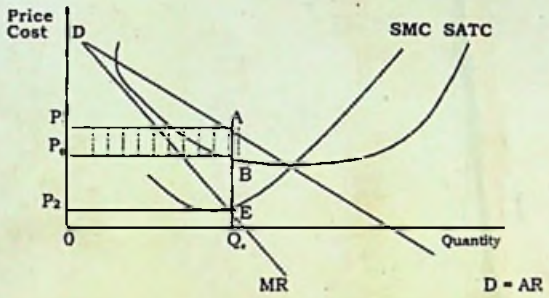
BASIC PRINCIPLES AND THEORIES OF ECONOMICS



A HANDBOOK FOR FOUNDATION STUDENTS OF MANAGEMENT EDUCATION AND SOCIAL SCIENCES

PROSPECTIVE CANDIDATES FOR IJMB, JAMB AND STUDENTS OF SENIOR SECONDARY SCHOOLS

- AJIDANI M. SABO
- EGGON H. AHMED
- OSESHI B. IGWO

BASIC PRINCIPLES AND THEORIES OF ECONOMICS

A HANDBOOK FOR FOUNDATION STUDENTS OF MANAGEMENT EDUCATION AND SOCIAL SCIENCES,

PROSPECTIVE CANDIDATES FOR IJMB, JAMB AND STUDENTS OF SENIOR SECONDARY SCHOOLS.

BY

AJIDANI MOSES SABO,

EGGON HENRY AHMED

AND

OSESHI BITRUS IGWO

Copyright Ajidani Moses Sabo,
Eggon Henry Ahmed
Oseshi Bitrus Igwo

BASIC PRINCIPLES AND THEORIES OF ECONOMICS

ISBN 978-978-900-472-0

All rights reserved.
No part of this publication may be reproduced, transmitted, transcribed, stored in a retrieval system or translated into literal or computer language, in any form or without prior permission of the publisher.

PREFACE AND ACKNOWLEDGEMENT

THIS BOOK, BASIC PRINCIPLES AND THEORIES OF ECONOMICS deals with introductory topics in economics. Some people found economics boring, abstract and uninteresting. Yet it is made compulsory for prospective as well as foundation students of arts education, management and social sciences. This means that one could not escape masters it to be a good student of these courses.

The chapters and illustrations in the main text were drawn mostly from our many years of experience as graduates and teachers of economics, and in line with the contents of the perspective of students in developing economics with which we are very familiar.

Consequently, the subject matter is totally relevant to the developing economies.

The purpose of this text is to present the subject matter from the perspective of students in developing economies. It is our hope that students would find the book more interesting, thereby enhancing their better understanding of economics.

The book is intended primarily for prospective and undergraduate students at their introductory year as difficult theories in economics.

Economics teachers teachers may selectively use the text for two semester courses with the first semester covering chapters 1- and the second semester focusing on chapters.

FOREWORD

It gives me great pleasure to write this foreword to this text put together by Ajidani Moses Sabo, Eggon Henry Ahmed and Oseshi Bitrus Igwo.

It can be observed that undergraduate and professional students of economics and other disciplines are finding that economics is included in some of their course components. For instance, students of sociology, psychology, political science, law and history, accounting, business administration, public administration as well as professional studies, economics is one of their core subjects.

Recently, a basic knowledge of economics is an important requirement for some science based courses.

Therefore, it is not easy to write a text of this nature that can satisfy the study needs of such diverse groups.

I therefore recommend this book, basic principles and theories of Economics by Ajidani Moses Sabo, Eggon Henry Ahmed and Oseshi Bitrus Igwo as a text book for use by undergraduate students in Universities and other similar tertiary institutions as polytechnics and colleges of Education as well as professional bodies. The text is highly simplified readable educative and informative.

Although there is a substantial list of books available for introductory economics, I believe that the present book is more simplified and easier to understand both in developed and developing economies.

DR. DAKARE RABO
February, 2009

DEDICATION

To all prospective and foundation students of Humanities.

Table Of Content

Pages

CHAPTER ONE ——— 1 - 5
THE NATURE AND METHODOLOGY OF ECONOMICS
1.1 The Definitions of Economics
1.2 The Nature and Scope of Economics
1.3 Some basic Concept\terms in Economics
1.4 Basic Economic Problems Facing Society
1.5 Division Between Microeconomics And Macroeconomics
Review questions

CHAPTER TWO ——— 6 - 26
THEORY OF DEMAND
2.1 Meaning of Demand
2.2 The Law of Demand
2.3 Determinants of Demand
2.4 Types of Demand
2.5 Elasticity of Demand
2.6 Determinants of Elasticity of Demand
2.7 Distinction Between Change in Demand and Change in Quantity Demanded
2.8 Other Types of Elasticity of Demand
Review question

CHAPTER THREE ——— 27 - 40
THEORY OF SUPPLY
3.1 Meaning of Supply
3.2 The Law of Supply
3.3 Determinants of Supply
3.4 Types of Supply
3.5 Elasticity of Supply
3.6 Determinants of Elasticity of Supply
3.7 Distinction Between change in Supply and change in Quantity Supplied
3.8 Equilibrium Conditions
Review question

CHAPTER FOUR ——— 41 - 48
THEORY OF PRODUCTION
4.1 Meaning of Production
4.2 Levels of Production
4.3 Factors of Production
4.4 The Law of Diminishing returns
Review question

CHAPTER FIVE ——— 49 - 57
THEORY OF COSTS
5.1 Meaning of Costs
5.2 Types of Costs
5.3 Distinction between Long-run Costs and Short-run Costs
Review question

CHAPTER SIX ——— 58-73
INTRODUCTION TO MARKET STRUCTURE
6.1 Meaning of Market
6.2 Types of Market
6.2.1 Perfect Market
6.2.2 Monopoly market
6.2.3 Monopolistic competition
Review question

CHAPTER SEVEN ——— 74- 90
INTRODUCTION TO MACROECONOMICS
7.1 Meaning and Scope of Macroeconomics
7.2 Macroeconomic objectives and policy instruments
7.3 National income models
7.3.1 Consumption function
7.3.2 Saving
7.4 Sources of investment financing
7.4.1 Investment
7.4.2 Investment function
7.4.3 Determinants of investment
7.5 Multiplier
Review question

CHAPTER EIGHT _____ 91 - 104
THEORY OF NATIONAL INCOME
8.1 Meaning of national Income
8.2 Some concept used in national income cal culation
8.3 National Income Accounting
8.4 Reasons for calculation of National Income
8.5 Problems faced I calculating National Income
8.6 Limitations on the uses of National Income
8.7 Determinants of a country's National Income
8.8 Circular flow of National Income
Review question

CHAPTER NINE _____ 105 - 124
9.1 Meaning of public finance
9.2 Sources of Government Revenue
9.2.1 Taxation
9.2.2 Borrowing
9.3 Public Expenditure
9.4 Items of public expenditure in Nigeria
Review questions

CHAPTER TEN _____ 125 - 133
10.1 Introduction to the theory of inflation
10.2 Theories of Inflation
10.3 Cause of Inflation
10.4 Effects of Inflation
10.5 Solution to the Problem of Inflation
Review question

CHAPTER ELEVEN _____ 134 - 139
BASIC THEORIES OF UNEMPLOYMENT
11.1 Meaning of Unemployment
11.2 Causes of Unemployment
11.3 Types of Unemployment
11.4 Effects of Unemployments
11.5 Solution to unemployment
Review question

CHAPTER TWELVE _____ 140 - 150
INTRODUCTION TO THE THEORIES OF MONEY
12.1 Meaning of Money
12.2 Function of Money
12.3 Characteristics of Money
12.4 Similarities and Differences
Between money and other commodities.
12.5 Theories of demand for Money
Review question

CHAPTER THIRTEEN _____ 151 - 173
13.0 Forms of Business Organization
13.1 Meaning of Business Organization
13.2 Similarities and Differences
Between private and Public Organizations
13.3 Types of Business Organization
13.3.1 Sole Proprietorship
13.3.2 Partnership
13.3.3 Joint Stock Company
13.3.4 Cooperative Society
13.3.5 Public Corporations
Review question

CHAPTER FOURTEEN _____ 174 - 200
14.0 INTRODUCTION TO AGRICULTURAL ECONOMICS
14.1 Meaning of Agricultural Economics
14.2 Nature and Importance of Agriculture
14.3 The Role of Agriculture in Economic Growth in Nigeria
14.4 Problems Facing Agriculture in Nigeria
14.5 Solutions to Problems Facing Agriculture in Nigeria
14.6 Government Policies in Nigeria's Agricultural Sector
14.7 Agricultural Production Functions
14.8 Agricultural Production Relationships
Review question

CHAPTER FIFTEEN ——— 201 - 236
15.0 INTRODUCTION TO INDUSTRIAL ECONOMICS
15.2 Industrial Policies in Nigeria
15.3 Problems Facing Industries in Nigeria
15.4 Solutions to the Problem Facing Industries in Nigeria
15.5 Industrial Structure and Ownership
15.6 Industrial Pricing and Marketing
15.7 The Role of Advertisement in Industrial Growth
15.8 Product Differentiation
15.9 Entry Barrier
15.10 Determinant of market structure
Review question

CHAPTER SIXTEEN ——— 237 - 258
INTRODUCTION TO URBAN ECONOMICS
16.1 Meaning of Urban Economics
16.2 Definition and Growth of Urban Centres in Nigeria
16.3 Migration, Urbanization and Rural and Urban Poverty
16.3.1 Rural-Urban Migration
16.3.2 Social Economic Effect of Migration
16.3.3 Urbanization and it's problems
16.3.4 The Impact of Localization of Firms on Urban development
16.3.5 The Problems of Housing and Transportation in Nigeria Urban Centres
16.3.6 Government Policy on Housing
16.3.7 Solution to the problems of Housing in Nigeria
16.3.8 Transportation in Nigerian Urban Centres
16.3.9 The Problems of Transportation in NigerianUrban centres
16.3.10 Government Policy on Transportation
Review questions

CHAPTER SEVETEEN——————— 259 - 272
17.0 INTRODUCTION TO INTERNATIONAL ECONOMICS
17.1 Meaning of International Economics
17.2 Theories of International Trade
17.3 Differences Between international and Internal Trade
17.4 Reasons or Basis For International Trade
17.5 Restriction to International Trade
17.6 Reasons for The Imposition of Trade Restrictions
17.7 Balance of Payment
17.8 Causes of deficit Balance of payment
17.8 Solution to Deficit balance of Payment
Review Question

CHAPTER EIGHTEEN ——————273- 283
INTRODUCTION TO GLOBALIZAION
18.1 Meaning of Globalization
18. Origin of Globalization
18.3 Globalization and Internationalization
18.4 Likely positive Impact of Globalization on Economies
18.5 Likely Negative Impact of Globalization On Economies
18.6 Strategies that would Enable Nigeria Benefit from Globalization

CHAPTER ONE

THE NATURE AND METHODOLOGY OF ECONOMICS

1.1. Definitions of Economics:

Economics has no single and universally accepted definition. Thus, it was defined differently by different persons.

(i) For instance, Adam Smith defined economics as "an enquiry into the nature and causes of wealth of nations."

(ii) Alfred Marshal described economics as "a study of mankind in the ordinary business of life."

(iii) John Stuart Mill looked at economics as "the practical science of production and distribution of wealth." But, of particular interest to note is the definition of economics given by professor lionel Robbinson, which is " the science which studies human behaviour as a relationship between ends and scarce means which have alternatives uses"The Robbinson's definition of economics is generally accepted because it covers some basic concepts in economics, including, 'ends' (i.e, human wants, desires, or needs), and scarce means' (which refers to inadequate resources to satisfy the ends) and the 'alternative uses' (which mean that the scarce resources can be used for different purposes).Thus, we can deduce from the definition by Robbinson that available resources are scarce relative to human wants. Therefore, choice has to be made in order to derive maximum satisfaction out of the available scarce resources.

1.2. Nature and Scope of Economics Basically, economics is a social science subject. It deals with various aspects of human behaviour in the area of

production, distribution and consumption of goods and services for the satisfaction of wants.However, there is one problem facing economists, as social scientists. That is, the behaviour of human beings cannot be the same at all times. This is due to the fact that human beings have feelings and think differently. Hence, it does not have the level of accuracy and precision as in any of the pure or natural sciences.

Economics is a science because its studies adopts scientific method including: hypothesis, collection of data,

analysis of data, and conclusion as well as generalization of theories. The difference between economics and pure science is that the economist cannot experiment under controlled conditions as is done by pure scientists in a laboratory.

In the area of scope, economics covers wider area than what Robbinson's definition reveals. It covers production, distribution and consumption of goods and services (in industry, commerce and administration). Furthermore, an economist decide on "what is" and not "what should be". Thus, the business of an economist is a positive, not a normative one.

1.3 Some Basic Terms in Economics

There are several basic concepts in economics,

Including the following:

(I) Wants: Want may be defined by Ande (2005) as insatiable desire by human beings to own goods and/or services that give satisfaction. These include; food, housing, clothing; tailoring, teaching, etc.

(ii) Scarcity: Scarcity means inadequate or (limited) supply of goods and services which could be used to satisfy unlimited human wants. The resource (or means) available for any human being can never, at any

moment, be enough to satisfy his wants. Thus, there is the need to make choice and arrange the wants in order of preference.

(iii) Choice: Choice is the art of picking the best out of several alternatives. With regard to human wants, choice is the art of selecting want(s) to satisfy first and which to satisfy last. It could be either to take one thing and forego the other or to take more of one good/service and less of the other or to take equal amounts of both goods/services.

(iv) Scale of Preference: It is the arrangement of unsatisfied and selected wants in order of importance. In this arrangement, the most pressing want(s) will be top on the list while the least pressing one(s) will be at the bottom.It is however important to note that individual's choice made to satisfy his wants follow his scale of preference.

(v) Opportunity cost: It is the satisfaction of one want at the expense of another. It refers to the want(s) foregone in order to satisfy the more pressing one(s).

For instance, if Mr. A has N200.00 and he is faced with a choice to make between buying a pair of shoe or a wrist watch (each cost N200.00).Supposing Mr. A decide to buy the pair of shoe instead of the wrist watch, then, the wrist watch is the alternative foregone- otherwise referred to as opportunity cost or real cost.

The N200.00 exchanged for the pair of shoe is called money cost or exchange value.

1.4 Basic Economic Problems Facing Societies

Every economy (or society) is faced with some basic problems of resource allocation. These problems are outlined below

(i) What to produce?

This problem arises from the fact that there are two broad types of goods to be produced i.e., capital (or producer) goods and consumer goods. The question thus, seeks to identity the type of goods and services that should be produced and the quantities of the chosen goods and services.

(ii) How to produce?

This problem arises from the fact that there are more than one methods of producing the chosen goods and services. This question concerns what resources and technology to be used to produce the chosen goods and services. i.e, whether to use labour-intensive or capital-intensive method of production.

(iii) For whom to produce?

The interest here is to find out who benefited or not benefited from the total output in the economy. It deals with the nature of distribution in the economy, i.e, whether the distribution is fair or not.

(iv) Is the economy growing?

The interest here is to find out whether or not there has been efficiency in the use of scarce resources which is very crucial for the rapid growth of any economy.

These problems are tackled differently in different economic systems. In centrally-planned economies, it is the planning authorities that decide on these problems. But in market economies, these problems are solved by the price mechanism.

In mixed economies they are tackled by both central authorities and price mechanism.

1.5 Division Between Microeconomics and Macroeconomics.

Economic reality can be studied in two perspectives. These are:

(i) Micro-economics: This is the study of an economy using smaller units. It deals with the analysis of the basic decision making units of individuals, firms and governments, looking at such variables as: production, cost, output, consumption, utility maximization, etc.

(ii) Macro-economics: It is the branch of economics which deals with the study of an economy using larger aggregate of the economy. Its study is centred on such variables as: national income, unemployment, inflation, balance of payments, etc.

It is however important to state that there is no clear cut division between micro-economics and macro-economics since it is the summation of smaller units that make up the larger components in the economy.

Review Questions

1. What is economics?
2. The basic economic problems arise because of scarcity of resources. Discuss.
3. Explain in detail how can the basic economic problems facing societies be solved in mixed economies
4. Distinguish between microeconomics and macroeconomics

CHAPTER TWO

THEORY OF DEMAND

2.1 Meaning of Demand

2.2 The Law of Demand

2.3 Determinants of Demand

2.4 Types of Demand

2.5 Elasticity of Demand

2.6 Determinants of Elasticity of Demand

2.7 Distinction Between Change in Demand and Change in Quantity Demanded

2.8 Other Types of Elasticity of Demand

Review question

THEORY OF DEMAND

2.1 Meaning of Demand.

Demand may be defined as the quantity of a good or service that consumers are willing and able to buy at a given price at a particular time. This is quite different from want or need in the sense that while want or need is mere desire, demand is always backed up by willingness and ability to pay for a good or service. However, there is close relationship between demand and want. A consumer may not demand (or pay) for a commodity he does not want. But, though he may be willing to pay for all goods he want, he may not be able to pay. This ability to pay is the main distinction between want and demand.

2.2 The Law of Demand The Law of Demand states that "ceteris paribus" the lower the price, the higher the quantity of goods or services that will be demanded or vice versa.

The term "ceteris paribus" means " all things being equal", that is, all other determinants of demand remain constant.

This law can be explained with the use of schedule (table) and curve as below.

Demand schedule is the tabular presentation of the relationship between price and quantity demanded of a good. It is presented as below for Mr. A

Demand Schedule for mudus of maize

Price per mudu (Naira)	Quantity Demanded (No. Of mudu per day)
90	5
70	15
50	25
30	35
10	45

The Demand schedule above showed that at the price of N90.00, the quantity demanded of maize is five mudus. As the price falls to N70.00 and to N10.00, the quantity Demanded increases to fifteen mudus and to fourty-five mudus in that order.

This demand schedule can be translated to Demand curve as below.

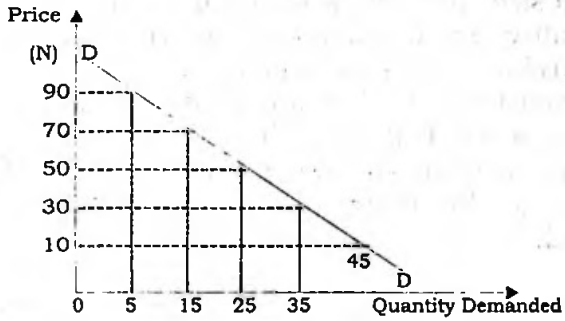


Fig.2.1 An Individual Demand Curve

In fig.2.1. above, it can be seen that the demand curve slopes downward from left to right, indicating that there is a negative (inverse) relationship between the price and quantity demanded of the particular good. This confirms the demand law.

The basic explanation for this relationship is the fact that consumer gets more and more satisfied (total utility) but less and less extra satisfaction (marginal utility) as he consumes more quantity of a good. Thus, he would prefer to buy more quantity of the good only if its price falls.

2.3 Determinants of Demand.

There are several determinants of demand, including:

(i) Price of the commodity:- Consumers generally tend to buy less of a commodity when its price increase or vice versa.

(Ii) Income of consumer:- As the consumer's income increases, his ability to buy rises, and hence the quantity demanded will increase, or vice versa.

(iii) Prices of other commodities:- Prices of other commodities can affect quantity demanded of a particular commodity.

In the case of substitutes such as meat and fish, a rise in the price of meat will cause an increase in quantity demanded of fish. This is because some consumers of meat will change from buying it in favour of fish. Therefore, the cross elasticity of demand is positive.

On the other hand, in the case of complimentary goods such as car and petrol, a fall in the price of car will cause an increase in the demand for more cars and hence a rise in quantity demanded of petrol. Therefore, the cross elasticity of demand is negative.

(iv) Population: As the population of consumers (or in a particular place) increases, the quantity demanded of commodities rises, and vice versa.

(v) Weather: Demand for goods also changes with weather. For instance, thick and black clothes as well as hot drinks that retain heat in human body are mostly demanded in cold regions (or seasons).

On the other hand, light and white clothes as well as cold drinks are highly demanded in hot environments (or seasons).

(vi) Tastes/Preference/Fashion: Some goods are fashionable at some times and therefore, are highly demanded at that time.

Similarly, if consumers change their tastes and preferences for a particular good, its demand will rise, and vice versa.

(vii) Festivities: Demand for some goods increase during festivities For example, quantity demanded of

food items and clothes usually rise during Christmas, and new year as well as sallah celebrations.

(Viii) Age Structure: If a population contains more children than adults (i.e, growing population) the demand for children's goods will increase. On the other hand, in ageing population, the demand for adult's commodities will rise.

(ix) Government policy: Government policy of taxation and subsidies can affect the price and quantity demanded of commodities. For instance, an increase in income tax will reduce consumers' disposable income and hence his demand for goods and/or services, and vice versa.

On the other hand, an increase in subsidies will reduce the cost of production and price of goods and hence lead to a rise in demand for them.

(x). Advertisement: Advertisement can increase consumers' preferences for a good and hence cause a rise in its demand by the consumers.

(xi). Culture: If the consumption of some commodities is not culturally allowed in a particular place, the demand for such commodities will fall or be low.

(xii). Expectation of changes in future price: If consumers expect that there will be a rise in price in the future, they will tend to buy more of goods now even at the high price, and hence demand for goods will rise, and vice versa.

This is one of the causes of abnormal demand. Abnormal (or exceptional) demand is a situation in which consumers tend to buy more of a commodity as its price rises. In this case, there is a positive relationship between price and quantity demanded of a good, and thus the demand curve slopes upward from left to right as shown in the graph below

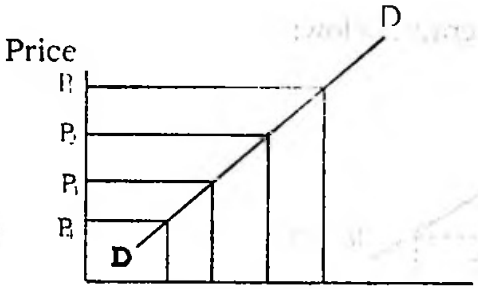


Fig.2.2 An Abnormal Demand Curve.

In fig.2.2 above, it can be seen that at price P_0, the quantity demanded is Q_0. As the price rises from P_0 to P_1, P_2 and to P_3, the quantity demanded increases from Q_0 to Q_1, Q_2 and to Q_3 respectively. Besides expectation for future rise in price, other determinants of abnormal demand are:

(ii) Conspicuous consumption: Some consumers who want to show that they are rich will buy more goods even at higher prices.

(iii) Necessities: Some goods are so necessary such that they must be consumed, e.g food items. Thus, consumers tend to sacrifice the consumption of other (or unnecessary) goods for them. Therefore, the higher the prices of these necessary goods the higher will be the demand for them.

2.4 TYPES OF DEMAND.

There are four types of demand, namely:

(i) Derived Demand: This is the type in which the demand for a good is for the purpose of using it to produce other good(s). For example, the demand for cassava is for the production of starch 'gari' or cassava flour. Thus, the demand for cassava increases as the demand for starch, gari or cassava flour rises, and vice Versa.

These are shown in the graph below:

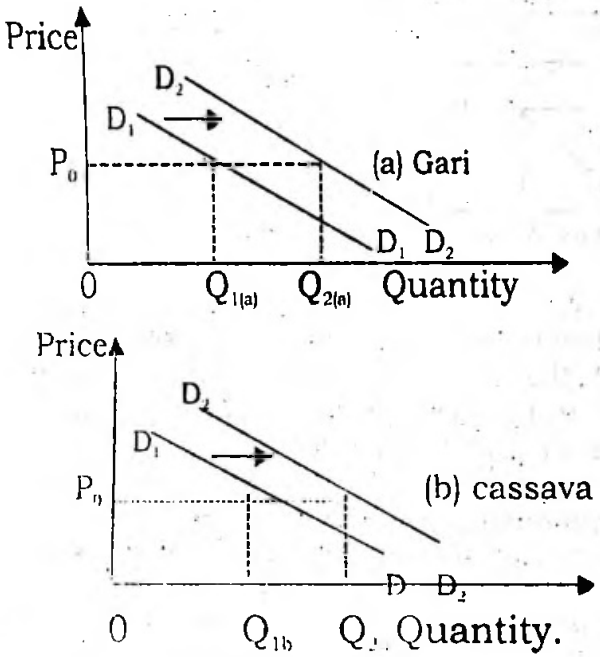


Fig. 2.3: Derived Demand.

Figure 2.3 shows that an increase in the demand for gari from $0Q_{1(a)}$ to $0Q_{2(a)}$ has caused a rise in the demand for cassava from $0Q_{1b}$ to $0Q_{2}$.

In sum, the demand for all raw materials is a derived demand for the finished or semi-finished goods they are used to produced.

(Ii) Joint or complementary Demand: This is the demand for two or more commodities that must be consumed together to satisfy a particular want. Example, the demand for car and petrol. Increase in the demand for car will lead to a rise in the demand for Petrol. This is shown in the figure below:

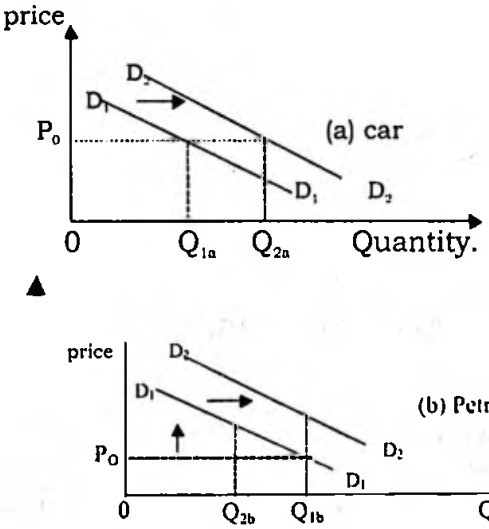
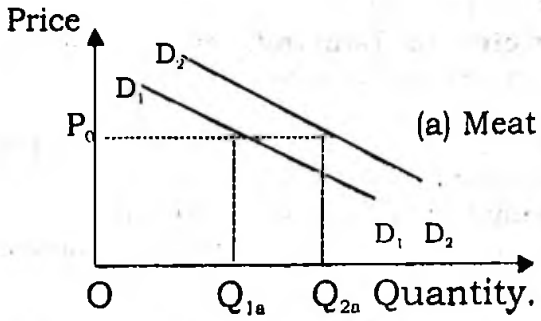


Fig. 2.4: Joint or complementary Demand

Fig. 2.4 indicated that the demand for petrol increased from $0Q_{1b}$ to $0Q_{2b}$ as a result of a rise in the demand for car from $0Q_{1a}$ to Q_{2a}.

(iii) **Competitive Demand:** This is the demand for goods which are close substitutes. Examples of such goods include: meat and fish; tea and coffee; egg and beans; etc.

An increase in the price of one will lead to an increase in the quantity demanded of the other. This is depicted in fig. 2.5. Below:



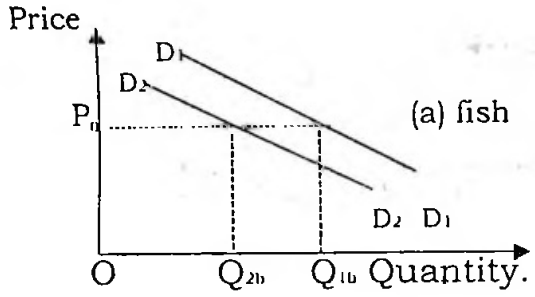


Fig. 2.5: Competitive Demand.

It is observed in fig.2.5 that an increase in the price of fish leading to a decrease in its demand from D_1D_1 to D_2D_2 has caused an increase in the demand for meat from D_1D_1 to D_2D_2.

(iv). Composite Demand: This is the demand for a good for a different purposes. Example, the demand for salt for domestic consumption and for industrial uses.

2.5 Elasticity of Demand: There are as many types of elasticity of demand as there are determinants of demand. In other words, elasticity of demand can be discussed with respect to each determinant of demand. However, in this book, we will limit ourselves to three types of elasticities, namely:

(I) Price Elasticity of Demand: price elasticity of demand is the degree of responsiveness of demand to a change in price.

There are five ways in which for a particular good demand react to changes in its price. They are:

(1) Perfectly Inelastic: This is a situation when changes in price have no effect on quantity demanded Of a good, as shown in fig. 2.6.

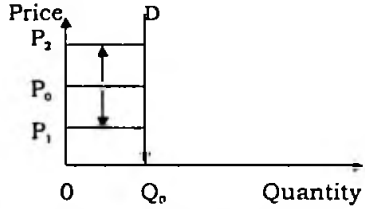


Fig. 2.6: Perfectly Inelastic Demand.

In fig. 2.6, It can be seen that at the original price P_0, the quantity demanded is Q_0. But, as the price falls (or increases) from P_0 to P_1 (or P_2) the quantity demanded remains constant at Q_0.

In this case the coefficient of price elasticity is Zero, i.e, Ed = 0.

(2) Fairly Inelastic Demand: This is a condition in which a change in price lead to a less than commensurate change in quantity demanded. In this case, the coefficient of elasticity is less than unity, i.e Ed<1. It is shown in figure 2.7 below:

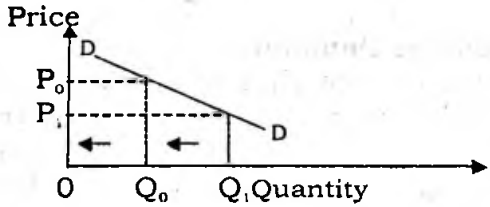


Fig. 2.7: Fairly Inelastic Demand.

Fig.2.7 shows that the increase in quantity demanded is less than the fall in price of the commodity.

(3) Unitary elastic Demand: This is a situation in which a change in price will cause an equal Proportionate change in quantity demanded of a commodity. In this case the coefficient of elasticity is unity, i.e, Ed = 1.

It is depicted in the figure 2.8 below:

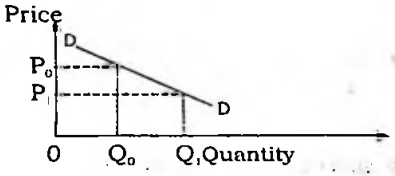


Fig. 2.8: Unitary elastic Demand

Fig. 2.8 shows that the decrease in price has led to an equal proportionate rise in quantity demanded.

(4). Fairly Elastic Demand.

In this situation a change in price will cause a more than proportionate change in quantity demanded of a commodity. Here, the coefficient of elasticity is greater Than unity, i.e, Ed > 1. It is shown in fig. 2.9 below:

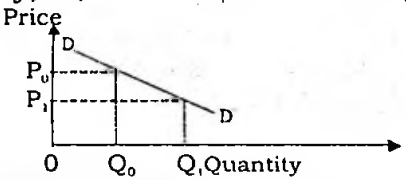


Fig. 2.9: Fairly elastic Demand.

In fig. 2.9. it can be seen that a fall in the price of commodity from P_0 to P_1 has led to a more than proportionate increase in the quantity demanded from Q_0 to Q_1. The change in quantity is greater than the change in price.

(5) Perfectly elastic Demand: Here, a small change in price lead to a very large (or far greater) change in quantity demanded of a commodity. In this case, the coefficient of price elasticity is infinity, that is, Ed = ∞. See fig. 2.10 below:

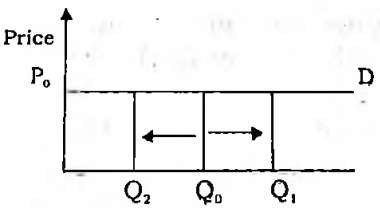


Fig. 2.10: Perfectly Elastic Demand.

Fig. 2.10 shows that a very small increase (or decrease) in price will cause a very large fall (or rise) in quantity demanded of the commodity. The coefficient of elasticity of demand can be Calculate by using two formulae as indicated below:

(1) Ed = Percentage change in quantity demanded Divided by percentage change in price where: Ed Coefficient of price elasticity of demand.

(2). $Ed = \frac{\Delta QD}{Q_0} \div \frac{\Delta P}{P_0}$

Where: Ed = Coefficient of price elasticity of demand

ΔQD = Change in quantity demanded measured as Q_1 Q_0

Q_0 = Initial (or first) quantity,

Q_1 = Later quantity

ΔP = Change in price measure as P_1-P_0; and

P_0 = Initial (or first) price and P_1 = Later price.

Example 1: Given that when the price of one mudu of maize was N40:00, ten mudus were purchased. But when the price was raised to N60:00 the quantity purchased of maize fall to six mudus. Calculate the price elasticity of demand.

Solution

(1). Using the first formula:

$Q_0 = 10$

$Q_1 = 6$

Change in quantity is

$\Delta Q = Q_1 \ Q_0$

$= 6-10 = -4$

Thus, percentage change in quantity is:

$\% \Delta Q = \frac{\Delta Q}{Q_0} \times 100$

$= \frac{-4}{10} \times 100$

:- % $\Delta Q = -40$

Again; $P_0 = N40$

$P_1 = N60$

$\Delta P = P_1 \ P_0$

$= 60-40 = 20$

:- $\Delta P = N20:00$

Hence, percentage change in price is

$$\% \Delta P = \frac{\Delta P \times 100}{P_0}$$

$$= \frac{20 \times 100}{40}$$

$\% \Delta P = 50$

Therefore, price elasticity of Demand in this case is

$$Ed = \frac{\% \Delta P}{\% \Delta P}$$

$$= \frac{-40}{50}$$

:- $Ed = -0.8 < 1$

Interpretation:- The absolute value of the coefficient (0.8) is less than unity. Thus, demand is inelastic. The presence of minus (-) sign attached to the coefficient of elasticity shows the negative relationship between price and quantity demanded of the commodity.

(2). Using the second formula:

$P_0 = 40$

$P_1 = 60$

:- $\Delta P = P_1 - P_0$

$= 60-40$

$= N20:00$

Also, $Q_0 = 10$

$Q_1 = 6$

$\Delta Q = Q_1 - Q_0$

$= 6-10$:- $\Delta Q = -4$

Thus, $Ed = \frac{\Delta Q}{Q_0} \div \frac{\Delta P}{P_0}$

$= \frac{-4}{10} \times \frac{40}{20}^{2}$

$= \frac{-4}{5}$

:- ED = -0.8 < 1.

The Demand is Inelastic

The calculations above showed that using any of the formulae will give you the same result.

2.6 Determinants of Elasticity of Demand.

The various degrees of reaction of demand to changes in price explained above have fundamental determinants. These include:

1.**Income of Consumers:** The higher the income of the consumer the more inelastic his demand for goods will be. Thus, a richer person react less violently to changes in prices of goods and service than the poorer.

On the other hand, poorer people react more sharply to changes in prices than the richer ones. Thus, poorer people have elastic demand for goods and services.

2. Substitute: Goods that are close substitutes have elastic demand than those that are not close substitutes.

3. Habit: Some consumers who might have formed the habit of consuming some particular commodities find it difficult to stop consuming them. So, their demand for the goods remained unchanged irrespective of changes in prices. Thus, such consumers have inelastic demand for such commodities.

4. Time: It may take long time to find substitute (s). And so until substitutes are found demand for a particular commodity remains inelastic.

commodity remains inelastic.

5. Nature of commodity: Commodities which are necessities have inelastic demand since consumers cannot do without them. E.g, demand for food items.

2.7. Distinction Between Change in demand and Change in Quantity Demanded

Demand Curve can shift either to the right or left depending on the direction of the change in the determinants of demand (except price).

If other determinants of demand (except price) change in favour of demand, the curve will shift to the right, indicating an increase in demand.

