to build one. Effective demand is backed up by the ability to pay for a commodity while ineffective demand (mere want) is not Abel, (2000).

3.2 THE LAW OF DEMAND

Often and normally, consumer will buy more of a commodity or service when the price is low and less when the price is high. This part brings us to the law of demand which states that: "the higher the price, the lower the quantity demand, and the lower the price, the higher the quantity demand" all things being equal.

The law of demand expresses an inverse relationship between quantity demanded and price, while holding other factors that affect demand constant or given.

3.3   DEMAND SCHEDULE

A table that shows the relationship between the quantity of a commodity demanded and the market price of the commodity at a particular period of time. It shows the quantity of the goods that can be purchase as price charges. An example of demand schedule is given below.

Price N	1	2	3	4	5	6
(Rice) Quantity Demanded	30	25	20	15	10	5

Source: Abel, 2000.

From the above table, we could observe that the quantity demanded of a bag of rice increases as price falls and vice-versa

3.4   DEMAND CURVE

A demand curve is the graphical representation of the relationship between price and quantity demanded of a commodity the graphical representation of the demand schedule. For example if the demand schedule above is plotted we obtain the demand curve shown below.
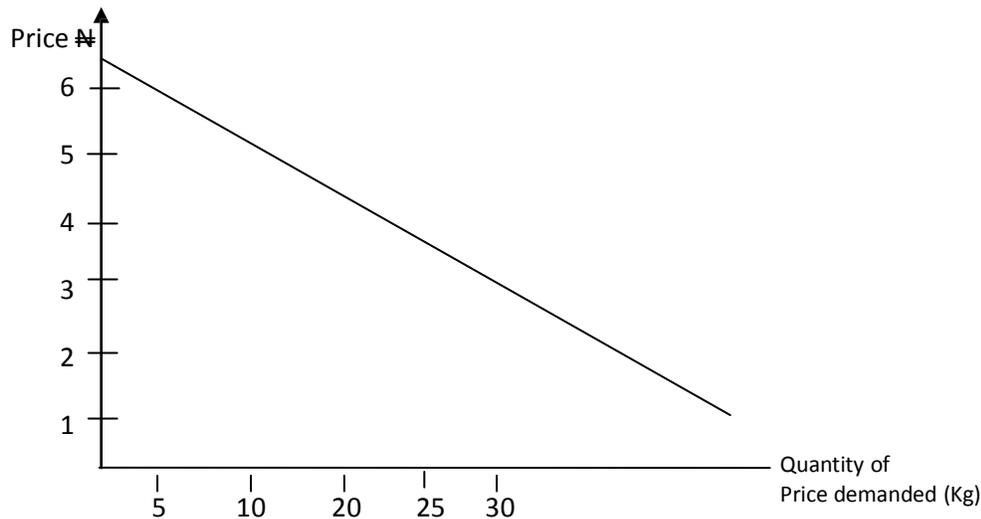
Source: Abel, 2000.

3.5   INDIVIDUAL AND MARKET DEMAND

The individual demand is the quantity of a commodity that would be bought by an individual or household at any given price at a particular period of time. On the other hand, the market demand is the sum total of the quantities of a particular commodity that would be bought by individuals or household

at any given price at a particular period of time. Given three individuals (households) A, B and C. with table below shows individuals demand and market demand of bag of rice

Price (N)	A	B	C	Market
	Quantity demanded		Quantity Demanded	Quantity
Demanded	Demand			
1	50	100	75	225
2	30	80	38	148
3	25	72	27	124
4	10	50	22	82
5	8	20	12	40

Source: Abel, 2000

3.6 DEMAND FUNCTION

The market demand depends on some factors. Mathematically, way say that the market demand function is a function of those factors. Some of the factors includes price of the commodity itself Px, consumer's tastes and preference T, consumer's income 1, Price of other goods PR, consumer's expectation, advertisement and we write:

Qdx =F (Px, T, I, Pn, E, A,) where Qdx means quantity demand of commodity x.

3.7 FACTORS INFLUENCING DEMAND

The quantity demanded of a commodity can be influenced by some factors. Some of these facts are explained below.

(a) **Price of the Commodity**: following the law of demand, which the price of a commodity is high, less of such a commodity is demanded and vice- versa. Things are true, all things being equal.

(b) **Population**: The population of a particular area determines the extent at which goods and services are demanded. When the number of people in an area increases, demand also increases and vice-versa.

(c) Income: Real income is the quantity of goods and services your money can buy. Money income is the cash at hand. Consumers tend to increase demand when their income increases. Consequently, a decrease in income may cause a fall in demand, ceteri paribus.

(d) New Commodity: When a new commodity is pushed into the market, consumers would like to have a taste of such a commodity. This will bring about a reduction in the purchase of other old goods. For example, an increase occurs in the demand among any new product such as coloured television, video recorded, etc. while old products of related function suffer a reduction in demand.

(e) Credit Facilities: If a consumer is given the opportunity to make payment for goods and services bought at a later date, the demand for such goods will rise.

(f) Taxation: An increase in the amount paid as tax by a consumer given a constant income will reduce the consumer's purchasing power and vice-versa.

(g) Other factors include weather, advertisement, income distribution and a consumer's expectation.

3.8   CHANGE IN DEMAND AND CHANGE IN QUANTITY DEMAND

It is very important to note that 'change in demand' and 'change in quantity demanded' do not mean the same. It is possible that the quantity demanded of a commodity rises or falls without any change in the price of the commodity. This is change in demand. A change in demand is cause by any factor other than price. For example, a consumer's income his taste and fashion, price of other goods (close substitutes), population among other factors could bring about a change in demand.

A demand curve may shift to the left or right from its original point. A rightward suggests increase in demand while a shift to the left means a fall (decrease) in demand. The figure below explains the above.

Source: Abel, 2000.

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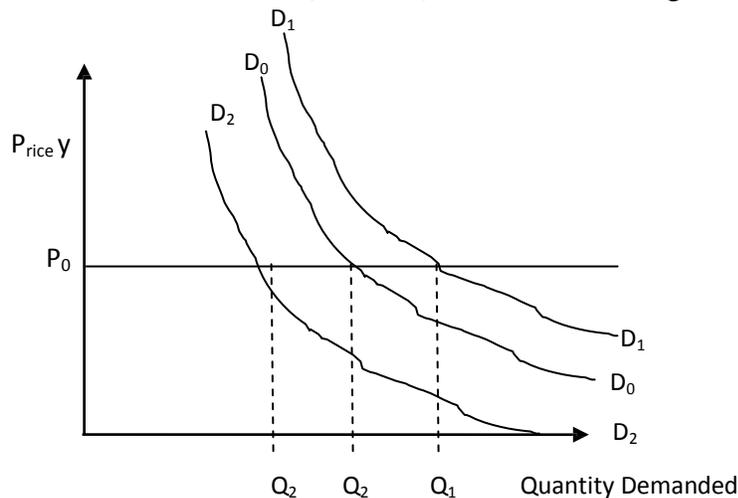
DoDo is the original demand curve, a rightward shift from DoDo to D1D1 brings about an increase in the quantity demanded from Qo to Q1 and a leftward shift from DoDo to D2D2 brings about a decrease in quantity demanded form Qo to Qo. On the other hand, a change in quantity demand takes place because of a change in price of the commodity. By change in quantity demanded we mean a movement along the demand curve resulting from an increase in the number of goods and services bought due to a fall in price or a decrease in the number of goods and services bought due to a rise in price. The figure below explains this concept clearly:
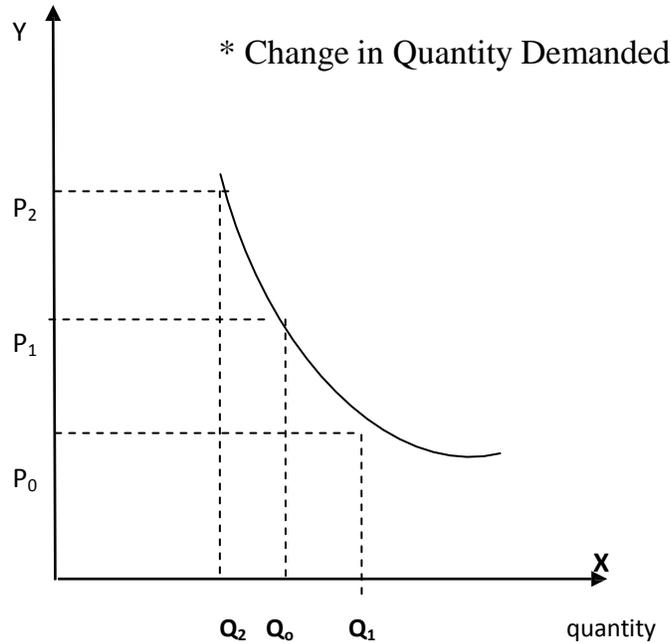
Let assume that Po and Qo are respectively the initial price and quantity demanded respectively. As a result of a fall in price from Po to P1, there is a corresponding increase in quantity demanded from Qo to Q1 and when the price goes up from Po to Q2.

3.9 EXCEPTIONAL DEMANDED

The above law is negated in some cases (exceptional cases) in which consumers purchase more of a commodity even when the price is high. Some of the reasons for this are:

(a) **Articles of Ostentation:** These are goods the society consider very important and place high value on them. Examples of such goods are jewelries, gold, luxury, cars, etc.

(b) Inferior or Giffen Goods: Inferior goods are goods which consumption does not vary over a wide range of prices. The low income on such goods which to them are the basic goods irrespective of their prices. Such goods include tuwo, gari and some other foodstuffs.

(c) Future Expectation: People tend to buy or demand for more of a commodity at a high price if they expect that the price will go higher than what it is now. Share speculators buy more stock even at high prices if by their forecast, it is expected that share price will go higher. This behavior contradicts the law of demand.

(d) Rare Goods: People tend to buy more of some rare and unique commodities irrespective of the prices. Rare goods attract higher demand   at higher prices. This is because they are in short supply when compared to the demand for them. Antiquities and old carnivals are good examples of such goods.

(e) Goods with Zero/Infinite Elasticity of Demand: These are goods which demand does not increase even at a very low price. Salts are a good example of such goods. For instance, it will be unreasonable for a house wife to increase the quantity of salt in her stew because the price is low.

3.10   TYPES OF DEMAND

The following are the types of demand. They are as follows:

(a) Joint or Complementary Demands

Some commodities are needed together in order to satisfy the need of a consumer. For example, car and tyre, generator and premium motor spirit (PMS), etc.

(b) Derive Demand

This is the demand for a commodity that it is needed not for its own sake but for what can be derived from it. For example, a consumer in need of gari needs to demand for cassava, labour is demand in order to produce goods and services, etc.

(c) Competitive Demand

This is the demand for goods that have similar uses, that is, goods that are close substitute, for example, Milo and Bournvita, Peak Milk and Cowbell, etc.

(d) Composite Demand

This is demand for commodities that serve separate or different purposes.

4.0 CONCLUSION

The foregoing discussion on the concept, and theory of demand we can categorically say that the forces of demand and supply work together in determining prices. Prices play a key role in determining the actions of consumers and producers at a particular period of time.

5.0 SUMMARY

From the forgone unit, we can say that the price mechanism plays a significant role in an economy. There exists a negative relationship between the price of a commodity and the quantity demanded (consumed) of the commodity. When the price of a good rises, the quantity demanded will fall but when the price falls, the quantity demanded will rise, all things being equal, this is the law of demand. A demand schedule is a tool for drawing the demand curve. Both the schedule and graph explain the relationship between price and quantity demanded per period of time. It is not only price that influences demand. Other factors like tastes, the number and price of substitute goods, income weather, and expectations of future price changes also do. A change in prices causes a movement along the demand curve. This effect is called 'change in the quantity demanded. A change in other factors other than price will make the whole curve to shift. This effect is called 'charge in demand'. A rightward shift of the curve denotes increase in demand and a leftward shift depicts decrease in demand.

6.0   TUTOR MARKED ASSIGNMENT

1.   How does income distribution influence demand?

2.   The law of demand may not hold true under certain situations. Discuss.

7.0   FURTHER READINGS/REFERENCES

Abe I.O., (2000), Intermediate Economics, Mipon Biz. Centre, Lagos

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UNIT 7: THE THEORY OF SUPPLY

Table of Content

1.0   INTRODUCTION

In the last unit you had an idea about what economic systems and organization is all about. This unit will takes you a step further into the concept of theory of supply. In this unit, the focus is on Economics as social science is concerned with consumption and production. Another way of saying the above is that the relationship between demand and supply are at the very centre of economics. We discussed demand in the previous unit and supply will be discussed in this unit. We shall considered the meaning of supply, the law of supply, supply schedule and curve, factors influencing supply and market equilibrium among others.

2.0   OBJECTIVES

At the end of this unit, you should be able to:

  i.   Explain what is meant by 'supply'.

  ii.   State and explain the law of supply

  iii. Define the supply curve

  iv.   State and explain the factors influencing supply.

  v.   Explain movement along and shifts in the supply curve.

3.0 MAIN CONTENT

3.1 MEANING OF SUPPLY

The theory of supply is for business firm. Supply means the amount of a commodity a producer are willing and able to offer for sale at a stated price and at a given period of time. Supply in economics refers to a fraction of total output. It deals with the relationship between price and quantity offered for sale at a given time in a particular place. The price at which a producer is willing to sell his product is very important in determining the quantity of the product that he releases to the market. He supplies more goods when the price is high and fewer goods when the price is low.

3.2 THE LAW OF SUPPLY

The law of supply states is the direct opposite of the law of demand. It states that, "the higher the price, the higher the quantity supplied and vice-versa".

3.3 SUPPLY SCHEDULE

A supply schedule is a tabular presentation of the relationship between the quantities of goods supplied at various prices.

Price (N)	250	100	150	200	250
Quantity of rice supplied (kg)	5	12	16	21	

Source: Wale and Kunle, (2002)

From the above table, it is obvious that more bags of rice are supplied at higher prices than at lower prices than at lower prices. For instance, 30bags are supplied when the price is N250 and only 12 when the price is N100. This is an agreement with the law of supply.

3.4 SUPPLY CURVE

When the prices at which various quantities of a commodity are supplied, the resulting diagram is called the supply curve. Better put, a supply curve is a graphical representation of a supply schedule. It shows the relationship between the quantities supplied of a commodity at various prices.
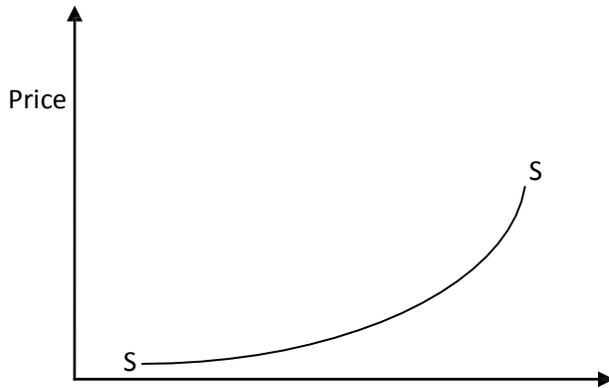
Source: Wale and Kunle, (2002)

Unlike the demand curve, supply curve has a positive slope. It slopes upward from left to right. The implication of this trend is that producers will put more goods for sale when the price rises and less when price falls.

3.5 FACTORS INFLUENCING SUPPLY

Wale and Kunle, (2002) states that the factors influencing supply of goods are as follows:

(a) Cost of Production: This refers to the amount of money incurred by a producer in the process of production. When the cost of production is high resulting from high cost of raw materials, labour etc. The effect would also be felt on supply as producers would be discouraged to produce goods.

(b) Taxation: A tax is a compulsory payment made by individuals and firms to the government. Producers of commodities pay tax to the government. An increase in tax on goods discourages high production while tax reduction encourages high production.

(c) Weather: Weather refers to the atmosphere condition of a place at a particular point in time. Weather affects mainly agriculture produce. If the weather is unfavorable, the quantity supplied would be affected and vice-versa. Naturally, good weather condition encourages good and speedy harvest while the reverse is the case when the weather condition is unfavorable.

(d) Technology: The term 'technology' is synonymous to invention or innovation. Technology in this context is the techniques and methods employed in the production process. When appropriate methods and techniques are used, supply increases because producers more. Conversely, when inappropriate method of production is used or desolate machines used, output level is reduced.

(e) Profit Expectation: When a producer is convinced that future profit expectation is very high, he would be encouraged to increase production while low profit expectation brings about low productivity or output and;

(f) Other factors that bring about changes in supply are the number of producers, government policy, quantity consumed by producers, incentives to workers and natural phenomenon.

3.6 MARKET EQUILIBRUM

The market equilibrium or supply equilibrium occurs when the quantity demanded of a commodity equals quantity supplied of that commodity. The price at which demand equals supply is called Equilibrium Price.

Equilibrium price (Pe) occurs at the point where the demand and supply curves intersect.
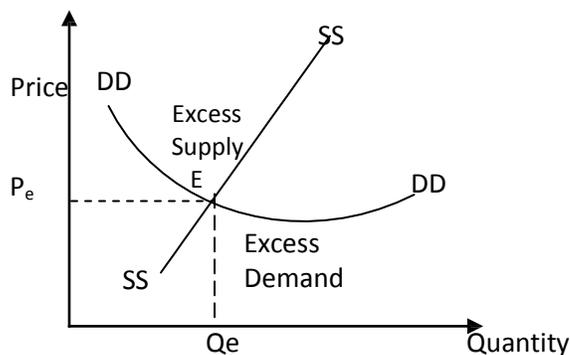
Source: Wale and Kunle, (2002)

The above graph shows the equilibrium price (Pe) and equilibrium quantity (Qe). Before the equilibrium price and quantity are attained, the consumer tries to put down the price in order to buy more. On the other hand, the producer tries to push the price up in order to sell more. This process goes on up to the point E (Equilibrium point) where the consumer's demand curve and the producer's supply curve intersect each other. Below the equilibrium point, there exists excess demand in which case demand exceed supply and above the equilibrium point, there exists excess supply in which case supply exceeds demand. It is important to note that the price equates demand and supply at the point of equilibrium and there is no tendency for the price to either move upwards or downwards. At that point, there exists neither excess demand nor supply. However, a new equilibrium may be established and this could be made possible if the quantity demanded and supplied changed. This may result into either an upward or downward movement of equilibrium price, quantity demand and supplied.

3.7 CHANGE IN SUPPLY AND CHANGE IN QUANTITY SUPPLY

(a) CHANGE IN SUPPLY: A change in supply takes place where there is a change (increase or decrease) in the quantity supply without a corresponding change in price. Supply curve may either shift

to the right or to the left from its initial position. A rightwards shift means increase in supply while a leftward shift of the supply curve indicates a cut or reduction in supply.
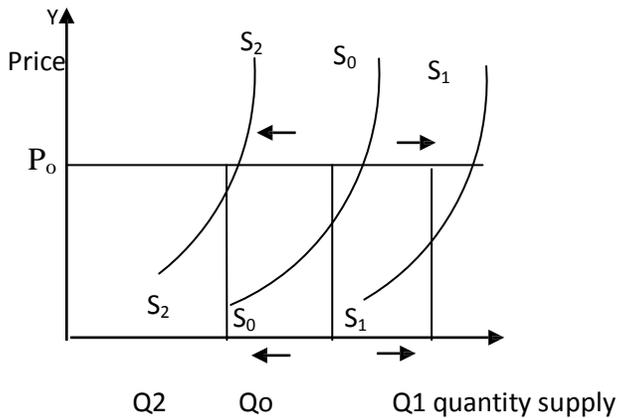
Source: Wale and Kunle, (2002)

The above graph explains the concept of change in supply. Given a constant price P_o with a corresponding quantity Q_o (supplied), the initial supply curve is $S_o S_o$. A shift of $S_0 S_0$ to $S_1 S_1$ depicts and increases in supply and a backward shift of S0S0 to S2S2 indicates a fall in supply. The change in supply can be caused by factors influencing supply, except change in price.

(b) CHANGE IN QUANTITY SUPPLIED: A change in quantity supply is caused by a change in the price of the commodity. A change in quantity supply is simply a movement along the supply curve. More of a commodity is supplied at higher price than at a lower price.
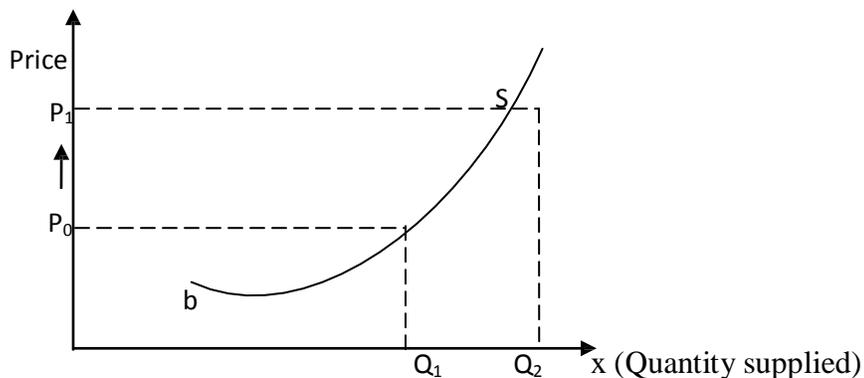
Source: Wale and Kunle, (2002)

From the above graph, we notice that an increase in price from P_0 to P_1 shifts quantity supply from Q_1 to Q_2. The converse also holds true.

3.7   TYPES OF SUPPLY

   i.   Joint Supply: When two commodities are produced together in the same production process, their supply is said to be joint. For example, palm oil and palm kernel are two different commodities (outputs) in palm oil production, production of torch and battery etc.

   ii.   Competitive Supply: A competitive supply exists when two or more commodities are supplied to satisfy the same need or purpose. For example, the supply of Milo, Bournvita and Oval tine, Wheat and Barley etc.

4.0   CONCLUSION

It is clear that there exists a negative relationship between price and quantity demand but a positive price between price and quantity supplied. When prices rise, supply rice and reverse is also true. For demand, a fall in price brings about a rise in quantity demanded and vice-versa. Equilibrium price and quantity are achieved at the point where conflicting interests are balanced, that is, at the point that demanders are willing to purchase the same as the amount that suppliers are willing to supply. It is the point that will be automatically reached in a free market through the operation of the price mechanism.

5.0 SUMMARY

Quantity supplied of a good varies in the same direction with its price. When the price of a good rises, the quantity supplied also rises and vice-versa. A supply schedule is a tabular representation of the relationship between price and quantity supplied per period of time while a supply curve is a graphical representation of same. As with demand curve, price is plotted on the vertical axis and quantity per period of time on the horizontal axis. Other factors influencing supply other than price include the cost of production, expectation of future price changes, taxation, weather, technology, the profitability of alternative products, the profitability of goods in joint supply and incentives to workers. A change in price will cause a movement along the supply curve. This movement is termed 'a change in quantity supplied'. On the other hand, a change in other factors influencing supply other than price will bring about a shift in the whole supply curve. This shift is termed 'a change in supply'. A outward or rightward shift depicts an increase in supply while an inward or leftward shift represents a decrease in supply.

6.0   TUTOR MARKED ASSIGNMENT

Assume that the equations for supply and demand curves in a particular market are as follows:

$Q_s = C + np$

$Q_d = a - mp$

Find the (i) Equilibrium price

(ii) Equilibrium quantity Qe

7.0   FURTHER READINGS/References

Abe I.O., (2000), Intermediate Economics, Mipon Biz. Centre, Lagos

John, Sloman and Alison Wride, (2009), Economics, Seventh Edition, Rotolito Lombarda, Italy.

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UNIT 8: ELASTICITY OF DEMAND

Table of Content

1.0   INTRODUCTION

In the last unit you had an idea about what theory or supply is all about. This unit will takes you a step further into the concept of elasticity. In this unit, the focus is on how the quantity demanded of a good will fall when the price rises. This is an obvious truth. However, most cases, economists are interested to know more than this. It is very important to know by how much the quantity demanded will fall. In other words, economics, will want to know how responsive demand is to a rise in price, this is what the concept of elasticity is all about. This unit present in clear and concise manner, the meaning of elasticity and its types.

2.   OBJECTIVES

After reading this unit, you should be able to:

(i)   Define price, income and cross elasticity of demand.

(ii)   Measure price, income and cross elasticity of demand

(iii)   Interpret the figure for elasticity

(iv)   Enumerate and explain factors affecting (determinants) of price elasticity of demand

(v)   Write short note types of goods with reference to their income elasticity.

3.0   MAIN CONTENT

3.1 MEANING OF ELASTICITY OF DEMAND

Elasticity of demand measures the degree of responses of a change in demand to a change in any one of the factors influencing demand, all other factors being held constant. The coefficient of elasticity (e) is the ration of the proportionate (percentage) change in the dependant variable to proportionate (percentage) change in the independent variable, Wale and Kunle, (2002).

3.2 TYPES OF ELASTICITY OF DEMAND

(i)   PRICE ELASTICITY OF DEMAND

Price elasticity of demand is the proportional change in quantity demanded of a commodity to the proportional change in the price of the commodity. Mathematically, we write price Elasticity% change in quantity demanded

        % change in price

i.e   Ep   = %D in Qd

        % D in p

Similarly   Ep   = Dq/q

                Dq/q

        =   Dq :- Dp

                Q   p

Where D = change

Ep   =   Elasticity demanded

q   =   quantity demanded

p   =   price

The coefficient price of elasticity of demand (Ep) is always negative because there is a negative relationship between price and quantity demanded of a commodity. Price elasticity of demand takes value from zero to infinity i.e. $0 < p < 00$

This means that price elasticity of demand (Ep) could be zero,

(0), unity (1), greater or less than unit or infinite (0)

TYPES OF PRICE ELASTICITY OF DEMAND

The following are types of elasticity of demand. These are;

(a)PERFECTLY OR COMPLETELY INELASTIC:

Price elasticity of demand is said to be inelastic if a change in price does not head to a change in demand. This means that demand is perfectly or completely unresponsive to a change in price. Here, price elasticity of demand is zero, ie. Ep

(b) **INELASTIC DEMAND:**

When the demand is particularly responsive to a change in price for an inelastic demand, the value of price elasticity of demand (Ep) is greater than zero but less than one. i.e. 0<1.

(c) UNITY ELASTIC OF DEMAND:

When the proportion of the responsiveness of demand is the same as that of price change then in demand equals change in price, the price elasticity of demand equals one i.e. Ep =1

(d) ELASTIC DEMAND:

Demand is said to be elastic if a change in price brings about a fairy significant change in demand. The value of Ep is greater than one but less than infinity. i.e, $1 < Ep < 00$. Goods with close substitutes usually have this type of price elasticity of demand.

(e) **INFINITY OR PERFECTLY ELASTIC DEMAND:** Demand is term perfectly and infinitely elasticity when at infinitesimal change in price brings about an infinitely large change in demand. This is usually the case with small forms under perfect competition. Note for perfectly elastic demand; Ep = 00.

3.3 FACTORS AFFECTING PRICE ELASTICITY OF DEMAND

(i)   **TYPE OF COMMODITY INVOLVED:** Necessity goods usually have inelastic demand while luxury goods possess elastic demand.

(ii)   **Price Level**: The general price level plays a significant role in effecting the price elastic of demand. When prices are high, demand id elastic and low prices, demand becomes less elastic.

(iii)   **Composited Demand:** Commodities with variety of uses usually have an elastic demand. For example, electricity, water, petrol, coal, etc.

(iv)   **Substitute Goods:** Commodities that are close substitute are more elastic in demand while commodities that are not close substitute are more inelastic.

(v)   **Income Group:** Elasticity of demand for high income group is less elastic while it is elastic for low income group.

(vi)   Joint demand, people's habit and choices are some other important factors that affect the price elasticity of demand.

3.4 IMPORTANCE OF PRICE ELASTICITY OF DEMAND

(i)   It is an important tool in the determination of monopoly price. A monopolist will profit more by fixing a low price if the demand for his product is elastic and vice-versa.

(ii)   Prices of public utilities can also be determined by the concept of price elasticity of demand. An inelastic demand for a service requires charging high prices for such a service out when demand for a service is elastic, a low price is charge.

(iii)   It is also a veritable tool in the determination of wages and salaries. When demand for labour is elastic, strikes and other trade union actions directed toward raising salaries and wages will not work out and the reverse of this is also true.

(iv)   Elasticity of demand encourages products advertisement as producers spend huge or large sum of money on advertising their products. This is because they aware that advertisement makes the demand for their products less elastic.

(v)   It is also very important to the government in making reasonable and efficient policies relating to price fixing for farm products, finance, poverty alleviation and granting protection to firms.

(vi)   It is important in the analysis of grain from international trade, tariff policy and policy of evaluation.

3.5 CROSS ELASTICITY OF DEMAND

By cross elasticity of demand we mean the relation between the proportional changes in the quantity demanded of a commodity to the proportional change in the price of related goods. Given two goods x and y, the cross elasticity of demand (Epc) is given by the fraction.

Epc = % change in quantity demanded of x

% change in price of Y

=   QX:-   PY

   Qx   x   py

$\triangle$Qx   x   py

$\triangle$Py   Qx

Where D = change

Qx = Quantity demand of commodity x

Py = price of commodity y

Cross elasticity of demand, while price elasticity of demand which is normally negative, could take positive value negative value or Zero. Cross elasticity of demand could be measures between goods that are substitutes, complementary goods independent or unrelated goods.

3.6 INCOME ELASTICITY OF DEMAND

Income elasticity demand measures the degree of responsiveness of a consumer's demand for my goods to the percentage change in the consumer's income. Given Y as a consumer's income, the income elasticity of demand is given by the fraction below:

Ey = % change in quantity demanded

% D in Qd in income

= % D in Qd

   % D in Y

$$= \frac{DQd}{Qd} \times \frac{Y}{Dy}$$

$$= \frac{DQd}{Dy} \times \frac{Y}{Qd}$$

Where D = change

Y = income

Qd = Quantity demanded.

3.7 INCOME ELASTICITY OF DEMAND FOR NORMAL AND INFERIOR GOODS.

NORMAL GOODS: The demand for a normal good vise with an increase in a consumer's income. In other words a good is termed 'normal' if its demand increase as the income of its consumer increase. For normal goods, the coefficient of elasticity (Ey) is positive.

INFERIOR GOODS: The demand for inferior good decreases as the income of its consumer increase. For inferior goods, the coefficient of income elastic of demand (Ey) is negative.

3.8 TYPES OF NORMAL GOODS

NECESSITY GOODS

In economies a necessity good is a type of normal good. Like any other normal good, when income rises, demand rises. But the increase for normal good, when income rises, demand rises. But the increase for a necessity good is less than property to the rise in income. That is $o< Ey<1$ (Ey =INCOME Elasticity). This means that the income elasticity of necessity good is thus between zero and one.

LUXURY GOODS

Luxury goods are products and services that are not considered essential and are associated with silence. In economics, a luxury good is a good for which demand increase more that proportionally as income rises and is a contrast to a necessity good. Its income elasticity is greater than one Ey =1

(ii) that is Ey > 1.

(iii)   **Comfort Goods**

For comfort goods e.g. electricity, the increase in its consumption and income change in the same proportion. That is the value of its income elasticity is unit; $Ey = 1$

4.0   CONCLUSION

As we have seen, elasticity measures the responsiveness of one. Variable (e.g. quantity demanded) to change in another (e.g. price). This concept is fundamental to the understanding of how markets work. The more elastic variable is, the more responsive is the market to changing circumstances.

5.0   SUMMARY

Elasticity is a measure of the responsiveness of demand (or supply) to a change in one of the determinants. It is calculated by dividing the percentage change in quantity by demanded (or supplied) by the percentage change in the determinant. The degree of responsiveness of demand to any of the determinants often varies. If the percentage change in quantity is more than the determinant, the figure for elasticity will be greater than 1 (ignoring the sign): it is elastic. If the proportionate (percentage) change in quantity is less than the determinant, the figure of elasticity will be less than 1 in which case it is in elastic. If quantity and determinant change by the same proportion, value of elasticity will be 1, then, it is unit elastic. Price elasticity of demand measures the responses the responsiveness of demand to change in price. Income elasticity of demand measures the responsiveness of demand to change in income. For normal goods, income elasticity is positive and assumes negative value for inferior goods. Cross elasticity of demand measures the proportional change in the quantity demanded of a good to the proportional change in the price a related good. For substitute goods, its value will be positive; for complements it will be negative. The cross elasticity will be higher the closer the two goods area as substitutes or complements.

6.0   TUTOR MARKED ASSIGNMENT

1.   Explain the concept of 'wage elasticity of demand for labour'

2.   Given that an equation for a demand curve is $Qd = 120 - 30P + 2p^2$

a.   Calculate the price elasticity of demand at a price of (i) 3   (ii) 5

b.   What types of price elasticity do you have in each case?

7.0 FURTHER READINGS/REFERENCES.

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MODULE THREE:

UNIT 9: THE THEORY OF CONSUMER BEHAVIOUR

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1.0   INTRODUCTION

In the last unit you had an idea about what the concept of elasticity is all about. This section will takes you a step further into the theory of consumer behaviour. In this unit, the focus is on the quantity of goods and a service a consumer buys is a function of his income and prices all things being equal. The theory of consumer behavior explains how a consumer distributes a given level of income among various competing commodities in order to maximize utility (satisfaction) consumer theory or household behavior, as the theory of consumer behavior is otherwise known deals with the action of and reaction of consumers towards the purchase of goods and services. The term 'utility' is central to the overall theory of consumer behavior.

2.0   OBJECTIVES

At the end of this unit, you should be able to:

(a) Define utility and state the law of Diminishing marginal utility.

(b) State properties of indifference curve

(c) Explain consumer equilibrium using the indifference curve analysis

(d) Derive the individual's demand curve using the indifference curve analysis, and

(e) Differentiate between income and substitution effects.

3.0 MAIN CONTENT

31. MEANING OF UTILITY:

The word 'utility' refers to the ability of a commodity or service to satisfy a consumer's want. If a commodity or service gives a consumer the satisfaction he needs regardless of its nature injuries or experimitive etc, such a commodity or service is said to possess utility. Utility is thus a subjective concept and does not carry any ethical connotation or consideration. In the analysis of the concept of utility, there are basically two schools of thought namely:

- Cardinal school of thought
- Ordinal school of thought

3.2 THE CARDINAL SCHOOL OF THOUGHT AND ITS ASSUMPTIONS

The Marshatlian demand analysis of consumer theory sees utility as a cardinal concept. It assumes that utility is measurable and additive. Here, utility is expressed as a quantity measured in hypothetical units called 'utils'.

Assumptions of the Cardinal Approach

The cardinal approach to measuring utility is based on the following assumptions:

(a) **Rationality:** It assumes that the consumer is a rational being who makes appropriate economic decisions. He thinks deeply before buying anything and compares the utility (satisfaction) derivable from different units or quantities of various goods and services. The consumer ensures that his decisions give him the best satisfaction.

(b) The consumer has full knowledge of all available commodities and their prices since every consumer has the basic objective of maximizing utility.

(c) No substitutes: it assumes that every commodity is unique there are no substitutes and utility is measurable in terms of money. Therefore, utility is relative to consumer depending on three factors– time, place and form.

3.3 THE ORDINAL SCHOOL OF THOUGHT

The ordinal approach to analysis utility sees utility as an ordinal concept. Ordinarily of utility means that utility could be rankled as various levels of consumption. This approach of measuring utility requires that a consumer makes scale of preference and choose between or among various commodities that yield equal amount of utility to him.

3.3   TYPES OF UTILITY

TIME UTILITY: This refers to the ability of a commodity or service to satisfy a consumer's wants at a particular time. Some goods or services may at one time yield the required satisfaction while at other times may not. Time here could mean morning, afternoon, evening, a particular day, week, and year, etc.

FORM UTILITY: A commodity or service may not satisfy the need of a consumer in its original form but when such commodity or service undergoes transformation or processing, it may then possess utility. For example, crude oil does not possess utility until it is refined. Its bye products include; kerosene, petroleum paraffin, etc. These products are used domestically and in industries.

PLACE UTILITY: This refers to the ability of a commodity or service to satisfy a consumer's wants at a particular place some goods and services do not give utility where they are made or mined. They needed to be transported to another area or country. For example, air conditioners may not be required in some zones or regions of the world where the weather condition is never very hot or very cold and so, if air conditioners are produced in such countries or regions there is need to sell or export it to other regions with very high temperature.

3.4 TOTAL, AVERAGE AND MARGINAL UTILITY

TOTAL UTILITY: This is the total amount of satisfaction a consumer derives from the consumption of a particular commodity is consumed; the satisfaction derived from it also increases. It should be noted however, that the amount of satisfaction derived from the consumption of a commodity or service does not increase at the same rate with the quantity consumed. There comes a point (saturation point) where the satisfaction derived from the consumption of additional unit of a commodity tends to diminish.

Mathematically,

$TU = f(x_1, x_2, x_3, \ldots x_n)$

DU/DX is positive up to the satisfaction point and D^2u/Dx^2 is always negative. This is explained by the total utility curve below:
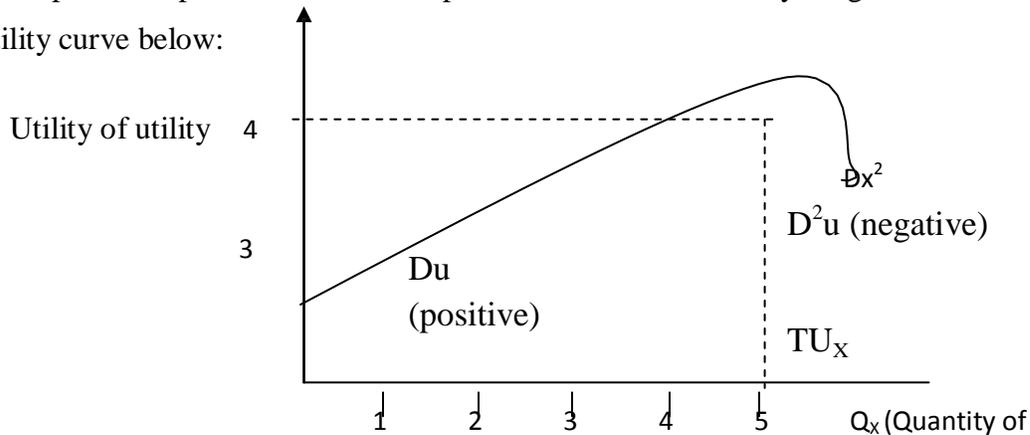

(Wale and Kunle, 2002)

Average Utility: This is the total satisfaction derived from a commodity divided by the number of units of the commodity.

Marginal Utility: This refers to the additional amount of satisfaction which a consumer derives from the consumption of an extra or one more unit of a commodity. It is the change in total utility resulting from the change in consumption of a commodity or service. The Figure below shows the relationship between total utility and marginal utility.

-saturation point
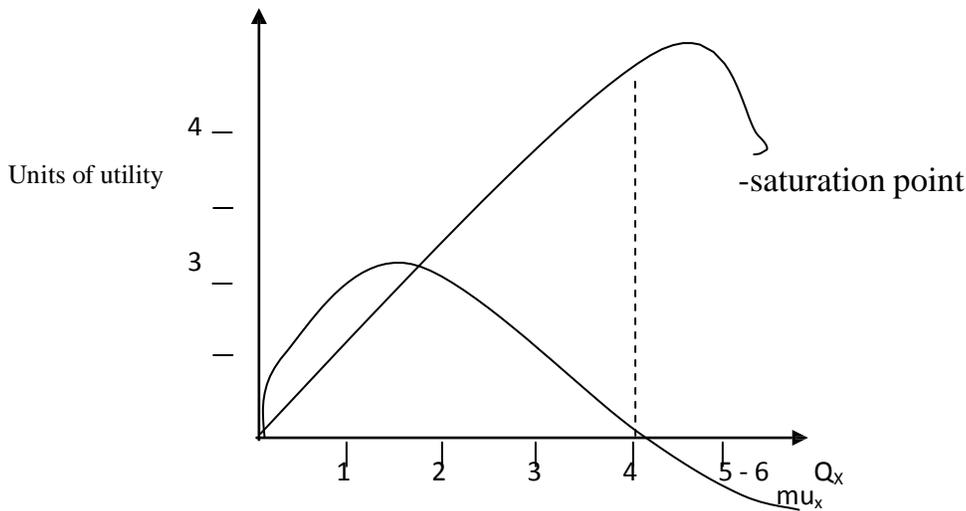
(Wale and Kunle, 2002)

At the Initial level, marginal utility rises with total utility. Soon afterwards, total utility gets to its peak (utility maximization point).