On the other hand, if other determinants of demand (except price) change in disfavour of demand, the curve will shift to the left, indicating a decrease in demand.

Both increase in demand and decrease in demand are termed "change in demand".

These are shown in the figure below:

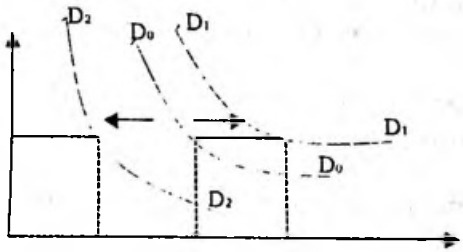


Fig. 2.11 change in Demand.

In fig. 2.11, it can be seen that price remains constant at P_0. The original demand curve is $D_0 D_0$. When other determinants of demand (except price) changes in favour of consumers, such as increase in income, decrease in tax, etc, demand curve will shift to $D_1 D_1$, indicating an increase in demand.

decrease in tax, etc, demand curve will shift to D_1 D_1, indicating an increase in demand.

On the other hand, if the other determinants of demand (except price) changes against consumers, such as decrease in income, increase in tax rate, etc, demand curve will shift to D_2 D_2 showing a decrease in demand. Change in quantity demanded is caused by changes in price (holding other determinants constant). This is also called movement along a demand curve either upward (when there is increase in price) or downward (when there is fall in price) of the commodity. This is shown in the figure below:

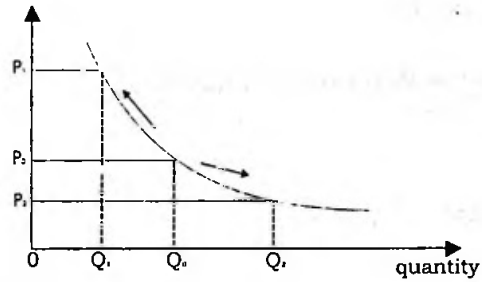


Fig. 2.12: Change in quantity Demanded.

It is observed in fig. 2.12 that at the initial price P_0, the initial quantity demanded is Q_0. When the price rise from P_0 to P_1, quantity demanded fall from Q_0 to Q_1. On the other hand, when price fall from P_0 to P_2, quantity demanded increased from Q_0 to Q_2.

In sum, the distinction between change in demand and change in quantity demanded is that while the former is caused by changes in other determinants of demand (except price) and involves shifts in demand curve, the latter is caused by changes in price (except other determinants of demand) and involves movement along a demand curve.

2.8 Other Types of Elasticity of Demand.

2. Income Elasticity of Demand: Income elasticity of demand is the degree of responsiveness (or reaction) of change in quantity demanded to change in income. The coefficient of income elasticity of demand can be computed by using any of the following formulae:

(i). $Ey = \left(\frac{\%\Delta Q}{\%\Delta y}\right)$

Where,

Ey = Income elasticity of demand

$\%\Delta Q$ = Percentage change in quantity demanded Measured by

$$\frac{Q_1 - Q_0}{Q_0} \times 100$$

$\%\Delta y$ = Percentage change in income measured by

$$\frac{y_1 - y_0}{y_0} \times 100$$

Q_0 = Initial Quantity

Q_1 = Later Quantity

y_0 = Initial income

y_1 = Later income

(ii). $Ey = \frac{\Delta Q}{Q_0} \div \frac{\Delta y}{y_0}$

Where:

$\Delta Q = Q_1 - Q_0$ $\Delta y = y_1 - y_0$

Example 2.

The monthly income of a clerk was increased from N200:00 to N250:00 due to his promotion in his office while his demand for gari rose from 10 mudus to 15 mudus.

(A). Compute the coefficient of income elasticity of demand.

(B). Interprete the result.

Solution

(a). $Q_0 = 10$ (given in the question)

$Q_1 = 15$ (given in the question)

$\therefore \Delta Q = Q_1 - Q_2$

$= 15-10$

$\therefore \Delta Q = 5.$

Hence, $\%\Delta Q = \frac{(Q_1-Q_0)}{Q_0} \times 100$

$\frac{(15-10) \times 100}{10}$

$= \frac{5 \times 100}{10}$

$\therefore \%\Delta Q = 50.$

Similarly:

$Y_0 = 200$ (given in the question)

$Y_1 = 250$ (given in the question)

$\therefore \Delta Y = Y_1 - Y_0$

$= 250-200$

$\therefore \Delta Y = 50.$

Hence, $\%\Delta Y = \frac{(Y_1-Y_0)}{Y_0} \times 100$

$= \frac{(250-200) \times 100}{200}$

$= \frac{50 \times 100}{200}$

$\therefore \%\Delta Y = 25.$

Then $Ey = \frac{\%\Delta Q}{\%\Delta Y}$

$= \frac{50}{25}$ $\therefore Ey = 2 > 1.$

(B) The result showed that the coefficient of income elasticity of demand is greater than unity. Thus, the demand is elastic. This implies that gari is a normal (or necessary) good to the consumer.

3. Cross Elasticity of Demand.

Cross elasticity of demand, is the degree of responsiveness of demand for a commodity to changes in the prices of its related goods. It is calculated by using any of the following formulae.

(i). $Ec = \frac{\% \Delta Q_y}{\% \Delta P_x}$

Where:

$\%\Delta Q_y$ = Percentage change in quantity demanded of commodity Y(measured by $\frac{(Q_1 - Q_0)}{Q_0} \times 100$

$\%\Delta P_x$ = Percentage change in price of commodityX (measured by $\frac{(P_1 - P_0)}{P_0} \times 100$

Q_0Y = Initial quantity of commodity Y.

Q_1Y = Later quantity of commodity Y.

P_0X = Initial price of commodity X.

P_1X = Later price of commodity X.

(ii). $Ec = \Delta Q_y \div \Delta P_x$

$Q_0Y \quad P_0X$

Where:

ΔQ_y. $Q_1Y - Q_0Y$

$\Delta P_X = P_1X - P_0X$

Q_0Y = Initial quantity of commodity Y.

Q_1Y = Later quantity of commodity Y.

P_0X = Initial price of commodity X.

P_1X = Later price of commodity X.

Examples 3:

Given two commodities X and Y, and that as the price of commodity X rose from N20:00 to N50:00, the quantity demanded of Y increased from 10 units to 20 units.

(a). calculate the coefficient of cross elasticity of demand.

(b). Interprete the result.

(c). What types of goods are X and Y.

Solution

$Q_0Y = 10$

$Q_1Y = 20$

$\Delta Q_y = Q1Y - Q_0Y$

$= 20 - 10$

$\Delta Q_y = 10$ units.

$\therefore \%\Delta Q_y = \frac{\Delta Q_y}{Q_0Y} \times 100$

$= \frac{(Q_1Y - Q_0Y)}{Q_0Y} \times 100$

$= \frac{(20-10)}{10} \times 100$

$= \frac{10 \times 100}{10}$

$\therefore \Delta Q_y = 100.$

Similarly:

$P_0X = 20$

$P_1X = 50$

$\Delta P_x = P_1X - P_0X$

$= 50 - 20$

$\therefore \Delta P_x = 30.$

$\%\Delta P_x = \frac{\Delta P_x}{P_0X} \times 100$

$= \frac{(P_1X - P_0X)}{P_0X} \times 100$

$$= \frac{(50-20) \times 100}{20}$$

$$= \frac{30 \times 100}{20}$$

$$= \frac{300}{2}$$

:- $\%\Delta P_x = 150$.

Therefore, $Ec = \frac{\%\Delta Q_y}{\%Px}$

$$= \frac{100}{150}$$

$Ec = 0.67$.

(B). The cross elasticity of demand is less than unity. Thus, it is inelastic.

(C). The goods are substitutes since the coefficient of cross elasticity is positive.

If the coefficient of cross elasticity is negative then the goods are complementary.

Review Questions

1. Explain the determinants of demand

2. With appropriate graphs, discuss the types of demand known to you.

3a. What is income elasticity of demand?

b. Suppose the income of consumer is increased from N300.00 to N400.00 but his demand for a commodity fall from 15 to 10 units.

(i). Compute the income elasticity of demand

(ii). Interprete the result, and classify the Comodity.

4. Distinguish between change in demand and change in quantity demande

CHAPTER THREE

THEORY OF SUPPLY

3.1 Meaning of Supply

3.2 The Law of Supply

3.3 Determinants of Supply

3.4 Types of Supply

3.5 Elasticity of Supply

3.6 Determinants of Elasticity of Supply

3.7 Distinction Between change in Supply and change in Quantity Supplied

3.8 Equilibrium Conditions

Review question

THEORY OF SUPPLY

3.1. Meaning of Supply

Supply is defined as the quantity of a commodity that a producer is willing and able to sell at a given price and at a time. Like demand, supply is backed up by willingness and ability of a producer to sell a quantity of good and service at a given price at a given time.

Supply is not the same as the total stock of a commodity which the producer has produced but rather it is the part of the total production actually sold (or offered for sale) at the ruling market price and at a particular time. This is termed effective supply.

3.2. The Law of Supply.

The Law of Supply states that "the higher the price the higher the quantity of goods and services supplied, or the lower the price, the lower the quantity of goods and services supplied.

This law is also based on the assumption of 'ceteris' paribus", i.e, all other determinants of supply remain constant.

This law can be explained with the use of table and graph as follow:

Price per tuber (N)	No. of tubers supplied
10	20
20	35
30	48
40	50
50	63

The supply schedule above showed that at the price of N10.00, the quantity of yams supplied is 20 tubers. But, as the price increases to N20.00, N30.00 and toN 50.00, the quantity of yams supplied rose to 35, 48, and 63 tubers respectively. This supply schedule can be translated to supply curve as below:

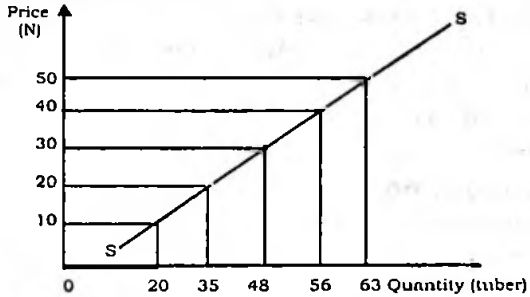


Fig. 3.1 An individual supply curve

Supply curve is the graphical (geometric) presentation of the relationship between price and quantity supplied of a good.

In fig. 3.1 above it can be seen that the supply curve slopes upward from left to right, indicating that there is a positive (or direct) relationship between price and quantity supplied of the good. The basic explanation for this is that producers/sellers prefer to sell more quantities as the price rise since this will give him more revenue.

This underscores the supply schedule and supply law stated earlier. Market supply schedule and market supply curve follow similar shape.

3.3. Determinants of Supply.

The determinants of supply include the following:

(i) Price of the good: Producers generally tend to sell more quantity of a good when its price rise and vice versa.

(ii) Cost of production: An increase in the cost of production will reduce the quantity of a commodity produced and supplied.

(iii) Natural factors: Natural factors such as Floods, drought, earthquakes, etc, have negative effect on output of goods and hence can lead to less supply.

(iv) Level of technology: Improved techniques of production can increase output and supply of goods.

(v) Government policy: Government policy such as subsides given to producers can reduce production cost and lead to increase in production and supply of goods.

On the other hand, increase in taxation on raw Materials used in production may discourage production thereby leading to reduction in supply.

(vi) Prices of other commodities: An increase in the price of a commodity will cause a fall in the production and quantity supplied of its substitutes.

On the other hand, a rise in the price of a good will cause the quantity supplied of its complement to increase.

(vii) Number of producers: An increase in the number of producers will lead to a rise in production and supply of goods and services.

(viii) Quantity consumed by the producers: The more the quantities consumed by the producers the less the quantities available to supply, and vice versa.

(ix) Socio-political factors: Socio-political factors such as: wars, ethnic, communal and religious crises, discourages production and hence lead to little or sometimes no supply of goods.

3.4. Types of Supply.

There are three types of supply, namely:

(i) Joint/complementary supply: This is the supply of two or more commodities from the same source such that a change in the supply of one is brought about by similar change in the supply of the other. Example, the supply of beaf and skins, palm oil and palm kernel, etc. Supply of more skins (hides) must be accompanied by Supply of beaf and skins, palm oil and palm kernel, etc. Supply of more skins (hides) must be accompanied by supply of more beaf, or vice versa, as shown below:

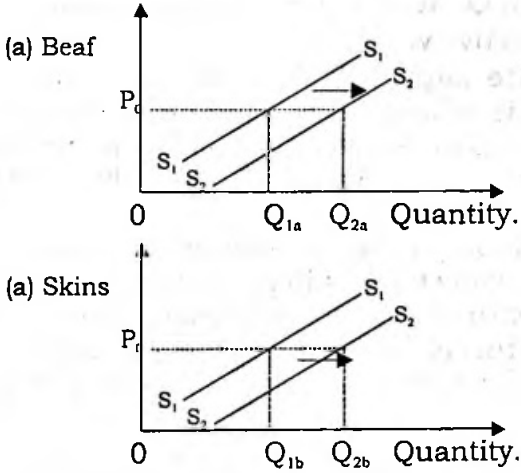


Fig. 3.2: joint/complementary supply

Fig. 3.2 shows that an increase in the supply of skins from $0Q_{1b}$ to $0Q_{2b}$ has led to similar increase in supply of beaf from $0Q_{1a}$ to $0Q_{2a}$.

(I) Competitive supply: This is the supply of goods which are such that a rise in the production of one leads to a decrease in the production of the other. For instance, an increase in the production of beef will lead to a fall in the supply of milk.

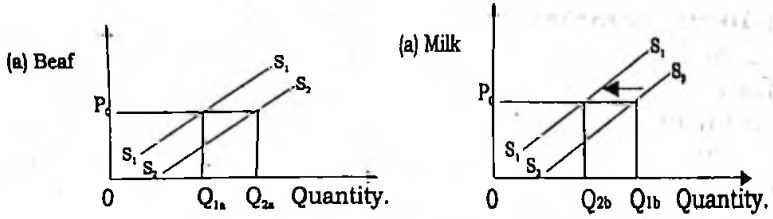


Fig. 3.3 Competitive supply.

Fig.3.3 showed that as the quantity supplied of beef increased from Q_{1a} to Q_{2a}, the supplied of milk fall from Q_{1b} to Q_{2b} respectively.

(iii) Composite supply: This is the total supply of a group of goods which serve the same purposes. For instance, the supply of a pair of trouser, a pair of shoes, a part of shirt etc, provide a composite supply of clothing.

3.5. Elasticity of supply

Elasticity of supply is the degree of responsiveness of quantity supply to changes in price. Elasticity of supply is discussed with respect to all determinants of supply.

But, in this chapter we shall concentrate on price elasticity of supply. Supply react to changes in price in many ways, namely:

(i) Perfectly Inelastic supply: This is a condition when change in price has no effect on quantity supplied. That is, even though price changes, quantity supplied remains constant. In this case the coefficient of price elasticity of supply is zero that is Es = 0

This is shown in fig. 3.4 below:

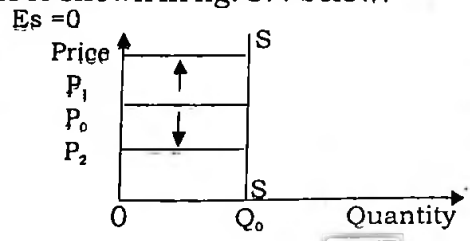


Fig. 3.4: Perfectly Inelastic Supply.

Fig. 3.4 showed that even though price rise from P_0 to P_1 or fall from P_0 to P_2, quantity supplied remains fixed at Q_0.

(ii) Fairly Inelastic supply: This is a condition in which a change in price cause less than proportionate change in quantity supplied, as shown in fig. 3.5 below:. Here, the coefficient of price elasticity of supply is less than unity, i.e Es<1.

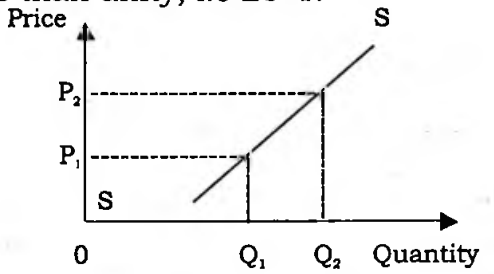


Fig. 3.5: Fairly Inelastic supply.

It can be seen from fig. 3.5 that the change in price $P_1 P_2$ is greater than the change in quantity $Q_1 Q_2$.

(Iii) Unitary Elastic supply: Here, the change in price lead to equal proportionate change in quantity supplied. Thus, coefficient of price elasticity of supply is equal to unity, 1.e. Es = 1

This is depicted in fig. 3.6 below:

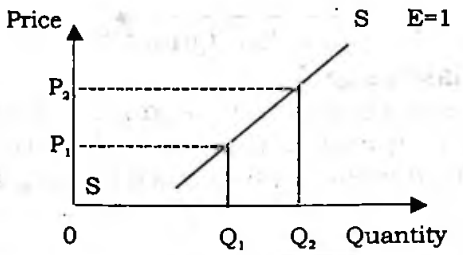


Fig. 3.6: Unitary Elastic supply.

Fig. 3.6 above showed that the change in price $P_1 P_2$ is equal to the change in quantity supplied $Q_1 Q_2$.

(iv) Fairly Elastic supply: This is the type in which a change in price leads to more than proportionate change in quantity supplied.

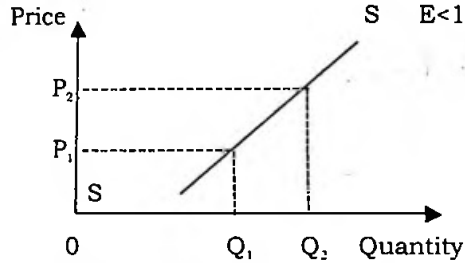


Fig. 3.7: Fairly Elastic supply.

Fig. 3.7 above indicated that change in quantity supplied $Q_1 Q_2$ is greater than the change in price $P_1 P_2$.

(v) Perfectly Elastic supply: This is a condition in which a change in price lead to a very large change in quantity supplied.

This is shown in fig. 3.8 below:

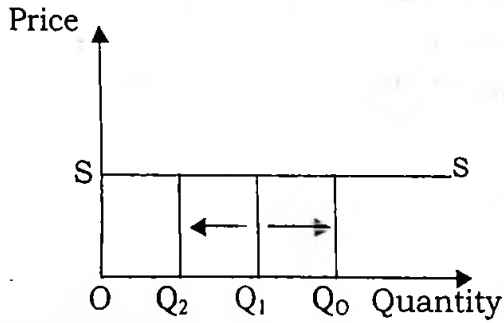


Fig. 3.8: Perfectly Elastic supply

Fig. 3.8 indicated that a small change in price leads to a very large change in quantity supplied. Note that the change is so small that it cannot be shown in the graph.

3.6. Determinants of Elasticity of supply

Elasticity of supply is determined by two major factors namely:

1 Time: In the very short period, supply is fixed and thus supply is inelastic.

In the short-run, supply of agricultural goods is fixed and hence their supply is perfectly inelastic. But in the long-run, in which all factors are variable, supply is not fixed. Thus, supply is elastic.

2 Cost of production/substitution: The ease with which one factor can be substituted for another determined the elasticity of supply. If it is easy to substitute one factor for another, then supply is elastic, and vice versa. Increase (decrease) in cost of production can cause supply to change (or to be elastic).

3.7. Distinction Between Change in Supply and Change in Quantity Supplied

Change in supply is caused by changes in other determinants of supply (except price). If other determinants of supply (except price) change in favour of producers, supply curve will shift to the right, indicating an increase in supply. On the other hand, if other determinants of supply (except price) change against producers, supply curve will shift to the left indicating a decrease in supply.

Increase in supply and decrease in supply are grouped under change in supply, and are shown in fig. 3.9 below:

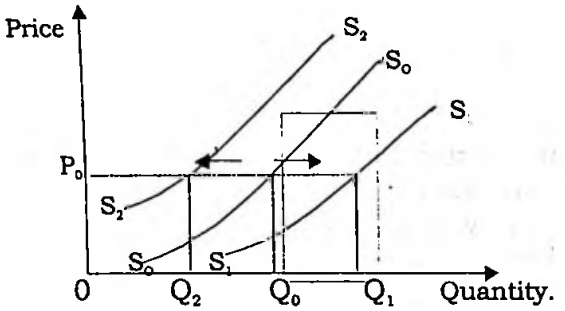


Fig. 3.9: change in supply.

Fig. 3.9 indicates that supply curve shift from S_0 S_0 to S_1 S_1 as a result of favourable changes in other factors of supply (except price). This lead to increase in supply.

On the other hand, supply curve shift from S_0 S_0 to S_2 S_2 due to unfavourable changes in other determinants of supply (except price). This lead to decrease in supply.

Change in quantity supplied is caused by changes in price (holding other determinants of supply constant). This causes movement along supply curve upward (when price rise) and downward (when price fall). This is shown in fig. 3.10 below:

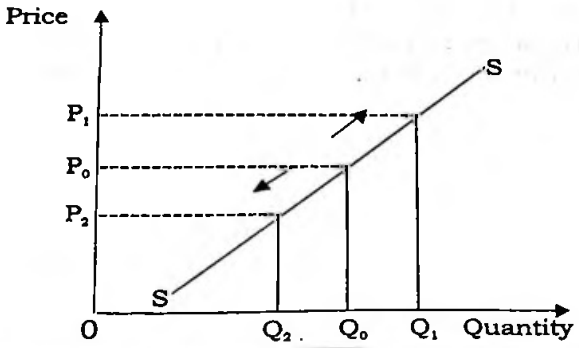


Fig. 3.10: Change in Quantity supplied.

It can be observed from fig. 3.10 that quantity supplied rose from Q_0 to Q_1 as a result of increase in price from P_0 to P_1. This led to upward movement along the supply curve as shown by the arrow.

On the other hand, as the price fall from P_0 to P_2, the quantity supplied also fall from Q_0 to Q_2 leading to downward movement along the supply curve as reflected by the arrow.

In sum, change in supply is caused by changes in other determinants of supply (except price) and it involves shifts of supply curve.

On the other hand, change in quantity supply is caused by changes in price (except other determinants of supply) and it involves movement along a supply curve.

3.8. Equilibrium Conditions

The explanations in chapter two and section three of this chapter showed that the determinants of demand are quite different from those of the supply. Besides, the buyers' and consumers' objectives are different from the objectives of sellers and producers.

But, it is important to state that both consumers (buyers) and producers (sellers) usually meet at a market place.

Sometimes, in the market, the quantities of goods that sellers brought is greater than the quantities buyers would be able to buy. In this case, there will be excess supply in the market.

On the other hand, when the quantities that buyers are willing and able to buy is greater than the quantities sellers brought to the market, we have excess demand in the market.

In a situation when supply is equal to demand, we have equilibrium point, and the price at that point is called equilibrium price while the quantity at that point is termed equilibrium quantity.

Excess supply, excess demand, equilibrium point, Price and quantity are depicted in fig. 3.11 below:

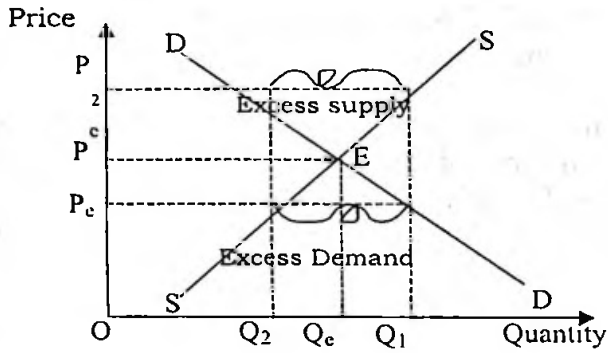


Fig. 3.11: Equilibrium point, Excess supply and Excess Demand.

In fig. 3.11 above, it can be seen that Demand curve DD intersect with supply curve SS at point E. Thus, point E is the Equilibrium and the equilibrium price and quantity is Pe and Qe respectively.

You may observed that when the price rise to P_2, supply will rise while demand will fall, leading to excess supply of Q_2 Q_1.

On the other hand, when the price fall from P_e to P_1, demand will increase while supply will fall causing excess demand Q_2 Q_1. But, note that equilibrium point seldom exist since determinants of supply and demand are different and not constant. Thus, most times equilibrium is temporal

Example:

Given the Demand function as Qd = 15-1/3 P and the supply function as Q_s = 5+2/3 P,.

(a). Find the equilibrium price and quantity.

(b). Show the result geometrically.

Solution

(a). At equilibrium Qd = Qs

$:- 15 - {}^{1}/_{3}P = 5 + {}^{2}/_{3}P$

Collect like terms

$15 - 5 = {}^{2}/_{3}P + {}^{1}/_{3}P$

$10 = P$

$= 15\ {}^{1}/_{3}(10)$

:-Qd = Qs

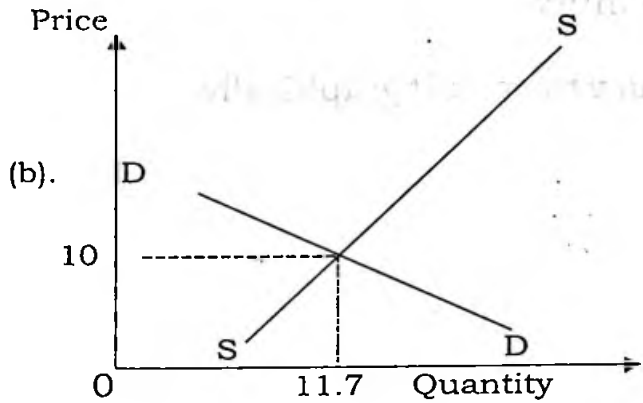
$15\ {}^{10}/_{3} = 5 + {}^{10}/_{3}$

$15\ 3^{1}/_{3} = 5 + 6^{2}/_{3}$

$11^{2}/_{3} = 11^{2}/_{3}$

11.7 = 11.7.

(b).



Review Questions

1. Explain the determinants and types of supply

2. Under what conditions is supply greater (or less) than demand?

3. Given the demand function as Qd = 6-2p and supply function as Qs = 4+2p.

a. compute the equilibrium price and quantity

b. Show the result graphically.

CHAPTER FOUR

THEORY OF PRODUCTION

4.1Meaning of Production

4.2Levels of Production

4.3Factors of Production

4.4The Law of Diminishing returns

Review question

THEORY OF PRODUCTION.

4.1. Meaning of production.

Production encompasses several economic activities. Simply, production is defined as the creation and distribution of goods and services for human consumption and satisfaction. That is, it is made up of three stages namely: creation of goods, distribution of goods and consumption of goods and services.

Thus, production is completed when the goods and services created got to the hands of final consumers.

4.2. Levels of production

There are three levels of production. They are:

(I) Primary Production: This is the extraction of raw-materials provided by nature, which is called land. The activities here include: Farming, hunting, mining, fishing, quarry, lumbering, etc.

(Ii). **Secondary Production:** Secondary production is the processing of raw-materials to finished or semi-finished goods. The activities here include: manufacturing, construction, etc.

(iii). **Tertiary Production:** This is concerned with the rendering of services that aid the distribution of goods so produced at the primary and/or secondary level(s) to final consumers. The activities here include: trading, banking, transportation, teaching, tailoring, catering, etc.

4.3. Factors of production:

There are little disagreement in economics on the number of factors of production. Some groups of economists say there are four factors of production

namely: land, capital, labour and entrepreneurship.

Other groups believed that there are three factors of production, which are: land, capital and labour. The latter groups argued that labour and entrepreneurship should be grouped together since entrepreneurship is a skilled form of labour.

But the modicum of consensus is that there are four factors of production which means that entrepreneurship is recognized as a separate factor.This is because of the training it has received and its very crucial role in production, which, is far greater than those of the other types of labour, i.e, unskilled and semi-skilled labour.

Conceptually, factors of production are the resources used to produce goods and services. They are:

(A). Land: Land refers to all resources provided by nature. They include stones, hills, valleys, trees, grasses, rivers, sky, sunshine, liquid and solid minerals, etc. Characteristics of Land include:

(I) It is immobile: land cannot be moved from one geographical area to another.

(ii) It is fixed in supply: The quantity of land can neither be increased nor decreased.

(iii) It is the gift of nature: No man has contributed to the existence of land. It is provided by nature alone.

(iv) Its value varies with location: Lands in the Urban areas are costlier than those in rural areas.

(v) Its uses: It provide the site necessary for production and the raw-materials used for production.

(vi) Its reward: The reward for land is called rent, which is the money paid for the use of a piece of land.

(Vii) It is subject to the law of diminishing returns (see section 4.4) of this chapter.

(viii) It is heterogeneous: No two pieces (or plot) of land are the same in value or in contents.

(ix). Its value always appreciates

(B). Labour: Labour is defined as human effort, both physical and mental, used in production for a reward. This "human" aspect of labour makes it distinct from other factors of production.

Labour is characterized by:

(I) It is mobile: Labour can move from one area to another and from one occupation to another. For instance, a primary school teacher can be transferred from rural to urban primary school, or vice versa.

On the other hand, a lecturer in economics may decide to resign and take up appointment as a banker (see section 4.5).

iii). The supply of labour is not fixed: A worker can be nfluenced to increase or decrease his services by the rate of payment. The higher the rate of payment, the more the number of hours (or days) a worker will put into work, and vice versa.

On the other hand, unemployment and underemployment can diminish knowledge overtime and hence lead to reduction of labour.

(iii). The reward for labour: The reward for labour is wages or salaries.

(iv). The role of labour: It controls other factors of production to make them more useful to the society.

(v). It is heterogeneous: labour exist in three forms namely: unskilled, semi-skilled and skilled labour.

(vi). The quality of labour can be improved by education, training, etc.

(vii). It is not inheritable

(viii). It can be transformed from one form to another.

(C). Capital: Capital is a resource used for further production of goods and services. It is man-made wealth used to produce other goods and services. They include: cash, machines, raw-materials, buildings, semi-finished goods, etc.

Capital is characterized by:

(I). It is heterogeneous: It exists in different forms, namely: fixed capital like buildings, machineries, liquid capital such as cash at hand; floating capital, including motor vehicles, etc; and social capital like roads, schools, etc.

(Ii). It can be transformed from one form to another. For example car can be converted to raw cash by selling it.

(Iii) It is mobile: factory building in Abuja can be moved to Kaduna by selling it and used the money to build the same or similar factory in Kaduna.

(iv). It is inheritable.

(v). Its reward is called interest.

(vi) It is subject to depreciation. The value of capital can reduce overtime.

(D) Entrepreneurship: It is the combination of the other factors of production with the view to accept risk and benefits of production.

Thus, an entrepreneur is the person who decides what to produce, organizes and coordinates other factors of production in order to produce goods and services.

They include: farmers, traders, share holders, etc.

Entrepreneurship is characterized by the following:

(I). It is mobile: It can be changed from one area or occupation to another.

(Ii). It is heterogeneous: There are different forms of entrepreneurship, including: Managers, investors, etc.

(Iii) It organizes and controls other factors of production.
(iv). The reward for entrepreneur is profit.

4.4. The Law of Diminishing Returns

The law states that " as more and more equal units of variable factor is combined with a given unit of a fixed factor, output increases getting to a maximum and decreases "there after."

The law is based on three assumptions, namely:

(i). There is a fixed factor.
(ii). There is a variable factor; and
(iii). The technology (or technique) of production is known and constant.

The law is usually used in connection with land since land is fixed in supply. For instance, given a 10 acre of farm land and some workers, starting from zero, the effect of increasing the supply of the variable factor-labour- is to employ equal units against the fixed units of land as explained in the table and graph below:

Table 4.1: The law of Diminishing Returns

S/N	Fixed Factor (Land)	Variable factor (labour)	Total Product (T.P)	Average product (AP)	Marginal product (MP)
1	10	0	0	0	-
2	10	1	5	5	5
3	10	2	14	7	9
4	10	3	24	8	10
5	10	4	33	8.2	4
6	10	5	34	6.8	1
7	10	6	34	5.7	0
8	10	7	32	4.5	-2
9	10	8	29	3.6	-3
10	10	9	25	2.7	-4

Table 4.1 above showed that as more equal unit of labour (1man) is employed against the fixed unit of land

(10 acres), all production parameters-total product, average product and marginal product-first rise, reaching a maximum (i.e, 29 for total product, 8 for average product and 10 for marginal product) and decline thereafter. It can be seen that marginal product and average product reached maximum first and begins to decline before the total product reached its maximum and begin to fall respectively.
These are depicted in the graph below:

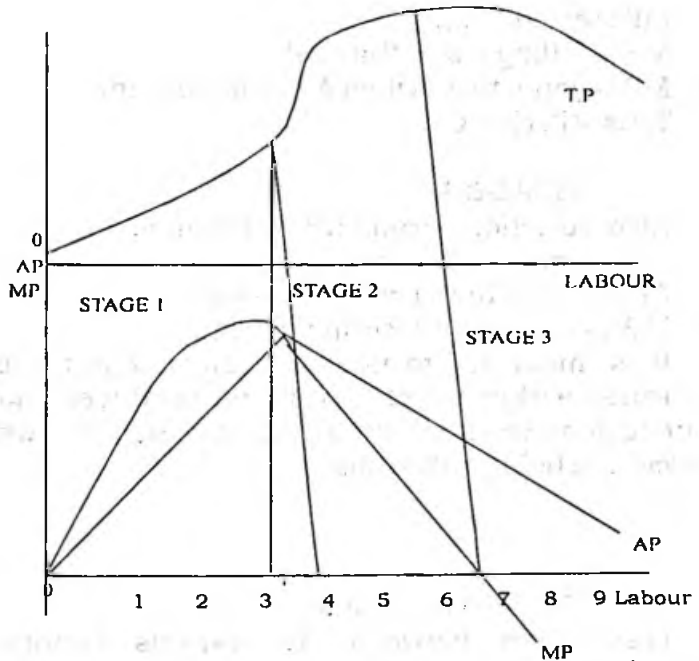


Fig. 4.1: Total Product, Marginal Product and Average Product. From table and fig. 4.1, it can be concluded that the law of diminishing returns set in when the marginal product begins to fall, i.e, at the employment of the 4th worker. Fig. 4.1 also showed the relationship betwee marginal product, total product (TP) and average

product (AP). This is described below:

STAGE 1

(I). All production parameters i.e, TP, AP and MP are rising.

(Ii). MP rises faster than AP, i.e, MP is above AP.

(Iii). MP reaches maximum before A.P and T.P

STAGE 2

(i). MP started falling

(ii). MP is falling faster than AP

(iii). MP is equal to AP when AP is maximum.

(iv). TP is still rising

STAGE 3

(i). All production parameters are falling.

(ii). MP becomes negative

(iii). AP, though falling, it is still positive.

(iv). MP. is zero when TP is maximum.

It is important to note that stage 2 is the best range within which a rational producer should operate to achieve maximum results because it is where resources are being fully utilized.

Review Questions

1. Distinguish between the various factors of production

2. With appropriate graph, explain the law of diminishing returns.

CHAPTER FIVE

THEORY OF COSTS

5.1 Meaning of Costs

5.2 Types of Costs

5.3 Distinction between Long-run Costs and Short-run Costs

Review question

THEORY OF COSTS

5.1. **Meaning of Cost:** Cost is viewed differently in different professions. In accounting, it is the payment made interms of monetary value to obtain goods or services. In other words, cost is the price paid to obtain a good or service.

In economics, cost is viewed as "a sacrifice made interms of either money or other equivalents to obtain a good or service. Thus, it may be greater than, equal to or less than the price.