At this point, marginal utility becomes zero and thereafter assume negative values as total utility decreases.

3.5   THE LAW OF DIMINISHING MARGINAL UTILITY

The law states that as more and more of a particular commodity or services is consumed, total utility increases at first but there comes a point (saturation point) at which the consumption of additional units of the commodity or service add less to total utility than the proceeding units. The table below illustrates the relationship among total utility, average utility and marginal utility.

Quantity of Total Average

Goods consume	Utility	Utility	Marginal Utility
1	8	8	-
2	12	6	4
3	18	6	6
4	16	4	-2
5	10	2	-4

 Source: Wale and Kunle, (2002)

3.6 MERIT OF THE LAW OF DIMINISHING MARGINAL UTILITY

(i)   It is the fundamental law that govern consumption, the law of demand and the concept of consumer surplus.

(ii)   The law dictates the changes in design, pattern and packaging of industrial goods because the use of a particular commodity with the same design and pattern may be boring.

(iii)   The law influences the principles of progression in taxation.

As of workers income increases, the rate of tax rises because the marginal utility of money to him falls with the rise in come.

(iv)   The law is based on the socialist ideology of equitable distribution of wealth. The marginal utility of money to the rich is low, it is therefore advisable that their surplus wealth be acquired by the state and distributed to the poor who possess high marginal utility for money.

3.7 CRITICISMS OF THE LAW OF DIMINISHING MARGINAL UTILITY

(i)   The law assumes that all commodities are divisible into small units. This assumption is not always realistic.

(ii)   There are some commodities that the more one consume them, the more one needs them. For example, the marginal utility of having more money will never diminish, all things being equal.

(iii)   Habits and impulses of individuals make it difficult to weigh or measure the marginal utility derivable from consuming an item before the consumption.

UTILITY MAXIMIZATION (CONSUMER EQUILIBRIUM)

Utility maximization refers to the ability of a consumer to derive the highest level of satisfaction from consuming a given commodity or service. When a consumer maximizes satisfaction, he is said to be at equilibrium. A consumer maximizes satisfaction (utility) or is at equilibrium when his marginal utility equals to the price of the commodity consumed, that is $MUx = Px$ where MUx = marginal utility of commodity ZX and Px = Price of commodity.

Now, let us assume that the consumer's income is fixed and that he spends his income on different commodities given the prices of the commodities. Since the consumer is assumed rational, he will organize his consumption in a way to maximize his utility. Usually, any consumer with fixed income

given market prices for the commodities can maximize utility is satisfying the condition of equal marginal utility for every naira spent. The basic condition for consumer equilibrium can be stated in terms of MU and prices of different goods as follow:

$$\frac{MEx}{Px} = \frac{MUy}{Py} = \frac{MUz}{Pz}$$

Where MUx is the marginal utility of commodity x, MUy is the marginal utility of commodity y, MUz is the marginal utility of commodity z, Px, Py and Pz are respectively prices of commodities x, y and z.

The equation in * above can be re-expressed as:

MUx Py = MUy Px …… ** when only commodities x and y are considered and finally as:

$$\frac{MUx}{MUy} = \frac{Px}{Py} \dots\dots\dots\dots\dots\dots\dots ***$$

3.8 INDIFFERENT CURVE THEORY

The indifferent curve analysis measures utility ordinary. It explains consumer behavior in terms of his preferences or rankings for different combinations of two goods, X and Y. An indifference curve is the locus of point involving different combination of goods which yield the same level of utility to the consumer so that he is indifferent among them. An indifference curve is usually downward sloping. The consumer can choose any point on an indifference curve and still obtain the same of satisfaction. Using two commodities X and Y (bread and yam), the consumer's indifferent curve can be represented with the following diagram.
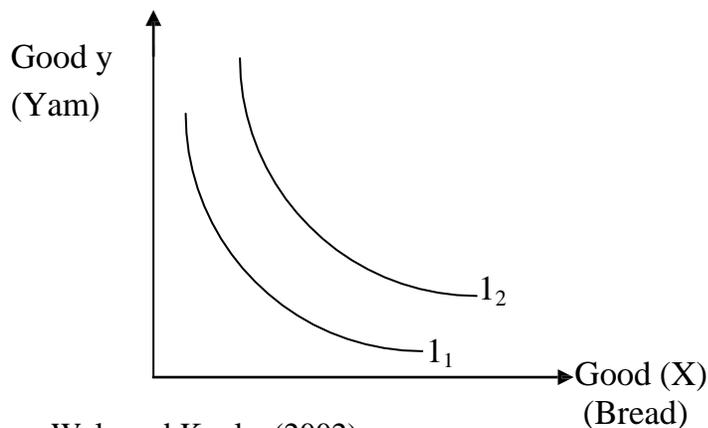

Source: Wale and Kunle, (2002)

One indifference curve depicts a level of satisfaction. But it is possible to have a number of indifference curves as shown in the diagram above. The curves that are further away from the origin represent higher levels of satisfaction; as a consumer has larger combination of commodities of X and Y.

Thus, 1_2 indicates a higher level of satisfaction than L,

INDIFFERENCE MAP

An indifference levels of utility. It means that when two or more indifferent curves are drawn, an indifference map is formed. The higher the indifference curve, the higher the level of satisfaction. An indifference map can be shown as follows:
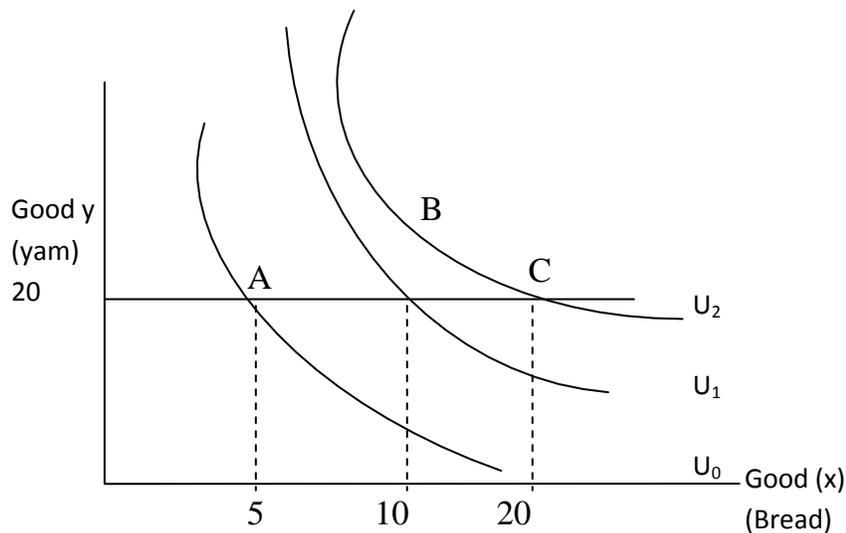
Source: Wale and Kunle, (2002)

The further a consumer is from the origin in a north–east direction,

3.9 ASSUMPTION OF INDIFFERENCE CURVE ANALYSIS/ORDINARY THEORY

(i). The consumer is a rational being. He aims at utility maximization.

(ii) The consumer ranks his preference according to the utility derivable from each commodity basket.

(iii) Total utility is a function of the total number of commodities consumed. That is, $TU = f(x_1 \ x_2 \ x_3 \ \ldots, x_n)$

(iv) The slope of indifference curve is convex to the origin; this is the marginal rate of commodity substitution (DMRS) the slope diminishes as one commodity is substituted for another.

(v) The consumer is consistent and transitive in making choices. Given two commodities x and y, the consumer is consistent if he prefers basket x of y, and at no time will he consider basket y over x if the both of them are available for transitively, if bundle x is preferred to bundle y and y preferred to z, then bundle x is preferred to z. mathematically, if X > Y, and Y > z, then X > Z.

(vi) The consumer arranges the basket of goods using scale of preference. This make him to have preferences" and "indifference" for the goods.

3.10 PROPERTIES OF INDIFFERENCE CURVE

(i) It is convox to the origin. This means that, for two commodities X and Y, the amount of X is increase by equal amount that of y diminishes by smaller amounts.

(ii) The further the indifference curve is from the origin, the greater the satisfaction derived and vice versa.

(iii) I Cs are not necessarily parallel to each other. This means that the marginal Rates of substitution will not be the same for all ICs. That is, MRSx + MRSy.

(iv) Indifference curve cannot touch nor interest each other

(v) An IC has negative slope. It slopes downloads from left to right.

This means that the consumer is indifferent to all the combinations on an IC.

3.11 MARGINAL RATE OF SUBSTITUTION (MRS)

Commodities X and Y, the marginal rate of substitution is the rate of exchange between some units of commodities x and y which are equally preferred. The marginal rate of substituting x for y, is the amount of commodity y that will be given up for obtaining every additional unit of x and vice-versa. The table below illustrates the MRS of x for y.

Combination	X	Y	MRS of X for Y
1	1	20	_
2	2	17	3:1
3	3	13	4:1
4	4	10	3:1
5	5	6	4:1

Source: Wale and Kunle, (2002)

From the table, MRS of X for Y, denoted as MRSxy is the ration of the change in commodity Y to a given change in X i.e MRSxy = Dy/Dx. It is clear from the table the MRS of commodity substitute is the quantity of one commodity that must be sacrificed in order to obtain more of the other so that the consumer remains at the same level of satisfaction. It should be noted however that the MRS is the slope of the indifference curve and that by assumption commodities x and y are substitutes but not necessary perfect substitutes y.
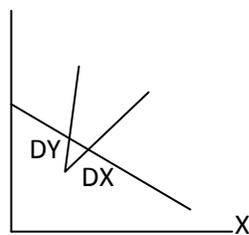
Source: Wale and Kunle, (2002)

The above diagram shows MRS as Dy/Dx

3.12 CONSUMER'S BUDGET CONSTRAINT

The consumer, though assumed rational, is still constrained by his income. The consumer budget line otherwise referred to as consumer's possibility line is a straight line sloping from left to right (negatively slope) and shows the sum total of all the possible positions the consumer can occupy by spending his given income at a given price of a particular commodity. The graph below shows the budget line of a consumer for two commodities X and Y.

Abbey
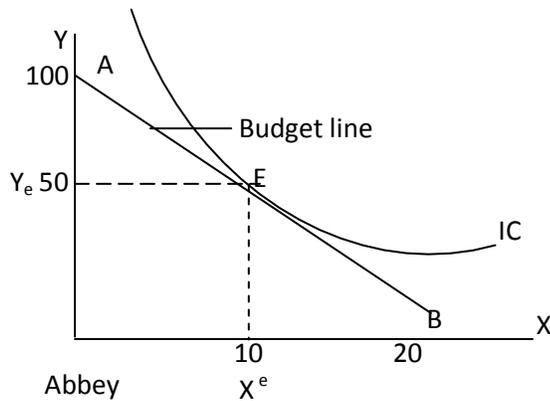
Source: Wale and Kunle, (2002)

A critical look at the above diagram shows that the slope of the budget line is equivalent to the ratio of the prices of the commodities. At the point of the tangency, Ye and Xe quantities of commodities x and Y are consumed. These two points represent position of maximum satisfaction. In other words, satisfaction is highest at the point where the IC is tangent to the budget line. At that point, the slope of the budget line is equal to the slope of the indifference curve.

3.14 DERIVING THE INDIVIDUAL'S DEMAND CURVE

Individual's demand curve can be derived from the utility theory. We can use the analysis of price changes to show how in theory a person demand curve for a product can be derives.

THE PRICE EFFECT

The price explains how a consumer's purchases of goods x changes when its price changes given his income, taste preferences and the price of good y. for a normal good, there exits an inverse relationship between the price of the commodity and its demand. A fall in price of x, will bring about increase in the quantity of x demanded. This situation will make the budget line to swing outwardly. This will lead to the derivation of the demand curve as the consumer spends the whole or his money income (m) on the purchase of these two goods (x and y). This is shown in the figure below:
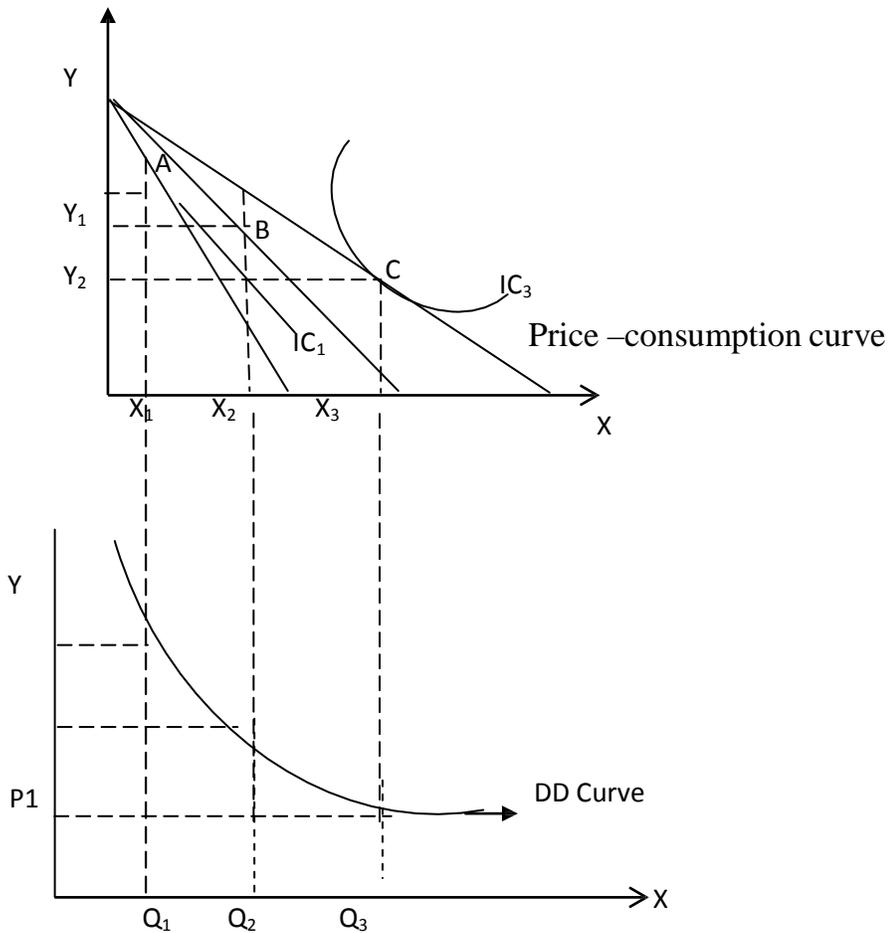
Source: Wale and Kunle, (2002)

It can be deduced from the above figure that as the price of x falls, the consumer can buy more and more units of x like ox_1, $0x_2$, etc thereby attaining higher ICs – IC_1, IC_2, SS IC_3, etc: buying Q_1 of x l with y, of y), Q_2 of x (with y_2 of y) and Q of x (with y_3 of y) respectively.

The price –consumption curve is a line showing how a person is optimum level of consumption of two goods changes as the price of one of the goods changes (assuming that income and the price of the other goods remain constant) from the above diagram, the price- consumption curve for commodity x is the locus of points of consumer equilibrium resulting when only the price of x change. As price falls from p1 to p2 to Q3 making it possible for the derivation of demand curve.

3.15 THE INCOME EFFECT

When the price of a good rises, consumers will purchase less of it because they cannot afford to buy so much. Also, a fall in the price of a commodity affects the demand for that commodity by raising the

consumer's "real income". Consequently, the income effect of a price change is that portion of the change in quantity demanded that results from the change in real income, all other factors remaining constant. For a normal good, increase in money income, price remain constant, will lead to an increase in it consumption but a fall in money income will result in decrease in the consumption of such a goods. In other words, the income effect for normal goods is positive which brings about a downward sloping demand curve. For an inferior goods, a consumer is likely to reduce its consumption when money income effect. The consumption of a product like salt may remain unchanged regardless of the changes in income.

3.16 THE SUBSTITUTION EFFECT

Also, when the price of a good rises, consumers will purchase less of it because the goods is now more expensive relative to other goods. Therefore consumers' substitution alternatives for it. This is the substitution effect. The substitution effect is` that portion of the change in quantity demanded that result from the change in the relative price of the goods. Given two commodities x and y, and a constant real income, a fall in price of good x will lead to a substitution of x in place of y, while a rise I the price of good x will bring about substitution of x for x. it should be noted that for a normal good therefore, the income and substitution effects of a price change reinforce, each other. They both involved a reduction in the quantity demanded as price rises (and vice versa). The bigger the income and substitution effects, the higher will be the price elasticity for goods x.

4.0   CONCLUSION

Indifference curve theory through has made it very possible to demonstrate consumer's rationality in choice making easy derivation of individual's demand curve and the analysis of the income and substitution effects of price change is not without its shortcomings. Apart from the fact that in practice, it is impossible to derive indifferent curves, consumers may not be rational and hence may not give careful consideration to the satisfaction they believe they will gain from consuming goods. Besides, this theory is also limited because certain goods are bought only now and again, and then only one at a time.

5.0 SUMMARY

There are two schools of thought in the analysis of the concept of consumer behavior – the cardinal school of thought and the ordinary school of thought (Indifference curve theory). While the cardinal school of thought assumes that utility is measurable, and additive, the ordinal (indifference) approach to

analyzing consumer demand avoids having to measure utility. An indifference curve is the locus of points involving different combination of goods which yield the same level of satisfaction to the consumer so that he is indifferent among them. An indifference map on the other hand is a family of indifference curves showing different levels of utility. Indifference curve are convex to the origin, the further it is from the origin, the greater the satisfaction derived and vice versa. The slope of indifferent curve is called the marginal Rate of substitution (MRS) = MUx / MUy. A budget line can be drawn on an indifference diagram. The consumer budget line otherwise referred to as consumer's possibility line is a straight line sloping from left to right (negatively sloped) and showing the sum total of all the possible positions the consumer45 can occupy by spending his given income at a given price of a particular commodity the slope is equal to Px /Py. The consumer's level of satisfaction will be maximized, for a given income (budget) at the point where the budget line just touches the highest possible indifference curve. At this point of tangency, the budget line and the indifference curve have the same line, that is, MUx = Px

MUy   Py.

If the consumer's real income rises, the budget line will shift outwardly. A rational consumer will move to the point of tangency of this new budget line with the highest indifference curve. The price consumption curve is a line showing how a person's optimum level of consumption of two goods changes as the price of one of the goods changes (assuming that income and the price of the other goods remain constant). Given two commodities x and y and measuring the expenditure on commodity y on the vertical axis and by hiding its price constant and money income constant, a demand curve can be derived for commodity x measured curve can be derived for commodity x measured on the horizontal axis. Changes in its price make the budget line to pivot inwardly or outwardly depending on whether its price increases or falls. The effect on the quantity demanded can be found on the budget line.

The effect of a price change on quantity demanded can be viewed from two perspectives – income effect and substitution effect. The income effect arises because of change in real income while the substitution effect is as a result of the change in the relative price of the goods.

The income and substitution effects for normal goods as result of increase price will be negative and will reinforce each other. For inferior goods, the substitution effect will still be negative while the income effect will be positive and thus will offset the substitution effect.

6.0   TUTOR MARKED ASSIGNMENT

Distinguish between a normal good, and inferior good and a Giffen using the indifference curve analysis

7.0   FURTHER READINGS

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Unit 10: **THE THEORY OF COST**

Table of Content

1.0   INTRODUCTION

In the last unit you had an idea about what the theory of consumer behavior is all about. This unit will takes you a step further into the concept of theory of cost. In this unit, the focus is on the theory of cost from the short run and long–run perspectives. It shows how output depends on input employed in production and how the cost of production is a function of output produced. The relationship between long-run and short–run average cost curves also considered. A thorough analysis of the relationship between the various cost curves is made.