But in this chapter, we will view cost as the monetary (or exchange) value of goods or services otherwise called factors of production.

The various costs incurred in the production of goods and services are called cost of production. Also, cost of production include the reward for the four factors of production.

5.2. Types of Costs

The different types of money costs incurred in production of goods and services include:

(I). Fixed costs (FC). These are costs of fixed factors of production such as cost of rent for Land, buildings, etc. They do not change in direct proportion with the firm's quantity. Infact, even if there is no output, fixed costs must be incurred, and they remain the same irrespective of changes in output.

This is shown in the graph below

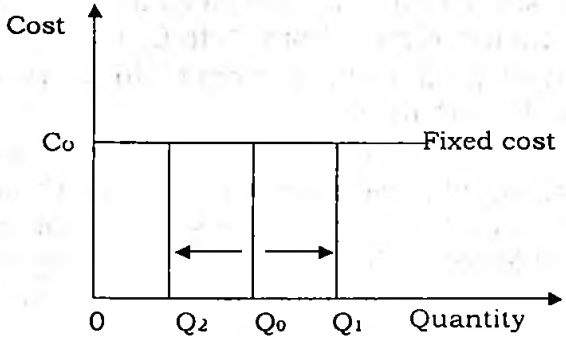


Fig. 5.1: Fixed cost (FC).

In fig. 5.1, it can be observed that fixed cost remains constant at C_0 irrespective of the increase in quantity produced from Q_0 to Q_1 or decrease in quantity from Q_0 to Q_2.

(ii). Variable costs (V.C):- These are costs of variable factors of production. They include: wages/salaries of labour, costs of power, transportation and raw-materials. Variable costs vary directly with quantity. Where there is no quantity variable costs are zero.

It is represented by fig. 5.2 below:

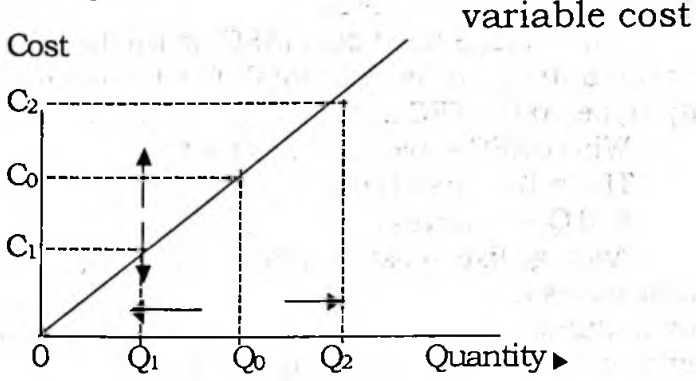


Fig.5.2: Variable Cost

Fig. 5.2 showed that variable cost rises as out put increases. As quantity produced increases from Q_0 to Q_2 cost incurred rises from C_0 to C_2. On the other hand as quantity produced falls from Q_0 to Q_1, variable cost decreases from C_0 to C_1.

(iii) Total Cost (TC): Total cost is the sum of all costs of both fixed and variable factors of production. Thus itis the sum of fixed cost and variable cost of production. Because variable cost is included, total cost vary with quantity produced. This is shown in fig. 5.3 below

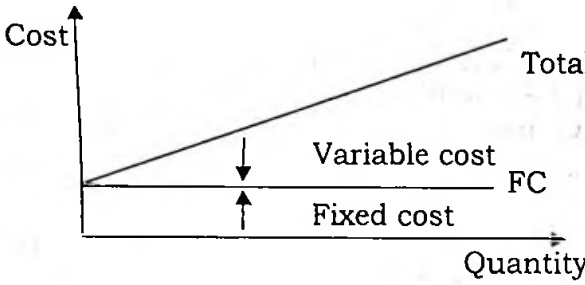


Fig. 5.3: Total cost, variable cost and fixed cost.

$$TC = FC + VC$$

(Iv) Average fixed cost (AFC)

The average fixed cost (AFC) is the fixed cost per unit of output. It is the total fixed cost divide by output, i.e, AFC = TFC ..... (1)

Where AFC = Average fixed cost

TFC = Total fixed cost

and Q = Quantity.

Average fixed cost decreases as output increases, and vice versa.

This is due to the fact that as output increase the per unit cost falls, as depicted in fig. 5.4 below:

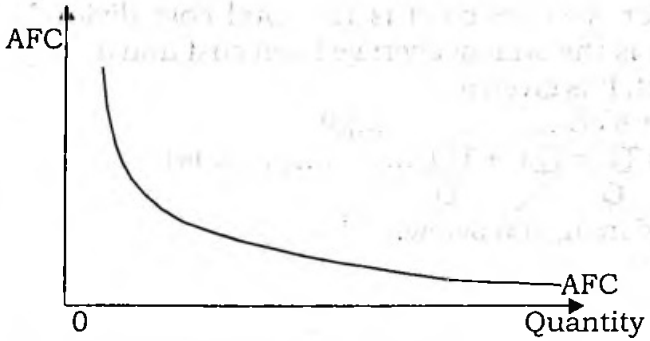


Fig. 5.4: Average fixed cost (AFC)

Fig. 5.4 indicated that AFC decreases as Quantity increases.

(v). Average Variable Cost (AVC).

The AVC is the total variable cost divide by quantity, i.e, $AVC = \frac{TVC}{Q}$ ----------(2)

Where AVC = Average variable cost

TVC = Total variable cost

and Q = Quantity

The AVC curve is demonstrated in fig. 5.5 below:

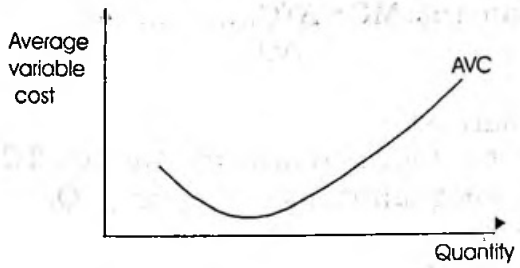


Fig. 5.5 Average variable cost (AVC).

The AVC curve slopes upward from left to right indicating that it increases as quantity rises.

(vi). Average Total (or Average) cost (ATC):- Average

total cost (or Average cost) is the total cost divide by Quantity. It is the sum of average fixed cost and average variable cost. It is given as:

$ATC = AFC + AVC$.....(3)

or $\frac{TC}{Q} = \frac{TFC}{Q} + \frac{TVC}{Q}$.....(4)

It is depicted in fig. 5.6 below:

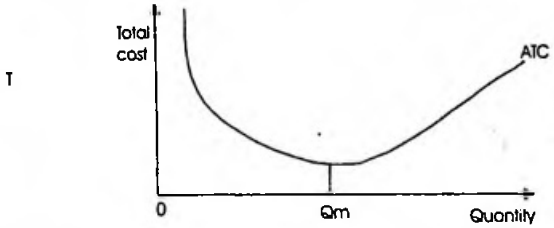


Fig. 5.6 Average total cost (ATC). Average total cost is above AFC and AVC, and it is U-shaped. This is because at the initial stage the ATC curve decreases as quantity produced rises. The ATC reaches its minimum when quantity and other derivatives of cost (i.e, MC, AVC and AFC) rise.

(viii). Marginal cost (M.C.)

It is the extra cost of producing extra unit of output. It is calculated as: $MC = \frac{\Delta TC}{\Delta Q}$.....(5)

Where:

MC = Marginal cost

ΔTC = Change in total cost measured as $TC_2 - TC_1$

ΔQ = Change in quantity measured as $Q_2 - Q_1$

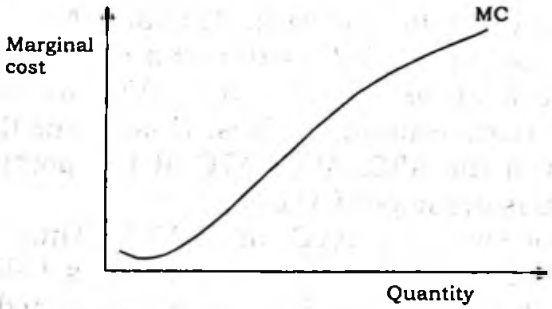
TC_2 = Latter cost

TC_1 = Former cost

Q_2 = Latter quantity

Q_1 = Former quantity.

MC is depicted in fig .5.7 below:



F.g. 5.7: marginal cost (MC).

Like AVC, marginal cost is u-shaped as can be seen in fig. 5.7. it decreases as quantity increase and rises thereafter the minimum point is reached. The minimum point is where the law of diminishing return set.

All types of costs have relationship with one another. This is explained in Fig. 5.8

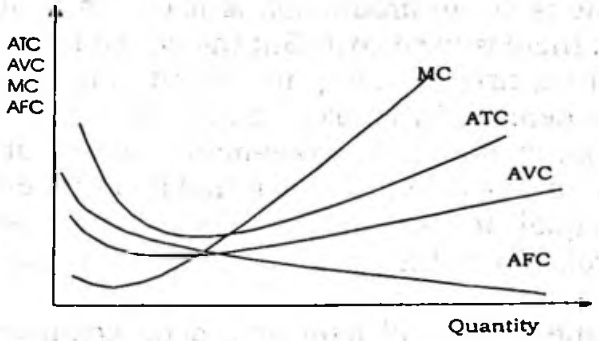


Fig. 5.8: Relationship between the various costs.

It can be seen from fig. 5.8 that AFC is parallel to the quantity axis indicating that it is constant irrespective of the level of output.

The AVC lies between AFC and ATC, meaning

that AVC is the difference between AFC and ATC. As AVC rises, ATC also rises.ATC is the sum of AFC and AVC. Thus, ATC is above both AFC and AVC. MC cuts cost curves and rises as quantity rises. This means that MC equal each of the AFC, AVC, ATC at the point of intersection. MC is the slope of ATC.

MC is below both AVC and AFC. Thus, it continues to pull them down as long as it is falling until it reaches its minimum point. When MC started to rise, ATC also began to rise.

MC is U-shaped because some factors of production are fixed (particular in the short-run). And if there is constant factor prices, extra quantity becomes more expensive and therefore MC begins to rise.

5.3. Distinction between long-run and short-run costs

5.3.1 Short-run Cost: A short-run is a period in which at least one factor of production is fixed. Thus, in the short-run, there is fixed cost. But the period is not long enough for the firm to change its output in response to changes in demand by employing more or less variable factors of production such as raw-materials, labour, etc.

It should be noted, however, that if the price of the good is equal to the MC, the firm will make a normal profit. But, if the price of the good is less than MC, the firm will be making a loss.

On the other hand, if the price of the commodity is more than the MC, the firm will make abnormal (or super-normal) profit.

Again any price below AVC is a loss. On the other hand, any price above the AVC, the firm will cover its fixed costs, and in the long-run make profit.

A long-run is a period in which all factors of

production and hence their costs are variables. Like in the short-run, ATC in the long-run is U-shaped, and it envelopes all the short-run Mcs.
This is shown in fig. 5.9 below:

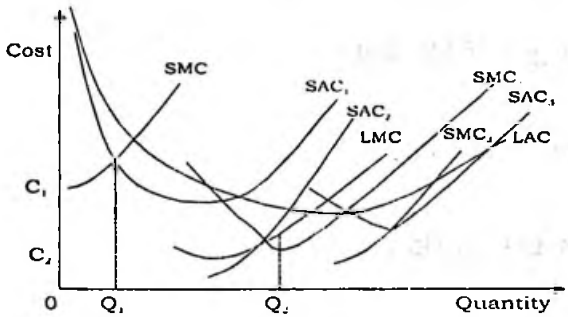


Fig. 5.9: Long-run cost curves of a firm.

In fig. 5.9, it can be seen that the average cost curve is U-shaped and envelopes all other cost curves. The reason is that in the Long-run when the firm is operating on a new scale, it now has a new short-run cost SAC_2 and can therefore produce quantity $0Q_2$ more cheaply at a cost $0C_2$ (which is the minimum)

The reason is that in the long-run, the amounts of all factors can be adjusted so that the long-run proportions between them are such that at all levels of output, production can take place at the lowest point on the relevant short-run average cost curve (which is on the LAC").

By drawing a line through the various minimum points of the various SACs we obtain the LAC curve.

Revision Question

1Distinguish between short-run and long-run costs.
2.With the aid o f diagrams, explain the relationship between the various types of costs.

CHAPTER SIX

INTRODUCTION TO MARKET STRUCTURE

6.1 Meaning of Market

6.2 Types of Market

6.2.1 Perfect Market

6.2.2 Monopoly market

6.2.3 Monopolistic competition

Review question

6.0. INTRODUCTION TO MARKET STRUCTURE

6.1. Meaning of Market.

Market in economics may be defined as an organization whereby all buyers and sellers of any commodity are kept in contact. It could be a place or through any means of communication.

6.2. Types of Markets: Markets are classified in three ways, namely:

(a). According to commodities;
(b). According to channel of distribution; and
(c). According to characteristics.

In this chapter, we shall concentrate our discussion on the classification of market according to characteristics.

In this regard, the following markets are identified:

6.2.1. Perfect Market

(A). meaning: Perfect market is a type in which buyers and sellers cannot influence the conditions in the market.

It may also be defined as a market characterized by a complete absence of rivalry among the buyers and sellers in the market.

(B). Characteristics of perfect market.

Characteristics of Perfect Market include:

(i). Many buyers and sellers: The market has large number of firms (buyers and sellers) such that no single firm can affect the price in the market.

(ii). One unique price: There is only one price at which the product is bought and sold, and that no single firm can alter it.

(iii). Homogeneous commodity: The commodity sold

in the market is homogeneous, that is, the commodity of any one seller is identical or similar to the commodity of any other seller.

(iv) Free entry and exit of firms: In perfect market, there is no barrier to entry or exit from it by firms.

(v) Perfect Knowledge: There is perfect knowledge of market conditions by all firms.

(vi) Very small or no transport cost: There is little or no transport cost in relation to the value of the commodity.

(vii) Profit maximization: The goal of all firms is profit maximization.

(viii) Perfect mobility of factors of production: There is free movement of factors of production between firms, i.e, raw-materials are not monopolized and labour is not Unionized.

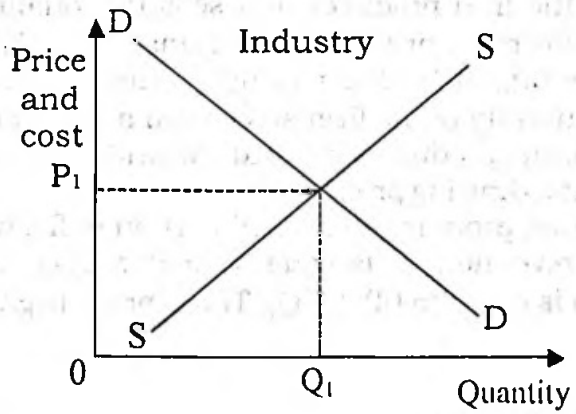
(ix) No Government Regulation: There is no government intervention like tariffs, subsidies, rationing of production (supply) or demand in the market.

As a result of the characteristics above, each firm in perfect market is a price-taker and thus has a perfectly elastic demand curve (see fig. 6.2.).

(C) Price and Quantity Determination for a firm in perfectly competitive market in the short-run.

The price in perfectly competitive market is determined by the interplay of industry supply and market demand. Thus, the market is the "price-maker" while each firm is a "price-taker". This implies that although the market demand curve slopes downwards, the individual firm's demand curve is horizontal, i.e, perfectly elastic.

Since there is only one price, the only remaining option for each firm that want to produce is to determine the quantity that will maximize its profit. Thus, individual firm's quantity is determined by it while market quantity is determined by the summation of all firms output (see fig. 6.1.).



Koutsoyiamnis pp. 178-179.
Fig. 6.1: Equilibrium of a firm in an industry.

Fig. 6.1 above shows the link between a firm and industry. The industry and firm's equilibrium price is P_1, while the firms profit maximizing quantity is Q_1.

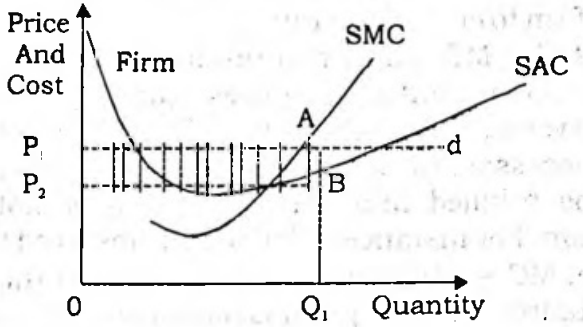


Fig. 6.2 profit maximizing conditions of a perfect firm.

The curve P_1d is the firm's marginal revenue (MR) and demand, since each additional unit sold yields the same revenue (i.e, the market price) as all former quantities.

At price $0P_1$, the firm produces and sells $0Q_1$ quantity thereby equating price (or MR) with marginal cost (MC). Thus, at price $0P_1$, MR = MC and $0Q_1$ is the short-run equilibrium quantity of the firm since even a very small change in quantity produced and sold would prevent the firm from maximizing profit.

The actual profit is the shaded portion in fig. 6.1. that is, total revenue (TR) is equal to (OP_1 x $0Q_1$), and total cost (TC) is equal to $0P_2$ x $0Q_1$. Thus, profit is given as:

$\prod = TR - TC$

$\prod = (0P_1 \times OQ_1) - (0P_2 \times 0Q_1)$

This is the profit necessary to keep the firm's assets in industry (i.e, transfer earnings).

In summary:

1. If MC < MR, total profit is not maximized and it pays the firm to expand its quantity.
2. If MC > MR, total profit is being reduced and it pays the firm to cut its quantity.
3. If MC = MR, short-run profit is maximize and it pays the firm to maintain its present quantity.

However, the profit-maximizing condition- MC = MR is a necessary rather than sufficient condition, since it may be fulfilled and yet the firm may not be in equilibrium. For instance in fig. 6.2 we observed that the condition, MC = MR is satisfied at point e^1 yet the firm is not in equilibrium since profit is maximized at e(which is greater than e^1).

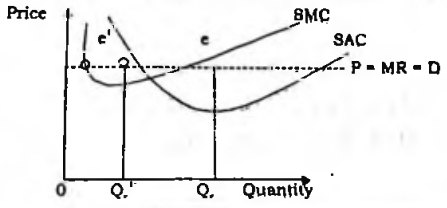


Fig. 6.3: Equilibrium of a perfect firm in shor -run.

The second and sufficient condition for short-run equilibrium of a perfect competitive firm is that the MC be rising at the point of its intersection with the MR curve. This means, the MC curve must cut the MR curve from below, i.e, the slope of the MC curve must be steeper than the slope of the MR curve.

In fig. 6.2, the slope of MC curve is positive at e, while the slope of MR curve is zero at all levels of output. At point e, both conditions for equilibrium are satisfied, i.e,

1. MC = MR
2. Slope of MC > slope of MR.

Some times, a firm is in short-run equilibrium but earning a normal profit (or in a break-even position).

In this case, the SAC is equal to the price (MR) i.e, SAC = MR as demonstrated in fig. 6.4 below

D. PRICE AND QUANTITY DETERMINATION OF A FIRM IN PERFECTLY COMPETITIVE MARKET IN THE LONG-RUN.

The Long-run equilibrium is achieved in a perfect market when firms are neither entering nor leaving the industry. With regard to firm, the Long-run equilibrium is a achieved when the firm is just covering its total costs (TC), i.e, where it is earning normal profit or where Long-run average total cost is equal to marginal cost of the firm.

There are three positions of a perfect firm in the Long-run, namely:

1 If the LAC curve is below the MR curve, the firms are earning a surplus profit. This will, in the Long-run, attract new entrants into the industry and lead to increase in supply of goods and fall in the price and profit of existing firms.

2 On the other hand, if the LAC curve is above the MR curve, the firms are making losses. This will, in the long-run, make some existing firms to quit out of the market

and lead to fall in supply of the good and increase in the price and profits of the remaining firms.

3. But, if the LAC curve touches the MR curve, then the firm is in equilibrium. In this case, the firm is making a normal profit (which may neither attracts nor drive firms).

These positions are depicted in fig. 6.4 below:

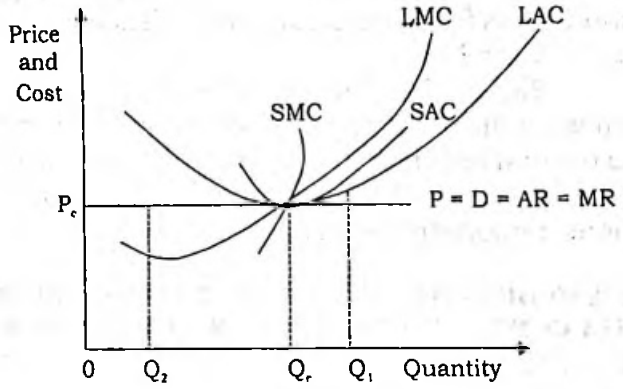


Fig.6.4: Long-run Equilibrium of a perfect firm.

In fig. 6.4, it can be seen that at Q_2, the firm's LMC curve is below its MR curve. This indicate that the firm is making abnormal (super-normal) profit which attracts new entrants. And as this happens, quantity will increase and price will fall (a downward shift in the MR curve) and an upward shift in LAC curve due to the increase in the prices of factors of production as the industry enlarges. This continues until the LAC curve is tangent to the demand (MR) curve.

The reverse is the case when the firm is producing Q_1 quantity.

Thus, Q_e is the equilibrium quantity of a perfect firm in the long-run. At Q_e the LAC is tangent to the MR curve while LMC curve cut the MR from below.Therefore,

the condition for the long-run equilibrium of the firm is that the marginal cost be equal to the price and to the long-run average cost. That is: LMC = LAC = P = MR = D.

The firm adjusts its plant size so as to produce that level of output at which the LAC curve is minimize, given that factor prices and technology are constant.

Hence, at equilibrium, the SMC is equal to the LMC and the SAC is equal to the LAC. Thus, given the above equilibrium condition we have:

SMC = LMC = LAC = SAC = P = MR.

This condition is explained by the fact that at the minimum point of the LAC the corresponding (SAC short-run plant is worked at its best capacity, so that the minimum of the LAC and SAC is the same.)

On the other hand, the LMC cuts the LAC at the minimum of LAC and the SMC cuts the SAC at the minimum of SAC.

6.2.2. Monopoly market

(A) MEANING:- Monopoly market is the type in which there is a single seller of a commodity which has no close substitute. In a monopoly situation, the power of seller is limited only by the tastes and incomes of consumers. The monopolist can influence the quantity and price of his product in the market (but not both at the same time). Thus, monopolist is a price-giver. He can increase or decrease the price or flood or starve the market of supplies of his good according to his wishes.

If there is no new firms (rivals) who enter market and no drastic changes in demand conditions can occur, then the position of the monopolist becomes ABSOLUTE. Such a condition is described as pure monopoly, and that is, one firm constitutes the industry and hence the firm's demand curve is the same as the market demand curve (which is downward sloping from left to right.)

(B) CHARACTERISTICS OF MONOPOLY MARKET:-
Monopoly market has the following characteristics:

I Single Seller, Many Buyers:- The market has one seller but many buyers such that the single seller can influence the price in the market.

II Different Prices:- There are different prices at which the monopolist's product is bought and sold, and the monopolist can alter it.

III Entry Barriers:- There are various barriers to entry such as: patent right, copy right, etc.

IV Imperfect Knowledge:- There is no perfect knowledge of market conditions by the buyers.

V Profit Maximisation:- The goal of the firm is profit maximization.

VI Perfect Immobility of Factors of Production:- There is immobility of factors of production between firms, i.e, raw-materials are monopolized by the suppliers and labour is unionized.

VII Government Regulation:- Sometimes there is government intervention such as: tariffs, subsidies, etc.

As a result of the features above, the monopolist is a price-giver and hence has a downward sloping demand curve (see fig.6.7).

C. PRICE AND QUANTITY DETERMINATION IN A MONOPOLY MARKET

The price and quantity in monopoly market are fixed by the monopolist (but not both at the same time) according to his wishes. Thus, the monopoly firm is price-giver, and faced with a downward sloping demand curve. It sets price at the quantity level which will maximize profits.

The monopolist maximizes his short-run profits if the following conditions are fulfilled:

1. If the MC is equal to the MR; and

2. If the slope of MC is greater than the slope of the MR, at the point of intersection.

These are shown in fig. 6.7 below:

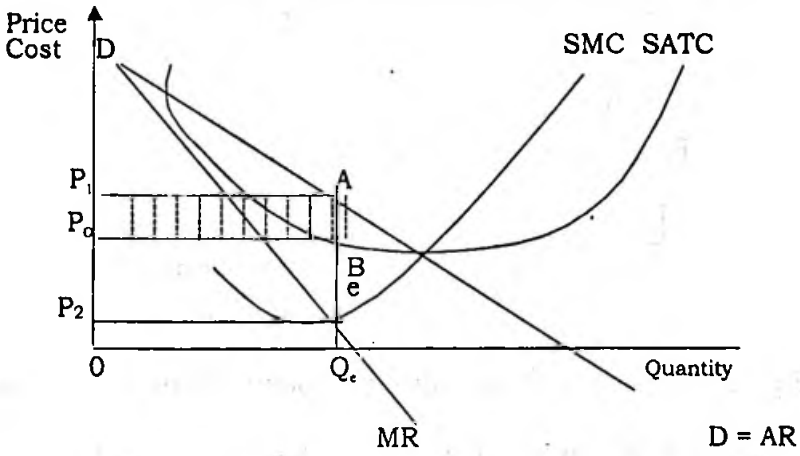


Fig.6.7: Short-run Equilibrium of Monopoly Firm.

In fig.6.7, the equilibrium of the monopolist is at 'e' where MC curve cuts MR curve from below. Thus, both conditions for short-run equilibrium are fulfilled. The profit maximizing price is P_1 and the quantity is 'Q_e'. The excess profit of the monopolist is the shaded portion which is equal to $P_0 P_1 AB$.

Therefore, the profit is

$$\Pi = TR - TC$$

i.e, $\Pi = (OP_1 \times OQ_e) - (OP_0 \times Oq_e)$.

The monopolist may be in break even position in which he is neither making profit nor making loss.

In this case, the SAC curve is tangential to the monopolist's demand curve as shown in fig. 6.8 below:

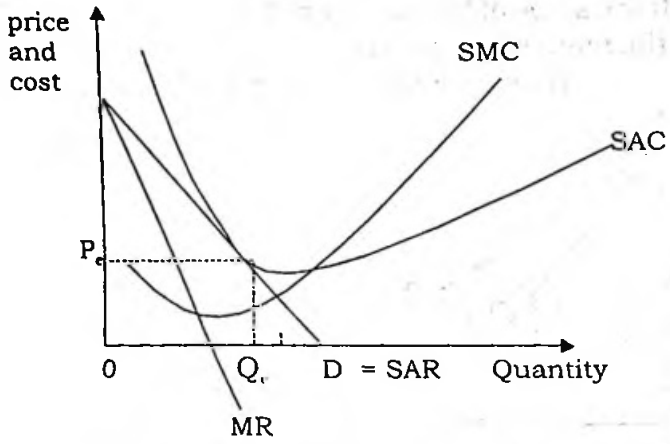
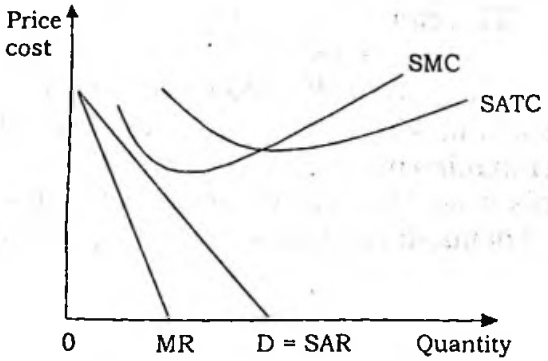


Fig. 6.8: Short-run break-even position of monopoly firm.

In fig. 6.8, it can be seen that the SAC curve is tangent to the SAR curve. This means that at quantity 'Q_e' and price 'P_e' the monopoly breaks even, indicating that it is neither making profit nor making a loss.

But, in a case where all the cost curves-SMC and SAC are above the demand or short-run average revenue (SAR) curve, the monopoly firm will make loss, and thus, it is better for it to close down. This is depicted in fig, 6.9 below:



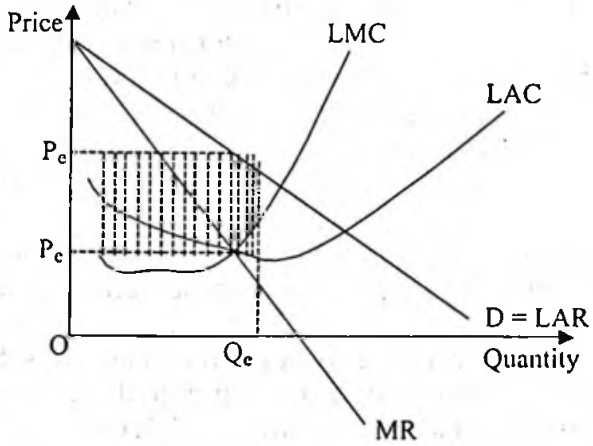


Fig.6.10:Monopolist with optimal plant and full capacity.

Fig. 6.10 above showed that the monopolist's plant is optimal and he is operating on a full capacity. This is because all conditions for profit maximization are fulfilled. That is:

(i). LMC = LMR

(ii). LAC cut LMR from below.

(iii). The slope of LMC is greater than the slope of LMR.

Thus, P_e is the equilibrium price while Q_e his the equilibrium quantity.

(E). CAUSES/SOURCES OF MONOPOLY

Monopoly power can arise from various ways including the following:

(i). Natural causes: This type of monopoly power arises as a result of the possession of land containing natural resources like coal, gold, crude oil, etc, or Possession of natural skills and talents, e.g musicians dancers, footballers, e.t.c

(ii). Licensing: This arises from government creation or permission through licensing laws. E.g, laws permitting only NEPA to produce electricity in Nigeria.

(iii). Patent Laws: These laws confer a special privilege on a firm to protect its new invention and prevent its competitors from entering the market.

(iv). Merging of Producers: This will make them stronger to be able to eliminate other competitors from the market.

(v). Level of Technology: When a producer developed a high level technology which makes goods cheaper, it will force other competitors out of production.

(vi). Restriction on Entry to Certain Professions: Some professions like legal, accounting, medical, etc. restrict entry by insisting on lengthy training, high entrance fees, etc.

(vii). Tariffs: When the government wants to allow monopoly power for producers of goods for domestic market, it usually impose tariffs on similar imported goods to prevent their importation.

(F). ADVANTAGES OF MONOPOLY

The advantages of monopoly include the following:

(i) Standardization: Standardization, which is the basis of cheaper production, is better practiced under monopoly.

(ii) Centralized Management: There is effective and proper central management under monopoly.

(Iii) Economies of large scale production: Economies of large scale production is possible under monopoly since it has no competitors.

(iv) Greater efficiency: There is greater efficiency resulting from an assemblage or pool of specialized managerial skills.

(v) Better use of resources: resources available to a monopolist are better utilized to maximize production.

(vii) It leads to invention: Monopolists, in an attempt to have full control of the market, do engage in intensive research, leading to inventions.

(viii) Avoidance of duplication: There is avoidance of duplication and waste often associated with perfect competition, especially in the supply of social services.

(ix) Greater opportunity to expand operations: A greater opportunity to expand operations because the uncertainty usually associated with a state of free competition has been eliminated.

(G). Disadvantages of Monopoly

The disadvantages of monopoly include the following:

(i) Danger of exploitation: Monopoly leads to exploitation of the consumers.

(ii). It leads to hoarding: The desire for supernormal profit by the monopolist may lead to restriction in output thereby causing hoarding of the good (s).

(iii) Decline in efficiency: Absence of competition often leads to decline in efficiency.

(iv). Over production and waste: A monopolist may over produce, leading to wastage.

(v) Loss of freedom of choice: There is a complete loss of freedom of choice by consumers.

6.2.3. MONOPOLISTIC COMPETITION

(A) Meaning: Monopolistic competition is a type of market in which there are some elements of monopoly market and perfect competitive market. It has a downward sloping demand curve, but there are many buyers and sellers.

(B). Characteristics of monopolistic competition.

Monopolistic competitive market is characterized by the following:

(i) There is large number of buyers and sellers

(ii). There is free entry and exit

(iii). The goods are not homogenous but are close substitutes of one another.

(iv). The firm's goal is profit maximization.

(v). There is little knowledge of the firm's demand and cost curves.

(vi). Maximization of short-run profits is the same as maximization of long-run profits.

(vii). Factors and Technology prices are constant.

(Viii). Both demand and cost curves for all 'products' are uniform throughout the market.

(c) Price and quantity Determination in monopolistic competition In the short-run monopolistic competitive firm acts like a monopoly. But, in the long-run, product differentiation gives rise to a downward sloping demand curve of individual firm in monopolistic competitive market. Thus, price and quantity are determined in the same way as in monopoly.

If the firm increases the price of its product, it will lose some but not all its customers. On the other hand, if it reduces its price, it will attract some customers from other firms. So one firm can influence the market conditions.

The individual firm's demand curve and equilibrium Position is shown in fig. 6.10

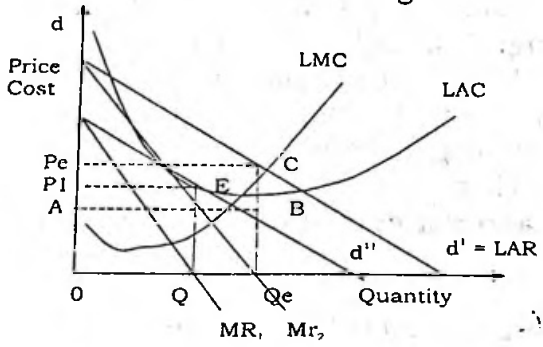


Fig. 6.11: A monopolistic competitive firm Earning Abnormal profit

In fig. 6.10 the demand curve of the firm is dd_1 and its cost structure shown as: LAC and LMC. It will set the price at Pe to maximize profits equal to the area ABCPe. Thus the firm is in equilibrium at 'C' (where the distance between LAR and LAC is highest.

However, the abnormal profit will attract new competitors into the market and this will shift the demand curve dd^1 downward (since the market is shared by a large number of sellers). Therefore in the long-run the abnormal profit will be removed.

Revision Question

1. Briefly distinguish between perfect market and monopoly market.

2. With the aid of diagram show how a perfect firm makes abnormal profit and loss in the short-run.

3. How is price and quantity determined in a monopolistic competitive market?

CHAPTER SEVEN

INTRODUCTION TO MACROECONOMICS

7.1 Meaning and Scope of Macroeconomics
7.2 Macroeconomic objectives and policy instruments
7.3 National income models
7.3.1 Consumption function
7.3.2 Saving
7.4 Sources of investment financing
7.4.1 Investment
7.4.2 Investment function
7.4.3 Determinants of investment
7.5 Multiplier
Review question

INTRODUCTION TO MACROECONOMICS

7.1. Meaning and Scope of Macroeconomics

Macroeconomics is the study of the whole economy looking at variables like: aggregate consumption, aggregate investment, government expenditure, inflation, unemployment, national income, etc.

The study of macroeconomics is centered on the causes, effects and solutions of macroeconomic problems such as: inflation, unemployment, poverty, etc with the view to achieve rapid and sustainable economic growth.

Thus, central in the study of macroeconomics is the formulation of policies that will lead to non-inflationary and sustained economic growth and development within medium to long terms.