2.0   OBJECTIVES

At the end of this unit, you should be able to:

  (a) Explain what is meant by cost of production

  (b) State the Law of diminishing returns

(c) Explain the relationship between the various cost curves

(d) State and explain the assumptions behind the long-run average cost course.

(e) Explain the relationship between long-run and short-run average cost curves.

3.0   MAIN CONTENT

WHAT IS COST OF PRODUCTION

Cost of production refers to the monetary value of all resources (human and material (resources) used in the production of a commodity. For effective production to take place human resources like entrepreneurship and labour as well as land and capital must be in place. The totality of all cost incurred or expended on these resources of production in the production of goods and services is what is generally called cost of production.

3.1 BASIC COST CONCEPT

The basic cost concepts include:-

TFC – Total concepts includes

TVC – Total Fixed cost

TC – Total cost

AVC – Average variable cost

AFC – Average Fixed cost

ATC – Average Total cost

MC - Marginal cost

(i)   **TOTAL FIXED COST (TFC):** These are the costs of resources which do not vary with the develop of output in the short run. They are so called because they remain unchanged. These costs include cost of machinery, land and other heavy equipment used in the production of goods and services.

(ii)   **TOTAL VARIABLE COST (TVC)**: As they are called, they are costs of resources that vary with the level of output both in the short run and long run. In other words, when output increases, such costs increase too and vice versa. They in include cost of raw materials, labour, transportation, etc.

(iii)   **TOTAL COST (TC)**: This refers to the sum total of all the costs incurred in the production of a commodity. Total cost consists of Total Fixed Cost and Total variable cost, that is (Mathematically) TC= TFC+TVC or TC = ATC x Q where ATC means Average Total Cost and Q is the output.

(iv)   **AVERAGE VARIABLE COST (AVC)**: This is the cost unity variable cost of output. It is the average of total variable cost. To obtain AVC, we divide TVC by the total variable cost. To obtain AVC, we divide TVC by the total member of output. That is AVC = $\underline{TVC}$
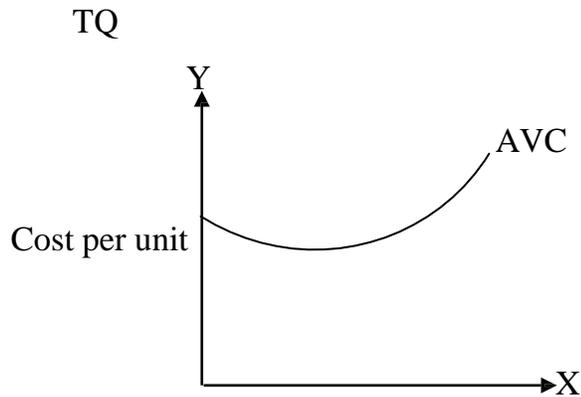
(Wale and Kunle, 2002)

(v)   **AVERAGE FIXED COST (AFC)**: This refers to the fixed cost per unit of output. AFC = $\underline{TFC}$ = ATC –AVC
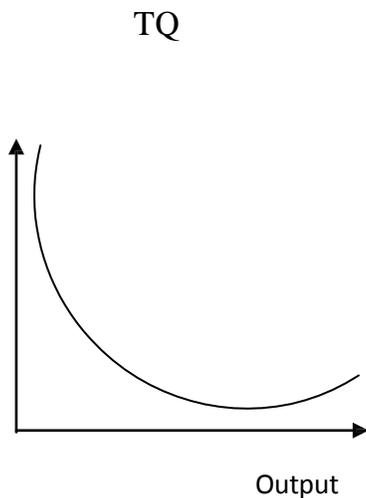

(Wale and Kunle, 2002)

(vi) **AVERAGE TOTAL COST:** This is the term employed to describe the cost incurred in producing a unit of output.

Simply put, this is the cost per unit of output. To obtain average cost, we divide total cost by the total number of output, that is ATC or AC = $\underline{TC}$ Where AC = Average cost,

$$TQ$$

TC = Total cost and TQ = Total output. Similarly ATC or AC = AFC + AVC.
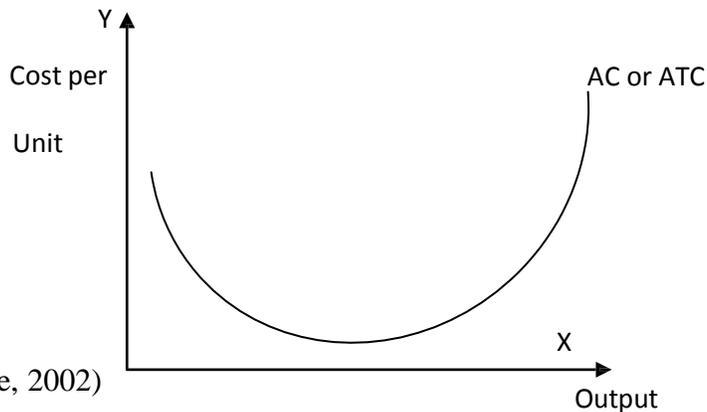

(Wale and Kunle, 2002)

(vii) **MARGINALD COST:** This refers to the additional or extra cost incurred in producing additional unit of output. It is the extra amount resulting from an extra unit of out put produced. It can also be viewed as the change in Total cost resulting from change in total output.

MC = $\underline{\triangle\ \text{in TC}}$ where D = charge, TC = Total cost and

$\triangle$ in Q

Q = Total input
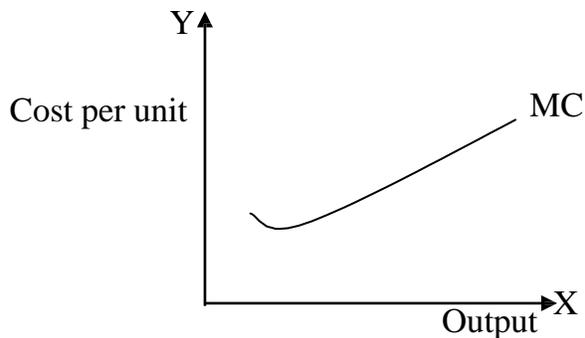
(Wale and Kunle, 2002)

The various cost concepts can be analyzed and clearly explained using numbers. This will help us in understanding how production costs are incurred and calculated. The table below shows the calculations.

OUTPUT	TFC	TVC	TC	AFC	AVC	ATC	MC
0	5	-	5	-	-	-	-
1	5	15	20	5	15	20	15
2	5	30	35	2.5	15	17.5	15
3	5	55	60	1.66	18.3	20	25
4	5	62	67	1.25	15.5	18,75	7
5	5	75	80	1	17	16	13
6	5	90	95	0.83	18	19	15
7	5	102	107	0.71	16	15.28	12
8	5	140	145	0.63	17.5	18.1	38
9	5	200	205	0.56	22.2	22,7	60
10.	**5**	**284**	**289**	**0.50**	**28.4**	**28.9**	**84**

(Wale and Kunle, 2002)

Note: $TC = TC + TVC$, $AFC = \dfrac{TFC}{Q}$, $AVC = \dfrac{TVC}{Q}$

$$ATC = \frac{TC}{Q} \text{ or } AFC + AVC \quad MC = \frac{\triangle TC}{\triangle Q}$$

The table above shows the short-run relationship among the various production costs assuming a single commodity production with one variable input. It is obvious from the table that TFC remains constant for every level of output, TVC increases but at a decreasing rate, TC increases continuously, AVC first decreases and later rises, MC too first falls but increase later.

TC = (TC =TFC+TVC)

TVC

TFC

TVC

TFC

Y
Cost

X Output [Total cost of a firm]
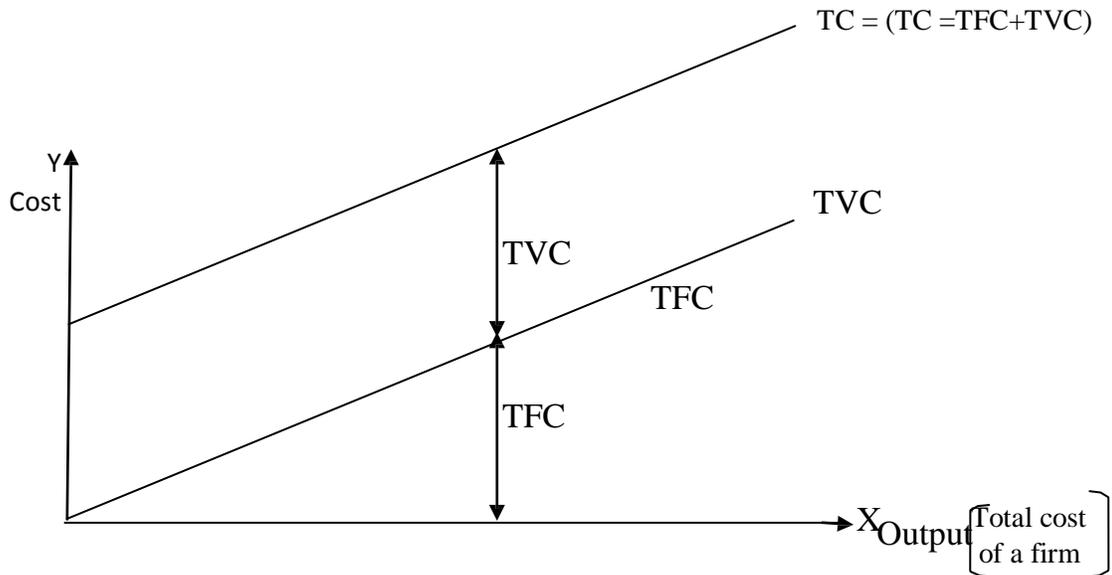
(Wale and Kunle, 2002)

Since TFC remains constant, TC will increase by the amount of increase in the TVCD. The distance between TC and TVC represents TFC at all levels of output.

3.2 THE LAW OF DIMINISHING (MARGINAL) RETURNS The law of diminishing returns states that when one or more factors are held fixed, there will be a point beyond which the extra output from additional unit of the variable factor will diminish.

3.3 THE RELATIONSHIPS BETWEEN THE VARIAOUS COST CURVES

MC

AC

AVC

AFC

C

B

A
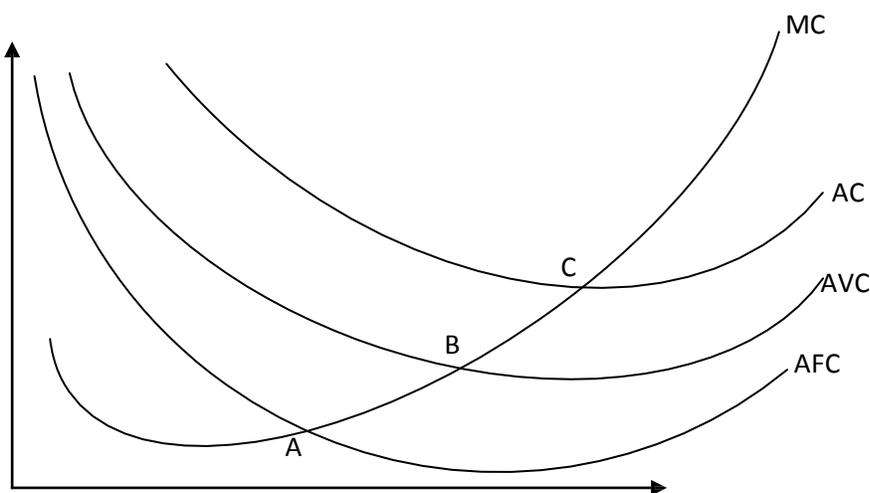
Source: Wale and Kunle, (2002)

The shape of the MC curve follows directly from the law of diminishing. Initially in the above figure and also in the table, as more of variable factor is used, extra units of output cost less than previous unit and this make MC to fall. Also, as the average product of workers increases to a certain point, the average labour cost per unit of output (the AVC) falls. As long as new units of output cost less than the average, producing them will pull the average cost down. That is if MC is less than AC, AC must be falling. On the other hand, if new units cost more than the average, their production must drive the av3erage up. That is, if MC is greater than AC, AC must be raising consequently, the MC crosses the AC at its minimum point C in the above graph. Since all marginal costs are variable, the same relationship holds between MC and AVC.

3.4 SHORT RUN COST COURVES

In the short run, at least factor of production is fixed. During this period of production, a firm cannot vary all its factors. A firm cans only such factors and resources that are variables- labour, cost of raw materials, etc. costs of the firm's assets like cost of land, building, machinery, etc. cannot be varied during this planning period. The only option available to a firm seeking increased output during this period is to employ more variable factors and use other fixed assets efficiently and effectively.

3.5 WHY SHORT RUN AVERAGE COST CURVES ARE USUALLY U-SHAPED

Average costs curves usually takes a U-shape, that is, they fall, get to a minimum and begin to rise again. The answer to the above question will be viewed from two angles, namely: why AC curves falls and what happens when it reaches the minimum, why AC curve rise.
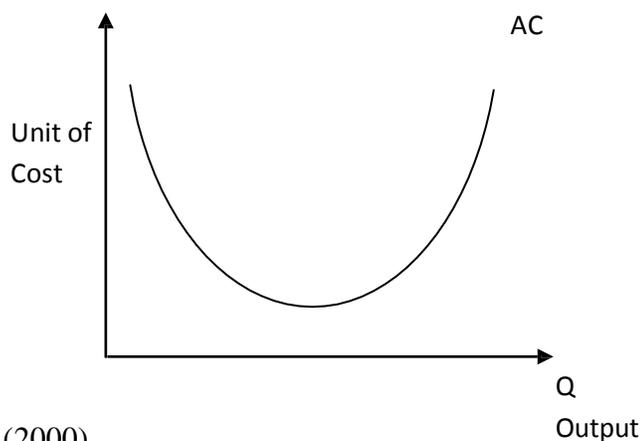
Source: Abel, (2000)

Average curves fall as output increases because of the following reasons:

(i) SPECIALIZATION AND DIVISION OF LABOUR: AC curves fall because of specialization and division of labour as proved by Adam Smith. Workers acquire a high degree of efficiency where production is broken down into a number of simpler and more specialized tasks. The overall result of workers efficiency will be a fall in unit cost of production, which in turn lead to increase in output.

(ii) INCREASING RETURN TO SCALE: This occurs where a given percentage increases in inputs will lead to a larger percentage increase in output. External or pecuniary economies of scale are a method of achieving decrease in cost of production.

(iii) **ECONOMIES OF SCALE**: This happens when increasing the scale of production leads to a lower cost per unit of output. Economies of scale are of two forms: internal economies or external economies. Internal economies of scale are the advantages a firm derive from increase in production that goes on to reduce the cost of production as a result internal. Internal economies are classified as follows:

(a) **Managerial Economies**: This advantage arises due to large scale production. The internal growth of a firm may bring about expansion of products. A growing firm may engage in specialization and division of labour, this will also aid managerial economies.

(b) Marketing Economies: Large firms have the capacity to buy in bulk and also dominate the market. Buying raw materials in bulk will the price per unit of output. Their market dominance will on the other hand increase their turnover. Also, a large firm will be able to secure special considerations for transportation from transport companies and sell their outputs easily because of the fame they enjoy through regular advertisement.

(C) Financial Economies: Large firms will be able to secure necessary finance from financial institutions to expand and increase production. They can also be float debentures which the general public can subscribe to.

(d) Welfare Economies: Workers in large firms usually enjoy certain benefits which those in small firms do not. The large form is financial strong and so in a better position to provide facilities that would improve the overall wellbeing of their workers. They can afford to pay good salaries, provide housing facilities for their workers, train and retrain their workers regularly, among other things.

(e) Technical Economies: A growing firm may benefit from technical advantages. The use of large machines and new innovations may be more efficient in the sense that more output can be gained for a given amount of inputs. Also a; large machine may make more efficient use of raw materials.

(f) Other Classes of internal economies include: transport and storage economies, researcher and development economies and risk bearing and survival economies.

(g) External or pecuniary economies of scale are also a method of achieving decrease in cost of production. By external economies of scale, we mean a situation where a firm's cost per unit of output falls as the size of the whole industry grows. This advantage which depends on external factors will arise irrespective of the number of firms in the industry. External economies can arise due to many reasons: better and affordable transportation and communication may be available when all firms expanding an area. Also, a reduction in electricity tariff and improved power supply could reduce the cost per unit of output. Adequate and better housing, health facilities, education and improved banking services have the effect of lowering costs of production and increasing output with the general expansion of industry.

(f) Constant Fixed Cost: Since the fixed cost will not change in the short run regardless of the level of output, an increase in output will bring about a fall in fixed cost per unit and the greater the output the smaller the average fixed cost will be. When output rises from low levels to high levels, the AFC appears more dominant than the AVC, therefore, a fall in AVC will bring ATC curve down.

WHY AVERAGE COSTS CURVES RISE

When firms get beyond a certain size, or produce beyond the optimum output (output at which all factors of production are most efficiently used, costs per units of output may start most to increase because the fixed factors become too much intensively use. Other seasons for such diseconomies of scale include: inappropriate management and co-ordination, deterioration of industrial relation complex production–line process, interdependencies of mass production from which can lead to great disruption if there are hold-ups in any one part of the form.

3.6   LONG –RUN COST CURVES

In the long-run, there are 10 fixed factors and so, there are no long-run fixed costs. During this production planning period, a firm can vary all the factors of production in order to achieve the desired level of output.

Long –Run Average Costs

Long-run average cost curve (LRAC) is a curve that shows how average cost varies with output on the assumption that all factors are variable. It is usually assumed that as a firm grows, it will benefits from the advantages of economies of scale and thus face a downward sloping LRAC as a result of fall in cost of production. Thereafter, a point comes where the economies of scale would have been maximized briefing about a flattened curve and after some period of constant LRAC, perhaps, the firm will become very large and will start to experience diseconomies of scale and hence maling the LRAC to rise. The above explanation is presented diagrammatically below.
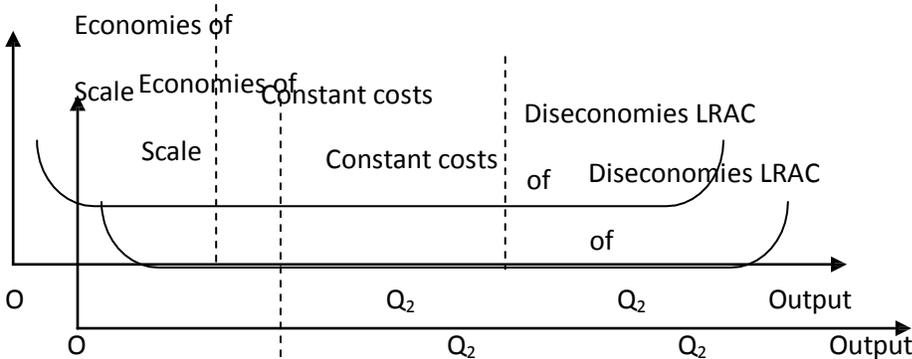
Source: Abel, (2000)

3.7 ASSUMPTIONS BEHIND THE LONG-RUN AVERAGE COST CURVE

Source: Abel, (2002)

(a) Factor Prices are given: It is assumed that at each level of output a firm will be faced with a given set of factor prices. Therefore a factor price charge will bring about a shift in both the short run and long run cost curves. An increase in wage rate will lead a different factor prices at different output, will not bring about a shift in curve.

(b) The State Of Technology And Factor Quality Are Given: It is assumed that these can only change only in the long run. A firm will achieve economies of scale of existing technology are fully exploited and factors of production are efficiently utilized.

(c) **Firms Choose the Least–Cost Combination of Factors for Each Output:** This is the assumption of efficiency, that is, firms choose the cheapest possible way of producing any level of output. This means that at every point on the LRAC, the cost minimizing formula: MPPa = MPPb = MPPc MPR

$$Pa \qquad Pc \qquad Pc \qquad Pd$$

Will be adhere to strictly in the above formula MPP means marginal physical product (The extra output gained by the employment of one more unit of the variable factor) and a… n are the various factors the

firm uses. The firm would be producing above the Ls RAC curve if it failed to use optimum factor combination.