7.2. Macroeconomic Objectives and Policy Instruments

Macroeconomic Objectives include the following:

(i). Price stability;
(ii). Increased economic growth;
(iii). Fair distribution of income;
(iv). Employment generation;
(v). Poverty reduction or increased standard of living; and
(vi). Balance of payment equilibrium.

The objectives above can be achieved by using combinations of three categories of policies, namely:

(A) **Monetary policy:** Monetary policy is the manipulation of monetary variables such as bank rate, minimum deposit ratio, interest rate, etc, with the aim of varying the cost and volume of money in circulation and

hence macroeconomic variables in the desired direction.

(B) **Fiscal Policy:** Fiscal policy is the manipulation of fiscal instruments such as: taxation, government expenditure and fiscal deficits to achieve the macroeconomic objectives. These variables are within the armpit of government.

(C) **Trade Policy:** Trade policy is the formulation and implementation of tariffs and charges on importation and exportation with the aim of influencing the volume of trade to achieve balance of payment equilibrium.

These policy instruments are combined in various ways and degrees to fight economic problems in order to achieve macroeconomic objectives.

For instance, if government want to fight inflation in order to achieve price stability, it will combine the following instruments;

(i) Increase tax rate, decrease government expenditure, reduce import taxes and increase export charges. These instruments will lead to importation of more goods, discourage exportation and increase domestic supplies of goods thereby forcing the prices down.

(ii) On the other hand, if government want to fight unemployment and poverty, it should use the following combination of instruments.

Decrease tax rate, decrease export charges, increase government spending and increase import taxes. These will create more employment opportunities, increase production, supply and exportation of goods.

Proper combination and fine-tuning of the policies and instruments will gravitate the economy towards equilibrium income where all other macroeconomic objectives are achieved.

7.3. National Income Model

It is important to note that the study of macroeconomics is centered on national income and its

components given in the equation below:

$Y = C + I + G (X-M)$.....(i)

Where; Y = National income (expenditure)

C = Consumption;

I = Investment;

G = Government expenditure

X = Export; and

M = Import

Thus, it is important to briefly explain each component of national income.

7.3.1. Consumption function is technical relationship between consumption and disposable income.

7.3.2. Savings

Savings Defined: Saving is the part of income earned which is not consumed now. In a simple economy in which consumption decision is assumed to be made by households only, the savings function simply complements savings. It is assumed that what is not consumed is saved.

Savings function shows the functional relationship between savings and disposable income. Like consumption savings increases as level of income increases, and vice versa. The general form of savings function can be written as:

$S = s(y)$..... (1)

The linear form of savings function is:

$S =$ + y ..... (2)

Where:

S = savings

And $\propto$ = Constants (parameters)

βY = Disposable income

$\propto$ = Autonomous savings

= marginal propensity to save

The graph of the linear savings function in (2) can be

represented below:

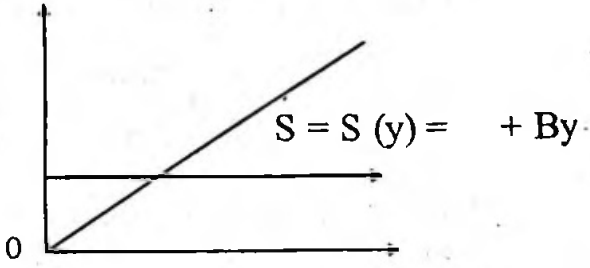


Fig. 7.2: savings function

In a simple two-sector economy, total income earned by individuals and firms through wages, rents, interest and profits, are assumed to be divided into two parts-consumption and savings.

Thus, in national income accounting sense,

Y = C + S..... (3)

and ?Y = ?C + ?S..... (4)

Dividing both sides of equation (4) by ?Y, we get:

?Y = ?C + ?S..... (5)

?Y = ?Y ?Y

Hence: 1 = MPC + MPS..... (6)

Where:

MPC = Marginal Propensity to Consume

and MPS = Marginal Propensity to Save

Average Propensity to Save

The average propensity to save (APS) is the proportion of income devoted to savings. It is the ratio of savings to income. It is given as: APS = S.....(7

Example: If an individual earns N150 monthly and saves N100.00, then the average propensity to save is calculated as:

APS = S/Y

= 100/ 150

APS = 0.67

Marginal propensity to save: On the other hand is

the ratio of change in savings to change in income.

It is expressed as:

$MPS = \Delta S / \Delta Y$ ..... (8)

Where:

MPS = Marginal propensity to save

ΔS = Change in savings ΔY = Change in income.

Example 2:

If the individual's saving increased from N100 to N140 as his income rose from N150 to N250, then his marginal propensity to save is:

$$MPS = \Delta S / \Delta Y$$
$$= 140 - 100$$
$$250 - 150 = 40/100$$
$$MPS = 0.4$$

The explanation above showed that both average propensity to save (APS) and marginal propensity to save (MPS) are fractions. MPS lies between zero and one. From the complementary relationship between consumption and savings, it follows that:

MPC= 1-MPS..... (9)

Or MPS = 1-MPC..... (10)

Similarly:

APS = 1-APC..... (11)

Or APC = 1-APS..... (12)

This implies that knowing one automatically determines the other.

Determinants of Savings

There are several Determinants of Savings including:

(I) **The size of income:** The higher the size of income the higher the volume of savings or vice versa. This is

because the richer an individual becomes the more he satisfies his wants and thus have more to save.

(Ii). **Attitude to Savings:** If an individual has urge or like to save by sacrificing his current consumption, he will save more in the current times.

(Iii) **The level of Present Commitment:** The more commitments an individual has the less he would be able to save and vice versa.

(Iv) **The Existence of Institutions to Encourage Savings:** The availability of institutions to encourage savings the more the individuals (particularly, those who want to save) will save.

(V) **Rate of Income Tax:** The higher the rate of income tax, the smaller the disposable income and savings, or vice versa.

(Vi) **Government's Policy:** Subsidies and credits given by government can assist in reducing cost of production and enhance profits and savings of producers.

(vii) Inflation: Inflation has positive impact on prices, profits and savings as well as investments, particularly for investors.

Reasons for Savings:

(i). To raise money for investment
(ii). For unforeseen contingencies
(iii). To raise money for children's education
(iv). To guide against old age

7.4 Investments: There is no single or universally accepted definition of investment. But, a working definition of investment is that it is the purchase of goods that is used for the production of further wealth.

It is important to note that not all expenditure on durable goods are considered to be investment. The motivation for such purchase matter on whether such spending should be considered as an investment or not E.g, An individual who decide to buy a car may be

motivated by his or her desire for comfort in which case it may be called consumption. On the other hand, a company who purchase the same type of car may be doing so to assist in transacting the company's business. In this case, it is called investment it would assist the company in producing further wealth.

7.4 (a). Motives for Investment

(I) To make profit: This is the case of private individuals.

(ii). To create employment

(iii). To enhance even development

(iv). To reduce poverty, and social decay (e.g, armed robbery, prostitution)

Note The last three motives concerns public investment

7.4. (b) Sources of Investment Financing: There are two major sources of investment financing available to any firm. These are:

(i). Internal sources; and

(ii). External sources.

Internal financing involves sources of funds internal to the firm such as the firm's profits.

External financing refers to investment financing from sources of funds external to the firm. These include: bank loans, sales of shares, etc.

In the case of public sector investment, external sources of investment financing include: external borrowing, aids and grants from other countries

Internal sources of financing government investment include: profits from public enterprises, sales of government securities, etc.

7.4. (c). Investment Function

This is a functional relationship between investment and its determinants. It is given as:

$$I = I_0 + I(r) \quad \text{..... (I)}$$

Where:

I = Investment

I_0 = Autonomous Investment

I(r) = Induced Investment

And r = Rate of Interest



Fig. 7.3 Autonomous in vestment.

Fig.7.3 showed that investment remains constant irrespective o the level of income.

Autonomous investment is the type of investment decision that is done without making reference to rate of interest Such. Investment comes from either one or combinations of savings, profits, etc.



Fig: 7.3 induced investment

Induced investment, on the other hand is the type of investment decision that depends on interest rate. Its sources include: bank loans, borrowing from individuals and capital market.

In the case of induced investment, as the rate of interest increases, lending from banks and investment decreases, or vice versa (Keynes, 1936).

Thus, investment function may be Specified as:

$I = f(E, X, N)$..... (2)

Where:

I = Investment

E = Economic factors;

X = External factors; and

N = Non-economic factors.

From analytical point of view, the factors that would come under E may include: past profits of the firm, its expectation on future profitability, level of current sales, its financial assets and liabilities, and allowance for depreciation. Some of the external factors coming under 'X' may include: prevailing interest rates, credit policy of banks, economic situation, government economic policies etc. Again, the factors that fall under 'N' include: religious, political, and cultural etc.

7.4.3. Determinants of Investment

(i) Profits: As the profits increases investment increases, since usually the investor would plough back part of the profits, and vice versa.

(ii) Lending (or borrowing) rate: If lending rate increases, it becomes costlier to borrow from financial institutions and thus, investment will fall, and vice versa.

(iii) The level of savings: As the level of savings rises investible funds and hence investment will increase.

(iv) The rate of income tax: If the rate of income tax increases, less disposable income would be left for savings, consumption and hence investment will fall, and vice versa.

(v) The level of technology: Improved level of technology would enhance productivity, income, savings and investment.

(vi) The level of GDP: Increased level of GDP lead to increased investment since per-capital income would rise.

(vii) Socio - political factors, etc.: Socio-political stability enhances peace and encourages investment and production.

7.5. The Multiplier A simple Definition of multiplier is that it is the number of times a given change in any of the autonomous variables (related to aggregate demand) is multiplied to give the resultant change in the level of income. Thus if it is due to change in consumption expenditure, we talk of consumption multiplier, or investment expenditure known as investment multiplier or change in government spending which brings about government expenditure multiplier.

7.5.1. Mathematical Derivation Of Multiplier

Given a simple two sector economy as:

$Y = C + I$ ..... (1)

Where:

Y = National income

C = Consumption

and I = Investment

Any change in income (Y) will automatically lead to change in consumption as well as investment. Thus,

$\Delta Y = \Delta C + \Delta I$ ..... (2)

We know that,

$C = a + by$ ..... (3)

A change in consumption implies that there was change in autonomous consumption (Δa) and change in disposable income (ΔY) thus,

$\Delta c = \Delta a + b\,\Delta Y$ ..... (4)

But $\Delta a = o$ since constant does not change. Thus,

equation (4) bowls down to:

$\Delta c = b \Delta Y$.....(5)

Substitute equation (5) into equation (2) we obtain:

$\Delta y = b \Delta Y + \Delta I$..... (6)

Collect term in Δy together in one side.

$\Delta y - b \Delta y = \Delta I$..... (7)

Factorise the L.H.S

$\Delta y(1-b) = \Delta I$..... (8)

Divide both sides of equation (8) by $\Delta I(1-b)$

$\Delta y(1-b) / \Delta I(1-b) = \Delta I/(1-b)1$

$\Delta y/\Delta I = 1/1-b$ (b)

Where:

ΔY = Change in income

ΔI = Change in investment

and b = MPC since MPC = 1-MPS or MPS = 1- MPC,

$$\Delta Y = \frac{1}{1-MPC} = \frac{1}{(MPS)} \text{ ..... (10)}$$

Since 1> b > o, it follows that the numerical value of the simple multiplier must always be greater than zero but less than unity.

In a three-sector closed economy where we have household, firms and government the national income equation is given as:

$Y = C + I + G$..... (1)

Where

I = Investment

G = Government expenditure, and

$C = a + b(Y-T)$..... (2)

Where:

T = Autonomous Taxes. Equation (1) is the aggregate demand function which is also given as:

$Y = C + S + T$..... (3)

Thus, at equilibrium:

$C + I + G = C + S + T$ ..... (4)

$I + G = S + T$ .....

(5)Equation (5) implies that in equilibrium, total leakages of income from the system by way of savings and taxation, should be fully compensated by injections of income into the system through autonomous investment and autonomous government expenditure. That is, new equilibrium condition requires that intended investment plus government expenditure must equal to savings plus taxes.

Substituting equation (2) into equation (1) we obtain $Y = a + b(Y-T) + I + G$ ..... (6)

Open the bracket on the R.H.S we have:

$Y = a + bY - bT + I + G$ ..... (7)

Collect terms in Y together we get:

$Y - bY = a + I + G - bT$ ..... (8)

Factorise Y on the L.H.S

$Y(1-b) = a + I + G - bT$.

$\therefore Y = \frac{a + I + G - bT}{1-b}$ ..... (9)

Or

$Y = \frac{1}{1-b}(a + I + G - bT)$ ..... (10)

Note that introduction of taxes reduces the equilibrium level of income while the introduction of government expenditure raises the equilibrium level of income. They however, do not have exact opposite of each other. Usually, the value of the negative impact of taxes would be less than the positive effect of an increase in government spending. The reason is that a fall in tax rate leaves more income with individuals out of which consumption and savings would be made. The savings constitute leakages from national income. Besides, the impact of the imposition of tax which is negative is not equal to the full amount of taxes but make their impact

on the level of income indirectly through consumption. With imposition of taxes, consumption falls not by the full amount of taxes but by a fraction MPC (ΔT). In effect, the individuals meet the increase in taxes partially by reducing consumption and making up the balance by also reducing savings. This initial reduction in consumption leads to further reduction in income through a chain effect similar to the increases, and continues until the reduction become very negligible. Thus, apart from the initial impact which is

$$C = -b\Delta I \quad \ldots\ldots (11)$$

the tax multiplier works negatively to change the level of income in the opposite way government expenditure, and autonomous consumption multipliers work positively to increase the level of income. The tax multiplier is given as:

$$\frac{\Delta Y}{\Delta I} = \frac{-b}{1-b} \quad \ldots\ldots (12)$$

Thus,

$$\overline{Y} = 1\,\frac{(b\Delta T)}{1-b} \quad \ldots\ldots (13)$$

Equation (12) implies that the value of tax multiplier is negative as well as less than the magnitude of government expenditure, and autonomous consumption multipliers, since the numerator of equation (12) is negative (-b).

Supposing the change in government expenditure is wholly financed by taxation, then we will have BALANCED BUDGET MULTIPLIER, which is derived as follows:

Sum up the two separate multipliers, we have:

$$\frac{\Delta Y}{\Delta G} + \frac{\Delta Y}{\Delta T} \quad \ldots\ldots (14)$$

Where:

$\frac{\Delta Y}{\Delta G} = \frac{1}{1-b}$ ..... (15)

And

$\frac{\Delta Y}{\Delta T} = \frac{-b}{1-b}$ ..... (16)

Substitute equations (15) and (16) into equation (14)

We obtain:

$\Delta Y = \frac{1}{1-b} + \frac{(-b)}{(1-b)}$ ..... (17)

$= \frac{1}{1-b} - \frac{b}{1-b}$

$= \frac{1-b}{1-b}$

$\therefore \Delta y = 1$ ..... (18)

This implies that the balanced budget multiplier is equals to unity.

If proportional income tax is introduced, the multiplier is given as:

$Y = C + I + G$ ..... (19)

Where:

$C = a + b(y - Ta - ty)$ ..... (20)

This is different from equation (2). The equilibrium is solved as follows:

Step 1: Substitute equation (20) into equation (19) we have

$Y = a + b(y - Ta - ty) + I + G$ ..... (21)

ie, $Y = a + bY - bTa - btY + I + G$ ..... (22)

Step 2: collect terms in Y together to L.H.S

$Y - by + bTy = a + I + G - bTa$ ..... (23)

Step 3: Factorise the L.H.S of equation (23) we have

$Y(1 - b + bt) = a + I + G\ bTa$

$\therefore Y = \frac{a + I + G\ bTa}{1 - b + bt}$ ..... (24)

Or

$Y = \frac{1}{1-b(1-t)} (a + I + G - bTa)$ ..... (25

Compare equation (25) and equation (9) in the simple multiplier, we observed that, with introduction of proportional taxes, the value of multiplier becomes smaller, since

$\frac{1}{1-b} > \frac{1}{1-b(1-t)}$.

This shows that taxes has in built stabilization effect.

Multiplier for open economy

The multiplier for an open economy is derived as follows:

The equilibrium national income of an open economy is given as:

$Y = C + I + G + (X - M)$ ..... (26)

Where: $C = a + b(Y - T)$ ..... (27)

$I = I_o + ty$ ..... (28)

$T = Ta + ty$ ..... (29)

$G = G_o$ ..... (30)

$M = M_o + mY$ ..... (31)

$X = X_o$ ..... (32)

Step 1` Substitute equations (27)-(32) into equation (26), we get:

$Y = a + b(Y - Ta - tY) + I_o + G + X - M_o - mY$ ..... (33)

step:2 Open the bracket on the right hand side we have:

$Y = a + bY - bTa - btY + I + G + X + Mo - mY$ ..... (34)

step 3: collect like terms:

$Y - bY + btY + mY = a + I_o + G_o + X - bTa + M_o$.... (35

step 4 factorise equation..... (36),

we have:

$Y(1 - b + bt + m) = a + I + G + X - bTa - M_o$

:- $Y = \frac{a + I + G + X\ bTa - M_o}{1 - b + bt + m}$ ..... (33)

Where $\frac{1}{1-b(mt)+m}$ is the multiplier for foreign sector. This is smaller than the multiplier for three-sector closed economy since $\frac{1}{1-b(1-t)} > \frac{1}{1-b(1-t)+m}$ because m is a positive value.

Revision Questions

1. What are the sources and determinants of consumption, savings and investment.

2. Use appropriate equations, derive the multipliers for three-sector closed economy with government intervention.

CHAPTER EIGHT

THEORY OF NATIONAL INCOME

8.1 Meaning of national Income

8.2 Some concept used in national income calculation

8.3 National Income Accounting

8.4 Reasons for calculation of National Income

8.5 Problems faced I calculating National Income

8.6 Limitations on the uses of National Income

8.7 Determinants of a country's National Income

8.8 Circular flow of National Income

Review question

THEORY OF NATIONAL INCOME

8.1. Meaning of National Income

National income is the market value of final goods and services produced in an economy over a period of one year expressed in monetary value. On the other hand, national income accounting is the summation of the market value of all final goods and services in an economy in monetary term.

The total income earned in an economy is equal to addition of incomes earned by individuals business organizations and governments.

8.2. Some concepts used in national Income calculation.

Some basic concepts used in national income calculation include the following:

(i). Personal income: It is the income received by individuals over a period of time.

(ii). Disposable income: It is the amount of money that is left to an individual for consumption and savings after personal income taxes are deducted.DI = T _I Taxes

Where;

DI = Disposable in income;

TI = Total income;

(iii). Real income: It is the value of money in terms of goods and services it can buy. It is calculated as:

$$RI = \frac{TI}{P}$$

Where;

RI = Real income

TI = Total income

P = Price

(Iv) National income accounting: Is the measurement of the monetary value total flow of output (of goods and

services) and of the total flow of inputs (factors of production) that pass through all markets in the economy during a specified period of time.

(v). Value added: Is the value of a firm's output minus the value of its inputs purchased from other firm(s).

(vi). Intermediate products: These are all goods and services used as inputs into a further stage of production.

(vii). Final products: These are the output of the economy after eliminating all double counting

.(viii). Double Counting: This is the recording of the value of a single product more than once.

(ix). Investment: It is expenditure not on immediate consumption but for further production of goods and services.

(x). Gross Investment: Total investment in the economy.

(xi). Capital consumption allowance (depreciation); It is the amount set aside for replacement of worn-out capital.

(xii). Gross National Income (or GNP): Total income within and outside the economy.

(xiii). Gross Domestic Product (or GDP): Total income produced within an economy.

(xiv). Net National Income (or NNP): GNP-depreciation.(xv). Net Income from Abroad: GNP- GDP

(xvi). Transfer payments: Any payment for no work done e.g. student bursary awards, sick benefits, etc.(

xvii). Injection: Any activity (or variable) that increase the level of national income, e.g. investment, exports, and government expenditure.

(xv). Withdrawal: Any activity (or variable) that decreases the level of national income e.g. savings, imports and taxation

8.3. National Income Accounting:

National income of a country can be computed by using either of the followings:

(i). Income method: Using this method national income is calculated by adding up incomes of individuals, firms and governments. That is, the income earned as wages, salaries, rents, interest and profits as well as government revenue.

But, incomes earned through transfer payment, illegal activities, unemployment wages, sick benefits and students scholarship, which are for no work done are excluded from the calculation to avoid double counting.

(ii). Output method: This approach computes the total national income in a country in a year. To avoid double counting, the figures are collected on the basis of value added.

But, the value of capital depreciation is excluded from the calculation.

(iii). Expenditure Method: This measures the total expenditures by individuals, firms and governments on consumption and investments during the year.

Again, transfer payments, such as pension, sick, benefits, etc, are excluded from the computation.

Any of the methods used give the same result. Thus, total income equals total value of output which also equals total expenditure. That is;

NI = TVO = NE

Where;

NI = National income

TVO = Total value of output

NE = National expenditure.

8.4. Reasons for calculating National Income

There are several reasons for computing national income.

These include:

(i). To know a country economic performance overtime: an increase in national income figures indicate that the country is growing, and vice versa.
(ii). To know a country's per-capital income and standard of living: This can be achieved by dividing national income by total population.
That is;

$$PCI = \frac{N.I}{T.P.}$$

Where:
PCI = Per-capital income;
NI = National income; and
T.P. = Total population of the country.
(iii). To know the structure of production and consumption of goods and services. This is done by comparing the figures of economic sectors and agents.
(iv). To compare the standard of living between countries: The country with higher national income figure is assumed to have higher standard of living, or vice versa.
(v). For economic planning and policies: Since the figures show the performance of the various sectors of the economy, it can be used for economic planning.
(vi). To aid allocation of resources in the country: Since national income figures show the contributions from all the regions and states, it assist government in planning how to redistribute income between them.

8.5 Problems faced in calculating national income:

There are several problems faced in calculating national income of a country. These include:
(i). Lack of data: This problem is due to lack of transportation and communication facilities, illiteracy and fear of taxation on the part of some producers and consumers.
(Ii). Double counting: There is the danger of

calculating the value of a good twice when calculating national income, particularly through the output method. For instance, it is possible to add the values of raw cassava, garri and starch. This may over estimate the national income figures.

(iii). Lack of statisticians who can collect and analyse data on national income.

(iv). Inflation: During inflation the value of money decreases over time, and this may not give a correct estimate of the national income.

(v). Transfer payments: It is sometimes difficult to classify some individual's income as transfer payment or not where as transfer payments are not to be included in the calculation of national income.

(vi). Unpaid services:- Since unpaid services such as owner occupied houses, services of house wives, etc, are not paid and therefore not included in national income estimates, it is difficult to arrive at the correct figures.

(vii). Value of depreciation: It is always difficult to know the correct value of capital depreciation which is to be excluded from the gross domestic product before arriving at national income.

(viii). Difficulties in calculating Net income from Abroad: This is due to instability in foreign exchange rate and value.

(ix). Illegal Activities: It is difficult to know the value of income earned through illegal activities, and thus makes the computation of national income difficult.

8.6. Limitations on the uses of national income data

National income data is an important yardstick for measuring the extent to which a nation is deemed rich as a geo-political economic entity. A positive level of national income may earn a nation superficial respect from the external world, since it has the propensity to attract foreign investors and material imports.However, it is in no way an exact determinant of the people's welfare for the following reasons:

it is in no way an exact determinant of the people's welfare for the following reasons:

(i). GNP data are determine by the stock of production of goods and services in an economy. But in most cases, the figures tells us little or nothing about the types of goods and services produced or the amount of welfare derived from their consumption. It may be possible that the goods and services that form the national income are military hard wares, physical plant and machinery which have little or no bearing on the livelihood of consumers who form the bulk of the population.

8.7. Determinants of a country's National Income

There are several factors that determine the output and value of goods and services in a country. These include:

(i). The Quantity and Quality of Factors of Production: Countries with more of factors of production and which can make efficient use of them will likely raise their output of goods and services.

(ii). Infrastructure: Provision of adequate and efficient infrastructural facilities in a country can increase the out of goods and services in that country.

(iii). State of Technology: The techniques of production a country adopts can affect output and the size of that country's national income.

(iv). Political Stability: This ensures peace and thus people's ability to produce. During wars, people cannot produce and so output of goods will fall.

(v). External factors such as: terms of trade, foreign direct investment, loans and grants to and from a country can determine the output of goods and services in that country. Favourable external factors can raise domestic output, and vice versa.

8.8. Circular flow of national income

The circular flow of national income describes the flow of resources (both money and services) between productive and consumption agent in a country. In general, it shows how money passes from households (individuals) to firms in return for goods produced by the firms and money passes from firms to households in return for factor services provided by households.

Basic assumptions: The basic consumptions in circular flow of national income are:

(i). National income is constant

(ii). The level of price is constant

(iii). There are unemployed supplies of all factors of production.

We shall discuss circular flow of income in three types of economies. They are:

A The simple (or spend thrift) economy.

In the spend thrift economy, everything produced is consumed. There is no idea of saving nor investment. Thus, households constitute both productive and consumption agents.

The primitive hunting economy, gathering economy and peasent farming economy are good examples of spend thrift economy.

In the spend thrift economy, the model of national income determination is given as:

$Y = C$ ..... (1)

Where;

Y = national income; and

C = Consumption.

B. The frugal economy:

In the frugal economy, income flows between households and firms. Thus, it is an economy with savings and/or investments. Therefore, the model of national income determination is:

$Y = C + I$ ..... (I)

Or

$Y = C + S$ .....(ii)

Where;

C = Consumption

I = Investment

S = Savings.

It is shown diagrammatically below:

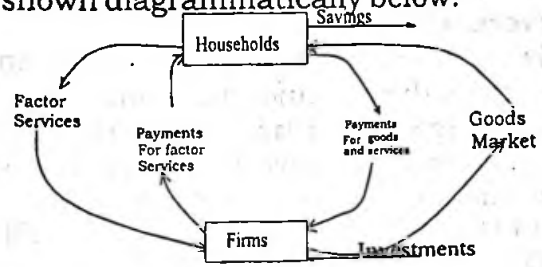


Figure 8.1: Circular flow of income between Households and firms (in a two-sector closed economy).

Since this economy assumes savings and investment, financial institutions such as banks are include.

Flow of resources: Households are endowed with factor which they sell to the firms in the factor market. The firms used the productive services in certain combinations to produce goods and sell to the households in the goods market.

Flow of money: The firms, in return, pay the households income wages, salaries, rents and profits, for the productive services supplied by the households.

The households either use all the money obtained from the firms to buy goods in the product market or save a portion of it.

The portion saved by households is channeled into financial institutions in the form of savings and

from the firms in form of investment.

Thus, in equilibrium:

$C + I = C + S$ ..... (3)

i.e. $I = S$ ..... (4)

After eliminating C from both sides. Hence, in equilibrium, aggregate demand must equal aggregate supply or investment must equal savings.

C. The governed Economy

In this economy government participation through her expenditure and taxation, has been included. The income, thus, circulate between households, firms and the government. The model of national income determination is given as:

$Y = C + I + G$ ..... (5)

Where; G = Government activity.

The diagram is presented below:

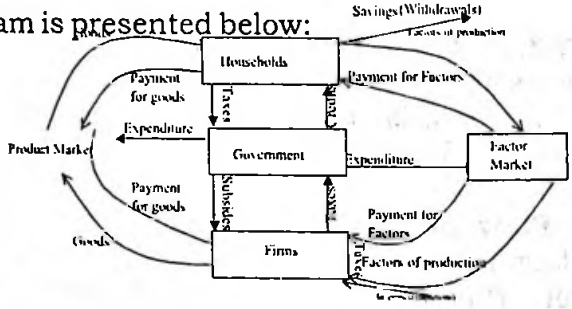


Fig. 8.2. Circular flow of income between Households, firms and government.

Description

(A) Households: These supply factors of production to the firms through the factor market. In return, the households received factor payments in the form of wages, rents, interest and profits.

(B) Firms: These use the factors of production to produce goods which they sell to the households in the goods

market. The firms receive payment from the household for the goods sold.

(C) Government: Both Households and firms pay taxes to the government (in the form of personal income taxes and company income taxes) respectively. The tax revenues are used by government to purchase goods and services in the product market and provide social services to the households.

Numerical example 1:

Given that $Y = C+I$

Where: $C = 60$

$I = 50$

$\Delta I = 50.$

Determine:

(I). the value of multiplier

(ii). the change in income

(iii). the equilibrium level of national income.

Solution:

(i). We know that:

$$K = \frac{I}{I - MPC}$$

$$K = \frac{I}{I - 0.8} \text{ since } MPC = b = 0.8$$

$$= \frac{I}{0.2}$$

$$K = 5$$

OR

We know from the information that MPC = 0.8

:- MPS = 1-0.8 = 0.2

$K = I / MPS = 1 / 0.2$

:- K = 5

(ii). We know that $\Delta Y = K \Delta I$

$= 5 \times 50$

:- $\Delta Y = 250$

(iii). We know that $Y = C + I$

$Y = 60 + 0.8Y + 50$

$Y - 0.8y = 60 + 50$

$Y(1-0.8) = 110$

$Y(0.2) = 110$

$\therefore Y = 110/0.2$

$\therefore Y = 550$

Example 2:

Given that:

$Y = C + I + G$

$C = 20 + 0.6Y$

$I = \#100m$ and

$G = \#350m$

Determine the following:

(i). The value of multiplier

(ii). The equilibrium level of national income

(iii). The level of consumption.
If investment increase to #170m

(iv). Determine the new equilibrium level of national income and the change in income.

Solution

We know that the equilibrium level of national income is given as:

(i) $Y = C + I + G$

$Y = 20+0.6Y+100+350$ (since I = 100 and G = 350)

Collect like terms

$Y - 0.6Y = 20 + 100 + 350$

$Y(1-0.6) = 470$

$Y(0.4) = 470$

$\therefore Y = 470/0.4$

$\therefore Y = \#1175m$

(ii). We know that multiplier is given as:

K = I/I-MPC..... (7)
K = I/1-0.6, since MPC 0.6
= 1/0.4
:- K = 2-5

(iii). We know that: C = 20 + 0.6Y
= 20 + 0.6 (1175)
= 20 + 705
:- #725m

(iv). We know that;
$\Delta Y = K\Delta I$
$\Delta Y = 2.5\ (70)$
$\therefore \Delta Y = N175m$

If the question is given in figures, the following formula should be used:

NI = C + I + G + X-M + S T-D

Where;

NI = National income;
C = Consumption;
I = Investment;
G = Government expenditure;
X = Exports;
M = Imports;
S = Subsidies;
T = Taxes; and
D = Depreciation

Example 3:

The following information is given in respect of Nigeria in the year 2007 (in millions) .

(a). Personal income/expenditure #30million
(b). Government expenditure = #20 million
(c). Stocks of goods at home = #10 million
(d). Exports = #15million
(e). Imports = #10 million
(F). Taxes = #6 million
(G). Capital consumption allowance #7million

(h). Subsidies #2milliom

From the information above, calculate the national income for Nigeria for the year 2007.

Solution:

Expenditure approach

Add:	
Personal expenditure	30
Government expenditure	20
Stocks of goods at home	10
Exports	15
Subsidies	2
Total expenditure	77
Less	
Imports	10
Taxes	6
Capital consumption allowance	7
Total	23

:- NI = #77-#23 = #54million

CHAPTER NINE

9.1 Meaning of public finance

9.2 Sources of Government Revenue

9.2.1 Taxation

9.2.2 Borrowing

9.3 Public Expenditure

9.4 Items of public expenditure in Nigeria

Review questions

INTRODUCTION TO PUBLIC FINANCE

9.1 Meaning of Public Finance

Public finance is the study of ways in which government raise revenue and the items on which it spend money. In other words, it deals with government revenue and expenditure as well as their effect on the economy.

It can be seen as financial activities that involves borrowing and lending, receiving and spending by the federal, state and local governments as well as their agencies in order to create an effect on households, firms and the governments.

9.2 Sources of Government Revenue

There are six sources of government revenue. The y are:

1. Taxation
2. Borrowing
3. Privatization and Commercialization
4. Profits from public enterprises
5. Aids and grants from other nations
6. fines

9.2.1. Taxation

A. Meaning: Taxation is a compulsory levy imposed by government on individuals and organizations in a country.

The characteristics of tax include the following:

(i). It is a compulsory levy
(ii). It is levied by government only
(iii). Its payment involves sacrifice
(iv). It is used to provide welfare for all
(v). Its payment has age limit.

B.Reasons for the imposition of Taxes in an Economy

Government impose taxes for several reasons. These include:

(i). To raise revenue: The various types of taxes are good sources of government revenue.

(ii). To fight inflation: An increase in tax rate will

reduce the purchasing power of individuals thereby leading to a fall in demand for goods and their prices. or vice versa.

(Iii). To discourage the consumption of harmful goods, The consumption of harmful goods like tobacco, alcohols, etc, can be discouraged by imposing higher taxes on them, so as to raise their prices.

(Iv). To redistribute income: Income can be redistributed and in quality reduced by imposing progressive or direct taxes, whose payment vary with the level of income. In this case, higher incomes are charged higher tax rates and vice versa.

(V). To protect infant industries New industries: particularly of indigenous ownership can be protected by imposing higher tax rates on the similar goods imported from their foreign counterparts.

(Vi). To correct balance of payment problems: Deficit balance of payments can be corrected by imposing higher taxes on imported commodities and lower taxes on exported goods.

(Vii). To achieve even development: Taxation can be used to create employment and enhances development in rural areas.

This is done by tax exemption or rebates for industries located in rural areas.

(viii). To Retaliate: A country can retaliate other countries by imposing higher tax rates on importation of their goods.

C. Principles of a Good Tax System

There are several principles of a good tax system. These were propounded by Adam Smith in his book entitled "Wealth of Nation". These principles, otherwise called canons of a good tax system include:

(I). The principle of Economy: The principle states that the cost of collecting tax should be smaller in relation to the amount collected as tax

(Ii). The principle of Equity: This principle states that

people should be made to pay tax according to their abilities.

This means that payment of tax should not cause undue hardship to the tax payers.

(Iii). The principle of convenience: This principle states that the payment of tax should be done when the tax payer has money. For example civil servant personal income tax should be paid when salaries are being paid.

(Iv). The principle of certainty: The principle states that the time of payment of tax, the manner of payment and amounts to be paid must be known by the tax payers understanding.

(V). The principle of simplicity: This principle states that the manner and rate of payment should be simple for the tax payer's understanding.

(Vi). The principle of flexibility: This principle states that the tax system should be flexible to adjust when the need arise.

(Vii). The principle of Neutrality: The principle states that tax system should not have negative effect on production, savings, investments and people's willingness to work.

D Classification of Taxes

Taxes are classified in two ways, namely:

(i). Method of payment and

(ii). Rate of payment.

Based on method of payment, there are two types of taxes. They are:

(A). Direct taxes: These are taxes charged directly on the income of payers. After all taxes have been deducted from an individuals gross income what remains is called "Disposable income" This is the "take home" income for an individual. The individual thus spend such an income on any goods and services he chooses.

(I). Personal income tax forms a very small contribution

towards revenue in West Africa since only a few Nigerians are wage-or salary- earners. Moreover, many self-employed persons fail to declare their correct incomes for taxation whilst others evade payment of tax completely.