LONG–RUN MARGINNAL COSTS: This is the extra cost of producing one more unit of output when all factors assumed to be variable. The relationship that exists between long-run average and long-run marginal cost curve is similar to that existing between any other averages and marginal. Economies of scale make the cost of producing an extra unit of output fall than the average. This makes the LRMC fall below LRAC and hence forcing the average down as output increases. On the other hands, in the face of diseconomies of scale, additional units of output will cost more than the average and hence the LRMC must rise above the LRAC, PULLING IT UP. However, there are no economies or diseconomies or diseconomies of scale, the LRAC curve is horizontal as any additional unit will cost the same as the average, that is LRMC = LRAC. The above is illustrated diagrammatically below:
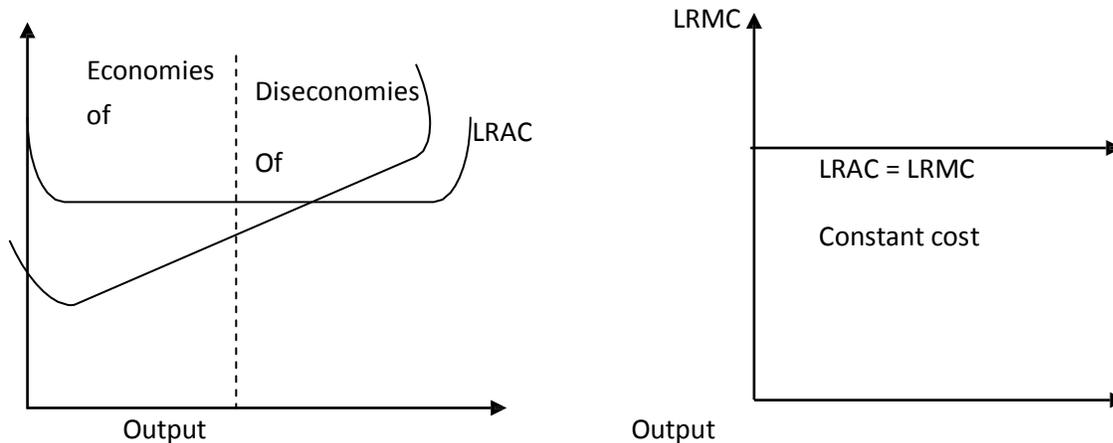

Source: Abel, 2000

3.8 THE RELATIONSHIP BETWEEN LONG-RUN AND SHORT –RUN AVERAGE COST CURVES.

A firm with only one factory and which faces a short –run average cost curve SRAC, say, can build more factors in the long run since all the inputs becomes variable. The variability of inputs relies on the assumption that supply of inputs becomes elastic. If it thereby experiences economies of scale, each successive factory it builds will allow it to produce with a new lower SRAC curve. Consequently, with two factories, it will face SRAC2, SRAC3 with three factories and soon.

Each SRAC curve corresponds to a particular amount of the factor that is fixed in the short run: in this case, the factor. From the succession of short-run average cost curves, a long run average cost curve can be constantly as shown below.

(Wale and Kunle, 2002)
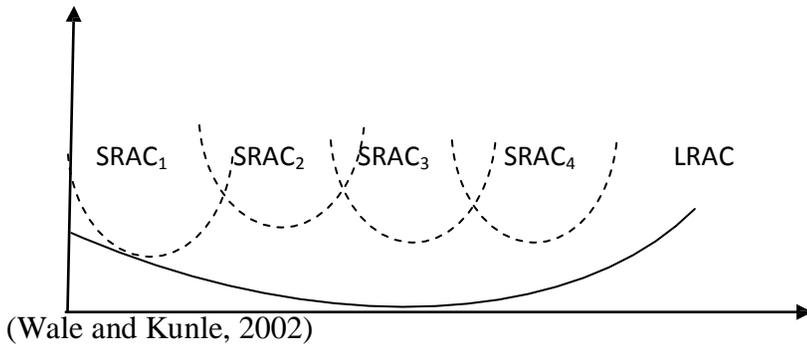
4.0 CONCLUSION

Firms experience economies of scale. While some are faced with a continuously falling LRAC curve, others experience economies of scale. Up to certain output and thereafter constant returns to scale. Evidence is in conclusive on the question of diseconomies of scale. There is little evidence to suggest the existence of technical diseconomies but the existence of managerial and industrial relations problems cannot be ruled out.

5.0 SUMMARY

This unit can be summarized as follows, in the long-run, a firm can vary all the quaintly of factors of production it uses, but in the short run at least one factor is fixed. Economies of scale occur when the cost per unit of output falls due to an increase in the scale of production. This advantage can arise due to a number of factors. Some of these factors are: specialization and division of labour, the use of large and modern machines, and adoption of more efficient method of production. Other benefit result from economies of scale is financial and administrative benefits of large scale organizations. The location of a firm influences its long-run costs. A firm will have to balance the needs to be as near as possible both to the supply of its raw materials and to its market. The optimum balance will depend on the relative costs of transporting the inputs and the finished product. An Envelope curve, which is a long-run cost drawn as the tangency points of a service of short run-average cost curves can be used explain the relationship between long-run and short –run average cost curves.

6.0 TUTOR- MARKED ASSIGNMENT

1.   How would you explain each of the following?

(a)   Constantly returns to scale, and

(b)   Decreasing returns to scale

2.	If the marginal cost function for a particular product is: $MC = 50 + 60q - 18^2q$ are given that the fixed cost is N 160. Find:

(a)	Total Cost Function

(B)	Average Cost Function

(C)	Variable Cost Function

## 7.0	Further Reading/References

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MODULE FOUR:

UNIT 11: PERFECT COMPETITION

Table of Content

1.0   INTRODUCTION

In the last unit you had an idea amount what the theory of cost is all about? This section will takes you a step further into the concept of perfect competition. In this unit, the focus is on perfect competition. Industries can traditionally be categorized based on the degree of competition that exists between the forms that make up the industry. There are four such categories, namely: perfect competition, monopoly completion which allows for competition between the firms within the industry. Important aspects of the topic as contained under the table of content are thoroughly explained.

2.0   OBJECTIVES

At the end of this unit, you should be able to:

(i)   Define perfect competition

(ii)   State and explain the necessary conditions for the existence of perfect competition.

(iii)   Explain how price and quantity are determined under perfect competitive

(iv)   Write note on short-run and long-run equilibrium of the firm.

(v)   Write note on short-run and long-run equilibrium of the industry.

3.0   MEANING OF PERFECT COMPETITION

A perfectly competitive market or simply a competitive market is one having a large number of buyers and sellers, all engaging in the buying and selling of homogenous products without any artificial restriction and possessing perfect knowledge of the market at any point in time. In this market, neither the buyers nor the sellers can dictate the prices at which goods and services are sold and bought. Priced are fixed by the interaction of the forces of demand and supply.

3.1   NECESSARY CONDITIONS FOR THE EXISTENCE OF A PERFECT MARKET.

(1)   Many Sellers and Buyers: This makes room for health competition. No single seller of a commodity or buyer can influence price. Prices of goods and services are influential or determined by the invisible herds of demand and supply.

(ii)   Free Entry and Exit: There is free movement of goods and services, m sellers and buyers. Manufacturers, sellers and buyers are not restricted from entering and existing the market.

(iv)   Adequate Information: Sellers and buyers have enough information about the working of the market. They have enough knowledge about the prevailing, market price, etc.

(v)   Absence of Preferential Treatment: In a perfectly competitive market, sellers treat buyers equally in terms of prices, customer relation, etc. Buyer too exhibit on form of partiality in the patronage of the sellers.

(vi)   Free Movement of Resources: In this market, resources-natural and human move freely. There is free entry and exit of factors of production.

(**vii**)   **Sameness of Price:** There exists in this market same market rating price. Prices of similar commodities are the same. There is no price different among identical or homogenous products of production.

3.2   HOW PRICE AND QUANTITY ARE DETERMINED UNDER PERFECT COMPETITION

In a perfectly competitive market, prices and quantities of commodities sold and bought are determined by the interaction of the process of demand and supply. No seller or buyer has power to fix the prices because prices are fixed by the interaction of demand and supply. Consequently, there is always same market ruling price. The presence of many sellers and buyers allows for a healthy competition there by creating room for natural fixation of prices. Quantities demanded however depend on prices. In a perfectly competitive market, every competitor is a "price taker" and not a "price maker". There is only one price as which identical products are sold and if a competitor (seller) raises price above the market ruling price, no buyer would buy from him.

3.3   SHORT- RUN EQUILIBRIUM OF THE FIRM

In the short run, there is no sufficient time for news firms to enter the industries firms are price-markers and can also adjust the amount of quantity supplied. The aim of every firm is to maximize profit and so a firm is confronted with the problem of determining the level of output that guarantees profit maximization. A firm will maxims profit at that level of output where Total cost (TC) is low and Total Reverences (TR) is higher. In other words, profit is made at the quantity of output where Total Revenue (TR) is higher than Total cost (TC) i.e. profit = TR-TC It should be noted however that how much a firm makes as profit depends largely on the pattern of its cost and revenue curves.

3.4   TR and TC APPROACH TO SHORT-RUN EQUILIBRIUM OF THE FIRM

Using the Total Revenue (TR) and Total cost (TC) approach to determining the short run equilibrium of a firm, equilibrium occurs where the differences between TR and TC is greatest. Equilibrium output is produced at this point. The graph below explains the equilibrium of a firm using the TR and TC approach.
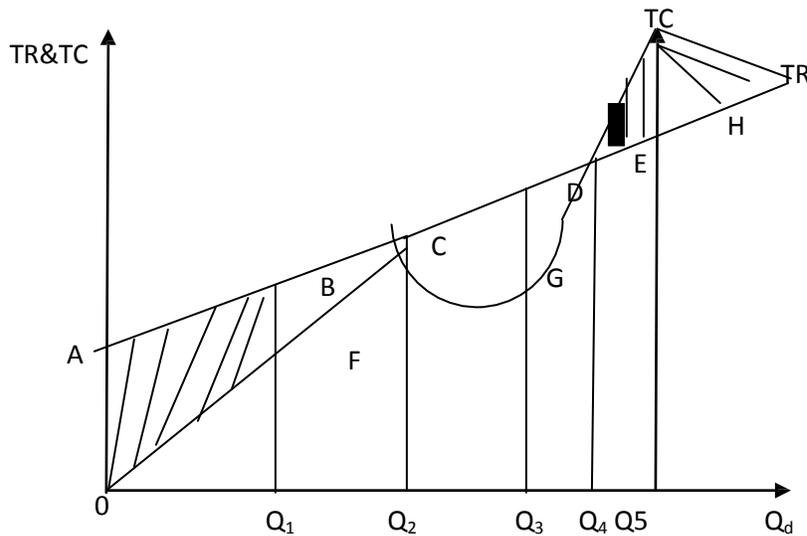
From the figure above, Q3 is the firm equilibrium output produced. TC is greater than TR at every point before point C and at every point after E. Regions before C and water E denotes losses incurred by the firm. At these points, TC > TR. Point C with output OQ2 is the break-even point. At this point TC intercepts TR, i.e TC =TR. Neither profit nor loss is cured by the firm at this point. Region DG describes the maximum profit obtained by the firm. At output OQ, the firm's loss is maximum and equals BF; at zero output, loss incurred equals fixed cost Oa. At CD the firm has the greatest profit margin when compared to other regions between C and E and consequently, profit is maximized at output Q_3 .

3.5   MARGINAL REVENUE (MR) and MARGINAL COST (MC) APPROACH TO SHORT RUN EQUILIBRIUM OF THE FIRM.

Using the MR and MC approach in determining a firm's equilibrium, a firm is in equilibrium where the MC curve cuts the MR curve from below. Since the Average Revenue (AR) and marginal Revenue (MR) curves represent the price line, a firms equilibrium output is produced where MC = MR.
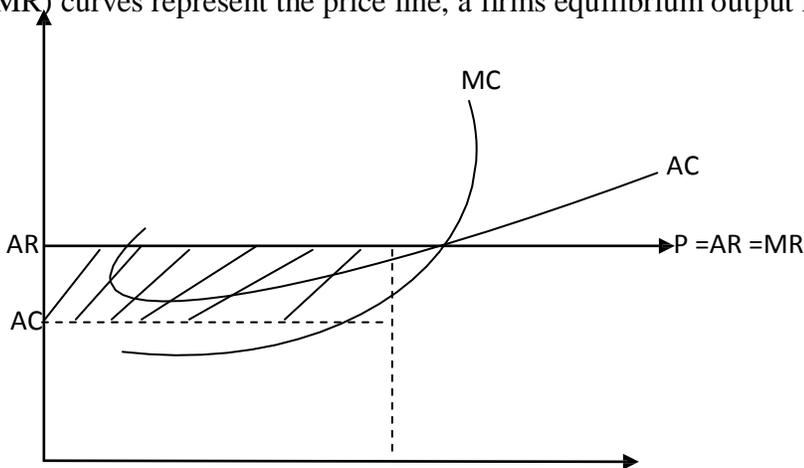
From the above diagram, the firm will maximum profit where MC = MR, at an output Qe. It should be noted however that marginal revenue will equal price since the price is not affected by the firms output. If the average (AC) curve dips below the average revenue (AR) curve, the firm will earn supernormal profit. The vertical difference between AR and AC at Qe indicate the supernormal profit. The firm earn less where the AC curve has above the MR line. If MC < MR; the firm needs to expand output to maximize total profit but needs to cut production at the point where MC>MR. It is important to note that firm can only continue production if its average cost is covered and should close down where it can be no longer cover its average cost (AVC).

3.6   LONG –RUN EQUILIBRIUM OF THE FIRM

The long man is the period of time that is long enough for new firms to enter the industry. During this period all factors of production are variables and there are no fixed costs. Excess profits made by firms are wiped off and firms make normal profits. If firms are making excess profits, new firms are attracted in5to the industry. Also, if established firms can make excess profit by expanding the scale of productions they will do so, since all factors of production are variables. Omn the other hand, if firms make losses, they will leave the industry. All firms produce at the minimum point of their long run average cost (AC) curve which is tangent to the demand curve defined by the market price.
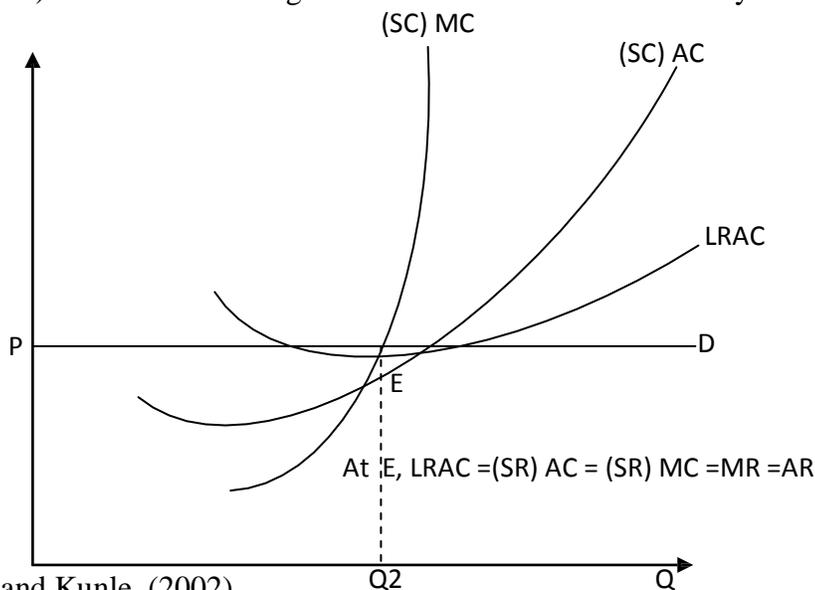

Source: Wale and Kunle, (2002)

From the above diagram, in the long run, LMC = P= LRAC = MR.

Where LMC is Long run marginal cost and LRAC is long run average cost. Notice that LMC cuts MR from below. Equilibrium occurs at point E where P=MR=AR=LMC=LAC at its lowest point. Qe is the optimum output.

3.7   SHORT-RUN EQUILIBRIUM OF THE INDUSTRY Short run equilibrium of an industry occurs when its total output remains steady such that there is no tendency to expand or contract its output. Firms with supernormal profit in the short run will expand their output while those incur losses will leave the industry. The adjustment continues until equilibrium of the industry is reached. At this point all forms will earn a normal profit in the industry, that is, short run marginal revenue, (MR) equals average revenue (AR) EQUALS **SHORT RUN AVERAGE COST** (SAC).

SMC = MR=AR=SAC.
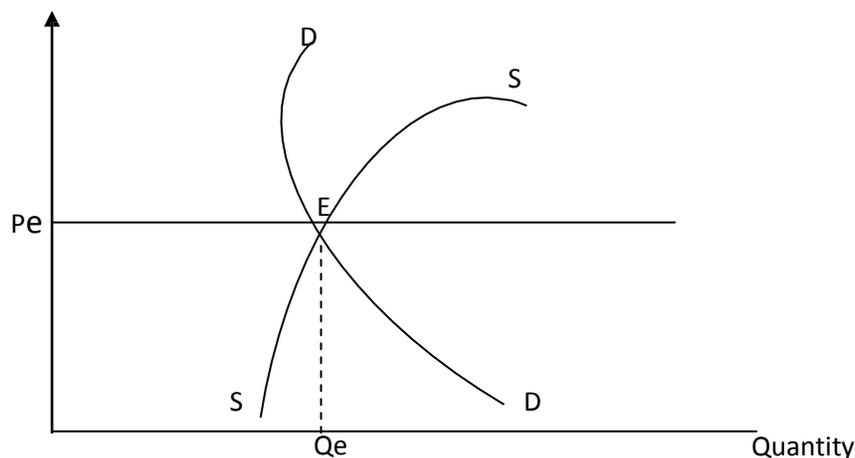
Source: Wale and Kunle, (2002)

From the figure above, the industry achieves equilibrium at point E where its demand cured DD, intercepts its supply curves SS. At point E, Equilibrium price is Pe and Qe is the equilibrium quantity.

The equilibrium of the industry in the short run is reached at the minimum of their SAC curve.

3.8 LONG –RUN EQUILIBRIUM OF THE INDUSTRY

In the long run, equilibrium is achieved when all firms in an industry earn normal profits. In the long run, there is no incentive for new firms to enter it. Existing firms in the industry is in the long run, each of the firms in the industry is also in long run equilibrium.
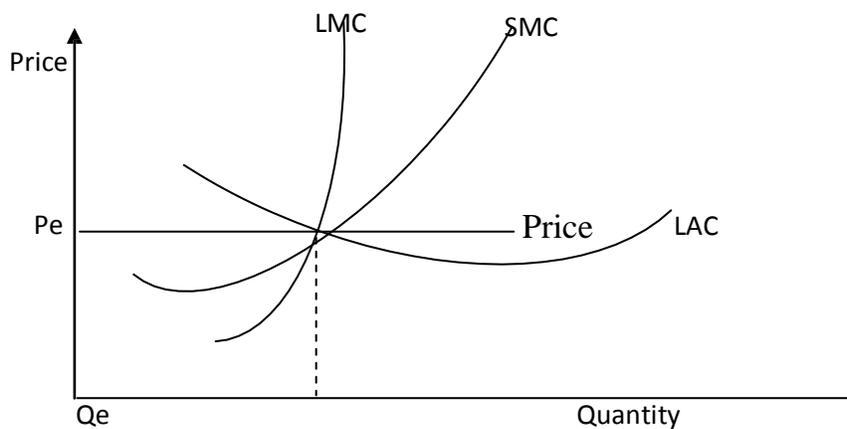
Source: Wale and Kunle, (2002)

The equilibrium price is Pe and equilibrium quantity Qe. At equilibrium price, all the firms in the industry are in the long run. They produce at least possible cost and earn normal profit. At equilibrium LMC –SMC=SAC=P=MR

4.0   CONCLUSION

To conclude this unit, it is important to state that perfect competition as a market structure has a number of features that benefit the society. Besides the fact that price equals marginal cost (P=MC), perfect competition is a case of 'survival of the fitest'. The high level of competition that exists in the market will make a inefficient forms to leave the industry, since they will not be able to make even the normal profit. Also, long-run equilibrium firms to leave the industry, since they will not be able to make even the normal profit. Also, long-run equilibrium is at the bottom of the firm's long- AC curve. This means that, for any given technology, the firm, in the long-run will produce at the least cost –output. Furthermore, long-run output is at the least cost and the firm making only normal profit keeps prices at a minimum.

5.0   SUMMARY

Perfect competition exists when there are many firms, none of which is large; where there is freedom of entry into the industry. Where all firms produce an identical product and where all firms are price taker.

The necessary conditions for (assumptions) for the existence of perfect competition are: complete freedom of entry and exit, a homogenous product, perfect knowledge of the market, large number of sellers (firms) and buyers and sameness of price.

Supernormal profits can be made by firm in the industry in the short-run because there is no enough time for new forms to enter the industry. These supernormal profits are however wiped out in the long –run by the entry of new forms.

Short –run equilibrium occurs at the point where price equals marginal cost (P=MC) and at this output, the firm will be maximizing profit. The long-run equilibrium on the other hand occurs where the market price is equal to firm's long-run average cost.

Under perfect competition, the optimum output is at the point where P=MC and firms will produce at this point.

6.0   TUTOR MARKET ASSIGNMENT

Perfect competition is not without some short falls. Writ on some of the shortfalls associated with this market structure.

7.0   Further Reading /References

Abe I.O., (2000), Intermediate Economics, Mipon Biz. Centre, Lagos

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UNIT 12: MONOPOLY

Table of Content

1.0 INTRODUTION

In the last unit you had an idea amount what perfect competition is all about. This unit will takes you a step further into the concept of monopoly. In this unit, the focus is on monopoly. At the other extreme of perfection competition is monopoly. Unlike under perfect competition where there are very many firm competing, here is only one firm within the industry. But whether an industry can be classified as a monopoly is not always clear to extent however, the classification could be done the amount of monopoly power a firm has and this depend largely on how close the substitutes produced by rival industries are to the product of the firm. This unit an attempt is made to; define monopoly, examine its features, discuss its types, examine price and output of a monopolist and also consider its advantages and disadvantages.

2.0 OBJECTIVES

At the end this unit, you should be able to:

(1)   define a monopoly

(2)   Identify the features of a monopoly.

(3)   Analyst equilibrium price and output of a monopolist.

(4)   Identify some advantages and disadvantages of a monopoly.

3.0   MAIN CONTENT

3.1 DEFINITION OF MONOPOLY

A market structure where there exists only one firm in the industry is monopoly. the extent of classifying an industry   as a monopoly is a function of how the industry is define for example a pharmaceutical company may have a monopoly of a certain drug or raw material for   producing a particular drug but there may be alternative drug for treating the same illness the monopoly drug can treat. the extent of clarifying an industry as a monopoly therefore depends on the amount of monopoly power it has and this is also dependent on the closeness of substitutes produced by rival industries, for example the monopoly power enjoyed by Nigeria postal service (NIPOST) has been Limited as a result of swift competition communication from phone , faxes and email .

3.1 FEATURES OF MONOPOLY

i   There must be barriers to entry a firm is to maintain Its monopoly position. Although there exists entry barrier under oligopoly but in the case of monopoly the prevent the entry of new firms.

ii   There is only one seller in the industry this. The single seller has total control over the supply of the commodity

iii   There are no close substitute for the products

iv   All form of competition are restricted.

V   The demand curve of a monopolist is downward slopping the implication of this is that the monopolist can sell more at lower price and vice versa.

3.2 TYPES OF MONOPOLY

i   **Legal Of Monopoly :** A firm may be protected by patents on essential processes, by copyright statutory regulation of government etc, such a firm is legally protected .examples of monopolies protected by pharmaceutical companies (e.g. anti-AIDS drug) micro soft's widows operating system etc

ii   **Joint Monopoly**

Monopoly position can also be acquired through mergers and takeover. The monopolist can put in a takeover bid for any new entrant. The threat of taker over may discourage new firm planning to come into the industry. Also monopoly position ca-n be acquired through amalgamation, cartels, syndicates, etc.

iii   **Natural Monopoly**

If a firm has natural advantage , say it governs the supply of vital input it can deny accesses to these inputs it potential rivals natural monopoly can also result as a result of natural advantages' like good location abundant mineral resources or absolute control of exploration of certain major natural resources

iv **Public Monopoly**

Often times especially in socialist countries, government own, control and manage certain productive activities and private firms are denied access to such productive activities, such a situation is termed public monopoly. Public monopoly is manly welfare and service oriented.

v **Technological Monopoly**

This types of monopoly exists as a result of economics of larger scale, of capital good innovation and modern structural adjustment new production method among other this is common in engineering industry, automobile industry, etc,

vi other types of monopoly include perfect monopoly imperfect monopoly private monopoly , simple monopoly discriminating monopoly .

3.3 EQUILIBRIUM PRICE AND OUTPUT OF A MONOPOLIST

Demand under monopoly will be relatively inelastic at each price compared to other market will structures, this is because there is only one firm in the industry the firms demand curve is also the industry demand curve. The monopolist is a price marker. it can price and consumers can act in two ways to this: buy the commodity at the higher price since there are no alternative firm producing the same commodity in the industry or decide to go without the good .

The monopolist is however constrained by its demand curve because less quantity will be demanded at higher price.

Like firm in other market structure, a monopolist is at equilibrium where MR=MC
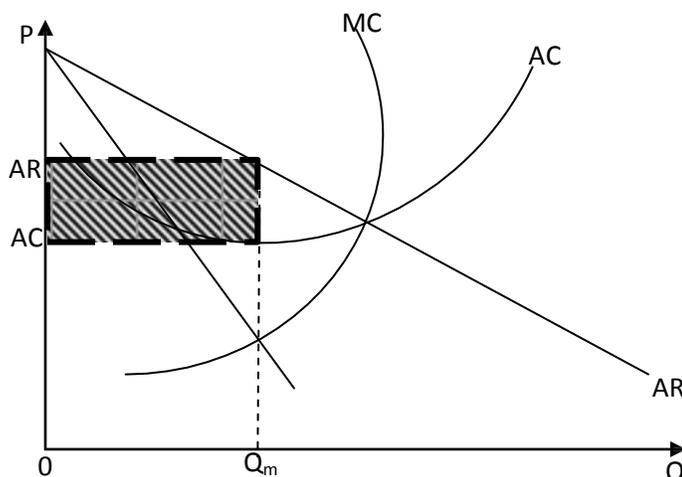
Source: Wale and Kunle, (2002)

From the above diagram, the monopolist profit is maximized where MR=MC . the shade portion in the figure shows the super normal profit obtained by the monopolist . its profit will tend to be larger the less elastic the demand curve is since other firm are restricted from entering the industry , the super normal profit will not be wiped off in the long run. Only difference however between short-run and long-run equilibrium is that in the long run the firm will produce where MR=long –run MC

3.4 ADVANTAGES OF MONOPOLY

Despite several arguments against monopoly, some advantages abound in favor of this marker structure.

(i)   **Innovation and New Products:** The expectation of super normal profits may encourage the emergence of new monopolies producing new producing new products with new innovation.

(ii)   **Competition For Corporate control :**There is no   doubt above that fact that a monopoly does not face any form of competitions in the goods market, but it may face financial markets competition .A monopoly, with low capital base, poor management and that is run inefficiently may be subject to a takeover bid from another company. This threat may bring about efficiency and   improved management in the running of the monopoly in other to avoid being taken over.

(iii)   **Economies of Scale**: some advantage enjoyed by the monopoly like having larger plant, standardized and centralized administration and avoidance of unnecessary duplication may help monopoly to achieve economies of scale

DISADVANTAGES OF MONOPOLY

Argument against monopoly are enumerated and explained below:

(i) Income Inequality : the high profit made by monopolist leads to the concentration of wealth in the hands of few individuals bring about unequal distribution of income the impact of this problem however depends on the size of the monopoly and degree of its power

(ii) Higher Cost Curves: there exist possibilities of higher cost curves due to absence of competition. Unlike a firm in the long run under perfect competition which has to use best techniques and practices in order to survive industry, the monopolist sheltered by barriers to entry, can still make exorbitant profits even without the use of efficient known techniques.

(iii) Higher Price and Lower Output

In the longer run freedom of entry eliminates super normal profit and forces firm to produce at the bottom of them LRAC curve under perfect completion .this is not the case under monopoly. The monopolist enjoys super normal profit since .the monopolist is forced to operate at the bottom of the AC

curve therefore, all things being equal, long-run prices will tend to increase and output lower under monopoly.

4.0 CONCLUSION

Monopoly as a market structure has unique features, advantages and disadvantaged. Economic however in recent year have developed the theory of contestable markets. According to them what is crucial in determining price and output is not whether an industry there is the real threat of competition. If a monopoly is the raw materials relevant to its production then it will be able to make super normal profits with no fear of competition. If on the other hand, another firm could take over from it with littler difficulty then it will behave much more like a competitive firm.

5.0 SUMMARY

A market structure where is only one firm in the industry is called monopoly .For a monopoly to be protected from competition barriers to entry of new firms are usually necessary. Such protection could take the form of economies of scale, control over supplies of input or over outlets, patents or copyright, etc. A monopolist just as other firm maximizes profit where MC=MR but will Probably be at a higher price relative to marginal cost of other firms due to the less elastics nature of its demand at any given price

6.0   TUTOR MARKED ASSIGNMENT

(a) Write a short note on   'monopoly price discrimination

(b) What are the assumptions about rivals' behavior under non-collusive oligopoly?

7.0   FURTHER READINGS/REFERENCES

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UNIT 13: MONOPOLISTIC COMPETITION

TABLE OF CONTENT

1.0   INTRODUTION

In the last unit you had an idea amount what monopoly is all about. This unit will takes you a step further into the concept of monopolistic competition. In this unit, the focus is on monopolistic competition. We said earlier that industries can be grouped based on the degree of competition that exists between the firms within the industry. Between perfect competition and pure monopoly lies imperfect competition which has two face monopolistic competitions and Oligopoly In practice, very few markets can be classified as perfectly competitive or as a pure monopoly. The vast majority of firm does compete with other firms and they often do this aggressively, but even with this they are not price takers: they do have some degree of market power. Most markets therefore lies between perfect competition and pure monopoly. they combine the feature of both perfect competition and pure monopoly and there by exist as imperfect competition this unit seeks to analyses in detail, the mining of monopolist competition which is a form of imperfect competition, its features, short–run and long–run equilibrium and limitation to the model of monopolistic competition.

2.0 OBJECTIVES

At the end this unit, you should be able to:

i.   Define monopolistic competition

ii   State and explain the features (assumption) of monopolistic

iii   Explain equilibrium of the firm under monopolistic Competition

(iv)   Write a short note on limitation to the model of monopolistic competition.

3.0 MAIN CONTENT

3.1 DEFINITION OF MONOPOLISTIC COMPETITION

Monopolistic competition is a market structure, as with perfect completion, there are many firms and freedom of entry into the industry, but where each firm produces a differentiated product and thus has some control over its price. Monopolistic competition is in between the extreme cases of perfect competition and monopoly. Monopoly is a market structure where there is only one firm in the industry. (Note that this is the economic definition of a pure monopoly). Monopolistic competition can best be understand as a situation where there are a lot of firms competing, but where each firm does nevertheless have some degree of market power: each firm has some choice over what price to change for its products. The theory of monopolistic completion was developed in the 1930s by the American economist Edward Chamberlin.

FEATURES OF MONOPOLSTIC COMPETITION

(i). A LARGE OF FIRMS: There are quit a large number of unlikely to affect it rivals as it has an insignificant control over the market. This means that when a firm makes decisions, it does not need to worry about how its rivals react. This is referred to assumption of independence.

(ii) THERE IS FREEDOM OF ENTRY AND EXIT: This means that there is freedom of entry new firms if the firm wants to set up in business in the market. Existing firms are also free to leave the market.

(iii) PRODUCT DIFFERENTIATION: Each firm products or services are some way different from those of its rivals. This allows the firm to raise the price of the product or service it produces without losing all it customers. A situation where a firm faces a downward-sloping demand curve.

(iv) PROFIT MAXIMIZATION: The ultimate goal of the firm is to maximize profit.

(v) ADVERTISEMENT: Sales promotion in inform of advertisement and other propaganda can be adopted in marketing and distribution of product as a way of differentiating it from other products.

3.2 SHOR – RUN EQUILIBRIUM OF MONOPOLISTIC COMPETITION

Like other market structures, profit are maximized at the output where MC= MR. In monopolistic competition, the price quantity equilibrium is achieved just like the monopolist, except that the AR and MR curves will be more elastic. Its sales are limited and defined by price of the products, nature of d the product, marketing and advertisement strategy.
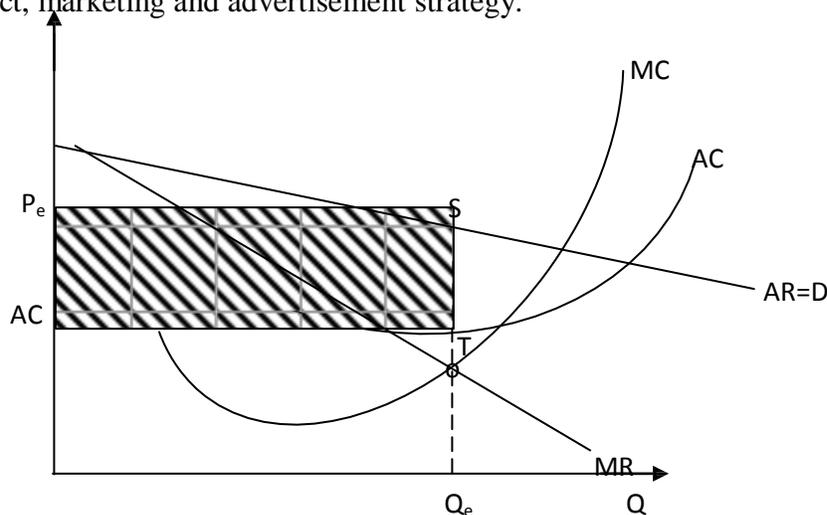

Source: Wale and Kunle, (2002)

How much profit the firm will make in the short run is a function of the strength of demand: the position and elasticity of the demand curve. The further to the right the demand curve is relative to the average cost curve, and the less elastic the demand curve is, the greater will be the firm's short run profit. It is possible for the monopolistically competitive firm to make supernormal profit in the short run. The shaded area shows this i.e. Rectangle P_e S T A C. The equilibrium output is Q_e and price P_e. The firm will continue to produce as long as its AVC is covered. The Equilibrium price and output is determined at a point where the short run MC equals MR. since cost differs in the short run, a firm with lower unit costs will be earning only normal profit, because firm is able to cover just the AVC, incurs losses.

3.3 LONG –RUN EQUILIBRIUM OF MONOPOLISTIC COMPETITION

When firms are earning supernormal profit, new firms are attracted to the industry in the long run. The entry of new firms into the industry will reduce the patronage enjoy by older firms as the new firms will take some of the customers away from establishment firms. The demand for the established firms will therefore fall. Their demand curve (AR) will shift to the left, and will continue doing so as long as supernormal profits remain and thus firms continue entering.
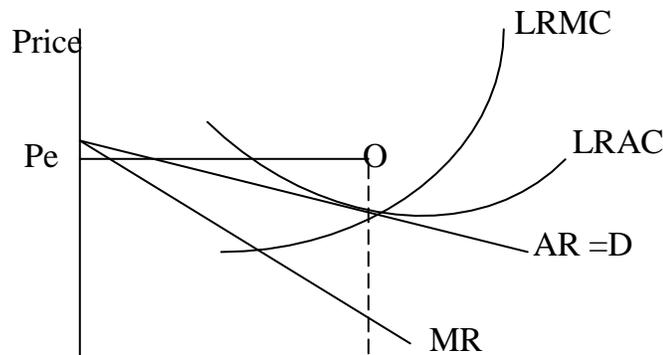
Source: Wale and Kunle, (2002)

From the above diagram the firm's demand curve settles at D, where it is tangential to the firm's LRAC curve. Output will be Q_e: where AR =LRAC. Since the number of firms has increased because of the entry of new firms, abnormal profits cannot be earned by any firm.

3.4 LIMITATIONS TO THE MODEL OF MONOPOLISTIC COMPETITION

There are many problems in applying the model of monopolistic competition in real world situation. Some of these problems are:

(i) **IMPERFECT INFORMATION**: New firms may be unaware that established firms are making supernormal profits it is also possible for them to underestimate the demand for the particular product they are considering selling.

(ii) **DIFFERENTIATED PRODUCTS:** The facts that the firms produce different products makes it difficult if not impossible to derive the demand curve for the whole industry. Consequently, the analysis is limited to firm level.

(iii) **NON- PRICE COMPETION**: The firms concentrate on price and output decisions. Practically, the profit – maximizing firm under monopolistic competition also has to decide the exact variety of product

to produce and how much to spend on advertising it. This will make the firm to take part in non price competition.

4.0   CONCLUSION

Monopolistic competition is a type imperfect competition. It is often argued that it leads to less efficient allocation of resources than perfect competition therefore, it may however, consumer may gain more from a greater diversity of products. When compared with monopolies, a monopolistic competitive form any have less economies of scale and conduct less research and development but may keep prices lower than under monopoly.

5.0 SUMMARY

Monopolistic competition was a theory developed by in the 1930s by the American economics Edward Chamberlin. It is a market structure in which there is free entry to the industry and having a large number of firms operating independently of each other but where each firm has some market power because it produces a differentiated product or services. Supernatural profits are made in the short –run but profits go down to the normal level in the long run as a result of new firms entering the industry. The long run equilibrium of the firm occurs where the demands curve is tangential to the long-run average cost curve (LRAC). The application of the model of monopolistic competition in real world situation is constrained by a number of factors. New forms may be unaware that established firms in the industry are making supernormal profits as a result of imperfect information. It is difficult if not impossible to derive the demand curve for the whole industry as a result of differentiated products sold by the firms. The firm also concentrates on price and output decisions.

6.0   TUTOR MARKED ASSIGNMENT

(a) How would you explain the concept of non-price competition, and what are its elements?

(b) With relevance examples differentiate between the short and long-run equilibrium of monopolistic competition.

7.0 FURTHER READING/REFERENCES

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UNIT: 14

OLIGOPOLY

TABLE OF CONTENT

1.0   INTRODUCTION

In the last unit you had an idea amount what monopolistic competition is all about. This unit will takes you a step further into the concept of oligopoly. In this unit, the focus is on oligopoly. The second form of imperfect competition is Oligopoly. Under Oligopoly, there will be only a few firms competing most of the famous companies, such as Coca-Cola, Nike, Ford, and Nintendo. In this unit, we will examine the meaning of Oligopoly, its basic features, collusion and competition on between Oligopolists and pricing and output under Oligopoly.

2.0   OBJECTIVES

At the end of this unit, student should be able to:

(i)   Define Oligopoly

(ii)   State and explain the features of Oligopoly

(iii)   Discuss industry equilibrium under collusive Oligopoly

(iv)   Write a brief note on non- conclusive Oligopoly has higher costs than perfect competition.

3.0 MAIN CONTEXT

3.1 MEANING OF OLIGOPOLY

Oligopoly exists when there are only a few seller of the commodity. The firms share a large proportion of the industry between them. If there are only two sellers a situation called duopoly, is created. When homogeneous products (e.g. cars, soft drinks, electricity etc.) it is often referred to as differentiated oligopoly.

3.1 FEATURES OF OLIGOPOLY

Despite the differences between oligopolies, two important features distinguish oligopoly from other market structures these features are:

(i) INTERDEPENDENCE: each firm under oligopoly knows that the decision of its rivals may affect it positively or negatively .this means that they are mutually depended. For example, .if a firm changes the price or specification of its product, or the amount spent on advertising the sales of its rivals will be affected. The rival may than respond by changing their price, specification or advertising.

(ii) BARRIERS TO ENTRY: unlike prefect competition and monopolistic competition there are various barriers to the entry of new firms under oligopoly. These are similar to those under monopoly the magnitude of the barriers however, are not the from industry to industry. In some uses entry is relatively easy, whereas in other it is virtually impossible.

(iii) Other features are advertisement, competition and lack of uniformity. There is also no unique pattern of pricing behavior.

Sometimes firms collude (collusive oligopoly) and at other times they do not, (non-collusive oligopoly)

3.2 COLLUSIVE OLIGOPOLY

Collusive oligopoly exists when oligopolists formally or informally agree to limit competition between themselves. The major purpose of doing this is to maximize their profits and to negotiate among themselves so as to share the market. They may set output quotes, fix price, limit product promotion or development, or agree not to work against each other's interest's ore markets.