(ii). Corporation or comny tax: This is a tax on the profits of companies. Usually allowance is made for capital expenditure before calculating profits. Not much revenue is derived from company tax since only a few industries exist in Nigeria and moreover "tax holidays" are given to "infant" industries. These tax holidays which exempt companies from paying tax ranges between four and five years as a way of encouragement and protection.

(iii). Capital Gains Tax: This is a tax on assets held for more than one year. E.g. levies on owner-occupied houses, cars. Etc Not much revenue is obtained from this since capital in Nigeria is lacking.

(iv). Death duties: These are taxes on the properties of deceased persons Such a tax cannot be levied on land in Nigeria because of the difficulty involved in identifying ownership of land.

(v). Royalties and mining rates, stamp duties and motor-vehicle: Royalties and mining rents contribute largely to government revenue in Nigeria.

b. Indirect Taxes: These are taxes levied on goods and services (like health and education). They are paid only when certain purchases are made. These taxes are paid indirectly as part of the price of a commodity or service. Very often, the payer of such a tax does not know how much tax he pays.

Examples:

(I). Customs duties: These are taxes levied on goods brought into the country (ie. Import duties) and on goods sent to other countries (i.e. export duties). Import and export duties form the biggest source of government revenue since Nigeria depend very largely on imported

capital goods (for its development projects) and on exports of agricultural. mining and especially in Nigeria crude petroleum products for its foreign exchange earnings.

(ii.) Excise duties: These are taxes levied on home-or locally-produced goods. Not much revenue is obtained from these since not many goods are locally produced and moreover, many infant industries are enjoying tax holidays i.e. exemption from payment of tax for the first four or five year of their establishment.

(iii). Purchase tax: This is an ad volarem tax (i.e. based on the value of commodities) generally collected at the wholesale stage. It is imposed on a range of selected consumer goods such as cosmetics, television sets, clothing and furniture at varying rates a high rate on luxury goods and a low rate on goods in more general demand.

(iv). Sales tax: It is a tax levied and collected either at a wholesale or retail level. E.g. taxes on the sale of petrol. It is called value added tax (VAT) in Nigeria since 1994.

(v). Licenses: The use of radio and television sets and the sale of drinks attract taxes in the form of licenses which have to be obtained.

Advantages of direct taxes:

(i). More equitable: The system of pay-As-You-Earn (P.A.Y.E.) i.e. the progressive tax system, makes direct taxes more equitable (i.e. fairer) than indirect taxes since the rich pay a higher rate than the poor.

(ii). Re-distribute incomes better: Since more tax is levied on the rich than on the poor, the gap between the rich and the poor will be reduced.

(Iii). Tax yield is more certain and easier to calculate: The yield of direct taxes is more certain and also easier to calculate than that of indirect taxes since the yield of indirect taxes depends on whether or not people will continue to buy goods and services concerned- i.e. it depends on the elasticity of demand for the goods and

services concerned.

(iv). Better for checking inflation: Direct taxes are better for checking inflation than indirect taxes. With direct taxes, people's purchasing power (i.e. ability to buy) may be reduced by raising, say, income taxes and thus cutting down excess demand and, hence, inflation.

(v). Relatively low cost of collection: The cost involved in collecting direct taxes is reasonably low, especially due to the progressive tax system which takes more from the rich and less from the poor.

(vi). Very convenience to payers: Payers of direct taxes find it more convenient to pay since they know what they will pay and are thus able to plan how they will spend the rest. Moreover, the incidence of taxation is convenient to the various income groups-i.e the poor have very little or, at times, nothing to suffer from payment of such taxes and the rich are more able to pay higher taxes.

Disadvantages of direct taxes:

(i). Disincentive to work: Those who suffer most from the progressive tax system, are often discouraged from working harder, especially with overtime workers, since they are conscious that part of the extra income earned is taken away in the form of higher taxes.

(ii). Disincentive to saving: Since higher incomes are reduced through higher rates of taxation, people lose the incentive to save.

(iii). Disincentive to investment: The high corporation or company taxes reduce businessmen's profits and, hence, their ability to re-invest (or plough back).

(iv). Easy to evade: Direct taxes can be easily evaded, especially, by self-employed people who often fail to declare correct incomes.

Advantages of indirect taxes:

(i). No exemption or evasion: Indirect taxes are payable by all, unlike direct taxes which are paid by only a section of the population and which can easily be

evaded. Since taxes finally become part of the price of a commodity, all buyers of that commodity are forced to pay the tax.

(ii). No disincentive effects on payers: Since the final payers of indirect taxes are not aware of how much they pay as tax, they do not become discouraged from working harder, nor from saving, nor from investing.

(iii). Used to protect infant industries: By raising taxes on imports higher than those on exports, infant industries in the country are protected from undue competition with the well-established ones in the developed countries.

(iv). Easier to collect: Unlike direct taxes, indirect taxes are easier to collect since there are fewer sources of taxation. For example, imports and exports have to pass through a port and are thus easily taxed.

(v). A more important source of government revenue: Indirect taxes yield more revenue to governments In Nigeria since import and export are very important in the country and also since indirect taxes are difficult to evade.

(vi). Used to correct deficit balance of payments: When a country's balance of payments is in deficit owing to unfavourable balance of trade, import duties can be raised to restrict imports and /or export duties can be reduced to encourage exportation of goods.

(vii). Used to check production and consumption of harmful goods:

Goods which are considered harmful to consumers' health, e.g. tobacco and alcohol, are more heavily taxed to restrict supply of, and demand for, them

Disadvantages of Indirect Taxes

(i). More regressive: One major disadvantage of indirect taxes is

that they tend to take equal amount of money from consumers irrespective of differences in consumers' income. The poor therefore suffer more than the rich i.e. indirect taxes are regressive.

(ii). They are inflationary: Any attempt by government to increase its total revenue through increased taxation on goods can easily lead to higher prices. especially if the demand for the goods taxed is inelastic. This will result in workers demanding for higher wages and salaries, thereby worsening the inflationary situation.

(iii). Yield is uncertain: The yield from indirect taxation cannot be known and calculated in advance since it depends very much on the elasticity of demand for the goods taxed.

(iv). They lead to higher costs of production and a fall in supply:

Higher rates of indirect taxes cause higher costs of production and consequently a decrease in supply of goods and services.

(v). They restrict free trade: Higher taxes on inmports can generate retaliation, i.e, other countries may do the same and consequently, free trade would be restricted.

Using the rate of payment, taxes are classified as progressive, proportional or regressive.

Progressive Tax System

(a). Meaning: Under the progressive taxation, the higher the income, the higher the proportion of income which is taken away as tax and the lower the income, the lower the proportion of income taken away as tax. In other words, the rate of taxation increases as income increases and vice versa, as illustrated in the (Table 9.1) below:

Income	Rate of Taxation	Amount paid as Tax
I). #1,000	2%	$\frac{2}{100} \times \frac{1,000}{1} = \#200$
Ii). #5,000	10%	$\frac{10}{100} \times \frac{5,000}{1} = \#500$
Iii). #8,000	13%	$\frac{13}{100} \times \frac{8,000}{1} = \#1,040$
Iv). #10,000	15%	$\frac{15}{100} \times \frac{10,000}{1} = \#1,500$

Table 9.1: Progressive Taxation

(b). Advantages of progressive taxation:

(i). It is equitable: Progressive taxation is very equitable, especially where great inequality of income exists. This is because the rich are taxed more heavily than the poor since the rich are better able to pay than the poor.

(ii). It redistributes income: Being direct taxes, progressive taxation redistributes incomes by taking more from the rich and less from the poor. This bridges the gap between the rich and the poor.

(iii). It is cheap to collect: The cost involved in collecting progressive taxes is very low and therefore very economical since it takes more from the rich.

(iv). Yield is certain: Being direct taxes, the revenue from the progressive tax system is very certain, i.e. the government is sure of the yield from such a tax and can therefore base its estimated expenditure on it.

(v). Very convenient: Payers of such taxes find it convenient to pay since they know what they will pay and are thus able to plan how they will spend the rest of

their income. Moreover, the incidence of progressive taxation is convenient to both the rich and the poor since the poor have very little, or at times, nothing to suffer from payment of such taxes and the rich better able to pay higher taxes.

(c) Disadvantages of progressive taxation:

(i) Disincentive to work: After a certain point, the Pay-As-You-Earn (P.A.Y.E.) system involved in progressive taxation dampens workers' incentive to work. Once extra income is taxed away, workers are discouraged from working harder.

(ii) Disincentive to saving: Many of those most hit by this system are likely to save less since their incomes are drastically reduced by the tax paid.

(iii) Disincentive to investment: Businessmen have less money to invest since their incomes are very heavily taxed.

2. Proportional Tax System: (a) Meaning: Proportional taxation is the system whereby the rate of taxation is the same (i.e. fixed) for all income-earners. Both the rich and the poor pay the same rate of tax as shown in Table 9.2 below:

Income	Rate of Taxation	Amount paid in Tax
a).#1,000	10%	#100, i.e 10/100 x 1000/1
b).#5,000	10%	#500,i.e, 10/100 x 5000
c).#8,000	10%	#800,i.e, 10/100 x 8000
d).#10,000	10%	#1,000,i.e, 10/100 x 10,000

Table 9.2: Proportional Taxation

i). Disadvantage: This system is less advantageous than the progressive in that it is less equitable.

Ii). Advantage: However, it does not have as much disincentive effect as the progressive taxation.

3. Regressive Tax System:

This is a system in which more tax is taken from the poor than the rich or both pay same amount of tax as illustrated table 9.3 below:

Income	Rate of Taxation	Amount paid in Tax
i).#1000	10% (i.e. 10 x 1000) / 100 1	#100
ii).#5000	2% (i.e. 2 x 5000 / 100 1	#100
iii).#10,000	1% (i.e. 10 x 10000 / 100 1	#100

Table 9.3: Regressive Taxation

Regressive taxation is common where both the rich and the poor have to pay the same amount of money as tax either directly as poll tax, for example, or indirectly in the form of higher prices of goods and services consumed by both the rich and the poor.

In Nigeria , most taxes are regressive since people in the various communities are usually asked to pay certain fixed sums of money towards certain development projects, irrespective of incomes, and also since indirect taxes like import and export duties form a great proportion of government revenues.

Incidence of Taxation

(a). Meaning: Incidence of a tax refers to the real burden of a tax on people in a country. It deals with how the burden of a tax is distributed among the people in a country.

The incidence of tax may be borned by the tax payer, shifted to another person or shared among persons depending on the type of tax..

In the case of direct tax like personal income tax, the incidence is always on the income earner. Income

tax cannot be shifted on to another person else since the income of the person who receives it is reduced by the full amount of the tax paid.

But, in the case of an indirect tax like sales tax the incidence may fall either on the buyer or seller of the good on which the tax is charged or shared between them, depending on the elasticity of demand for the particular good. These are briefly explained below:

Incidence of an Indirect Tax

(i). When the Demand is perfectly inelastic: In this case, the incidence of tax falls completely on the buyer of the taxed good. Since the increase in the price of the good, does not affect the quantity demanded of it. This is shown in the graph below Price

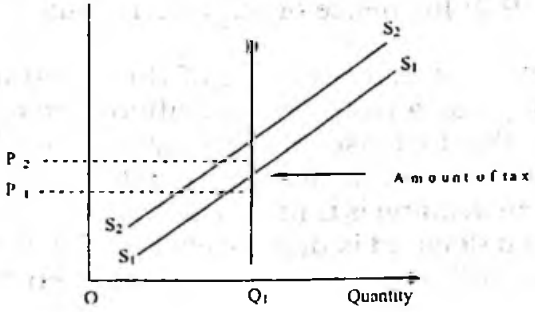


Fig. 9.1: Incidence of indirect tax When demand is perfectly inelastic;

In fig.9.1 it can be seen that the price of the good rose from p_1 to P_2 as a result of the tax but quantity demanded remains constant at Q_1.

ii). When demand is fairly inelastic: when demand is fairly inelastic, the incidence of indirect tax will be shared with the buyer bearing the greater portion of the tax.

This is shown in fig. 9.2. Below

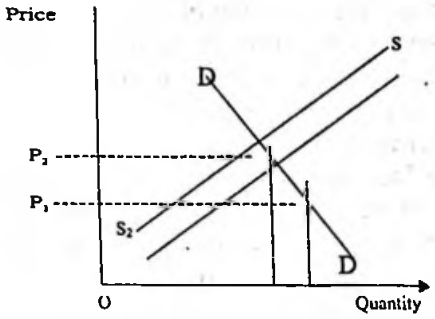


Fig. 9.2: Incidence of tax when demand is fairly inelastic

Fig. 9.2: showed that the price of the good increased from p1to p2 as a result of imposition of tax. It can be seen that the increase in price is greater than the decrease in the quantity demanded and supplied.

(iii). When demand is unitary elastic:

When demand is unitary elastic, the incidence of indirect tax will be shared equally between the buyer and seller.

This is depicted in fig 9.3 below

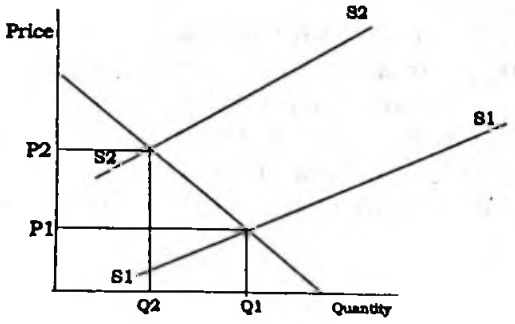


Fig .9.3: Incidence of tax when demand is unitary elastic.

Fig.9.3: Showed that the increase in price is equal to the decrease in quantity demanded and supplied.

(iv). When Demand is fairly Elastic.

When demand is fairly elastic the incidence of tax will be shared between seller and buyer with the seller bearing the greater portion of the tax.

This is shown in fig. 9.4. Below:

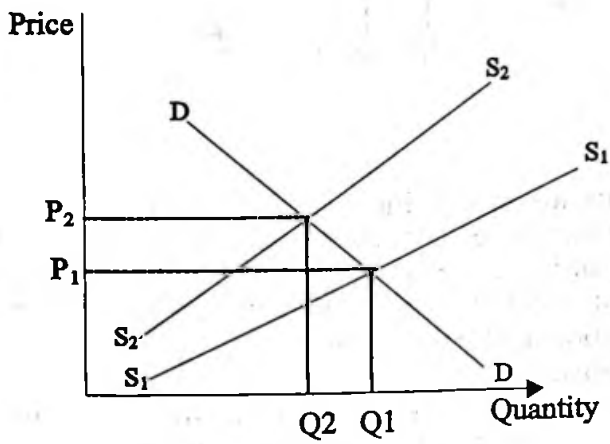


Fig. 9.4: Incidence of indirect tax when demand is fairly elastic.

Fig. 9.4. Showed that the price rose from P_1 to P_2 as a result of imposition of (or increase in) tax. This also led to fall in quantity demanded from Q_1 to Q_2 but the rise in price is smaller than the fall in quantity demanded.

(v). **When demand is perfectly elastic.**

When demand is perfectly elastic, the incidence of indirect tax falls completely on the seller of the taxed good, since at any price above the market price (Pe) buyers will refuse to buy. This is illustrated in fig. 9.5: below:

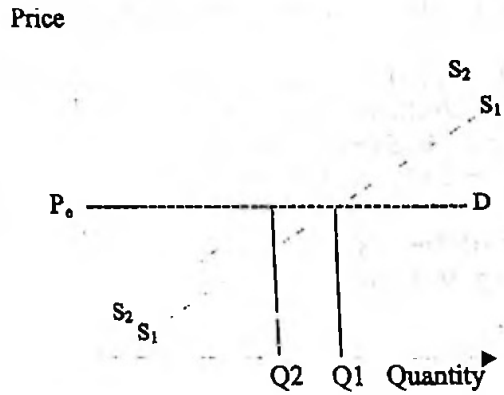


Fig. 9.5: Incidence of indirect tax when demand is perfectly elastic. Fig. 9.5: shows that inspite the imposition of (or increase in) tax, the price of the good taxed remains constant at P_e. This means that the tax is completely borned by the seller.

9.2.2. Borrowing:

This is another source of government revenue. Government could borrow from internal and/or external sources.

A. Internal sources of government borrowing include:

(I). From individuals through the sales of government securities like treasury bills, bonds shares, etc.

(Ii). From financial institutions like banks, insurance companies etc.

B. External sources of government borrowing include:

(i). Individual government of other countries, and

(ii). International financial institutions such as IMF, international monetary fund, World Bank, African Development Bank, e.t.c Both internal and external

borrowing have advantages and disadvantages and which are briefly explained below:

C. Advantages of internal borrowing:

(i). It encourages private investment on financial assets.

(ii). It is less inflationary since it does not increase the volume of money in circulation.

(iii). The amount so realized can be used to create employment And/or execute development projects.

D. Disadvantages of Internal Borrowing:

(i). It can cause inflation and/or unemployment if the amount so realized is mismanaged or diverted to non-productive activities.

(ii). It is a source of internal debt

E. Advantages of External Borrowing:

(i). It augment domestic inadequate funds for investment since the amount so realized will be used internally.

(Ii). It enhances international mobility of capital and technology

(Iii). It assist in employment creation in the debtor country.

F. Disadvantages of External Borrowing

(1). It may cause inflation since it increase the volume of money in circulation and particularly if it is not channeled into direct production.

(ii). It is the source of external debt which attract interest rate and some draconian conditions like privatization and commercialization, Liberalization, e.t.c which may not do good to some economies.

(Iii). It lead to loss of national sovereignty by debtor country as the creditor country may interfere in economic and political activities in the former. It is also important to mention that aids and grants from other countries have similar impact on the recipient country

as external borrowing.

9.3. Public (government) expenditure

A Meaning;

Public or government expenditure refers to total spending by government of a country in a period of time. It is usually .composed of capital and recurrent spending of all the tiers of government, i.e local, state and federal

(I). Capital expenditure Capital expenditure is government spending on capital projects such as building of new schools, hospital, road, dams, stadia e.t.c

Capital expenditure can create employment and income, but it is more inflationary since the benefits of the capital project may not be realized immediately.

(Ii). Recurrent expenditure

This is government total spending on items that repeat every year. These include: salaries and wages, interest on public debts, e.t.c Recurrent expenditure is less inflationary as it is only done when outputs have been produced, i.e., it is a payment for services rendered.

9.4(B) Items of Public Expenditure in Nigeria.

Items of public expenditure in Nigeria are broadly grouped into four, namely:

1. General Administration The items under general administration include:

(i). President
(ii). The Legislature
(iii). The Judiciary
(iv). The civil service
(v). The executive
(vi). The Police
(vii). The Armed Forces
(viii). The Para-military
(Ix). The embassies in other countries

(x). Political Appointees
(xi). Various Governments departments, etc.
2. Social Services Here, the items include:
(i). Education
(ii). Health care Delivery
(iii). Infrastructural facilities
(iv). Environmental Sanitation
(v). Market
(vi). Recreational Facilities, etc.
3. Economic services The items here include:
(i). Financing of the real sectors such as: agriculture, industry manufacturing, etc.
(ii). Power stations
(iii). Communications, etc.
4. Transfer services The items here include:
(i). Servicing of public debt
(ii). Grants aids and loans to other countries
(iii). Payments of pensions
(iv). Expenses on international organizations and peace keeping activities in other countries.
C. Causes of Growth in public expenditure in Nigeria.
Public expenditure in Nigeria has continued to rise over the years factors, including the following:
(i). Pp. 210 Essential-211.
D. Impact of Public Expenditure on Economy.
The public expenditure has both negative and positive impact on an economy.
(i). The negative impact of public expenditure is that if government increases its spending without an immediate corresponding increase in output of goods and services, inflation will be inevitable in the country.

On the other hand, the positive impact of public expenditure are outlined below:
(I). Pp. 211

Revision Questions

1. Explain the characteristics and various types of taxes.

2. Discuss the reasons for the imposition of taxes in your country.

3. With the aid of figures, explain the incidence of an indirect tax.

4. Briefly explain the main components and items of public expenditure in your country.

5. Financing of democratic institutions is the only cause of growth in public expenditure in Nigeria. Do you agree?

6. Increase in public expenditure in Nigeria has caused both harm and good to the economy. Comment

CHAPTER TEN

10.1 Introduction to the theory of inflation

10.2 Theories of Inflation

10.3 Cause of Inflation

10.4 Effects of Inflation

10.5 Solution to the Problem of Inflation

Review question

10.1. Introduction to the theories of inflation

Meaning: of Inflation

Inflation is generally defined as persistent and general rise in the prices of goods and services in an economy over time.

It is primarily caused by excess demand over supply of goods and services in an economy.

There are three degrees of inflation, namely:

(I). Creeping Inflation: Creeping inflation is a condition in which inflation is growing slowly, ranging between 1-3% annually.

(Ii) Hyper inflation: Here, the rate of growth in inflation is higher, between 4-10% per annum.

(Iii). Galloping/Runaway inflation: This is a condition in which inflation is growing very fast, ranging between 11% and above per year. If galloping inflation is not quickly controlled it will lead to stagflation and collapse of the value of the country's currency.

10.2. Theories of Inflation: There are about four theories of inflation. They are explained below:

A. Demand Pull Theory

Demand-pull theory states that inflation is caused by autonomous increase in any of the components of aggregated demand, i.e. (C,I,G). When there is increase in disposable income and consumption without corresponding increase in goods and services, inflation will be inevitable.

Similarly, a rise in government expenditure is inflationary if such increase is not channeled into immediate production of goods and services in the economy.

This is demonstrated in fig. 10.1. Below:

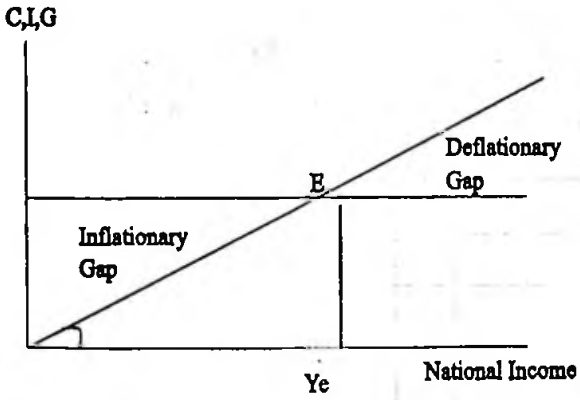


Fig. 10.1: Inflation, Deflation and Equilibrium National Income.

Fig.10.1. Show the inflationary gap, deflationary gap and equilibrium national income. It can be seen from fig. 10.1. that when the aggregate demand (C + I + G) is greater than (or above) aggregate supply (i.e, the 45° line) there is inflation.

On the other hand, when the 45° line is above the C + I + G line, we say there is deflation a condition in which there is general and persistent fall in prices of good and services.

B. Cost-Push Theory

Cost-push theory states that inflation is caused by increase in cost of production arising from increase in cost of raw-materials, labour and capital, etc.

Increase in cost of production can cause a fall in supply of goods and services and given constant or rising aggregate demand there will inadequate supply (or excess demand) of goods and services and a rise in their prices. This is illustrated in fig. 10.2 below:

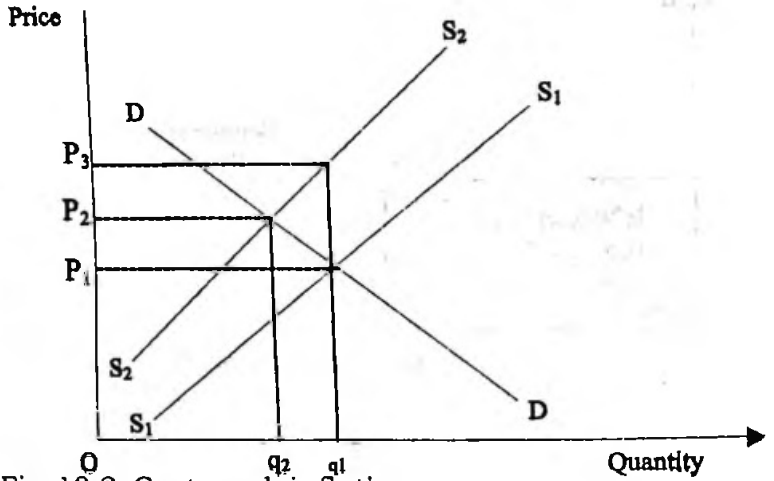


Fig. 10.2: Cost-push inflation

It can be seen from fig. 10.2. that the initial equilibrium is at E_1 where equilibrium price and quantity is P_1 and q_1 respectively.

As a result of increase in cost of production which producers may not be able to absorb the supply curve will shift backwards from SS_1 to SS_2 and output falls from q_1 to q_2 respectively. The same quantity of output OQ_1 can only be supplied at a higher price OP_2 as against the old price of OP_1. With a fixed demand curve, quantity falls to OQ_2 which is supplied at still a higher price OP_3.

C. Structuralist Theory

The structuralist theory states that ill-structured economy retard output and supply in the face of rising demand for goods and services in an economy. This theory believes that bad economic policies, corruption and mismanagement will cause a fall in output and supply on one hand and lead to increase in demand on the other, thereby causing inflation in the economy.

D. Monetarist Theory

The monetary economists, such as Irving fisher, believed that increase in money supply can cause inflation. They

used the quantity theory of money traceable to the Irving fisher's famous equation of exchange which is given as:

$MV = PQ$ ..... (i)

Where; M = Stock of money;

V = Velocity of circulation of money;

P = Price level;

Q = Volume of transactions;

The monetarists stated that holding the velocity of circulation and volume of transactions constant, increase in stock of money will result in increase in prices of goods and services. Thus, monetary expansion through external borrowing, printing of money, etc, can cause inflation in an economy.

10.Causes of Inflation

From theories of inflation above, we can identify the various causes of inflation. They are broadly grouped into four, namely:

A. Monetary Causes: Monetary causes of inflation have to do with those monetary instruments which can push more money into circulation. They include:

(i). Lending rate of interest: A decrease in lending rate of interest will encourage people to borrow from banks and if the amount so borrowed is not channeled into productive activities for immediate supply of goods and services, inflation will result.

(ii) Saving/deposit rate of interest: An increase in deposit rate of interest will encourage people to open savings accounts in banks which reduces the volume of money in circulation thereby reduces inflation.

(iii). Minimum Deposit/Cash Reserve Ratios: Decreases in minimum deposit ratio and cash reserve ratio will increase excess reserve ratio and the ability of banks to give loans. This will increase the volume of money in circulation and cause inflation to rise.

(iv). Open Market Operation: When government buy back its securities in open market operation (OMO), it pushes more money into circulation, and if the amount

goods and services leading to a falling standard of living.
viii. It discourages investment: Low value of money coupled with little or no savings discourages investments.
ix. Balance of payment problems: Inflation causes balance of payment problem s since foreigners will want to sell to and also do minimal buying from countries with inflationary trend.
x. It discourages exports: High prices during inflation discourage exports since it is more economical to sell at home.

10.5. Solutions of Inflation:

1. Use of contractionary monetary measures: The use of contractionary monetary measures such as increase in bank rate, open market operation, deposit ratio and moral persuasion can help to control inflation.
2. Use of fiscal measures: Inflation can also be controlled with the use of fiscal measures to reduce the amount of money in circulation, e.g. increase in direct taxation and decrease in government expenditure.
3. Effective price control system: Inflation can also be controlled through the use of effective price control system e.g. price control board by government officials and the application of rationing to maintain price level.
4. Industrialisation: Industrialisation will reduce over reliance on imported goods and bring about increase in output which will reduce prices.
5. Checking the activities of hoarders: The activities of hoarders should be checked to prevent increase in prices of goods.
6. Increased production: Inflation can be controlled by increasing production in order to bring down the prices of goods.
7. Granting of subsidy to enterprises: Inflation can also be controlled by granting subsidy to enterprises and companies producing essential products to reduce cost of production and prices.
8. Removal of bottlenecks in the distribution system:

Removing bottlenecks in the distributing system i.e. provision of good roads, storage facilities etc is another means of controlling inflation.

9. Discouragement of importation: Government should discourage importation from countries already experiencing inflation, as a way of controlling it.

10. Use of income policies: Use of income policies such as wage freeze, delay in promotions, etc. can control inflation.

Review Questions

1. What are the causes of inflation in your country?

2. Which of the theories of inflation is applicable to your country?

3. How can the problems of inflation be solved?

CHAPTER ELEVEN

BASIC THEORIES OF UNEMPLOYMENT

11.1 Meaning of Unemployment

11.2 Causes of Unemployment

11.3 Types of Unemployment

11.4 Effects of Unemployments

11.5 Solution to unemployment

Review question

BASIC THEORIES OF UNEMPLOYMENT

11.1. Meaning of Unemployment: Unemployment is an economic condition in which there is general and persistent fall in the number of people gainfully employed in an economy.

It may also be described as a situation in which workers who are able to work, and present themselves for work but are not gainfully employed

11.2. Causes of Unemployment: The causes of unemployment are broadly grouped into four, namely:

A. Monetary causes: They have to do with the monetary instruments which are used by the central Bank to reduce the volume of money in circulation.

(i). Lending rate of interest: An increase in lending rate of interest will discourage borrowing from banks and thereby leading to a fall in employment (i.e. increase in unemployment).

(ii). Savings/Deposit Rate of Interest: An increase in deposit rate of interest will encourage people to open accounts in banks thereby reducing the volume of money in circulation and eventually cause unemployment in the economy.

(iii). Minimum Deposit/Cash Reserve Ratios: Increases in minimum deposit ratio and cash reserve ratio will reduce excess reserve ratio and the ability of banks to give loans. This will reduce employment leading to increase unemployment in the economy.

(iv). Open Market Operations: When government sells its securities in open market, it reduces the volume of money in circulation and aggregate demand in the economy. This will cause unemployment since demand for goods, and employment of resources will fall.

B. Fiscal Causes: Fiscal causes of unemployment are concerned with fiscal instruments like taxation and public expenditure.

(i). Taxation: If government raise tax rates and/or introduce more tax bases, demand for goods and employment will fall while unemployment will increase.
(ii). Public Expenditure: If government reduces its expenditure, demand for goods and employment of resources (including labour) will decrease and unemployment will rise.
C. Natural Causes: Natural causes of unemployment have to do with natural factors such as drought, flood, etc. During dry season, agricultural activities are reduced. Thus, farmers will not be going to work on their farms and so they are said to be unemployed at that time.

Other natural factors such as floods, earthquakes, accidents, old age, etc, can incapacitate workers to work, thus making them unemployed.
D. Human Causes: These are concerned with human factors such as mismanagement, embezzlement, etc. by government officials.

If funds provided for employment generation is embezzled or mismanaged by government officials, employment will fall and unemployment will rise.

11.3. Types of Unemployment:

Some types of unemployment identified include:
(i). Structural Unemployment: This type of unemployment is caused by decrease in demand for good (s) of a particular industry. The workers of the particular industry, who may not be able to move immediately to other industries, will remain unemployed.
(ii). Frictional Unemployment: This is the type of unemployment that is caused by technical progress. Improvement in technology makes it possible for introduction of machines to replace labour thereby making some workers jobless.
(iii). Seasonal Unemployment: Unemployment due to changes in seasons or weather. For instance, in the raining seasons some construction work will be ill be

adversely affected while farming will be discouraged during dry season. Thus, the workers of these sectors will be unemployed at those periods.

(iv). Cyclical Unemployment: This type of unemployment is caused by general fall in aggregate demand in the economy resulting from such contractionary factors as rise in tax rate, decrease in public expenditure, etc. This is also called in voluntary unemployment.

(v). Residual Unemployment: This type of unemployment is caused by disabilities resulting from accidents, human or natural factors.

(vi). Voluntary Unemployment: This type of unemployment is caused by person's willingness to remain without job until he obtain a job he finds more rewarding.

(vii). Disguised Unemployment: This type of unemployment is caused when people employed are gross under-utilised. This is also called under employment e.g when an engineer is employed to teach physics or mathematics in secondary school.

11.4. Effect of Unemployment: The effect of unemployment include the following:

(i). Poverty: The unemployed person(s) will have little or no money to buy goods and services for his consumption.

(ii). Social Decay: Unemployment makes individual to be idle, and the idle man, they say, is the devil's workshop. Thus, unemployment can cause or compound the problems of armed robbery, gambling, prostitution, etc.

(iii). Political Crises: The unemployed persons can be easily mobilized during political crises.

11.5. Solutions of Unemployment: The following are some suggestions for tackling the problems of unemployment:

(i). Increase in public expenditure in an economy will

create more jobs for people to be employed thereby reducing unemployment in the economy.
(ii). Decrease in tax rates in an economy will increase aggregate demand, investment and employment. This will reduce unemployment in the country
(iii). Introduction of technology should be done gradually while workers should be sent on training and re-training to acquire more skills.
(iv). Physically challenged persons should be trained to acquire more skills to be able to withstand the challenge.

Review Questions

1. What are the causes of unemployment in your country?

2. Which of the theories of unemployment is applicable to your country?

3. How can the problems of unemployment be solved?

CHAPTER TWELVE
INTRODUCTION TO THE THEORIES OF MONEY

12.1 Meaning of Money

12.2 Function of Money

12.3 Characteristics of Money

12.4 Similarities and Differences between money and other commodities.

12.5 Theories of demand for Money

Review question

CHAPTER TWELVE
INTRODUCTION TO THE THEORIES OF MONEY

12.1. Meaning of money: Money is generally defined as any good that has value and is accepted as a medium of exchange in an economy. This definition, though not conclusive, is in accordance with one of the functions of money.

12.2. Functions of money: Money performs many functions in the economy. They include:

(i). Medium of Exchange: Money serves as a means of exchange of goods and services. It is used to buy goods and services.

(ii). Store of value: Money is the best mean of storing the values of goods and services. This is because the value of money is relatively stable.

(iii). Means of Deferred Payment: Money can be used to settle debts at a later date.

(iv). Unit of account: Money is the most convenient means of making computations, assigning and recording the values of goods and services bought and sold.

(v). Measure of Exchange Value: Money is used to measure exchange value of goods and services. This is done by using the prices of goods.

12.3. Characteristics of Money: The characteristics of money include the following:

(i). Generally accepted by every body: Money is generally accepted by every body.

(ii). Divisible: It is capable of being divided into reasonable small units like kobo.

(iii). Relatively Durable: Money can be kept for a long time without going bad. It is not a perishable good.

(iv). Relatively Scarce: Money must not be too much so as not to lose its value.

(v). Portable:- It is easy to carry from place to place

(vi). Recognisable: It is easily recognized.

(vii). Homogeneous: Money must be homogeneous, i.e., it is the same all over an economy in terms of size, colour and quality.

(viii). Stable Value: The value of money is stable so as to encourage lending and borrowing.

12.4. Similarities and Differences Between Money and other commodities.

(A). Similarities;

(i). There is fluctuation in the values of money and other commodities.

(ii). Money and other commodities are used for exchange

(iii). Both money and other commodities have their respective markets.

(iv). Both are demanded by people.

(v). The prices of both are determined by the forces of demand and supply.

(vi). They are all regarded as commodities.

(b). Differences:

(i). Money is generally acceptable while other commodities are not.

(ii). Money is portable while other commodities may not be portable.

(iii). Money is relatively scarce while other commodities are not.

(iv). Money is homogeneous while other commodities are not.

(v). Money is durable while other commodities are not.

(vi). Money is stable while other commodities used in trade by
barter are not.

(vii). Money is divisible into small units while other commodities are not.

(viii). Money is easily recognizable by the people, other commodities are not.

(ix). Money has no intrinsic values.

(x). Money is used as a medium of exchange, other commodities are not.

(xi) Money can function as a standard for deferred payment, other commodities cannot

(xii). Money serves as a unit of account, other commodities cannot.

(xiii). Money can serve as a store of value while other commodities cannot.

(xiv). Money can also serve as a measure of value while other commodities cannot

12.5. Theories of Demand For Money The demand for money arises form two important function of money, that is that money acts as a medium of exchange and the second is that it is a store of value. Thus, individuals and businesses wish to hold money partly in cash and partly in the form of assets. There are three approaches to the demand for money: the classical; the Keynesian; and the post-keynesian. We discuss these approaches one after the other.

(a) The classical approach: The classical economists view on demand for money is inherent in the quantity theory of money. They emphasized the transactions demand for money in terms of the velocity of circulation of money. This is because, money acts as a medium of exchange and facilitate the exchange of goods and services.

They used the Fisher's equation of exchange which specifies that: MV = PT .....(1) Where M is the total quantity of money V is its velocity of circulation, P is the price level, and T is the total amount of goods and services changed for money. The right hand side of the equation, PT, represents the demand for money which, in fact depends on the volume of the transactions to be taken in the economy. MV represents the supply of money. Thus, equation becomes:

Md = PT..... (2)

The classical economists believed in say's law whereby 'supply creates its own demand', assuming the full employment level of income. Thus, the demand for oney

money in classical's approach is a constant proportion of the level of transactions, which in turn, bears a constant relationship to the level of national income. Further more, the demand for money is linked to the volume of trade going on in an economy at any time.The Cambridge school refined the classical theory on the demand for money. According to them, the demand for money equation is:

Md = K PY..... (3)

Where Md is the demand for money which must equal the supply of money in equilibrium in the economy, K is the fraction of the real money income (PY) which people wish to hold in cash and demand deposits, P is the price level, and Y is the aggregate real income.They held that demand for money in nominal term would be proportional to the nominal level of income for each individual, and hence for the aggregate economy as well. They argued that one should consider the convenience an individual gets from money holding for transactions which depend on his wealth, the rate of interest, his expectations about future events, etc, as being potentially important influences upon the demand for money. Criticisms of the Classical Approach to Demand for Money The classical approach to demand for money has been criticized on many grounds

A major criticism of the classical approach to the demand for money arises from the neglect of store of value function of money. They classicals emphasized only the medium of exchange function of money which simply acted as a go-between to facilitate buying and selling. Their view that money performs a neutral role in the economy, and that it is barren and would not multiply, if stored in the form of wealth, is erroneous because, money performs the asset function when it is transformed into other forms of assets like bills, bonds cars, etc.

In addition, they say little or nothing about the nature of the relationship that one expects to exist

between such variables as wealth, interest rate etc, and it does not identify which variable (s) is/are more important.

(b) The Keynesian Approach

Keynes (1936) in his book entitled "General Theory of interest, income and employment" remedied the weaknesses in the classical theory of demand for money. In his book, he used a new term, "Liquidity preferences" to explain demand for money, and he emphasized both the medium of exchange and store of value functions of money.Keynes suggested that there are three motives which lead to the demand for money in an economy, namely:

1. The transactionary demand;
2. The precautionary demand; and
3. The speculative demand.

1. The Transactionary Demand for Money

The transactionary demand for money arises from the medium of exchange function of money in making regular payments for goods and services. Keynes argues that it relates to the need of cash for daily purchases and business exchange. He further divided it into income motive and business motive.

The income motive is meant to bridge the interval between the receipt of income and its disbursement. If the time between receipt of income and its disbursement is small, less cash will be held by the people for current transactions, and vice versa.

Similarly, the business motive is meant to bridge the gap between the time of incurring business costs and that of the receipt of the sale proceeds. That the smaller the gap, the smaller the cash that will be held by businessmen, and vice versa.

In general, the transactionary demand for money is positively depend on the level of income, and the interval between receipt of income and its disbursement. It is expressed as:

Mt = ky ..... (I)Where Mt is the

transactionary demand for money K is the proportion of income which is kept for transaction purposes and Y is the level of income.

This is illustrate in fig. 12.1.

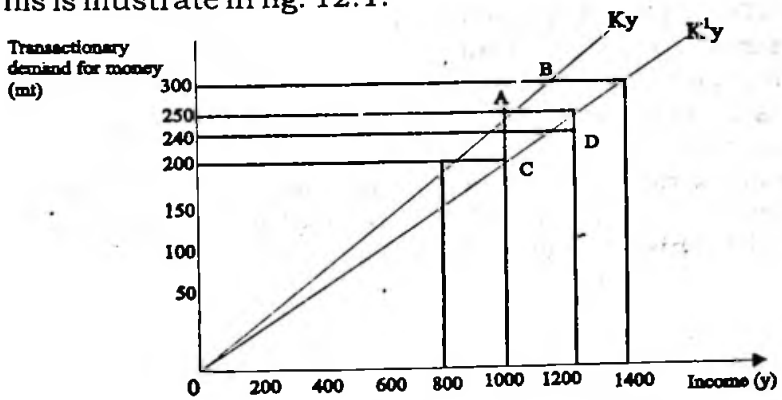


Fig. 12.1: transactionary demand for money (1).

In figure 12.1 above, the line KY represents a linear and direct proportional relation between transactionary demand for money and the level of income. Assuming K = ¼ and Y = #1000, the transactionary demand for money would be Mt = ¼ (1000) = #250 at point A. If there is increase in income to #1,200, then Mt = ¼ x 1200 = #300 at point B on the line Ky.

On the other hand, if income falls due to changes in institutional and structural conditions of the economy, and the value of K is reduced to say, $^{1}/_{5}$, then the new transaction demand curve is K¹y. It shows that for the amounts of #1000 and #1,200, transactions demand would be Mt = $^{1}/_{5}$ (1000) = #200 and Mt = $^{1}/_{5}$ x 1,200 = #240 at points C and D respectively.

Thus, he concluded that the major determinant of changes in transactionary demand for money is income. It is the t along

movement along the Ky line. But the shift of curve is caused by changes in the value of K which depend on individual motives.The transactionary demand for money will also depend upon the length of time period between the receipt of money income and its disbursement. If the time is short, less amount of income will be held for transactionary purposes, and vice versa. For instance, a worker who receives his pay after every two weeks will keep less income than the one who receives his after every four weeks. This is shown in fig 12.2. Below:

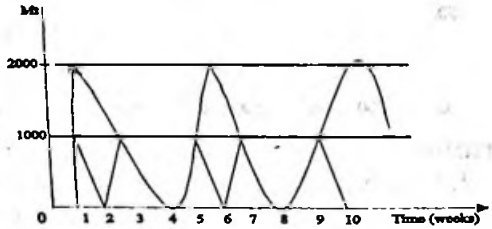


Fig. 12.2: Transactions demand for money (2).

In fig. 12.2. above, it can be seen that when the total money income of #2000 is paid only once in a month, the entire amount is needed for transactions during the four weeks. However, if the same sum is paid in two equal installments, in two weeks each then #1000 will be needed for transactions during the two weeks or #500. for one week, etc.

The transactions demand for money will also depend on the spending habit of the consumer. A consumer who is in the habit of consuming much will likely keep more income, and vice versa.

2. The Precautionary Demand for Money: The precautionary motive relates to "the desire to provide for contingencies requiring sudden expenditures and for unforeseen opportunities of advantageous purchases. Both individuals and businessmen keep cash in reserve to meet unexpected needs.

Individuals hold some cash to provide for illness, accidents, unemployment and other unforeseen contingencies. Also, businessmen keep cash in reserve to meet unfavourable conditions or to gain from unexpected advantageous deals.

Keynes argues that precautionary demand for money depends upon, the level of income, business activity, opportunities for unexpected profitable deals, the cost of holding liquid assets in bank reserves, etc. He held that the precautionary demand for money, like transactionnary demand, is a function of the level of income. The demand for money for these two purposes is expressed in the single equation Mp = f(Y).

Where Mp is the demand for money for transactionary and precautionary purposes and Y is the level of income.

3. The Speculation Demand for money

The speculative Demand for money is the desire to hold money as a store of value. This can either be stored in the form of bonds, or other securities, which yield no interest. He observed that people deliberately choose to hold wealth in the form of money seeking capital gains if the rate of interest moves in the direction they speculate.

If people expect that the rate of interest will rise, that implies that there is capital loss because the price of bond will fall. Therefore, they prefer holding money to holding bonds. Thus, demand for money (or money used) for buying bonds will reduce.

On the other hand, if they expect that the rate of interest will fall, that implies capital gain, because the price of bond will rise. Therefore, they prefer to hold bonds to holding money. Thus, demand for money (or money used) for buying bonds will increase.

For instance, if a bond has a value of N100 carries 4 percent interest and the market rate of interest rises to 8 percent, the value of the bond falls to N50 in the market. If the market rate of interest falls to 2 percent, the value of the bond will rise N200 in the market. This

can be worked out with the help of the equation:

$V = R / r$

Where;

V is the current value of a bond;

R is The annual return on the bond; and r is the rate of return currently earned or the market rate of interest.

So, a bond worth N100 (V) and carrying a 4 percent rate of interest (r), gets an annual return (R) of N4. When the market rate of interest rises to 8 percent, then $V = 4 / 0.08 = 400 / 8 = N50$

If r falls to 2 percent, then

$V = 4 / 0.02 = 400 / 2 = N200.$

Thus, individuals and businessmen can gain by buying bonds worth N100 each at the market price of N50 each when the rate of interest is high (8%) and sell at N200 each when the rate of interest falls (to 2%).

Keynes states that expectations about changes in bond prices or in the current market rate of interest determine the speculative demand for money. He argues that if current rate of interest (r) is above the normal rate of interest (r_n), businessmen expect it to fall and bond price to rise. Their demand for money will decrease. They will buy bonds now. Conversely, if the current rate of interest happens to be below the critical (or normal) rate, businessmen expect it to rise and bond prices to fall. They will sell the bonds now, if they have any, and the speculative demand for money would increase.

Thus, when $r_e > r_n$, an investor holds all his liquid assets in bonds, and when $r_e < r_n$, his entire holdings go into money. But, when $r_e = r_n$, he becomes indifferent to hold bonds or money.

Therefore, the speculative demand for money is a decreasing function of the rate of interest. The higher the rate of interest, the lower the speculative demand for money, and vice versa. It is given as:

$Ls = f(r)$.....(3)

Where Ms is the speculative demand for money and r is the rate of interest.

Graphically, it is shown in the figure below:

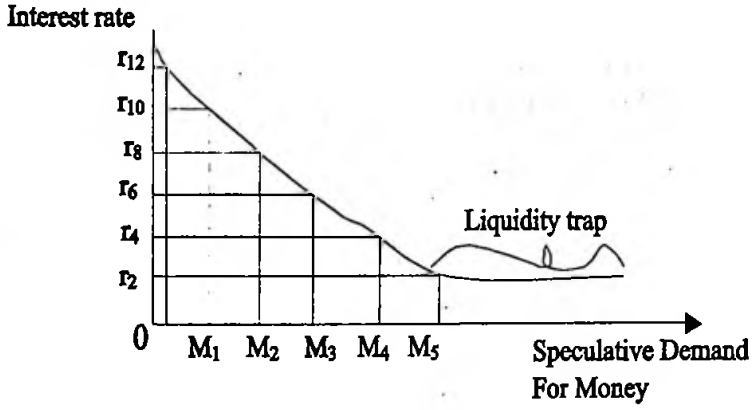


Fig: 12.3 Speculative Demand for Money

In the graph above the vertical axis represent interest, while speculative demand for money is represented by the horizontal axis.

The above graph shows that at a very high rate of interest, r_{12}, the speculative demand for money is zero. As the rate of interest falls to r_{10}, r_8... and to r_2, the speculative demand for money increases to M_1, M_2... and to M_5 respectively.

But at a very low rate of interest, such as r_2, the curve becomes perfectly elastic and the speculative demand for money is infinitely elastic. This portion of the Ls curve is known as the liquidity trap.

At such a low rate, people prefer to keep money in cash rather than invest in bonds because purchasing bonds will mean a definite loss. Thus, the lower the interest rate, the smaller the earnings from bonds. Therefore, the greater the demand for cash holding.

The Total Demand for Money: From the foregoing discussion, it can be see that money held for transactions and precaution purposes is primarily a function of income level, i.e, m(tp) = f(y), and the speculative demand for money is a function of the interest rate, Ls = f(r).

Thus the total demand for money is a function of both income and interest rate

Hence

$$Md = Mt + Mp + Is \quad \ldots\ldots (4)$$

$$Md = f(y) + f(r) \quad \ldots\ldots (5)$$

$$Md = f(yr) \quad \ldots\ldots (6)$$

CHAPTER THIRTEEN

13.0 Forms of Business Organization

13.1 Meaning of Business Organization

13.2 Similarities and Differences Between private and Public Organizations

13.3 Types of Business Organization

13.3.1 Sole Proprietorship

13.3.2 Partnership

13.3.3 Joint Stock Company

13.3.4 Cooperative Society

13.3.5 Public Corporations

Review question

INTRODUCTION TO BUSINESS ORGANIZATION

13.1 MEANING OF BUSINESS ORGANIZATION

Business organization is an enterprises set up by individual(s), government or its agencies for the purpose of creating employment and making as well as providing goods and services for human consumption. They are of three types, namely: small, medium and large scale enterprises.

13.2 SIMILARITIES AND DIFFERENCES BETWEEN PRIVATE AND PUBLIC ORGANIZATIONS

Business organizations can be divided into two groups namely: private organization and public organization.

All business organizations, be it small, medium or large, irrespective of the ownership and structure, have two things in common, they make profit and provide goods and services for human consumption and satisfaction.

It is however important to note that private enterprises are different from public enterprises in the following respects:

(i) While private enterprises are owned by private individual(s), public enterprises are owned by government.

(ii) Capital used to form private enterprises is provided by private individual(s) from their personal savings while public enterprises are formed from capital provided by government from taxes paid by the public.

(iii) Private enterprises are controlled by private individuals(s), public enterprises are controlled by directors appointed by government.

(iv) The aim of private enterprises is to make profit while public enterprises are set up to maximize public welfare.

(V) The reward for private enterprises goes to the private owners while those of the public enterprises go to government.

13.3 TYPES OF BUSINESS ORGANIZATION

As earlier mentioned, there a re two broad types of business organization, namely: private enterprises and public enterprises.

(A) Private Enterprises

Private enterprises are those enterprises organized, financed, owned, controlled and managed by private individual(s) for profit making. They include: sole proprietorship; partnership; private and public limited liability companies, cooperative societies, etc.

13.3.1 Sole Proprietorship

Sole proprietorship otherwise called "one-man business" is a private enterprises formed, owned, financed and managed by one person with the primary aim of maximizing profit. It is the oldest and perhaps the most popular and common type of business organization in Nigeria.

It is characterized by:

(i) Ownership: The business enterprise is owned by one person.

(ii) Objective: The main objective of the one man business is to make profit.

(iii) Sources of Capital: The capital required to set up and run the business is provided by the proprietor from his personal savings or loans.

(iv) Liability: The sole proprietor has unlimited liability, that is his liability can extend to his personal properties.

(v) Legal Entity: It is not a legal entity as the owner is not separated from the business.

(vi) Management: The business is controlled and managed by the sole proprietor himself.

(vii) Life Span: The life span depends on the life span of the owner. The enterprise can fold up at any time.

Source of Capital of Sole Proprietorship in Nigeria

Most sole proprietors in Nigeria usually obtain their

capital from the following sources:

(i) Personal Savings: A sole proprietor can obtain capital from his previous savings, or use his personal income as initial capital.

(ii) Loan from Friends: They can also raise capital by borrowing from friends and relatives.

(iii) Trade Credit: They can obtain capital by buying goods on credit from the suppliers, producers or wholesalers.

(iv) Loan and Overdraft from Bank: The sole proprietors can also obtain capital from financial institutions in the form of loan or overdraft.

(v) Grant/Loans from Government: Government can release capital to its agencies in support of certain programme, e.g. the government of Nigeria under its Poverty Alleviation Programme sometimes release some funds in the form of loans to unemployed graduates, among others, to set up small businesses. This constitutes a source of capital for sole proprietors in Nigeria particularly in the recent times.

Advantages of Sole Proprietorship

(i) It requires small capital: The sole proprietorship requires very small capital to set up.

(ii) It is easy to establish: The one-man business is easy to establish because of the small capital requirement and it may not require much protocol or procedures when setting up the business.

(iii) Taking of quick decisions: Quick decisions are easily taken by the sole proprietor alone without the consent of other workers in the organization.

(iv) It is easy to manage: The sole proprietor can easily manage the operations of the enterprise without expert management from outside.

(v) It requires small operation: The sole proprietorship serves small markets, and as such, requires smack operations.

(vi) All profits reaped by the owner: All the profit derived

from the business belong to the owner of the business because the capital outlay or provision came from him.

(vii) It can thrive in all business environment: The sole proprietor can thrice in almost all business environment, be it rural or urban environment because of its simplicity in establishment.

(viii) There is privacy in conducting business affairs: The sole proprietor can keep his business matters secret. He is not required to publish his account or submit an audited balance sheet to the government.

(ix) There is easy supervision: In a one-man business the workers are personally known to the owner. This makes supervision easy and ensures effectiveness of business operations.

(x) There is a close owner-customer relationship: The close relationship between the owner and customers allows the former to give special attention to the later. Also, he easily find out the special requirements of customers and satisfy them.

(xi) There is effective planning: The sole proprietor embarks on effective planning and formulation of policies alone and these will guide him in the smooth running -of the enterprise by way of taking prompt business decisions, especially in the area of sales and purchases.

Disadvantages of Sole Proprietorship

(i) Lack of continuity: In the event of the death of the owner, the business may also die with him, especially when there is no successor to take over from him.

(ii) Inadequate capital: The sole proprietor is always faced with inadequate capital because of the small size of his business and his inability to source funds outside his business and also general poverty in the case of Nigeria.

(iii) He bears all risks alone: The risk encountered in the course of the business is borne solely by the owner. If the business is successful, he rejoices but when it fails, he suffers it all alone.

(iv) It has unlimited liability: In the event of business failure, his assets and properties have to be sold to pay his creditors.

(v) It is not a separate legal entity: In law there is no different between the owner of sole proprietorship and the business itself. The business cannot sue or be sued in its own right.

(vi) It lacks specialization: The owner is personally involved in every section of the business. He works very hard; he may not observe public holidays, and scarcely has rest. In most cases, when he is absent, the business may close down temporarily.

(vii) There is limited growth: The sole proprietorship suffers from limited growth both in ideas, initiation and business, as a result of inadequate capital.

13.3.2 Partnership Business

Definition: A partnership may be defined as a type of business organization in which two to twenty persons agree legally to set up and manage with sole aim of making profit.

Partnership is usually formed by an association of two to twenty persons, who by an agreement (usually legal) decide to pool their resources (capital) and/or skills together and establish a business enterprises. The people involved in partnership agreement are called partners and they share the profit, losses and risks of the business. When partners are involved in banking enterprises, the number required by law is between two and ten. Some examples of partnership in Nigeria are Gani Fawehinmi and Co. (law chamber), Diya Fatimilehin and Co. (estate firm).

Characteristics of Partnership

i) **Ownership:** The partnership is owned by two to wenty persons but in a banking enterprises it is etween two and ten.

(Ii) Objective: The main objective of the partnership is profit making.

(iii) Sources of capital: The capital to set up the partnership is provided from the contributions of the partners based on legal agreement.

(iv) Liability: The partners have unlimited liability.

(v) Life span: The life span of the partnership depends on the agreement signed by the partners involved.

(vi) Legal entity: It is not a le gal entity as the partners are not separated from the business.

(vii) Management: The business is controlled and managed by the partners.

Sources of Capital for Partnership

(I) Personal contributions from partners: The partners jointly contribute their money to form the business.

(Ii) Loans and overdraft: Partnership can also obtain loans and overdraft from financial institutions, especially banks.

Advantages of Partnership

(i) Sharing of risks and liabilities: The partners can share risks and liabilities among themselves and this will reduce individual burden.

(ii) Better chance of continuity: There is better chance for continuity because the death or exit of a partner may not lead to the death of the business.

(iii) No legal formalities required: In forming a partnership, no major legal procedure of establishment is required.

(iv) Increase efficiency: The bringing together of special skills and talents help to increase efficiency in production.

(v) Specialization in management: The principle of division of labour may be applied in the managerial and administrative hierarchy of the business. For example, in an accounting firm, some accountants may be

management accountants while others may specialize in auditing or taxation.

(vi) Greater possibility of profit making: There is greater possibility of making profit by making use of large capital pooled together by partners.

(vii) Loan facilities: A partnership can easily obtain loan from creditors since they are jointly liable. The loan can be used for the expansion of the business.

Disadvantages of Partnership

(i) Unlimited liability: The partners are liable for the debts of the partnership business even up to their personal properties.

(ii) Business is not a legal entity: Partnership business is not a separate and distinct legal entity. It cannot sue and be sued in its own name.

(iii) Limited growth: the growth of the partnership will be limited to the managerial ability of the partners.

(iv) Disagreement between partners can end the business: There is the possibility that a disagreement between partners can put the business to an end.

(v) Risk of dissolution: Death, insanity and bankruptcy of a partner may bring the business to an end.

(vi) Slow decision making: Since every partner will want to contribute his own quota, decision-making may be slow and long.

(vii) False records: Some of the partners, especially the active partners, can use false records to gain advantage over others.

(viii) Inability to raise sufficient capital: Partners cannot invite the public to raise capital. Members of the public are always afraid to invest because of its unlimited liability.

(ix) Action of one partner is binding on others: There is an inherent danger that one partner, through his recklessness, can put other into problem and this may destroy the business. All the partners will be held responsible for the action of one another in the course of running the business.

15.3.3Private Limited Liability Companies

Definition: A private limited liability company is defined as a business formed, financed and managed by two to fifty persons, and whose name must end with the abbreviation of "Limited", e.g. Bluebird Nigeria Limited, Godwill Nigeria Limited, Newswatch Nigeria Limited, etc.

Characteristics of Private Limited Liability Companies

(i) Ownership: The business is owned by shareholders who may be between two and fifty persons in number.

(ii) Objective: The major aim of private limited company is to make profit.

(iii) Source Of Capital: The capital required to set up and run the business is provided by the shareholders in form of shares. However, shares are not sold to the general public. They are sold privately.

(iv) Liability: The shareholders have limited liability. In the event of liquidation, the amount a shareholder can lose is limited to the fully paid up value of his share or the capital he has invested in the business. His personal assets or properties are protected by the law.

(v) Legal entity: The business is a separate legal entity and therefore can sue or be sued in its own name.

(vi) Continuity: There is continuity of business operations as the withdrawal or death of a shareholder may not affect the existence of the company.

(vii) Shares are not easily transferable: Shares cannot be resold to other persons except with the consent of other shareholders.

(viii) Management: The private limited company is managed by a board of directors appointed by shareholders.Sources of Finance Available to Private Limited Company

(i) Loan and overdraft from banks: Loans and overdrafts can be obtained from commercial or development banks.

(ii) Sale of shares: Shares are usually sold by owners to

raise more capital for the company.
(iii) Equipment leasing: Equipment can be leased by the company for money.
(iv) Profit some part of: The profits made by the company can be set aside or re-invested.
(v) credit: Raw materials can be purchased by the company on credit.
(vi) purchase: Facilities can be grated to the company to buy and pay by installments.

Advantages of Private Limited Company

(i) Large capital: Private limited liability company can easily raise capital because of the large number of shareholders the from the business.
(ii) It has legal entity: Private limited liability company has legal existence, hence it can sue and be sued in its own name.
(iii) There is limited liability: In the event of business failure, the shareholders only loses his shares which he has contributed and his personal properties are not affected.
(iv) Continuity of existence: The chances of continuity of existence is high as the death or withdrawal of a shareholder may not lead to the death of the company.
(v) Efficient management: The business is efficiently managed by a board of directors appointed by the shareholders.
(vi) Large profit: Private limited liability company do enjoy large profits because of their large size.
(vi) Possibility of expansion: The business can easily expand because of the large capital available to set up and run the company.
(vii) It enjoys internal economies of large scale production: As long as the enterprise is large, production can be carried out on a large scale, leading

to economics of production.

Disadvantages of Private Limited Liability Company

(i) Limited capital: As a result of few number of shareholders coupled with the fact that shares cannot be sold to the public, the capital available for use is limited.

(ii) Shares are not sold to public: The private limited company cannot sell its shares directly to the public. This is one of the limitation to the capital base of the company.

(iii) Shares not easily transferred: A shareholder cannot sell his shares without the consent of other shareholders.

(iv) Lack of privacy: There is lack of privacy as companies are required to publicize their accounts.

(v) Payment of corporate tax: Private limited companies are usually required to pay corporate tax, unlike personal income tax paid by sole proprietorship and partnership.

(vi) Lack of personal contact: There is less personal contact with both the employees and customers, unlike in the sole proprietorship and partnership.

(vii) Delay in decision taking: Before any decision is taken on any crucial matters, the board of directors or the shareholders must meet and this tends to waste a lot of time.

13.3.4 Public Limited Liability Company (or Joint Stock Company)

Definition: A public limited liability company is a business formed by the public by sale of its shares, must have a minimum of seven person but no maximum number and the name of the public limited company must end with the abbreviation "plc".

The word public is used to imply that any member of the public is free to purchase shares in the business when shares are advertised for sale. Public

limited companies are actually owned by private individual and organizations.

Public limited liability companies or joint stock companies are organizations which have separate legal entity. It is regarded in law as having an identity of its own. The shareholders are not personally responsible for anything that is done in the name of the organization. The shareholders also enjoy limited liability, and above all, it enjoys the advantage of a large number of people who through the purchase of shares become owners of the company.

Example of public limited liability companies (or joint stock companies) are: Union Bank Plc., First Bank Plc., Dunlop Nig. Plc., UTC Nig. Plc., Mobil Nig. Plc., Etc.

Characteristics of Public Limited Liability Company (or Joint Stock Company)

(i) Ownership: The number of shareholders range from seven to infinity, i.e. owners must be at least seven but there is no maximum number.

(ii) It is a legal entity: The joint stock company has a distinct personality from that of the owners. It can sue and be sued in its own name.

(iii) Perpetual existence: The death or withdrawal of some shareholders will not affect the existence of the company.

(iv) It has limited liability: The liability of shareholders is limited to the amount contributed to the company. The private properties of the shareholders will not be affected in the event of liquidation.

(v) Formation: A public limited liability company must follow some special formalities before registration. They secure incorporation by filling the articles of association and memorandum of association with the registrar of companies.

(vi) Publication of annual accounts: It is required by

law to keep certain prescribed books of account. The accounts must be audited and published annually.

(vii) Specific line of business: A public limited liability company is authorised by law to carry on business specified in the object clause.

(viii) Ownership separated from management: Ownership is separated from management. The shareholders are regarded as the owners of the company while the management is in the land of board of directors.

Advantages of Public Limited Liability Company (or Joint Stock Company)

(i) Legal entity: Public limited liability companies have legal existence. They have a distinct personality from the owners, hence they can sue and be sued in their own name.

(ii) Continuous existence: There is continuity in a joint stock company. The death or withdrawal of a shareholder cannot bring the business to an end.

(iii) Limited liability: Their liability is limited to the amount invested as capital in the business; private properties will not be affected.

(iv) Large capital: The can raise enough capital by selling more shares or debentures to the public.

(v) Transferability of shares: Share of a public limited liability company can easily be transferred without having an effect on the business operation.

(vi) Loan facilities: Many banks prefer to grant loans to public limited companies than other forms of business units because there is no likelihood of default in payment.

(vii) Economies of large scale production: Public limited liability companies have sufficient capital for expansion, which can lead to mass production of goods.

(viii) Democracy in management: In choosing the board of directors, shareholders have the right to vote or be voted for at the annual general meeting.

(ix) Owners are separated from management: In joint stock companies, owners are separated from management. The shareholders are regarded as the owners of the company while the management is in the hands of board of directors.

(x) Employees can become co-owners: Employees could become co-owners of the business by purchasing shares of the company.

(xi) Recruitment of experts: Joint stock company attracts men of ability and skill to work for it.

(xii) Research programmes: In joint stock company, there is greater opportunity to undertake research prograemms.

Disadvantages of Public Limited Company (or Joint Stock Company)

(i) Lack of privacy: Public limited liability companies lack privacy because they are mandated by law to publish their annual audited accounts to the public. This makes it impossible for them to maintain secrecy or privacy.

(ii) Conflict of interest: there is the possibility of conflict of interest among the shareholders, directors and staff, which may affect the efficiency of operations of the business.

(iii) Slow decision making: Decision making is slow because of wider consultations and discussions in the management hierarchy.

(iv) Separation of owners from management: The owners of the business (shareholders) have little or no say in the affairs of the business, while the people at the helm of affairs who are not the owners may not put in their best.

(v) Hard to establish: The procedures and formalities involved in registration are very hard and complicated.

(vi) Payment of large corporate tax: The pay heavy tax arising from profit declared.

(vii) There is specialization: The company can only carry on business provided for it in its objective clause of the memorandum of association. It cannot venture into any other types of business.

(viii) Decrease in personal interest: The type of interest exhibited in this types of company is usually very low compared with the sole proprietorship where the zeal and interest is very high.

(ix) Large capital requirement: The capital required to set up and run a joint stock company is usually very large.

Sources of Finance Available to Public Limited Company (or Joint Stock Company)

(i) Loans and overdraft: Joint stock company can obtained loans and overdraft from commercial or development banks.

(ii) Sales of shares: A joint stock company can also raise capital by using shares for public subscription.

(iii) Sale of debentures: These are long term loans obtained from the general public at a fixed interest.

(iv) Bill of exchange: This is a document duly signed by the debtor's bank to the creditor and the creditor cashes the money with some discounts.

(v) Equipment leasing: Public limited liability companies can lease out some of their equipment for money.

(v) Retained (plough back) profits: The profits made by the company can be set aside for re-investment.

(vi) Trade credit: Raw materials can be purchased by the joint stock company on credit.

(vii) Hire purchase: Facilities can be granted to the company to buy and pay by installments.

SHARES

Definition: A share can be defined as the individual portion of the company's capital owned by shareholders. It is the interest which a shareholder has in a company. In other words share is a unit of capital measured by a

sum of money. The Company Act defines a share as: "The interest in a company's share capital of a member who is entitled to share in the income of such company".

Types of Shares

There are two major types of shares. These are Preference shares and Ordinary shares.

1. **Preference Shares:** A preference share is the type of which has priority in terms of dividend payment and repayment of capital in the event of winding up. They have a fixed rate of dividends.

Features of Preference Shares

(i) Preference shares have no voting rights.
(ii) They have fixed rates of interest.
(iii) Holders receive dividends before others.
(iv) They are entitled to return of capital first at closing down.

Types of Preference Shares

(a) **Cumulative preference shares:** Cumulative preference shares have priority in the share of dividends over others. Cumulative preference shareholders receive arrears of dividends not paid before other shares, i.e. when no profit is declared, their dividends will be carried forward to the following year.

Features of Cumulative Preference Shares

(i) No voting right
(ii) It has a fixed rate of dividend.
(iii) They receive arrears of dividends.

(b) Participating preference shares: Participating preference shares are shares which are entitled to further percentage of dividends after the ordinary shares have receive a specified percentage of profits. Participating preference shares have the right to participate equally with the ordinary shareholders in surplus dividends apart from their fixed dividends.

Features of Participating Preference Shares

(i) They receive fixed rate of dividends like other preference shares.
(Ii) They also participate in further dividends after all

others have been paid.
(iii) They usually receive dividends before ordinary shares.

(c) Redeemable preference shares: Redeemable preference shares are shares which have prior claims to dividends before all other preference shares. The owners of the business can buy back these shares after some time. The shares are issued to finance a particular project. The redemption of preference shares must not be regarded as amounting to reduction of capital.

Feature of Redeemable Preference Shares

(i) They have prior claims before other preference shares.
(ii) They can be bought back.
(iii) They are issued out to finance a particular project.

(d) Non-cumulative preference shares: In this type of shares, the dividends does not accumulate from year to another. Where a company fails to pay dividends in a particular year, it cannot be carried forward.

(e) Non-participating preference shares: Non-participating preference shares are the opposite of participating preference shares. They are not entitled to further dividends after the ordinary shares have been paid.

2. Ordinary Share: Ordinary shares are also known as equities. The ordinary shareholders are the real owners of the business. The holders are the risk bearers and they receive their dividends after all other shares have been paid. They can vote and be voted for. They have no fixed rate of dividend.

Features of Ordinary Shares

(i) There is no fixed rate of dividend.
(ii) They have voting rights.
(iii) The holders are the real owners of the business.
(Iv) They are the risks bearers.
(V) They receive dividends last, after others have been paid.

Types of Ordinary Shares

(a) Deferred or founder's shares: Deferred shares are shares which a re entitled to the remainder of profit after all other shares (preference and ordinary) have been paid. They are usually issued to the founders or promoters of the business.

Features of Deferred Shares

(i) They have more voting rights.

(ii) They are issued to the founders of the business.

(iii) The holders are entitled to the remainder of the dividends after all others have been paid.

13.3.5 Public Enterprises

Public enterprises are large-scale business organizations set up, owned and managed by the government mainly to provide services to the members of the public. They are usually established by an act of parliament or decree. Examples of public enterprises include Nigeria Telecommunication Limited (NITEL), Nigeria Ports Authority (NPA), Power Holding Company of Nigeria (PHCN), etc.

There are characterized by:

Ownership: Public corporations are owned and financed by the government.

Establishment: Public corporations are established either by decree or act of parliament.

Objective: They are established purposely to provide essential services to the generality of the people.

Legal entity: It is a legal entity as it can sue and be sued in its own right.

Management: Public corporations are managed by board of directors who are appointed by government.

Not profit oriented: Public corporations are not set up to make profit but to provide good and services to the people.

Monopolistic in nature: Some corporations are conferred with monopoly power by an act of parliament

or decree.Government and tax payers bear the risks: The risks of the business are borne by the government and the tax payers, who have provided the capital for financing the business.

High capital requirement: A public corporation requires large capital to set up, which cannot be provided by private individuals.

Employees are public servants: Workers in public corporations are public servants and treated as such.

Accountability: The management of public corporations i.e. (board of directors) are accountable to the government that set up the corporation.

Restriction of services: It is true that public corporations provide services but each one is restricted to the provision of special services. E.g. NEPA provides electricity while NITEL is involved in communication.

Advantages of Public Enterprises

Provision of infrastructural facilities: Public corporations provides infrastructural facilities, such as roads, schools, railways, electricity, to the populace.

Availability of large capital: Since public enterprises are owned by government, there is always availability of sufficient capital to ensure expansion of the enterprises.

There is continuity: Public corporations can past for a long period of time. In other words, there is continuous existence.

Development of capital projects: Establishment of public corporations can ensure the development of capital projects, e.g. rural electrification.

Avoidance of exploitation of consumers: Public corporations are consumer conscious as they ensure that the exploitation of consumers is greatly reduced.

Creation of higher standards: The government enters into business in order to ensure higher standards, e.g. provision of educational facilities.

Accountable to the public: Public enterprises are

accountable to the public because they have to submit their annual reports to the parliament.