3.3 INDUSTRY EQUILIBRIUM UNDER COLLSIVE OLIGOPOLY

Firm under collusive oligopoly may set output quotas, fix prices, limit product promotion, etc: this reduces the degree or level of uncertainty they face. A formal form of collusive oligopoly is a CARTEL. A cartel is an annunciation of independent firm writing an industry.

A cartel follows common pricing policies relating to prices output sales, and profit maximization and distribution of good. This makes profit maximization possible especially if the cartel acts like a

monopoly i.e.; if the members behave as if they were a single firm. The profit maximization situation of a collusive oligopoly is (cartel) illustrated in the figure below:
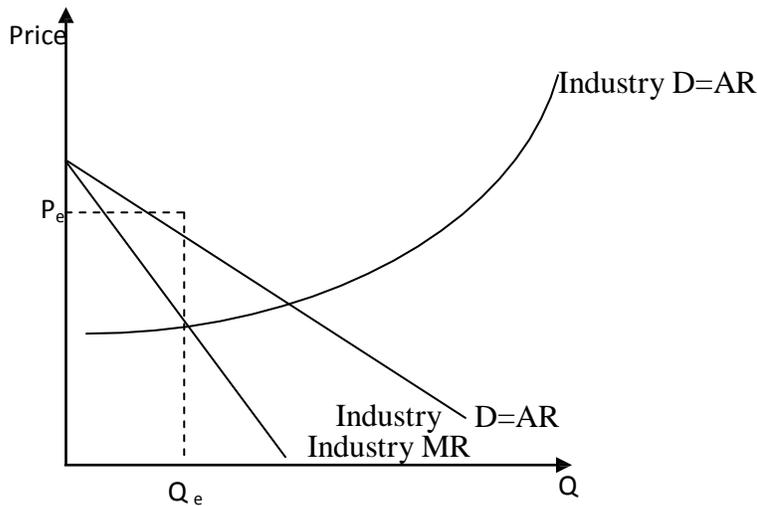
From the above graph, total market demand curve is shown with the corresponding market MR curve. The horizontal total of the MC curves of individual firm in the cartel give the cartels MC curve. Profit are maximized at Qe where =MR. at that point , the cartel must set price Pe and having agreed on a uniform price i.e. a cartel price the member may then compete against each larger share of Qe .

3.4 NON- COLLSIVE OLIGOPPOLY

Firm under non-collusive oligopoly have no agreement between themselves formal I informal or tacit. (Tacit) collusion: where oligopolists take care not to engage in price cutting excessive advertising or other form of competition). Even through oligopolists night not colluded, it is very important to take account of   rivals' likely behavior when deciding their own strategy. Non-collusive oligopoly is built on the following assumptions.

   (a) Rivals set a produce a given quantity (the cournot model)

(b)   Rivals set a particular price. (Bertrand model)

(c)   Kinked demand.

3.5   PRICING AND OUTPUT UNDER DUOPOLY

Duopoly is an oligopoly where there are just two firms in the industry. The two firms are assumed to be producing an identical product: for examples two telecommunication companies covering the whole country. It is maximizing output of each firm is determined on the firm that other firm is holding its own output constant. The two firms are completely independent and there exist no agreement between them.

4.0 CONCLUSION

From the foregoing discussion, we can categorically say that; Oligopolistic exist interdependently which makes them colludes with each other. On other hand, they may be tempted to compete with their rivals to gain a larger share of industry profits for themselves. Existing interdependently (collusion), whether formal or tacit is more likely when firms trust each other and can easily identify with each other.

A number of factors facilitate collusion. The presence of only very small number of firms that know each other, market stability, the existence of a dominant firm, products similarity and absence of measures by the government to curb collusion are some of these factors.

5.0 SUMMARY

Oligopoly describes a market structure where there are just few firms in the industry with barriers to the entry of new firms. Collusion is favored when oligopolists seek to maximize joint but unflavored when they want the biggest share of industry profit and thus compete among themselves. Collusion can be open or tacit. A formal from of collusive oligopoly is a cartel. A cartel is an association of with an cartel. A cartel is an association of independent firms with a firm with an industry .a cartel follows common policies and aims to act as monopoly. It can set price and leave the members to compete for market share or it can using quotas. Under collusive oligopoly profit is maximized where MC =MR Duopoly is a form of oligopoly whereby there are only two firms in the Industry.

6.0 TUTOR MARKED ASSIGNMENT

What are the assumptions about rivals' behavior under non-collusive oligopoly?

7.0 FURTHER READING/REFERENCES

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UNIT 15: PRICING AND EMPOYMENTOF RESOURCES

Table of Content

1.0   INTRODUCTION

In the last unit you had an idea amount what oligopoly is all about. This unit will takes you a step further into the concept of pricing and employment of resources. In this unit, the focus is on pricing and employment of resources**.** Scarcity is a major problem facing humanity today. Naturally, every human wants every good thing of life. Fundamentally they seek to satisfy the basic needs-food, clothing and shelter. In an attempt to satisfy their needs, they are constrained by the problem of scarcity which arises because of the fact that human wants are numerous but the resources to satisfy the wants are limited. This unit explains in detail the pricing of these resources. Light is shed on types of factors of production, reward for them and relevant theories relating to these factors (resources) are also considered.

2.0   OBJECTIVES

At the end of this unit, you should be able to:

i.   Discuss the types of employment resources in relation to their pricing (reward)

ii.   Explain the elasticity of market supply of labour.

iii. Write a short note about modern theory of interest

iv.   Give reasons for interest rate variation.

In the last unit you had an idea amount what economic systems and organization is all about. This unit will takes you a step further into the concept of theory of demand. In this unit, the focus is on

3.0 MAIN CONTENT

3.1 TYPES OF EMPLOYMENT RESOURCES

Employment resources or factors of production as they are often called are of three broad types:

(a)   **Human Resources:** This refers to labour. Labour means all human effort employed in the production of goods and services. Labour could be unskilled, semi-skilled or skilled. Labour is demanded for productivity.

(b)   **Natural Resources:** This includes land and raw materials. The world's land area is limited so are raw materials.

(c)   **Manufactured Resources Capital:** Capital refers to all man-made productive assets. Capital consists of factories, machines, transportation and equipment.

3.2   PRICING OF FACTORS OF PRODUCTION: WAGES

Labour is all forms of human input, both physical and mental directed into production of goods and services. This human effort is rewarded with wages. Wages are payment for services of labour. Wages could take the form of commission and salaries. Money wages or nominal wages relate to the amount of money received by a worker for services rendered in production of goods and services. Real wage on the other hand include benefits and comforts received by workers in terms of goods and services for services rendered.

3.3   THEORIES OF WAGES

A.   The Subsistence Theory of Wages

This theory was formulated by the physiocratic school of French Economists in the Eighteenth century. It was later developed by a German Economists, "Iron Law of Wages". This theory sees labour power as a commodity which price depends on its cost of production. The minimum subsistence expenses

required to support the worker's welfare in other to guarantee and sustain the continuous supply of labour is its cost of production.

B.   Standard of Living Theory

According to this theory, wages tend to equal workers' the standard of living in the long-run. This is because workers strive to maintain a particular level of living (standard of living) with no inclination of increasing or decreasing it.

C.   The Wage Fund Theory

This theory accredited J.S. Mill states that wages are function of the proportion between population and capital. The amount paid as wages according to this theory is a function of the amount of capital which is set apart by owners of business (entrepreneurs) for the direct purchase of labour services and secondly, on population

D.   The Marginal Productivity Theory

The basic assumption of this traditional 'neoclassical' theory is that firms aim at maximizing profits. This theory states that the demand for a factor depends on its marginal revenue product.

E.   The Residual Claimant Theory

This theory maintains that wages is the difference between whole product and rent, interest and profits.

F.   The Modern Theory of Wages

This theory assumes that there is absence of trade unions; consequently, the wage rate is determined by demand for labour and supply of labour.

3.4   DEMANDS FOR LABOUR

Just as goods and services are demanded for consumption the same way, labour is demanded for the production of goods and services. An expected increase in production of goods and services will bring about a rise in demand for labour and vice-versa. However, elasticity of demand for labour which depends on the elasticity of demand for the goods being produced, the ease of substituting labour for other factors and vice-versa, the elasticity of supply of substitute and complementary factors, wages as a proportion of total costs, and the time period involved. The cheaper and better the substitutes for labour, the more the elastic demand for labour.

The demand for labour depends on a worker's marginal revenue product. This is the extra revenue that a firm will gain from the output of an extra worker. This revenue diminishes in the long-run as a result of employment of extra labour.

3.5   SUPPLY OF LABOUR

Supply of labour refers to the number of workers that would offer themselves for employment at each possible wage rate and the quantity of labour supplied. Supply of labour can be viewed from three angles namely: the supply of hours by an individual worker, the supply of workers to an individual employer and the total market supply of a given category of labour. The supply of labour is determined or influenced by the following factors:

   i.   The cost of the job or non-wage benefits like working conditions, social security, and bonus, housing facility and promotion opportunities.
  ii.   The wage rate
 iii.   The wages and non-wage benefits in alternative jobs.
 iv.   Cultural tendencies like religion, age and sex distribution, mobility of labour and population growth.
  v.   The number of qualified people. Of course if the job is unskilled then a large number of people will be 'qualified'.

3.6   THE ELASTICITY OF THE MARKET SUPPLY OF LABOUR

Elasticity of market supply of labour describes the responsiveness of supply to a change in the wage rate. The elasticity of the market supply of labour depends on the difficulties and cost of changing jobs and also the time period under consideration. The willingness and ability of labour to move to another job (mobility of labour), whether in a different location (geographical mobility) or in a different industry (occupational mobility). There will be high rate of labour mobility and also high rate of elasticity of supply of labour when there are other alternative jobs in the same location requiring similar skills and also when people have good information about these jobs.

3.7   DETERMINATION OF WAGE RATE

In an industry, wage rates and employment are determined by the interaction of the demand and supply of labour. The higher the wage paid for a certain type of job, the more workers are encouraged to offer themselves for that job. This results into an upward sloping supply curve of labour. On the other hand, the higher the wage that employers have to pay, the less labour they will want to employ, thus the demand curve of labour is downwards sloping from left to right.

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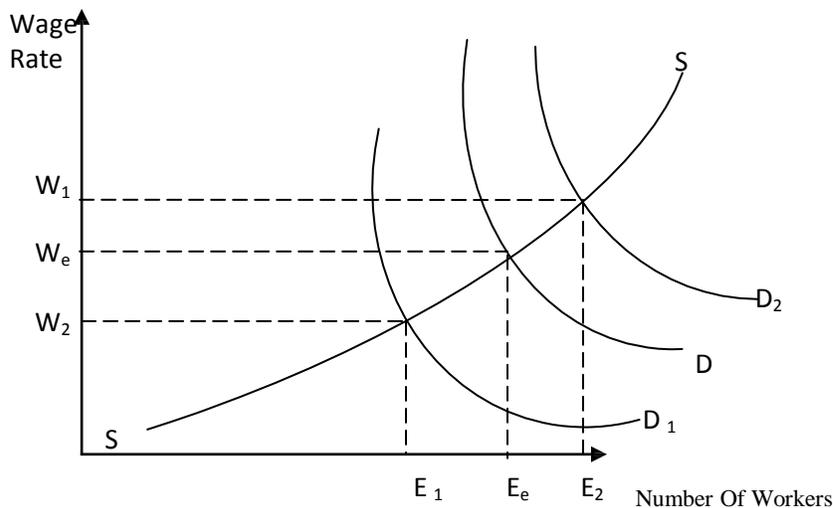
Source: Wale and Kunle, (2002)

The above figure depicts the determination of wage rate using demand and supply analysis. E_e workers are employed at We wage rate. As wage increases more workers want to do the job and firms will have to cut down employment. A decrease in the wage rate paid by employers will bring about in the reduction of workers willing to do the job, as a result, employers will offer higher wage to attract workers thereby forcing the wage rate to W_e.

3.8   MINIMUM WAGE

Minimum wage refers to the lowest wage permitted by law or agreement. It is the standard rate which a trade union or labour union collectively bargain to achieve. The benefits of minimum wage cannot be overstressed. It brings about increase in demand for goods and services which on turn stimulates employment, output and national income. It removes labour exploitation, brings about industrial efficiency, redistribution of income, increases the productive capacity of the industry and most importantly reduces poverty.

3.8.1 WEAKNESS OF MINIMUM WAGE

i.   Minimum wage, though a tool for relieving poverty, affects mainly the employed. One of the main causes of poverty is unemployment. Clearly, the unemployed will not benefit from a minimum wage.

ii.   Minimum wage may not be the way out when there is a large number of dependants in a family. A worker may be paid above the minimum rate and yet the family could still be very poor.

The above weakness of minimum wage however merely suggests that a minimum wage rate cannot be the main answer to poverty and must be considered in conjunction with benefits.

3.9   PRICING OF FACTORS OF PRODUCTION: RENT

The income earned by land owners is the rent charged to the users of the land. In a broader sense, rent is the payment received by owners of all kinds of private property that is leased for a fixed sum. In economics, rent according to Marshall, is a surplus, the income derived from the ownership of land and other free gifts of nature. Economics rent refers to return or earning accrued to a factor of production in excess of the minimum amount necessary to keep it in its present use. Rent, like the reward for other factors of production is determined by demand and supply. The inelastic supply nature of land is what

differentiates land from other factors of production. Land is not mobile and its total supply in an area is fixed. In another sense, since land can be improved its supply is not totally inelastic.

3.10 DETERMINATION OF RENT

Demand and supply analysis can be used in determining rent. Assuming perfect competition, homogenous product and quality of land, the demand for land depends on its marginal revenue product (MRP). A firm will pay rent that equals its marginal revenue productivity of land which decreases as more land is used as a result of the law of diminishing returns. The demand curve slopes downward from left to right, this because more land would be rented and used at lower rates and vice-versa, other things being equal. To an individual, the supply of land is perfectly elastic but less than perfectly elastic for an industry. From an industry perspective, rent determination, using demand and supply analysis is explained as follows:
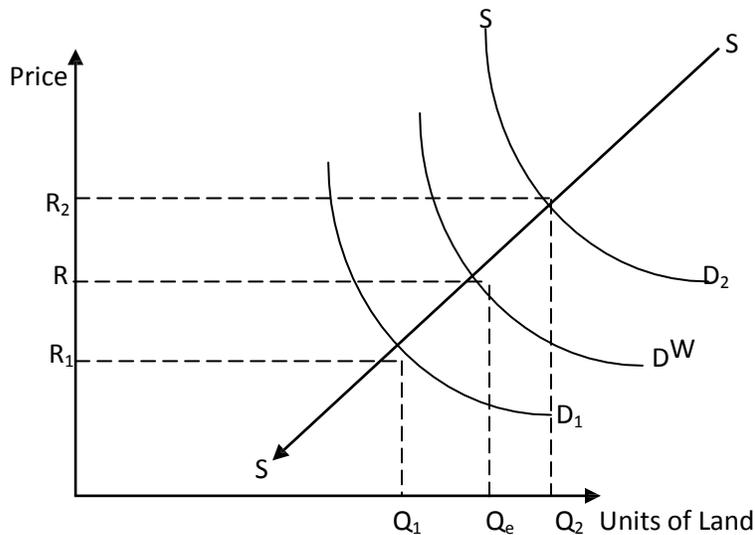
Source: Wale and Kunle, (2002)

The above figure shows the determination of rent in an industry using the demand and supply analysis. In this figure R_1 wage is paid for Q_1 units of land. If demand increases to D, rent will rise to Re and Qe land will be supplied by with the drawing QeQ_2 land from some other use. The reverse will happen if the demand falls to D.

3.11 THE CONCEPT OF QUASI-RENT

Quasi-rent refers to income resulting from machines and other man-made appliances. Quasi rent raises when the demand for man-made goods and services rises and vice-versa.

3.12 PRICING OF FACTORS OF PRODUCTION: INTEREST

The income earned by owners of capital resources is interest. Capital refers to the machinery; tools and buildings humans use to produce goods and services. Some common examples of capital include hammers, forklifts, conveyer belts, computers and delivery vans. Capital differs based on the worker and the type of work being done. The neo-classical economists viewed interest as the price for the use of loanable funds. Keynes considered interest as payment for the use of money while modern economists see interest in terms of productivity, savings, liquidity preference and money.

3.13   VARIATION IN INTEREST RATES

Interest rate varies from person to person and from place to place. There are many factors which cause variations in interest rate. Differences in gross interest, nature of security, credit worthiness of the borrower, period of loan, amount of loan. Differences in the productivity and market imperfections are some of the cause of variations in the rate of interest.

3.14   MODERN THEORY OF INTEREST

This is referred to as "the neo-keynesian synthesis". It provides a determinate theory of interest. It successfully combines all the four factors savings, liquidity preference, investment and the quality of money into a well integrated theory.

The Modern Theory of Interest is what is being designated as'   IS-LM   Curves   Model'. Hickshansen's IS-LM curves model seeks to explain a case of joint determination of equilibrium rate of interest 'r' and equilibrium level of income's'. This theory is designed to explain the joint determination of equilibrium rate of interest r and equilibrium level of income y by the interaction of the commodity market and money market. Since IS curve and LM curve indicate equilibrium in the money market respectively, so as the interaction of IS curve and LM curve shows the simultaneous equilibrium rate of interest r and the equilibrium level of national income y.

3.15   DETERMINATION OF THE RATE OF INTEREST

The IS-LM analysis relates income level and the rate of interest. The intersection of IS and LM curves depicts or determines the rate of interest.
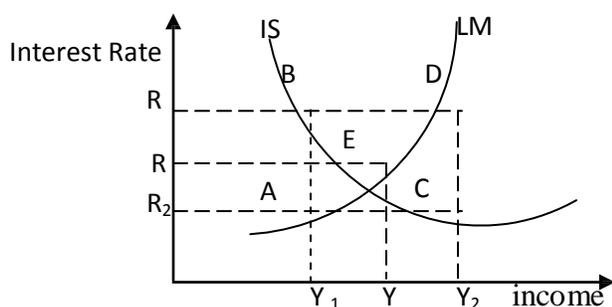
Source: Wale and Kunle, (2002)

From the above diagram, interest rate is determined at point E where the LM intersects the IS. At this point interest rate R corresponds with income level Y. income level Y and intersect rate R both bring about a simultaneous equilibrium in the real market and money market. This general equilibrium persists for a short-time. At Y level of income, the rate of interest in the real market is Y1B and it is Y1A in the money market. When Y1B is greater than Y1A, an investor will borrow at a lower rate from the money market and invest the borrowed fund at a higher rate in the capital market.

4.0 CONCLUSION

Economics is concerned with production and consumption of goods and services. In production of goods and services resources (land, labour and capital) are employed by entrepreneurs (producers). These resources when used in production are rewarded. We attempted to discuss the reward accord to each of these resources in this unit.

5.0   SUMMARY

At the heart of Economics is the problem of scarcity. Given that there is limited supply of resources of production (land, labour and capital), it is impossible to satisfy all human wants. This is because potential demand exceeds potential supply. Labour refers to all forms of human input, both physical and mental, used in current production. Its price is called wages. Land and raw materials are inputs into production that are provided by nature. The price of land is called rent. Capital means all inputs into production that have been produced. Its reward is interest. Labour is demand for the production of goods and service supply of labour refers to the number of workers that would offer themselves for employment at each possible wage rate.   Differences in gross interest, nature of security, credit worthiness of the borrower, period of loan, amount of loan and market   imperfections are some of the factors causing variation in interest rate.

6.0   TUTOR MARKED ASSIGNMENT

Explain the following:

1.   Substitution effect of a rise in wage rates

2.   Income effect of a rise in wage rates

3.   Economic rent

7.0 FURTHER REDING/REFERENCES.

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UNIT 16: **THE THEORY OF CONTESTABLE MARKETS**

Table of Content

1.0   INTRODUCTION

In the last unit you had an idea amount what pricing and employment of Resources is all about. This unit will takes you a step further into the concept the theory of contestable markets. In this unit, the focus is theory of contestable markets. We shall be examines how a firm behaves in order to maximize profit depends largely on the amount of competition it faces. A firm in an environment that is highly competitive will act differently from a firm that faces little or no competition. A firm facing fierce competition from many other firms will be forced to keep its prices down and be more efficient. On the other hand if a firm faces little or no competition, it will have considerable control over price which may make the buyers to pay more. In this unit, we consider a newly developed market structure-contestable markets.