Legal entity: A public corporation is a legal entity, i.e. it can sue and be sued on its own.
It caters for the interest of workers: In public enterprisers, the interest of the workers is catered for, so the employees have a great sense of security.
Provision of employment opportunity: Public corporation provide employment opportunities for the teeming number of the unemployed.
Enjoyment of large scale production: As a result of the availability of large capital for expansion, production can be done on large-scale.
Generation of revenue: Revenue is generated by the government from public corporations, e.g. water rate or electricity bill, to finance other projects.

Disadvantages of Public Corporations
Requires large capital: The cost of establishing a public corporation is very high, i.e. large capital is involved.
Government interference: Government can interfere in the activities of public enterprises by influencing the appointment of management board members.
Inefficiency in operation: Lack of competition can bring about inefficiency in business operation.
Danger of monopoly: Public corporations are monopolistic in nature, e.g. NEPA, hence it can abuse the privilege.
Bureaucratic tendencies and red tapism: Decision-making may be slow because it has to pass through many people or channels before approval.
Corruption and mismanagement: Many public enterprises in Nigeria have become the major areas for embezzlement and mismanagement of the nation's resources.
Not profitable: Most public enterprises are run at a

loss because they are too large and complex to manage.

Wastage: In public enterprises, waste are not usually discouraged because the belief is that the losses are borne by the government.

Lack of initiative: Lack of initiative is always exhibited in public enterprises as government functionaries must endorse the proramme and policies of the establishment.

Lack of privacy: Since the annual report must be presented to the public, such corporations have no privacy of their own.

Reasons for the Establishment of Public Corporations

(i) High capital requirement: Public corporations usually required heavy capital outlay, which may not be affordable by private enterprises.

Generation of revenue: Public corporations help the government to generate revenue needed to finance other government projects.

To prevent foreign dominance of the economy: Government can venture into some enterprises in order to prevent or reduce foreign control of the economy by foreign investors.

To avoid wasteful competition and duplication: Public corporations are established to avoid wasteful duplication of capital resources.

To provide infrastructural facilities: Government establishes certain enterprises to provide infrastructural facilities like roads and railways on which returns may not be forthcoming and which may, therefore, not attract investment by the private sector.

To prevent monopolistic tendencies: Public corporations are set up to prevent monopolistic tendencies resulting in very high prices charges if undertaken by private individuals.

To ensure even distribution of income: Government engages in some enterprises in order to ensure fair and even

hands.

Provision of essential services: Government engages itself in economic activities in order to provide essential services at subsidized rate e.g. water, electricity, etc.

To ensure higher standard of services provided: Government can participate in enterprises to ensure higher standard of services provided, such as education, which requires very expensive facilities that may not be affordable to the private sector.

For strategic and security reasons: Government may engage in business to control certain key industries such as airports, seaports, defence, the oil industry, etc.

Employment opportunities: Government may embark on business in order to create employment opportunities for the people.

To promote economic development: Government also invest in some enterprises, e.g. banking, insurance etc, in order to have firm control over the economy and regulate it for development purpose.

Ways in which Government Participate in Economic Activities

(i) Establishment of financial institutions: Government participates in economic activities by establishing financial institutions to grant overdraft and loans to private and public enterprises, e.g. Central Bank, Industrial Banks etc.

Establishment of public corporation: Public corporations are established by government to provide essential goods and services for the welfare of the people.

Establishment of joint business venture: Government, in conjunction with some private enterprises, can established joint business outfit to provide goods and services for the people.

Import monopoly: Government can also participate in

economic activities by exercising monopoly over certain items of importation a system in which government is the only agency that can import certain goods.

Revision Questions

1 What are the similarities and differences between private enterprise and public enterprises?

2 Compare and contrast between the following:

(a) Sole proprietorship and private limited liability company.

(b) Partnership and public limited liability company.

(c) Preference share and ordinary share.

CHAPTER FOURTEEN

14.0 INTRODUCTION TO AGRICULTURAL ECONOMICS

14.1 Meaning of Agricultural Economics

14.2 Nature and Importance of Agriculture

14.3 The Role of Agriculture in Economic Growth in Nigeria

14.4 Problems Facing Agriculture in Nigeria

14.5 Solutions to Problems Facing Agriculture in Nigeria

14.6 Government Policies in Nigeria's Agricultural Sector

14.7 Agricultural Production Functions

14.8 Agricultural Production Relationships

Review question

14.0 INTRODUCTION TO AGRICULTURAL ECONOMICS

13.1 Meaning of Agricultural Economics

Agricultural economics is the application of economic principles in agricultural production. It deals with the study of agricultural sector as regard to how productive resources are used efficiently with the aim of maximizing output. Therefore, the study of agricultural economics is centered on mean-end relationship which may be either profit maximization or utility maximization or optimization of physical products or a combination of all these objectives.

Usually, the means are concerned with physical resources, the funds and human resources that will be needed, the organization involved and/or the institutions which will be employed to attain the various possible objectives of the people.

14.2 Nature and Importance of Agriculture

Agricultural involves the production of crops and rearing of animals for human consumption and satisfaction. It include cropping, livestock production, forestry, fishing, hunting, processing and marketing of agricultural products.

Agriculture is important because of its role as the primary source of raw materials used for the socio-economic transformation of an economy.

14.3 The Role of Agriculture in Economic Growth

Agriculture plays crucial role in economic growth in the following ways:

(i) Provision of food: Agriculture has been providing food for the ever increasing population in Nigeria. However, Nigerian agriculture has, in the recent years

not been able to meet the food needs of the country. Consequently there has been a substantial rise in food imports to supplement the inadequate domestically produced food supply.

(ii) Source of employment: Agriculture has been a good source of employment in Nigeria. Anyanwu and et al (1997:15) reported that more than 80% of the rural population in Nigeria are engaged in agricultural and/or agricultural related activities. The World Bank (1993) reports that the agricultural sector employed 71% of the total labour force in Nigeria in 1960. This dropped to 56% in 1977; falling to 55% in 1985; and rose marginally to 57% in 1992. The information above have shown that agriculture is the major employer of labour in Nigeria.

(iii) Provision of raw materials: Agriculture has been the sole provider of raw materials for agro-allied industries in Nigeria. For example, industries like textile breweries beverages, depend on home produced cotton, grains and cocoa, etc respectively.

(iv) Source of export earnings: Agric, product forms a substantial proportion of Nigerian exports, which generates the necessary foreign exchange required to pay for the capital goods imported. However, agric, export in Nigeria has been declining in favour of oil exports.

(v) Source of capital: Accumulated savings of farmers provides a source of capital for investment. Taxes on agric, export are also a source of finance for the government.

(vi) Provision of market for industrial goods: Industrial goods such as farming tools and implements; insecticides, fertilizer; etc, finally find themselves in the hands of people employed in agriculture.

***(vii)* Agriculture and GDP:** Agriculture used to be and should be contributing significantly to GDP. It was the major determinant of foreign exchange reserve and GDP,

BOP in the 1960s. However, Anyanwu and et al (1997) reported that the share of agricultural in GDP which stood at 61.50% in 1964 decline steadily to 14.63% in 1983 and to 12% in 1997.

14.4 Problems Facing Agriculture in Nigeria

The problems facing agriculture include:

(i) Land tenure system: The type of land tenure system practiced in Nigeria in which piece of land is passed from parents to children discourages farmers from acquiring land for large scale farming.

(ii) Inadequate finance or credit facilities: Majority of the farmers are poor and do not have the finance to make purchase of land, tools, etc. They do not have access to loan facilities from banks because of lack of collateral securities.

(iii) Poor transportation system: The presence of bad roads or total lack of it makes distribution of produce to market very difficult and this leads to wastage. The non-available of vehicles couple with high cost of transporting farm produce makes it difficult for agriculture to develop

(iv) Inadequate storage and processing facilities: Lots of produce are wasted due to lack of storage and processing facilities. The farmers do not have the technical know-how to operate these storage and processing facilities, which are very expensive to purchase and maintain.

(v) Inadequate farm inputs: Farm inputs like chemicals, fertilizers, improved seeds, tools and implements are not easily available and, even when they are available, they are too expensive for the poor farmers to afford.

(vi) Lack of basic amenities: Lack of basic amenities like electricity, pipe-born water and proper health care makes able-bodied men and women to

migrate from rural to urban areas in search of non-existent jobs.

(vii) Use of crude implements: The use of simple farm tools like cutlasses, hoes etc, leads to low agricultural production. Majority of the farmers are so poor that they cannot afford to buy modern tools and equipment to improve their product.

(viii) Unfavourable climate: Unpredictable and unfavourable climate like high temperature, low rainfall generally discourage serious farming activities.

(ix) Lack of technical know-how: Majority of the farmers lack the technical knowledge of modern farming as a result of their illiteracy and this militates against increase in agricultural productivity.

(x) Problems of pests and diseases: Pests and diseases are not controlled by majority of the farmers. Pests and diseases generally reduce the quantity and quality of agricultural goods and income of the farmers.

(xi) Poor marketing system: There are no organized marketing channels for farm produce. There is also lack of proper pricing for agricultural produce.

(xii) Inadequate labour supply: The movement of able-bodied men and youth out of the rural areas to urban centres has worsened the development of agriculture. Agriculture is thus left to old men and women who cannot produce food for the increasing population.

(xiii) Inconsistent government policies: Inconsistent government policies on agriculture reduce agricultural development. The policies at time fail to recognize the rural farmers that produce food for the country. Most of the policies are centred around fake city farmers who only collect money from government and use them for other purposes.

(xiv) Natural disasters: Natural disasters like flood, drought, etc, may occur and the this will reduce agricultural productivity.

(xv) Lack of research: Most farmers do not have access to research work and this leads to low agricultural development.

(xvi) Political/social instability: Political/social instability in the country affects agricultural activities as farmlands are usually destroyed during communal clashes. This leads to low agricultural productivity.

14.5 Solution to the Problem Facing Agriculture in Nigeria

The problem facing agriculture as enumerated above can be solved or reduced in the following ways:

(i) Amendment of land use decree: Amendment of the land use decree of 1975 must be done to enable farmers obtain land for farming. Farmers should also use fertilizers in their available and to ensure increase production.

(ii) Establishment of agricultural banks: Agricultural banks like the Nigeria Agricultural and Co-operative Bank (N.A.C.B) should be established to give loans to farmers at reduced interest rates.

(iii) Construction of roads: Feeder roads should be constructed to open up the rural areas for agricultural produce and marketing.

(iv) Provision of storage and processing facilities: Government should provide storage and processing facilities for the farmers at subsidized rate.

(v) Timely provision of farm input: Farm input like improved seeds, implements, fertilizers, etc, should also be provided on time and at subsidized rates to the farmers.

(vi) Farmers should be educated: Special schools or training centres should be established where farmers can be trained on how to read and write, train on the use of modern systems of farming, etc.

(vii) Provision of basic amenities: Government should provide basic amenities like electricity, pipe-

born water and health care facilities in rural areas to make life more meaningful.

(viii) Provision of modern implements: Modern implements like tractors, ploughs, harrows, sprayers, planters, etc, should be made available to farmers to ease their production of crops.

(ix) Provision of irrigation facilities: Irrigation facilities should be introduced where weather is unfavourable, e.g. low rainfall. Also, water conservation techniques such as mulching should be practiced.

(x) Provision of drugs and pesticides: Drugs should be provided to enable farmers treat diseases. Pesticides and other chemicals should also be provided to control pests of agricultural produce.

(xi) Establishment of good marketing system: There should be organized marketing channels for agricultural produce. Government should buy excess produce from farmers to encourage them in continuous production.

(xii) Provision of research findings: Research findings or agriculture should be made available to farmers.

14.6 Government's Past Policies in Nigeria Agricultural Sector

Some past government's strategies and policies to develop the Nigeria's agricultural sector include the following:

(a) The National Accelerated Food Production Project (NAFPP): This programme was established in 1973 to induce farmers to boost food production within the shortest possible time.

Its main objectives is to increase the production of six major food crops namely: rice, millet, sorghum, maize, wheat and cassava. The project which has three components research, extension and agro-services is divided into three phases, namely: the small-scale

to believe. The programme only succeeded in keeping the nation aware of food shortage and mobilizing its effort in the fight against the problem. Everybody, irrespective of trade took to farming but this did not last long for after a while interest started falling. Increased food importation; land use decree, inadequate human and material resources, faulty campaign strategy and fault administrative system led to the death of OFN.

(e) Agricultural Credit Guarantee Scheme (ACGS): The ACGS was created by the Federal Government. Under the ACGSF Act 1977, and came into operation in April 1978, with the objective of providing "guarantee in respect of loans granted for agricultural purposes by any bank in accordance with the provisions of Act" and with the aim of increasing the level of bank credit to the agricultural sector. The ACGF covers such areas as: the production of rubber, oil palm and similar tree crops; the cultivation of cereal crops animal husbandry, including cattle rearing and poultry and fish farming.

So far, over 20,000 loans worth at N184.2 million have been granted before 2000. But the problems of the scheme included: delays in processing farmer applications by banks; faulty land use decree, etc.

Other strategies introduced to develop agriculture in Nigeria included:

(f) Rural Banking Scheme in 1977;
(g) Commodity Boards in 1977'
(h) The Land use Decree in 1978'
(i) The Green Revolution in 1980;
(j) The Agricultural Development Project in 1974; and
(k) The National Agricultural, Land Development Authority, NALDA in 1991.

It is important to note that most of the agricultural development strategies and programmes were established in the 1970s (except, the Green Revolution

and NALDA). It is also on records that the performance of agriculture in Nigeria became worst in the 1970s.
This means that, though, government designed and implemented these programmes they are bedeviled by many problems including lack of funds; untimely release of funds; inadequate farming equipment/machinery; they were not honestly implemented.

14.7 Agricultural Production Functions

Production function is a technical relationship between inputs and output. It is a mathematical statement which expresses output as a function of inputs.
Production functions are assumed to be continuous and differentiable. Its differentiability enables us to establish the rates of returns. Given a production function of the form:

$$q = f(x) \quad \ldots\ldots (1)$$

Where q is the output and x is the input of labour in man-day, then the production parameters of interest are:

$$AP = \frac{q}{x} = \frac{f(x)}{x} \quad \ldots\ldots (2)$$

$$MP = \frac{dq}{dq} = f'(x) \quad \ldots\ldots (3)$$

14.7.1 Returns to Scale

There are three rates of returns to scale related to the production function above. These are"
(i) Constant Return to Scale
This states that each additional unit of input results in a constant rate of increase in output, as shown in fig. 16.1
Quantity Constant Returns to Scale

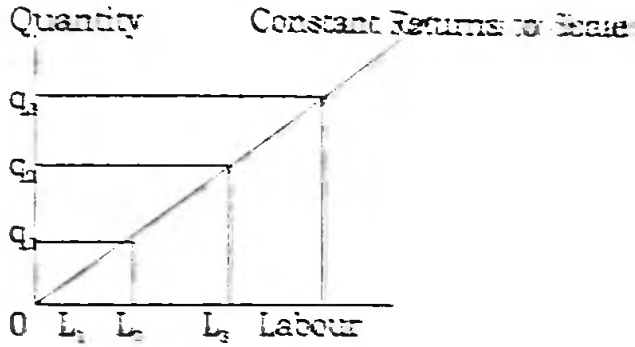


Fig. 16.1 constant returns to scale

Fig. 16.1 above showed that as the unit of labour employed increases from L_1 to L_2 and to L_3, quantity rises from q_1 to q_2 and to q_3 respectively. It can also be observed that there are equal proportions between unit of labour and quantity of the commodity produced.

(ii) Decreasing Returns to Scale

Here, each extra unit of input causes a less than proportionate increase in quantity produced. This is shown in fig. 16.2 below:

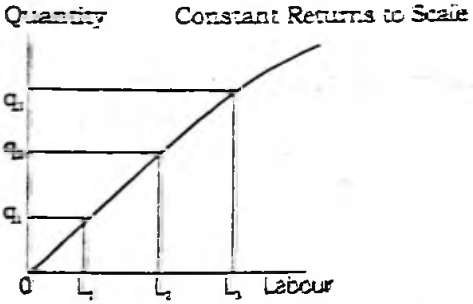


Fig. 16.1 constant returns to scale

As can be seen in fig. 16.2, the increase in labour input is greater than the rise in output.

(iii) Increasing Returns to Scale

This is a case in which an increase in units of input result in more than proportionate increase in quantity produced. This is depicted in fig. 16.3

Quantity Constant Returns to Scale

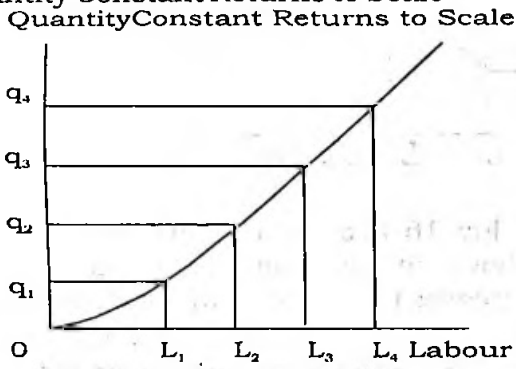


Fig. 16.1 constant returns to scale

Fig. 16.3 indicated that the increase in quantity is greater than the increase in unit of labour.

14.7.1 Structure and Forms of Agriculture Production Functions

There are two forms of production function. They are:

(i) Short-run Production Function

Production functions which relate factor input to quantity when at least one factor is fixed are called short-run production functions.

For instance, the function:

$q = f(x_2 x_2 \ldots\ldots\ldots\ldots \bar{x}_n)$ ..... (4)

where q = Quantity

x_1 = Variable input

$(\bar{X}_2 \ldots\ldots \bar{x}_n)$ = Fixed inputs

is a short-run production function.

(ii) Long-run Production Function

Production functions whose input output relations involve variation in the inputs at the same time can be termed long-run production functions for example, the function:

$$q = f(x_1, x_2, \ldots, x_n) \quad \ldots\ldots(5)$$

where q = Quantity

x_1 = Variable factor 1

x_2 = Variable factor 2

and x_n = Variable factor n

is a long-run production function.

Besides, there are several types of production functions namely

(1) Linear Production Function: Linear production function are the types in which the relationship between inputs and output is linear. It is given as:

$$q = a + bx \quad \ldots\ldots(6)$$

where: q = Quantity

a and b = constants and

x = factor/input

The average product (AP), marginal physical product (MPP) and elasticity of production (EP) is determined as follows:

(I) Average Product (AP) is

$$AP = \frac{q}{x}$$

$$AP = \frac{a+bx}{x} \quad \ldots\ldots\ldots\ldots\ldots\ldots (7)$$

(ii) Marginal Physical Product (MPP) is

$$MPP = \frac{dq}{dx}$$

$$MPP = \frac{(d(a+bx) = b}{dx} \quad \ldots\ldots\ldots (8)$$

(iii) Elasticity of Production is

$$EP = MPPX \; x \; \frac{}{q}$$

$$= \frac{b(x)}{a+bx}$$

$$EP = \frac{bx}{A+bx} \quad \ldots\ldots\ldots\ldots\ldots\ldots (9)$$

2. Power Production Function

Taking the two-variable case for this function.

$$q = ax_1^{b1}x_2^{b1}$$

Where the parameters of interest are:

$$MPP_1 = \frac{dq}{dx_1} = b_1ax_{1b1}x_2^{b2} = \frac{b_1ax_1^{b1}x_2^{b2}}{x_1}$$

$$MPP_2 = \frac{dq}{Dx_2} = b_2ax_1^{b1}x_2^{b2} = \frac{b_2ax_1^{b1}x_2^{b2}}{x_2}$$

$$EP_1 = \frac{(b_1 a x_1^{b1} x_2^{b2})}{X_1} \cdot \frac{(x_1)}{a x_1^{b1} x_2^{b2}}$$

$$EP_2 = \frac{b_2 a x_1^{b1} x_2^{b2}}{X_2} \cdot \frac{x_1}{a x_1^{b1} x_2^{b2}}$$

$$RTSx_2x_1 = \frac{dx_1}{dx_2} = \frac{b_2 a x_1^{b1} x_2^{b2}}{X_2} \cdot \frac{x_1}{a x_1^{b1} x_2^{b2}}$$

$= -bx_1$ (Rate of Technical Substitution)
B_2x_2

This functions has some unique characteristic which are very useful in empirical analyses.

(1) The partial elasticities are equal to each of the parameters b_1...

(2) When $\sum_{1=1}^{n} b_1 = 1$, we have constant returns to scale

(3) When $\sum_{1=1}^{n} b_1 < 1$, we have decreased returns to scale

(4) When $\sum_{1=1}^{n} b_1 > 1$, we have increasing returns to scale

(5) When Linearized in log, the function is easy to fit.

3 Quadratic Production Function: It is given as:

$$q = a+b_1x_1+b_2x_2-b2x_1^2-b_4x_2^2+b_5x_1x_2$$

Where the parameters of interest are:

$$MPP_1 = \frac{dq}{dx_1} = b_1 - 2b_3x_1 + b_5x_2$$

$$MPP_2 = \frac{dq}{dx_2}$$

$$\frac{dx_1}{dx_2} \quad \frac{b_1 - 2b_3x_1 + b_5x_2}{b_2 - 2b_4x_2 + b_5x_1}$$

$$\frac{x_1(b_1 - 2b_3x_1 + b_5x_2)}{q}$$

$$\frac{(b_2 - 2b_4x_2 + b_5x_1)\,x_2}{q}$$

4 Square Root Production Function

This function, for a two-variable case is of the form:

$$q = b - b_1x_1 - b_2x_2 + b_3x_1^{-5} + b_4x_2^{-5} + b_5x_1^{-5}x_2^{-5}$$

Where the parameters of interest are:

$$MPP_1 = \frac{d\,q}{dx_1} = -b_1 + 0.5b_3x_1^{-0.5} + 0.5b_5x_1^{-0.5}x_2^{0.5}$$

$$MPP_2 = \frac{d\,q}{dx_2} = -b_2 + 0.5b_4x_2^{-0.5} + 0.5b_5x_1^{0.5}x_2^{-0.5}$$

$$RTSx_1x_2 = \frac{MPP_1}{MPP_2} \quad \frac{-b_1 + 0.5b_3x_1^{-0.5} + 0.5b_5x_1^{-0.5}x_2^{0.5}}{-b_2 + 0.5b_4x_2^{-0.5} + 0.5b_5x_1^{0.5}x_2^{-0.5}}$$

Elasticity of production can be derived as:

$$EP_1 = \frac{X_1 =}{Q} \quad \frac{x_1(-b_1 + 0.5b_3x_1^{-0.5} + 0.5b_5x_1^{-0.5}x_2^{0.5})}{a - b_1x_1 - b_2x_2 + b_3x_1^{0.5} + b_4x_2^{0.5} + b_5x_1^{0.5}x_2^{0.5}}$$

$$EP_2 = MPP_2 \frac{X_2}{Q} = \frac{x_2(-b_2+0.5b_4x_2^{-0.5}+0.5b_5x_1^{0.5}x_2^{-0.5})}{a-b_1x_1-b_2x_2+b_3x_1^{0.5}+b_4x_2^{0.5}+b_5x_1^{0.5}x_2^{0.5}}$$

5 Exponential Production Function

This function and the parameters of interest are presented below:

$$q = ae^{(b1x1+b2x2)}$$

$$MPP_1 \quad \frac{dq}{dx_1} = b_1ae^{(b1x1+b2x2)}$$

$$MPP_2 \quad \frac{dq}{dx_2} = b_2ae^{(b1x1+b2x2)}$$

$$RTS = \frac{MPP_1}{MPP_2} = \frac{dx_1}{dx_2} = \frac{b_1ae^{(b1x1+b2x2)}}{-b_2ae^{(b1x1+b2x2)}} = \frac{-b_2}{b_1} \text{ (RTS)}$$

$$EP_1 = MPP_1 \frac{x_1}{q} \quad \frac{b_1ae^{(b1x1+b2x2)}}{ae^{(b1x1+b2x2)}} \frac{x_1}{q}$$

$EP_2 = b_2x_2$ by similar derivation

6 Semi-log Production Function

$$q = a+b_1 \log x_1+b_2 \log x_2$$

$$MPP_1 = \frac{dq}{dx_1} = \frac{b_1}{x_1}$$

$$MPP_2 = \frac{dq}{dx_2} = \frac{b_2}{x_2}$$

$$RTSx_1x_2 = -\frac{MPP_1}{MPP_2}$$

$$= - \frac{b_1}{x_1} \div \frac{b_2}{x_2}$$

$$= - \frac{b_1}{x_1} \times \frac{b_2}{x_2}$$

$$= - \frac{b_1 b_2}{x_1 x_2}$$

$$EP_1 = (MPP_1) \frac{x_1}{q}$$

$$= \left(\frac{b_1}{x_1} \right) \frac{x_1}{q}$$

$$= \frac{b_1}{q}$$

$$EP_2 = (MPP_2) \frac{x_2}{Q}$$

$$= \left(\frac{b_2}{x_2} \right) \frac{x_2}{q}$$

$$= \frac{b_2}{Q}$$

14.8 Agricultural Production Relationships

Production relationship specifies a production unit which h makes use of input mix in obtaining a given output. Within this production unit, three basic physical relationships between resources and output are usually distinguished.

1. **Factor Production Relations:** It describes the transformation of a given resources into a product. The problem is that of determining the intensity with which the given variable input should be combined with fixed amounts of other essential inputs for the attainment of profit maximizing objectives.
2. **Factor Factor Relationship:** This implies the level of choice between different combinations of two or more resources. That level of choice must be that which is economic for the production of the given output. This relationship is important in attaining the cost minimization objective.
3. **Product Product Relationship:** This seeks to establish the most efficient allocation of given resources between competing commodities or enterprises. This relationship is particularly relevant to the problem of optimum enterprise combination that maximizes overall income of the entrepreneur.

The economic implications of these relationships are derived by employing cost or price ratios of the factor and product and/or their transformation or substitution ratios. These ratios enable us to establish certain fundamental economic principles that form the basic or economic choice. We shall now treat these relations in fairly detailed forms.

(1) Factor Product Relationship

$$q = f(x_1 / x_2, x_3, \ldots\ldots\ldots\ldots X_n)$$

Where q is the output'

X_1 is the variable input

$\overline{X}_2, \overline{X}_3, \ldots\ldots\ldots\ldots \overline{X}_n$ are fixed amounts of the other

resources inputs.

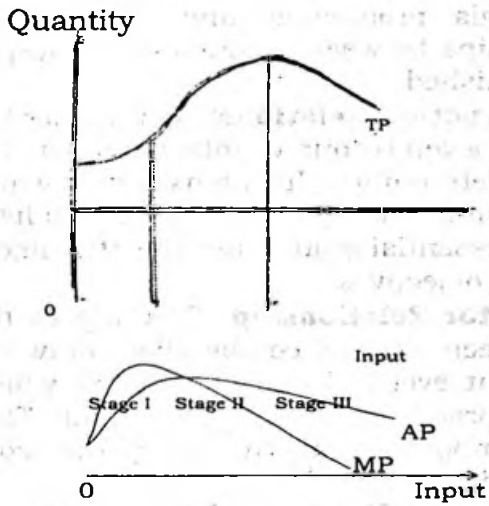


Fig. 16.4: Stages of production in factor production relationship.

The singular concern of the factor production relationship is essentially that of the transformation of a single factor into a single product.

The total product curve explains the frontiers of economic and uneconomic input-output relationship, which are called stages of production in microeconomic theory. This is shown in the figure below:

Hence, at"

Stage I

1. MP > AP
2. MP is maximum at point of inflection
3. MP = AP at boundary of stage I and II Where AP is maximum.

Stage II

1	MP	<	AP, or AP	>	MP
2	MP is falling faster than AP				
3	AP is also falling				
4	MP	=	0 at boundary of stages II and III		
5	AP is still positive				

Stage III

1	AP	>	MP
2	AP	>	0, i.e. Positive
3	MP	<	0, i.e. Negative
4	Both MP and AP are falling		

f. Total Product Curve

For all practical purposes, the relevant short-run production function will be of the form:

$Q = f(x_1)$

Given the production function, $Q = f(x_1)$, we can obtain the relevant economic equations of interest, as:

$\frac{dq}{dx}$ = fx (Marginal Physical Product, MPP)

$\frac{q}{x} = \frac{f(x)}{x}$ (Average Product, AP)

Apart from the simplistic presentation of these relationships, the factor product case is not true to one variable input, in the short-run case, while in the long-run situation all input are variable in addition to the scale of enterprise.

But the factor product relationship is an elegant way of assessing production parameters in situations where one basic input is the limiting resource. This is true of labour or capital in developing countries.

(2) Factor Factor Relationship

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

Where q is the quantity

X_1 is variable input of labour

X_2 is variable input of capital services

X_3 ..... X_n are fixed levels of other essential inputs

Here, two factors are varied while the others are held fixed. Hence the production function bowls down to

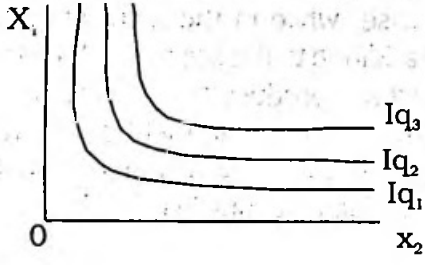
$q = f(x_1 x_2)$

This relationship implies that changes in the quantity are essential as either or both factors x_1 and x_2 are varied. Our concern is with the possibility of substituting x_1, for x_2 or x_2 for x_1 as q is held constant at some particular level.

This relationship implies that changes in the quantity are essential as either or both factors x_1 and x_2 are varied. Our concern is with the possibility of substituting x_1, for x_2 or x_2 for x_1 as q is held constant at some particular level.

Before examining the issue of optimization under the factor factor relationship, let us consider the theoretical framework of this relationship as studied in orthodox microeconomic theory.

Isoquant: is the locus of points of various combinations of x_1 and x_2 which yield the specified output level.



This is derived as: $Iqx_1 = f(q_1, x_1, x_2)$

Rate of Technical Substitution (RTS)

RTS is the negative of the slope of isoquant.

$$RTSx_2x_1 = \frac{dx_2}{dx_1}$$

This expression is obtained from a total differentiation of the production function, $q = f(x_1, x_2)$, as follows:

$dq = f_1dx_1 + f_2dx_2$

Where f_1 and f_2 are the partials $\frac{dq}{dx_1}$, $\frac{dq}{dq_2}$ of q with respect to x_1 and x_2 respectively.

Since any change in q (i.e., dq) is equal to zero for movement along an isoquant

$$RTSx_2x_1 = \frac{dx_2}{Dx_2}$$

Will become $dq = f_1dx_1 + f_2dx_2$

When this is solved by transposition we have

$$RTSx_2x_1 = -\frac{dx_2}{dx_1} = \frac{f_1}{f_2}$$

This relation helps us to establish three forms of substitution which are briefly explained below:

In figure (a) we have the case of constant rate of factor substitution. This implies that x_1 and x_2 are prefect substitutes pr competitive in use since one cane be used to replace the other.

Isocline

Define as a line which connects points of equal slope on a production surface, or on successively higher isoquants. In other words, they connect points which mark the limit of the efficiency of resource use, and hence are boundaries for the stages of production on the production surface depicted by the factor factor relationship.

The Expansion Path

Defined as the line joining points of the lest-cost combination of resource on the production surface. These points are those where isocosts or equal lines are tangent to the isoquants.

Production Surface

$\frac{dx_1}{dx_2}$ $\frac{(f_2(x_1, x_2)}{(f_1(x_1, x_2)}$ = k Isodine

$\frac{dx_1}{dx_2}$ $\frac{(f_2(x_1, x_2)}{(f_1(x_1, x_2)}$ = 0 (Ridgeline)

$\frac{dx_1}{dx_2}$ $\frac{(f_2(x_1, x_2)}{(f_1(x_1, x_2)}$ = $\frac{r_2}{r_1}$ (Expansion path)

Where r1, and r1 are the known prices per unit of inputs x1 and x2 respectively.

Economic principles have shown that the least-cost condition is obtained when the rate of technical substitution is equal to the price ratio. Quantitatively this is stated as:

$$\frac{dx_1}{dx_2} \quad \frac{r_2}{r_1}$$

$$\text{or, } dx_1 r_1 = dx_2 r_2$$

If $\frac{dx_1}{dx_2} > \frac{r_2}{r_1}$,

then production cost can be reduced by using more of x_2 and less of x_1 until the equality is established.

$$\frac{dx_1}{dx_2} = \frac{r_2}{r_1},$$

holds on the others hand,

If $\frac{dx_1}{dx_2} < \frac{r_2}{r_1}$,

then production cost can be reduced by using more of x_1 and less of x_2 until equality is restored.

Summarizing, the factor factor relationship provides a sound theoretical framework for deriving from a given production function the isoquant equation in terms of the given output level. It provides a basis for deriving RTS, the isocline, the ridgeline and the least-cost combination of inputs for the given output level. It is thus a useful theoretical and empirical tool for measurment of performance, and for the assessment of effective utilization of resources.

(3) Production Product Relationships

This involves the allocation of given resources between competing enterprises. It also refers to the choice between competing products. The problem of product product relationship

is sometimes given the specific term, of resource use problem. This refers to the allocation of all resources in its many forms, between competing alternatives. The issue of product production relationship will be examine by considering enterprises in five ways: these are: (i) joint products (ii) competitive products (iii) complementary products (iv) supplementary products and (v) antagonistic products which are special cases of competitive enterprises.

(i) **Joint Products**: These are produce through a single production process and this means that one of the commodities cannot be produced alone but must be accompanied by one or more other products.

(ii) **Competitive Products:** Two enterprises are competitive in the use of given resources if output of one can be increased only by a sacrifice in the production of the other product.

(iii) **Antagonistic Enterprises:** While all competitive products are rivals in the use of resources, certain enterprises appear to be antagonistically competitive.

Antagonism is expressed when the production for two independent products change as the two enterprises are produced in the presence of each other.

(iv) **Complementary Enterprises:** Technical complementary of two products

will result when an increase in the output of one, results in an increase in the output of the other with productive resources held constant in amount.

(v) **Summary of Product Product Relationships:** We can restate the relationships involved for products q_1 and q_2 as follows

Marginal rates of substitution Enterprises Relationship

$\frac{\Delta Q_1}{\Delta Q_2}$ or $\frac{\Delta Q_2}{\Delta Q_1} = 0$ Competitive

$\frac{\Delta Q_1}{\Delta Q_2}$ or $\frac{\Delta Q_2}{\Delta Q_1} < 1$ Supplementary

$\frac{\Delta Q_1}{\Delta Q_2}$ or $\frac{\Delta Q_2}{\Delta Q_1} > 0$ Complementary

(v) **Supplementary Product**

This is the use of one products to increase the production of other. E.g. beans/groundnuts to fertilize soil for maize production.

Discussion Question

1. Discuss the stages of the total product curve and indicate the relevance in output and profit maximization.
2. Account for the usefulness of factor factor relationships in production economic analyses given illustrative examples.
3. Compare and contrast the stages of production as given by the factor production and factor factor relationship.
4. Product product relationships take many forms which of these do you consider most important in production and why?
5. Examine the implications of joint products for efficient use of resource and maximum profit.
6. Compare and contrast competitive and antagonistic enterprises.
7. Examine the relationships and contrasts between competitive and complementary enterprises, using illustrative examples.