2.0   OBJECTIVES

At the end of this unit, you should be able to:
   i)   Explain the theory of contestable markets.
   ii) Explain the concept of perfectly contestable markets.
   iii) Examine contestable markets and natural monopolies.

3.0   POTENTIAL COMPETITION OR MONOPOLY?

Economists, in recent years have developed a theory of contestable markets. The fundamental premise on which the theory is built is that in determining price and output, what is important is not whether an industry is a monopoly or competitive but whether there is a real threat of competition. Conversely, a monopoly will behave like a competitive firm if another firm can take over from it with little difficulty. For a competitive firm, the threat of competition is similar to that of monopoly.

3.1 PERFECTLY CONTESTABLE MARKETS

A market is said to be perfectly contestable, when the cost of entry and exit by potential rival is zero and when such entry could be done rapidly. The situation will create a smooth entry for new firms to enter the market immediately it is clear that existing firms can make supernormal profits and also become more efficient. It's becoming more efficient is made possible by taking the advantage of any economies of scale and any new technology. If a firm failed to do these, potential competition will become actual competition as new firms will enter the industry.

3.2 CONTESTABLE MARKETS AND NATURAL MONOPOLIES

The existence or absence of, of sunk costs(costs that cannot be recouped (e.g. by transferring assets to other uses) and economies of scale are the two most important determinants of contestability. On the basis of these two criteria, natural monopolies are the least contestable markets. A natural monopoly is usually so large relative to the market that there is only room for one such firm in the industry. If a new firm comes into the market, then one or other of the two firms will not survive the competition. The market is simply not big enough for both of them. If however, there are no entries or exits costs, new firms will be perfectly will to come into the industry even though there is only room for one firm, provided they believe that they are more efficient than the established firm. Knowing this, the established firm will be forced to become more efficient and operate in such a manner to make only normal profit.

3.3 EVALUATION OF THE THEORY

The theory of contestable markets is often seen as an alternative to the traditional, neo-classical theory of the firm. Perfectly contestable markets can deliver the theoretical benefits of perfect competition, but without the need for a large number of firms. It is improvements on simple monopoly theories, which merely focuses on the existing structure of the industry and make no allowance for potential competition: no allowance for the size of the barriers to entry and the costs of exit. The theory is however criticized on the ground that it does not take sufficient account of the possible reactions of the established firm.

4.0 CONCLUSION

The theory of contestable markets helps in painting a clearer picture of the importance of entry barriers in determining how a monopoly behaves. The size of the barriers has therefore become the focus of attention of many politicians and academics when considering anti-monopoly policy.

5.0 SUMMARY

A real threat of competition may be as important as actual competition in the determination of a firm's price and output strategy.
A contestable market is that having the following features:
- At least one potential rival with the same cost structure.
- Potential entrants evaluate the profitability of entry at the incumbent firm's price.
- There are no barriers to entry and exit and there is possibility of hit- and- run entry.

The lower the cost of entry or exit becomes, the higher the threat of competition. If the cost of entry and exit are zero, the market is said to be perfectly contestable. When this happens, an existing monopolist will be forced to keep its profits down to the normal level in order to prevent or resist the entry of new firms.

The entry of contestable markets provides an alternative to the traditional neo-classical theory of firm. Perfectly contestable markets provide a more realistic analysis and can help deliver the theoretical benefits of perfect competition.

6.0   TUTOR MARKED ASSIGNMENT

Think of any three examples of monopolies in Nigeria and consider how contestable their markets are.

7.0   FURTHER READINGS

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UNIT 17: PRIVATIZATION AND COMMERCIAZATION IN NIGERIA

Table of Content

1.0   INTRODUCTION

In the last unit you had an idea amount what pricing and employment of resources is all about. This unit will takes you a step further into the concept of privatization and commercial. In this unit, the focus is on privatization and commercial. In this unit an attempt is made to look at privatization and the extent to which privatized industries should be regulated in order to prevent them from abusing the market power the concept of commercialization will be considered.

2.0   OBJECTIVES:

At the end of this unit, you should be able to do the following:

i Define (a)privatization; (b)   commercialization .

ii list and explain the benefit and demerits of privatization

iii list and explain the advantages and disadvantages of privatization.

Iv write short but detected not on privatization and commercialization in Nigeria

3.0   MAIN CONTENT

3.1 PRIVATISATION AND COMMERCIALISATION

THE MENING OF PRIVATISATION

Privatization primary, is the process of transferring owner shop of business, enterprise,

agency , public service or public property from a public sector (a government)to the private sector , either to a business that operates for a profit or to a non-profit organization . It may also mean government outsourcing of service or functions to private firms, for example, revenue collection, law enforcement, and prison management. In other word it is the shifting of services previously undertaken by the public sector into the private sector.

3.1.1 FORMS OF PRIVATISATION

There are four main method of privatization viz: share issue privatization (SIP),

Asset sale privatization selling an entire organization (or part of it) to a strategic investor, usually by auction or by using the freehand model, voucher privatization – distributing share of ownership to all citizens , usually for free or at a very low price and privatization from below - start-up of new private businesses in formally socialist countries . the method or choice of sale is influenced by the capital market, political and firm- specific factor .SIPs are more likely to be used when capital markets are less developed and there is lower income in equality . Share issue can help broaden and deeper domestic capital markets, booting liquidity and economic growth. Voucher privatization has mainly occurred in the transition economics of central Eastern Europe, such as Russia, Poland and Czech Republic and Slovakia. Additionally, privatization from below is important types of economic growth in transition of economics.

3.1.2 ARGUMENTS FOR PRTIVATSATION

(a) GREATER COMPTITION: privatization creates room for increased competition in the good market. The splitting of an industry into competing parts may drive cost and price down. There will also exist greater competition for finance. The fact that a privatized company has finance investment through the market: it must issue share or borrow from financial I institution will make the concepts with other companies and thus be seen as capable of using these funds profitably.

(b) ACCONTABILTY TO SHARE HOLDERS: shareholders put their money into a company in order to make profit. It is argued that a private firm has pressure from shareholders to perform efficiently . If the firm is inefficient then the firm could be subject to a takeover. A state owned firm does not have these types of pressure and so it is easier for them to be inefficient.

(c) REDUCED POLITICAL/GOVERNMENT IN TERFERENCE: state owned firms are sometimes mismanaged or managed inefficiently for political benefits is argued that government make poor economic managers. They are often motivated by political pressures rather than sound economics and

business sense. Nationalized industries may also be frequently required to adjust their targets for political reasons. Privatization frees the company from these constraints and allows it to make rational economic decision and plan future investments with great certainty.

(d) IMPROVED EFFICIENCY: A private firm is mainly interested in marking profit and it is more likely to cut costs and be efficient also the firm is accountable to its share holders and thus efficiency will be the way to go in order to will the support of the shareholders.

(e) Other advantages of privatization are; it is a source of revenue for the government as money is made from the sale of nationalized industries . It also allows for re-distribution of wealth and income. Additionally, resources   wastages are reduced or completely eliminated, thrift is encouraged and industry owner of the company is encouraged and industry ownership of the company is encouraged.

3.3 POTENTIAL PROBLEMS WITH PRIVTISATION

i NATURAL MONOPOLY: privatization can bring about natural monopoly. A natural monopoly occurs when the most efficient number of firm in an industry is one. A good examples of natural monopolies are the national electricity grids the national gas pipe network and the network of railway lines. The more insensitively the   electricity and gas grids are used, however the lower their cost will become per unit of fuel supplied. The same argument is true for the other two grids. Consequently, in these cases privatization would just create a private monopoly which might seek to set higher prices which exploit consumers therefore it is better to   have a public monopoly rather than a private monopoly which can exploit the consumer.

ii PROBLEMS OF INEQUALITY : Privatization creates problem of   externalities and inequality such concentrating wealth in the hand of few individuals. In Nigeria for example, the poverty rate is alarming and so not many people can afford the resource to purchase the share and manly financial institution were not prepared to give loans to industry to buy the share the outcome of this is the concentration of wealth made perhaps by the exploitations of masses by those few individuals who could afford the resources to purchase resources.

iii CAPITAL FLIGHT :this could surface as foreigners may buy majority of shares. Profits made by these foreigners may not be reinvested into the economics to generate more employment.

iv REGUCATORY PROBIEM: privatization crates private monopolies any lapses in the aspect of the government may lead to abuse of monopoly power by such private companies therefore , there is still the need for government regulation other short falls of privatization include:; oppression and victimization of the masses, retrenchment and unemployment , fragmentation of industries and abuse of public interest.

3.4   The Meaning of Commercialization

Decree No.25 of 1998 on privatization and commercialization of defines commercialization as the reorganization of enterprises wholly and partially owned by the federal government in which such commercial enterprises shall operate as profit –making commercial ventures and without subvention from the federal government. ,

Therefore, simply put, commercialization is the process of running previously publicly owned and managed enterprises in such a guarantee. The maximization of profit commercialization is the redirection of publicly welfare providing ventures into a profit marking venture.

3.5   Types of Commercialization

The following are types of commercialization; they are

(a) FULL COMMERCIALISATION

This is a types of commercialization in which the enterprises so designated will be expected to operate basically commercially for the main purpose of making profit and also be able to raise funds from the capital market without government interference such   enterprises are expected to use private sector procedures in the running of their businesses.

(b) PARTIAL COMMERCILISATION

Under this arrangement, enterprises so designated will be expected to generate enough revenue to cover their operating expenditures. The government may consider giving them capita grants to finance their capitals projects.

In the two types of commercialization no divestment of the federals government sharing will be involved, and subject to the general regulatory power of the federal government.

3.6   ADVANTANGES OF COMMECIALIZATION

Many arguments favor commercialization. Apart from that the commercialized enterprises are expected to be profitably, efficiency is also guaranteed .there is also optimum utilization of resources in term of opportunity cost. Government also stand the change of saving subvention or subsides given to such enterprises when they were publicly managed besides all these, it bring about improved quality of goods and services.

3.7   DISDVANTAGES OF COMMERCIALISATION

Arguments against commercialization are:

i   For partial commercialization, efficiency may not be guaranteed since the government will still be in control of such enterprises.

ii   The poor in the society will be affected by a rise in price, charges , tariffs or rates `   of such commercialization enterprises since profit is their main focus.

iii   Full commercialization that is void of government control may bring about poor service delivery and other attendant social problem

3.8   PRIVATISATION AND COMMERCIALISATION IN NIGERIA

A structural adjustment programmer (SAP) came into existence in Nigeria on 26th September 1986 under General Ibrahim Babangida administration. Privatization and commercialization   was major component of SAP. Before the structural adjustments programmer (SAP) made privatization and commercialization a component of its conditionality, two committees on the evaluation of the operations of public enterprises were institution in 1980s. While Onosode commission's report of 1982, during Shagari administration recommended the commercialization of public enterprises the report of Atlakin's committee of 1984 recommended the privatization of public enterprises, Oninode (1988). This development was quire to the degree of enormity of government investment in public enterprise with the resultant disheartening yields. With this, the policy of privatization and commercialization was made an issue of importance in 1986 budgets speech, consequently, the government introduces the policy on July 27TH, 1988 with the promulgation of the privatization and commercialization was set up. The methods adopted by the technical committee on privatization and commercialization (TCPC) include:

- Public offer of share of affected enterprises.

- Private placement of shares of affected enterprises.

- The sale of assets of affected enterprises where such enterprises cannot be sold either by public offer or private placement.

4.0   CONCLUSION

The failure of nationalized industries in addressing the problem of market failure resulted into the privatization and commercialization of such industries. By the mid 1970s, it became in creakingly clear that nationalized industries (state–owned industries that produce goods and services   that are sold in the market unrest. A change of policy was however introduced from the early 1980s when conservative government under Margaret that char and the john major engaged in an extensive programmer of 'privatization' with their effort, other countries have followed similar programmer of privatization and today privatization and commercialization have become a worldwide phenomenon.

5.0   SUMMARY

Privatization simply refers to the process of shifting services formerly undertaken by public sector into the private sector in order for efficiency to be achieved. Commercialization is the redirection of publicly owned welfare providing ventures into profit marking venture. Privatization has a lot of advantages. They include: greater competition, not only the good market but in the market for finance and for corporate control; reduced government interference; and raising revenue to finance tax cuts. Arguments against privatization include: the firm are likely to have monopoly power because their grids are natural monopolies; it makes overall planning and co-ordination of the transport and power sector more difficult. Commercialization raises government revenue, savings and savings and brings about improvement in quality of goods and services. The economics arguments against privatization include, inefficiency, rise in prices, charges, tariffs or rates and poor service delivery Privatization and communalization were major components of the structural Adjustment programmer (**SAP)**

6.0 TUTOR MARKED ASSIGNMENT

Write short note on the relative benefits to consumers of the following:

(a) Privatizing a nationalized industry, and

(b) Keeping it in the public sector but introducing competition.

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UNIT 17: PRIVATIZATION AND COMMERCIAZATION IN NIGERIA

Table of Content

1.0 INTRODUCTION

In the last unit you had an idea amount what the theory of constable market is all about. This unit will takes you a step further into the concept of privatization and commercial. In this unit, the focus is on privatization and commercial. In this unit an attempt is made to look at privatization and the extent to which privatized industries should be regulated in order to prevent them from abusing the market power the concept of commercialization will be considered.

2.0 OBJECTIVES:

At the end of this unit, you should be able to do the following:

(a) Define privatization, and commercialization.

(b) List and explain the benefit and demerits of privatization

(c) List and explain the advantages and disadvantages of privatization.

(d) Write short but detected not on privatization and commercialization in Nigeria

3.0 MAIN CONTENT

3.1 PRIVATISATION AND COMMERCIALISATION

MEANING OF PRIVATISATION

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UNIT 18: RETURNS TO SCALE

Table of Content

1.0 INTRODUCTION

In the last unit you had an idea amount what concept of privatization and commercial is all about. This unit will takes you a step further into the theory of return to scale. In this unit, the focus is on return to scale. Production periods as determined by technical conditions of production can be rigid (short-run) or flexible (long-run). In the short run at least one factor of production is fixed, output can be increased only by using more variable factors. The long run on the other hand is a period long enough for all inputs to be varied. Given a long enough period, a firm can build additional factories and install new machines, and in general combine its inputs in whatever proportion and in whatever quantity it chooses. This unit considers the meaning of returns to scale, the scale of production in relation to how decisions firms make affect the costs of production.

2.0 OBJECTIVES

After reading through this unit, you should be able to:
- (a) Explain what is meant by scale of production.
- (b) Explain the concept of constant returns to scale, increasing returns to scale and decreasing returns to scale.
- (c) Establish the link between returns to scale and the Cobb-Douglas production function.

3.1 MEANING OF RETURNS TO SCALE

Production inputs can be varied in different proportions and degrees. The word 'to scale' means that all inputs increase by the same proportion. Consequently, returns to scale means a change in output as input changes. It is a technical internal economy of scale. The laws of returns to scale, also known as long run analysis of production examines the effects of varying all factors of production on the level of output.

3.2 THE SCALE OF PRODUCTION

If a firm were to double all of its inputs- Something it could do in the long run-would it double its output? Or will output more than double o less than double? We can distinguish three possible situations:

3.2.1 CONSTANT RETURNS TO SCALE

This happens when a given percentage increase in inputs results into the same percentage increase in output.

3.2.2 INCREASING RETURNS TO SCALE

This happens when a given percentage increase in input leads to a smaller percentage increase in output. Increasing returns to scale is attributed to large scale production or mass production resulting from technical and managerial indivisibilities. Indivisibility means the impossibility of dividing a factor into smaller units.

3.2.3 DECREASING RETURNS TO SCALE

If by increasing inputs by a given percentage, output increases in less proportion, then we have "decreasing returns to scale". In other words, it refers to a situation where a given percentage increase in output will lead to a smaller percentage increase in output. Decreasing returns to scale exists due to diminishing returns on the part of the management or better still, as a result of diseconomies of scale.

The diagram below describes the three stages of returns to scale:

The Scale of Production
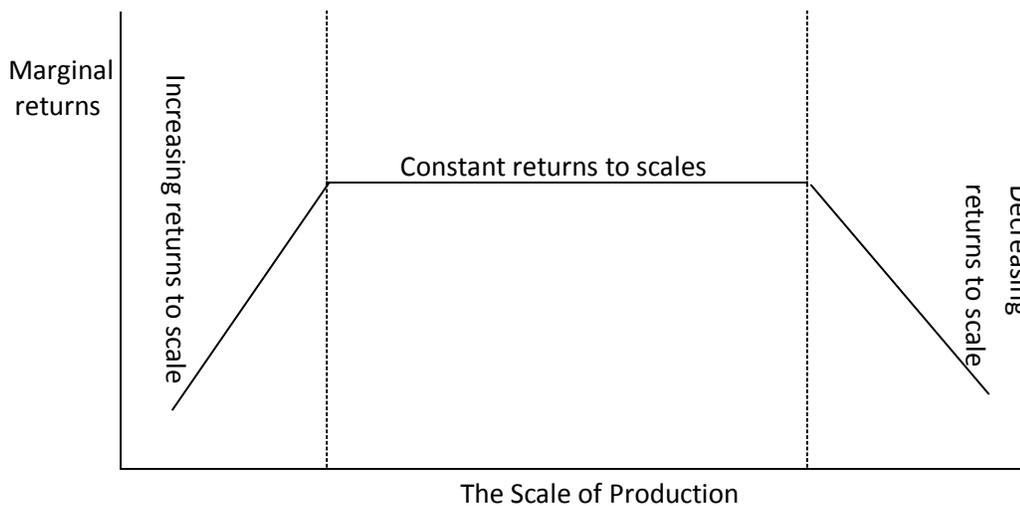
Source: *Wale and kunle, (2000).*

3.3   RETURNS TO SCALE AND THE COBB-DOUGLAS PRODUCTION FUNCTION

Let us begin by considering the simple Cobb-Douglas production function

$$TPP = AK^{\alpha}L^{\beta} \ldots\ldots\ldots *$$

What would happen if you were to double the amount of both K and L used? If output doubles, there will be constant returns to scale. If output more than doubles, there are increasing returns to scale; if it less than doubles, there are decreasing returns to scale.

Let us consider what happens mathematically:

TPP= $AK^{\alpha}L\beta$........*   (TPP: Total Physical Product)

When K and L are doubled

TPP= $A(2K^{\alpha})(2L^{\beta})$

$\qquad = A2^{\alpha}K^{\alpha}2^{\beta}L^{\beta}$

$\qquad = A2^{\alpha}+^{\beta}K^{\alpha}L^{\beta}$.....**

$\qquad\quad \alpha+\beta=1$, we have

TPP= $A2^{1}K^{\alpha}L^{\beta}$

$\qquad = 2AK^{\alpha}L^{\beta}$......***

Equation *** describes constant returns to scale.

If $\alpha+\beta> 1$, then $2^{\alpha}+^{\beta}>2$, there are increasing to scale. Similarly if $\alpha+\beta<1$, then $2^{\alpha}+^{\beta}<2$ and thee are decreasing returns to scale.

4.0   CONCLUSION

In this unit, you have learnt that returns to scale as an economic concept is associated with long run production period. The three stages of scale of production are: constant, increasing and decreasing returns to scale. The Cobb-Douglas production function was also explained in relation to returns to scale.

5.0   SUMMARY

A firm is able to vary the quantity it uses of all factors of production in the long run. There are no fixed factors. Returns to scale mean a change in output as input changes. If a firm increases all factors by the same proportion, it may experience constant, increasing or decreasing returns to scale.

6.0   TUTOR MARKED ASSIGNMENT

If TPP= $3K^{3/5}L^{1/2}$,   K=64 and L=26, calculate

    i) MPP_k (Marginal Physical Product of Capital)

    ii) MPP_L (Marginal Physical Product of Labour)

7.0   FURTHER READINGS

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