CHAPTER FIFTEEN

15.0 INTRODUCTION TO INDUSTRIAL ECONOMICS

15.2 Industrial Policies in Nigeria

15.3 Problems Facing Industries in Nigeria

15.4 Solutions to the Problem Facing Industries in Nigeria

15.5 Industrial Structure and Ownership

15.6 Industrial Pricing and Marketing

15.7 The Role of Advertisement in Industrial Growth

15.8 Product Differentiation

15.9 Entry Barrier

15.10 Determinant of market structure
Review question

INTRODUCTION TO INDUSTRIAL ECONOMICS

15.1 MEANING, NATURE, SCOPE AND METHODOLOGY OF INDUSTRIAL ECONOMICS

Industrial economics is an applied field of economics. It is an area of economic analysis which is concentrated on the problems of the firm.

The study in industrial economic is centered on firms thus, it is basically an upshoot of microeconomics. It has gradually evolved its own character and methodology distinct from the neo-classical theory of the firm. This is because it combines empiricism with theorizing. It applied the theory of the firm to the real world situation and attempt to solve practical and operational problems in the industrial world.

It is also concerned with management decision-making problems, which fall outside the scope of neo-classical theory. It originated from the writings of P.W.S Andrew, in his book entitled: Industrial analysis in economics.

There a re two schools of though in the study of industrial economics, namely:

(i) The English school; and

(ii) The Historical/Institutional school.

(I) The English School: The English school which was developed by J.S Mill Jevons, Robbins, etc, is characterized by the acceptance of certain behavioural assumptions about individual consumers and producers (or firms) and these were believed to be of wide-spread applicability. Economic analysis then took the form of searching out the logical implications of these behavioural patterns when confronted by resource scarcity. This type of analysis is centred on utility and profit maximization, and appealed to generalized theory using mathematical tools in relatively complex situations involving high degree of abstract from real world situations for its generalizations.

(ii) The Historical School: This school which originated in Germany, questioned the assumed university of the behavioural assumptions and the method of operation of economic forces and producers that were central to the economic analysis of the English school. The historical school argues that:

(a) Economic analysis should be based upon empirical investigation designed to establish the nature of the existing institutional framework and the manner in which it conditions the operation of economic forces;

(b) Since economic forces may change of time, they are proper understanding of their nature and the way in which they may be subsequently altered involves a study of their historical development; and

(c) Institutions should not be treated as given in economic analysis, but rather be taken as capable of modification where in their existing forms used in the operation of economic forces in achieving desired goals.

15.2 PAST INDUSTRIAL POLICIES IN NIGERIA

(i) industrial Policies Before SAP: To adequately discuss industrial polices, it is necessary to identify government as the prime promoter of industrial policies in Nigeria. One can now examine what constitutes the primary and secondary roles of government in industrialization. A society is said to have industrial environment if it wears an adequate infrastructure outlook.

Ndebbio (1999b), argued that adequate provision of physical infrastructure facilities such as access roads, water, electricity, storage and marketing facilities, etc are a pre-condition for industrial development in any nation. The provision of these facilities constitutes he primary role of government towards industrial development. Also, according to Bryce (1963), the provision of infrastructural facilities is a primary task of government in creating conditions

conducive to industrial growth and development. The secondary role of government are in the form of policies, laws and incentives created to boost industrial participation, production and growth.

The Federal government, in particular, is more poised than the state to create major policies and incentives for application at all levels. Thus, it will be possible to identify a few industrial policies/incentives created at different points in time for discussion. To be identified also are the traditional industrial policies/incentives advocated by economic development experts for all third world countries (including Nigeria). These policies which Nigeria had adopted jointly or severally at some points in time include: import substitution, export promotion, and exchange rate adjustment (Todaro 1997, Yotopaulos and Nugent, 1976).

(a) IMPORT SUBSTITUTION POLICY

This is a policy that encourages domestic industries to produce goods that are hitherto imported. The adoption of import substitution strategy dated back to 1960 when Nigeria gained her political independence. It was believe that the Nigerian government would be able to promote the emergency and expansion of domestic industries by replacing major imports such as textiles, shoes, foods, detergents and toiletries, household appliances, etc, with locally produced substitutes.

The adoption of import substitution strategy had positive impact on the Nigerian industrial sector. During the 1960-70 decade, the share of manufacturing in GDP stood at about 9.1% with most industries engaged in the processing of agricultural products. The sector experienced a growth rate that was about 7.5% on the average. In the same way, the policy of import substitution favoured manufacturing companies as most of the raw materials used are locally sourced.

(b) EXPORT PROMOTION POLICY

Another industrial policy introduced before SAP is the export promotion which has formally conceived in 1976. The policy was given legal backing by the promulgation of Export Promotion Decree No 26 of 1976. The policy was introduced specifically to encourage export of goods from Nigeria. To ensure high quality production of non-oil goods, and hence compete favourably at the international market, the industrial promotion Decree No. 40 of 1979 came into being three years after.

(c) FOREIGN EXCHANGE RATE ADJUSTMENT POLICY

During the period under review, the policy of exchange rate adjustment was gradual and less revolutionary. This implies that foreign exchange practice prior to SAP was by rationing or import licensing system. This system allowed the exchange rate of the naira to be arbitrarily fixed by the Central Bank of Nigeria relative to that of major foreign currencies. Under rationing system, naira was over-valued. Consequently, imports were rendered cheaper. This militated against the objective of import substitution policy hitherto introduced as private agents and industrialists found it easy to import their inputs rather than looking inwards. The distortionary effects of these policies had pervasive influence on all sectors of the economy. Furthermore the survival of local industries was continually threatened and such local ventures like agriculture faced formidable threat during the oil boom era when foreign exchange available was not a recognizable constraint.

Besides, the policy of over-valuation of the naira which applied across the board discouraged exports of manufactured goods and other non-oil exports. As a result, the export of manufacture and semi-manufactured goods declined. In value terms, it fell

from N65.8 million in 1980 to about N40 million in 1986 (Federal Ministry of Industries (1992).

(d) COMPANY INCOME TAX POLICY

This is a fiscal policy measure introduced in 1961, with the objective of streamlining the process of deregulation as well as the integration of industrial sector of the economy into the economic mainstream. The federal government also set up two groups to review the entire tax structure and administration with the view to improving tax collection through reducing tax evasion and encouraging voluntary compliance with tax regulations, and to stimulate industrial production and accelerated rate of economic development.

In line with the above, the federal government has consistently adopting this policy. In this policy, the incentives includes reduction in both company income tax and capital gains tax. For instance, the company income tax was reduced from 35% in 1995 to 30% in 1996, and capital gains tax from 20% in 1995 to 10% in 1996, as well as relief for export.

(e) THE NIGERIAN ENTERPRISES PROMOTION POLICY

The policy was introduced in the wake of the desire to make Nigerians own and control more industrial enterprises in the country. After the Nigerian civil war in 1970, the country's industrial sector was not doing well at all following the departure, for personal safety, of foreigners who dominated the sector. Therefore, the urge by Nigerians to take strategic position in controlling her industrial base through this policy was just timely.

Thus, a decree know as the Nigerian Enterprises Promotion Decree (NEPD) 1972 was promulgated to give the policy a legal backing. The objectives associated with the policy commonly refer to as indigenization policy are:

(i) To create opportunities for the Nigeria

indigenous business;
(ii) To maximize local retention of profits; and
(Iii) To increase level of intermediate and capital goods production (FGN, Decree 4, 1972).

With these objectives, it can be stated that the direction of the indigenization policy was to give Nigerians the opportunity to demonstrate their ability to assume ownership, control and management of a decree in 1972 divided industrial enterprises into two schedules, specifying equity participation rates which ranged from 100% in schedule 1 to 40% in schedule 2 in favour of Nigerians. The Decree was amended in 1977 basically to rectify the short-comings of that of 1972. Following this development, some enterprises in schedule 2 were transferred to schedule 1. The 1977 amendment was on the whole much more significant as industrial enterprises were divided into three schedules as against two in that of 1972. Schedule 1 with more enterprises remained exclusively for Nigerians as before while in schedule 2 equity participation rate in favour of Nigerians was increased from 40% to 60%. Schedule 3 stood exclusively to be owned by foreigners or to be jointly owned by Nigerians and foreigners.

The indigenization policy is justified not only by economic but also by social and political considerations. On the economic front, unhampered foreign ownership implies annual repatriation of substantial amounts by way of profits with adverse effects on our balance of payment (BOP) situation. The policy has helped to reduce the amount of profits repatriation to foreign countries and thus help to better BOP.

On the social and political front, the policy has helped to reduce undue foreign domination and interference in formulating domestic policies. As per the impact of this policy on manufacturing companies, it was positive. The policy led to a disproportionately higher equity holdings in companies in favour of Nigerians. On the whole, it can be said that the control

and self-reliant path paved by the 1972 indigenization policy, amended 1977 has been very significant.
Therefore, the policy should be regarded as a benchmark to rate other industrial policies.
Other relevant industrial policies prior to SAP include:

(i) Import Duties Relief Act 1957
(ii) Income Tax Relief Act 1958
(iii) Customs Duties Act 1958
(iv) Customs (Drawback) Regulation 1956
(v) Companies Income Tax Act 1961.

THE PERFORMANCE OF THE INDUSTRIAL SECTOR UNDER SAP

Information obtained from recent surveys and particularly from the various private sector groups clearly indicate that some modest recovery of activity has been achieved in the manufacturing sector sine 1986.
Firstly, manufacturing companies have enjoyed easier access to foreign exchange for the purchase of required raw materials and spare parts, unlike during the import license regime when companies could hardly predict future availability of foreign exchange for their raw material needs. The foreign exchange policy together with the other policies (like trade policy, price deregulation etc) discussed earlier have facilitated increase in industrial output and utilization of installed capacity.
Secondly, many companies and particularly the large ones, have been restructured and expanded their operations to enhance their competitiveness.
Another areas where the industrial sector has responded positively to the various policies is the sourcing of raw materials, especially in such sub-sectors as detergents, grain milling, etc.

MAJOR CHARACTERISTICS OF THE NIGERIAN MANUFACTURING SUB-SECTOR

Some common features of the Nigeria manufacturing sector have emerged and lingered on over the years in

response to the nation's industrial policy framework and overall macroeconomic development. Some of these characteristics are highlighted below:

(i) High Import-dependency: The Nigerian manufacturing sector is highly import-dependent. As noted earlier in the past, the country adopted the import substitution strategy that encouraged manufacturing processes with heavy dependency on imported inputs. The high import dependency was more pronounced in the heavy capital-intensive industrial sub-group. Thus, up to the mid-1980s, it is believed that most industrial group imported over 80 percent of their raw materials and almost 100 percent of their machinery and spare parts. This has continued to constitute a drain on the nation's scarce foreign exchange resources.

(ii) Low Production: The sector has continued to be characterized by low production. For instance, manufacturing share in gross domestic product (GDP) has continued to be low accounting for about 4.8 percent between 1960 and 1967 and average 6.8 percent between 1981 and 2001. It was only in 1982 that the proportion of manufacturing in GDP peaked at 13 percent. Similarly, overall manufacturing capacity utilization has remained low. Any manufacturing enterprises grew behind high protective tariff barrier barriers with the resultant huge profits, average capacity utilization rate for most of post of post SAP-era has been below 40 percent.

(iii) Inward Production Orientation: Arising from the import-substitution strategy adopted earlier, many enterprises in the country were established to produce solely for the domestic market, with the resultant lack of exposure to foreign markets. Even after the adoption of SAP and continuous efforts outward orientation, the sector is yet to make any significant contribution to earnings, accounting for less than 1.0 percent of total exports till date.

(iv) High Cost of Production: Most manufacturing enterprises in Nigeria are high-cost producers due partly to heavy imported input-contents as well as compensatory provision of deficient infrastructural facilities. Empirical findings from CBN surveys. Have shown that in a typical manufacturing cost structure, raw materials cost account for more than ha lf of total cost of operations, the bulk of which is imported. The fluctuating exchange rate of the Naira over the years, has thus compounded high cost profile of local manufacturers and price uncompetitiveness in the export market. Similarly, the private provisioning of basic and essential economic and social infrastructure, such as telecommunication, access roads, electricity and water supply has continued to make cost of establishing and running manufacturing enterprises in Nigeria very expensive.

(v) Low Degree of Backward Linkages: In spite of the country's rich and varied resources base, low degree of usage of local raw materials/backward integration had continued to be a common feature of the Nigerian manufacturing sector. There are low linkages within industries and between them and the rest of the economy, especially agriculture, as most manufacturing activities a re organized principally on imported inputs. This feature which is largely a fall out of the adopted import-substitution industrialization at independence, has been confronted with certain policy initiatives under the SAP and the establishment of the Raw Materials Research and Development Council (RMRDC). In particular, RMRDC was established to support and expedite industrial development and national self-reliance through optimum utilization of local raw materials.

However, arising from the epileptic performance of the core industrial projects that were designated to produce intermediate goods, the effort

towards increased local sourcing of raw material are yet to be fully realized as shown by continuous high demand for foreign exchange for industrial inputs.

(vi) Low Attraction to Banking Credit: In spite of continuous policy strategies to attract credit to the sector most Nigeria manufacturing enterprises have remained unattractive for bank credit. For instance, as indicated in CBN reports, almost throughout the regulatory era, commercial bank's loans and advances to the manufacturing sector deviated persistently from prescribed minima. Furthermore, the enhance financial intermediation in the economy following the financial reforms of the 1990s notwithstanding, credit to manufacturing as a proportion of total banking credit has not improved s significantly, averaging 15.7 percent between 1990 and 1994 and 25.8 percent between 1995 and 2000. Consequently, many manufacturing firms in the country have continued to rely heavily on internally generated funds, which have tended to limit their scope of operations.

(Vii) Dualistic Structure: Nigeria's manufacturing sector is dualistic in structure. On the one hand there are pool of small and medium manufacturing enterprises, constituting about 70 percent of total industrial employment in Nigeria, but contributing only 10 to 15 percent of manufacturing output.

This category of manufacturers are noted for the production of traditional consumer goods, which include weaving apparel, home and office furniture, footwear and other leather products, food products and services like metal working, printing, auto/vehicle repairs and tire rethreading.

On the other hand, there are a few formal modern and large-scale manufacturing enterprises that produce the bulk (over 80%) of industrial output. These are the modern factories, often with multinational linkages, using the state-of-the-art technologies and producing for both domestic consumption as well as for export

markets.

15.3 INDUSTRIAL DEVELOPMENT POLICY AFTER SAP

There is the need, at this juncture to understand what Structural Adjustment Programme (SAP) is all about, and what it seeks to achieve. SAP is an economic policy capable of inducing other policies (including industrial policies) is indeed a revolutionary strategy introduced in Nigeria in June 1986.

i. To diversify the production base of the economy in order to reduce its dependence on the oil sector and import.

ii. To achieve fiscal balance of payment viability over the period;

iii. To lay the basis for a sustainable non-inflationary growth and development within the medium to long-terms; and

iv. To reduce the dominance of unproductive investment in the public sector, improve the sector's efficiency and enhance the growth potential of the private sector.

SAP is commonly referred to as a rational economic policy reform imposed on a country which is on the edge of socio-economic collapse. Given Nigeria's internal and external economic problems, one would be right to say its introduction was timely. Orthodox Structural Adjustment Programme, by its very design and as practiced in Nigeria, assumes that the classical instruments of credit squeeze, exchange rate and interest rate adjustments, control of money supply, trade liberalization, rationalization of all forms, etc could bring improved economic fortune to the country. But it is surprising to note that its impact on various macro-economic variables is mixed. Nigeria's adherence to the tenets of SAP, even though it is one of the IMF recovery policies, has led the Federal Government to create certain SAP-induced industrial policies, namely

a. Interest rate deregulation policy
b. Debt conversion (equity swap) policy
c. The new export policy
d. The new industrial policy of Nigeria (1989).

We will briefly discuss each of the policies.

(a) INTEREST RATE DEREGULATION POLICY

Not until August 1, 1987, Nigeria had a "regulated" interest rate. The Central Bank of Nigeria raise the discount rate from 11% to 14% thus causing the minimum lending rate to be fixed at 14%. It was further increase to 22% (for commercial bank) and 28% (for merchant bank). Economic reasons for deregulation of interest rate include to stimulate foreign capital inflow, induce Nigerians to retain profits, encourage savings, thereby reducing the inflationary pressure in the economy. Under this policy, many small and medium scale enterprises might not be able to operate. Because of high rate, it has been observed that firms are no longer in a position to borrow to finance their working capital and new investments.

(b) DEBT CONVERSION (EQUITY SWAP) POLICY

This is a policy whereby a country's debt burden can be alleviated by the conversion of foreign currency-dominated debts into equity capital in the economy of the debtor's country. A decree to back the policy was promulgated in July 1988. A close examination of this policy shows that it is not devoid of problems. This policy is likely to exacerbate foreign exchange inflow. Consequently, the prospects of manufacturing industries that depend on import machinery and equipment may be dampened. Hence manufacturing companies would be adversely affected.

(c) THE NEW EXPORT POLICY/INCENTIVE

The export incentive that existed before SAP was the retention for own use 25% of export proceed by exporters of non-oil product. This incentives was reviewed upward to 100% after the introduction of SAP.

By far, this incentive is very attractive and it is hoped that Nigerian industrialists will take advantage of it. Also, if the incentive is properly utilized by industrialists, growth in industrial export trade is likely to be assured.

(d) THE NEW INDUSTRIAL POLICY OF NIGERIA 1989

The new industrial policy was introduced on January 14, 1989 to create a new investment climate and mobilize the private sector to take lead in entrepreneurship while government provides the infrastructure and security. This new policy has goals through which its objectives can be achieved include providing greater employment opportunities, increasing exports of manufactured goods, etc. The major tool to enhance employment generation is basically through the promotion of small-and-medium-scale enterprises.
Under the new policy, incentives to industries include: reduction company income taxes, effective protection against import-tariffs, export promotion of Nigerian products etc. Furthermore, the new policy, which replaces the Indigenization Policy of 1977, permitted foreigners, to compete with Nigerians in all other business except those of Banking, Insurance, Petroleum prospecting and Mining.

15.4 PROBLEMS FACING INDUSTRIALIZATION IN NIGERIA

The problems facing industrialization in Nigeria include:
(a) Shortage of Industrial Materials: This problem is as old as industrialization process itself. Though, the level of local sourcing of raw materials by manufacturing industries has increased since the introduction of SAP, the problem of shortage of industrial inputs still persists with that of machinery and spare parts much more severe, this problem may be linked with the neglect of

agricultural production in the previous years.

(b) Infrastructural Problems: The manufacturing companies have been facing the problem of inadequate supply of water, electricity and telecommunication service etc.

(c) Inadequate Marketing and Storage Facilities arising from lack of transportation facilities such as roads, tracks, etc, as well as inadequate supply of electricity.

(d) Lack of Quality Personnel: There has been shortage of highly experienced technical and managerial workers in industries.

(e) Depreciation of Naira Exchange Value: This problem arises from the floating exchange system that has been adopted since the 1980s, and it is making importation of machinery for industrial production difficult.

15.5 SOLUTIONS TO THE PROBLEMS FACING INDUSTRIALIZATION IN NIGERIA

The manufacturing sector provide great prospect for sustainable economic development in Nigeria. The abundance and varied resource endowment can support mass production both for local and export markets thereby diversifying the economy away from the present over-reliance on crude oil. However, these can only be achieved if future policy focus seeks to address the poor state of most enterprises in the sector through urgent remedial actions. These will include:

1. Revamping the nation's deteriorating infrastructural facilities such as roads, electricity, telecommunication etc. Current efforts at rehabilitating the power generating units and deregulating the telecommunications facilities are steps in the right direction. Moreover, necessary steps to privatize these services should be stepped up to ensure greater efficiency.

2. Refurbishing and completing the core industrial projects to facilitate local supply of intermediate products that would facilitate the much-needed backward integration in the economy. Improved local sourcing of raw materials will undoubtedly boost manufacturing and reduce cost of product, thereby making locally manufactured products price competitive both in the local and export markets.

3. Making lending to productive sector profitable and sustainable. This would entail making credit facilities to the manufacturing sector rediscountable and introducing the long delayed industrial credit guarantee scheme, the corollary of the Agricultural Credit Guarantee Scheme (ACGS) to ensure safety and profitability that would attract to the sector.

4. Streamlining and harmonizing the multiple taxes and levies on manufacturing production by the various tiers of the government. The ugly trend of ceiling off manufacturing firms for questionable tariffs and rates, as witnessed in many industrial centers of the country in recent times, is most counter-productive and should be discouraged;

5. Strengthening the business and investment climate through urgent resolution of on-going political and communal crises. Also, the lingering problem of insecurity of lives and properties in the country must be given a frontal attack by adequately equipping and motivating the law enforcement agencies as a means of creating and sustaining conducive environment for existing and prospective investors.

Also, the legal framework in the country must be made transparent and responsive to business needs so as to facilitate prompt conflict resolution, which is one of the yardsticks for determining the level of conduciveness of an economy by foreign investors.

6. Ensuring policy consistency and minimizing policy conflicts. Investment in manufacturing requires long-range planning, which is best fostered by stable policies.

Industrial policy in Nigeria must be designed, reviewed and implemented in such manners that will facilitate and not discourage investment in the sector. Also, the influx of all types of finished and cheaper products into the economy which has been facilitated by our membership of the World Trade Organization (WTO) with the attendant dampened production and demand for locally produced goods, calls for an urgent redress; and promoting manufacturing export orientation beyond mere propaganda and rhetoric. This would involve, among others, reviewing the present export-promotion institutional arrangement with a view to making them responsive and functional. Also, the existing myriad of export incentives, which have remained largely on paper, must be streamlined and made accessible by genuine exporters.

15.6 INDUSTRIAL STRUCTURE, OWNERSHIP AND PATTERN

Industrial structure is often defined in terms of the relative importance of individual industries or groups of related industries within an economy. Once boundaries of individual industries have been agreed on the criteria for measuring their relative importance have to be determined. The most frequent measures of an industry's importance are based on either

Its added value (or net output), expressed in monetary terms, or

The quantity of its inputs (usually labour), expressed in physical terms.

The two measures will give different results to be extent that the net output per unit of labour varies between industries and that industrial boundaries are defined differently. The trends in individual structure by these measures will also diverge if the rate of change in average productivity differs between industries.

The pattern of industrial structure can be studied in terms of a three-sector economy in which economic

activity is classified as:

(1) Primary
(2) Secondary
(3) Tertiary

The primary sector is frequently defined to includes agriculture and the extractive industries; the secondary sector includes manufacturing and construction industries and the tertiary sector includes the services industries. However, departures from this classification system do occur. For example, mining activities are sometimes included in the secondary sector, and the generation of electricity and other public sector manufacturing activities may be included in the tertiary sector. It is important that these discrepancies be taken into account when making comparisons between studies.

The primary concern of studies of industrial pattern is to establish a relationship between the pattern of industrial structure and different stages of economic development.

15.7 MARKET STRUCTURE

Market structure refers to a selected number of organizational characteristics of a market that establish interrelationships between the buyers and sellers of a particular product. Market structure analysis is therefore a study of the organizational features of a market that are believed to have significance for the conduct and performance of firms comprising the market.

The concept of market structure plays an important role in the received theory of the firm where it is employed as an heuristic device describing the market circumstances under which the relevant theoretical models are believed to apply. It is also central concept in industrial economics, received price theory hypothesis, certain relationships between market structure, firm behaviour, and market performance. Market structure is important

because the structure determines the behaviour of firms and that behaviour in turn determines the quality of the industry's performance.

Measurements of Market Structures

We shall, in this section, be examining the meaning and measurement of four basic dimensions of concentration.

(i) Seller concentration
(ii) Buyer concentration
(iii) Product differentiation
(iv) Entry barriers

Market Concentration: Concentration measures the degree of market domination by a few traders. Domination in this context means that of all the buyers and sellers who trade in a single commodity, only a relative few account for the majority of the goods which are bought and sold. Concentration is important and it can mean that the dominant sellers or buyers have market power, that they have the ability to control price. In concept, measures of concentration could refer either to sellers or buyers or to both; however, in practice, market concentration nearly always refers to the level of domination in production or sales. Let us examine figure 3.1.

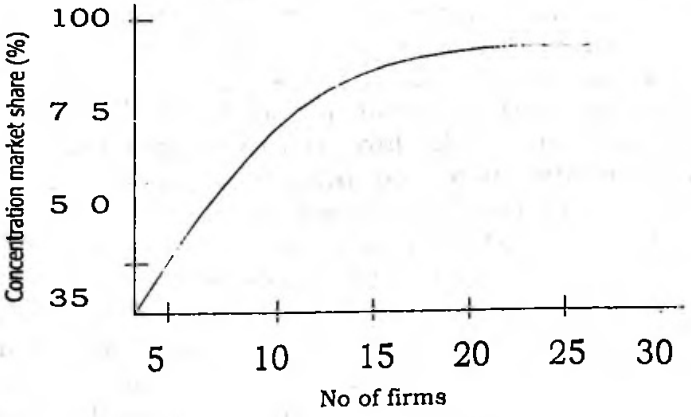


Fig. 17.1 Concentration Curve

Concentration can be represented by the concentration curve, which show the cumulative market share supplied by the firms in the market arranged from the largest to the smallest. Two factors affect concentration viz, (i) the number of firms in the market, and (ii) the relative size of the firms.

The concentration curve shows the cumulative market shares for all the firms in the market ordered by size from largest to the smallest. Therefore, the steeper the slope of the concentration curve, the higher the degree of concentration. Considering the extremes of the market structure, a monopoly would have the highest level of concentration (i.e., 100% of the market supplied by one firm), while a perfect competitive market would have the lowest level of concentration.

Generally, concentration = f(N) i.e., it is a function of the number of firms and of the degree of inequality in their sizes. For a given number of firms, concentration increase with inequality. For a give degree of inequality (assuming all firms in a market are the same size, for example), concentration decreases with number.

Measurement of Market Concentration

Concentration as earlier noted measures the degree of market domination by a few traders. Also recall that the concentration curve illustrates the cumulative distribution of market shares for all the firms in the market, ordered from the largest to the smallest. The concentration curve is a good indicator of concentration because it reflects the two dimensions which affect it the number of firms, and their relative size.

(1) The effect upon the level of concentration of the number of firms in the market may be illustrated with a simple hypothetical example. Compare two markets in which all firms are of equal relative size. The market share of each firms is equal to $^{1}/_{n}$ in both cases, but one market has ten firms while the other has only five (see figure 17.2 below)

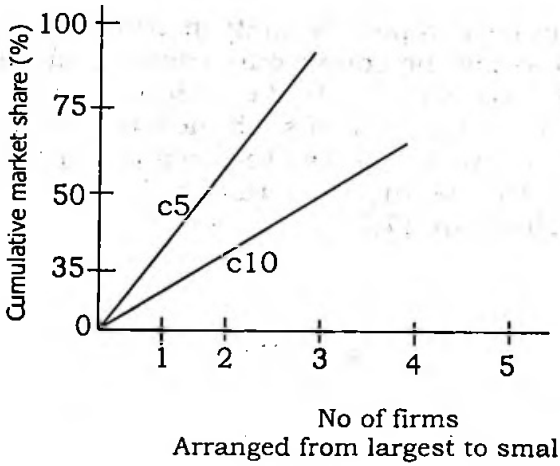


Fig. 17.2 Concentration Curves C5 & C10

Fig. 17.2 illustrates the distribution of market shares in the two cases. As noted before, the slope of the concentration curve is an index of the degree of concentration. Since concentration is affected by the number of firms, we can see that a market with five firms of equal size is twice as concentrated as one with ten firms of equal size. In this case, the concentration curves for both markets are linear, but the slope of one curve equals $^{1}/_{5}$ while the slope of the other equals $^{1}/_{10}$. The market with half as many firms as the other is twice as concentrated as it is.

(2) Effect upon concentration of differences in relative size. Compare two markets in which the number of firms is the same but the size distribution of firms is different. Measures of relative concentration record the degree of inequality in the share of firms producing for a given market. The inequality in share can be recorded in the form of Lorenz curve. A Lorenz curve shows the cumulative percent of market size accounted for by various percents of number of firms producing for the market, cumulated from the smallest. The diagonal line

shows a distribution of complete equality in firm sizes so that the extent to which the Lorenz curve deviates from this line is an indication of the relative seller concentration in a market. One of such measure is the Gine concentration ratio defined as the area under the Lorenz curve divided by the area under the line of equality as shown in figure 17.3

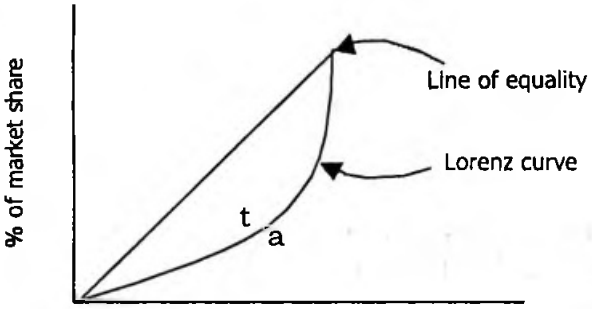


Fig. 17.3 A Lorenz curve

The Lorenz curve is an indicator of relative seller concentration.

Gini concentration ratio (GCR) = $\frac{\text{Area under the Lorenz curve}}{\text{Area under the line of quality}}$

$$GCR = \frac{a}{B}$$

Example of Effect of Relative Size on Concentration

Suppose we have an egalitarian (for short "Egal") market. The market share of all firms are equal to $^1/_n$ the, imagine another situation of where we have a dominant firm market. The market share of the leading firm is roughly three times larger than the market share of any other firm. We can illustrate the situation with the following hypothetical table.

Table 17.1 Firm size inequality on market concentration

Firm by Rant	Firm Market shares "Egal" Market	Dominant firm market	Cumulative market share "Egal" market	Dominant firm market
1	0.20	0.45	0.20	0.45
2	0.20	0.16	0.40	0.61
3	0.20	0.14	0.60	0.75
4	0.20	0.13	0.80	0.88
5	0.20	0.12	1.00	1.00

The question then is, which of the two markets is more concentrated? Considering only the leading firms, the dominant firm situation is more concentrated, and indeed, it is over twice as large as any firm in the market. The concentration for table 17.1 will appear as in figure 17.4.

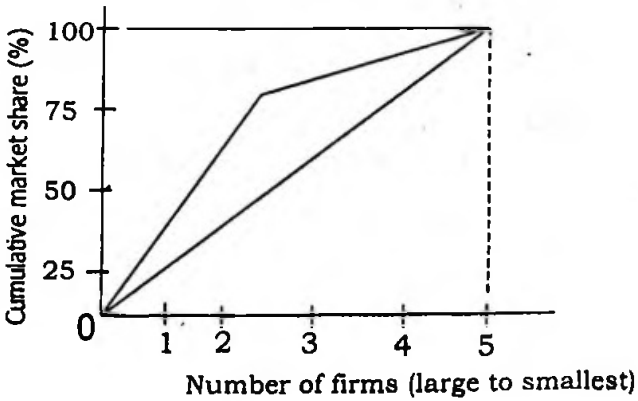


Fig 17.4 Concentration curve for Ce and Cd

Figure 17.4 shows that concentration is affected by inequality in firm size for a given number of firms, a

market dominated by a large firm is more concentrated than one with firms of equal size.

The skewed distribution of the dominant firm market (cd) causes its concentration curve to bend upwards from the linear path of the curve representing the egalitarian market (Ce). Cd lies above CE at all points except at the extremes. The dominant firm market is, therefore, the more concentrated. If two markets have same number of firms, the one in which there is a greater degree of inequality is the more concentrated. While Cd>Ce for the first few firms, the curves would ultimately cross and the order would reverse.

Concentration Ratio (CR)

Concentration ratio is a measure of concentration which reflects both the number of firms and the inequality in their market shares. The Cr (or CRn) in an unweighted sum of the market shares of the n largest firms in the market. A weight of 1 is assigned to the market share of the firm when it is among the largest in the industry and a weight of 0 is assigned to the market share of the firm which does not belong to n largest in the industry. RCn is expressed in percent terms so that values range from a maximum of 100, when the number of firms ≤ n the market to a minimum approaching or when there is a high number of firms and there is little or no inequality. CR4 and CR8 have become the standards for the concentration ratios used in developed and developing nations like Nigeria.

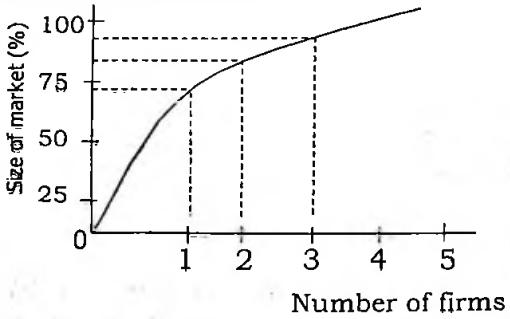


Fig. 17.5 Cumulative CC

The H-index is a measure of concentration which also reflects the number of firms and the inequality in their market shares. The H-index is a weighted sum of the market shares of all the firms in the market. However, the actual weights are determined by the market structure, (the weight assigned to each firm's market share is the particular value of the firm's market share).

$$H = \sum si^2$$

Where H = Herfindahl index

S = Share of market size

H-index is thus the summation of the squares of market size accounted for by every firm producing for the market.

Seller Concentration

Seller concentration refers to the number and market shares of firms producing goods or services for a particular market which is distinguished from aggregate or overall concentration which relates to the number and shares of the total economic activity of firms in an economy. The concentration CC is shown in figure 17.5, there, we can see that the CR which records the percent of an industry size accounted for by a number of the largest firms in the industry is indicated by the height of the cumulative concentration (CC) at a selected point on the horizontal axis.

Buyer Concentration

Buyer concentration refers to the number and size distribution of firms purchasing a particular type of product, service or material.

15.8 PRODUCT DIFFERENTIATION

Production differentiation measures the degree of independence possessed by a seller in the market. By independence we mean that the supplier of a product which is differentiated has the ability to set its price, independent of the prices which competitors have established for their own products. Obviously, monopoly represents the ultimate in product differentiation. There are no substitutes. However, a degree of monopoly, like market power, is possessed by any seller who has a differentiated product.

Production differentiation also measures the degree to which a buyer is attached to a particular product and to the seller who supplies it. By attachment we mean that when we compare the case of product differentiation with the case of homogenous products, i.e., when all products are identical, a buyer will be indifferent between sellers. The choice of supplier will be determined by price if there are many price differences, or by chance if there are not. When the products or the agents selling them are different in some way a buyer will become attached to a particular product or supplier, and the buyer's choice will reflect the presence of a differentiating factor or factors. Product differentiation is to some extent associated with price differences which are evidence of both the seller's independence and the buyers attachment.

Sources of Product Differentiation:

There are significant factors which when present in the background will lead to product differentiation. Product differentiation is affected by conditions on the demand side of the market. These have to do with the characteristics of the buyers including:

(i) Location where they live
(ii) Tastes what their tastes are

(iii) Information how much they know about rival products and the sellers who supply them.

These determine the extent, if any, of the attachment of the buyer to his or her choice supplier. They also determine whether or not the firm will be able to achieve some degree of independence from rivals by differentiating its product. Let us discuss these one after the other.

(i) Location and Product Differentiation: Differentiation can be explained by location and the cost of transportation necessary to supply the buyer. A buyer at point A choose between sellers at S_1 and S_2. Sine costs increase with distance, A choose to buy from S_1 as the cheaper alternative, assuming that S_1 and S_2 are two current plants producing.

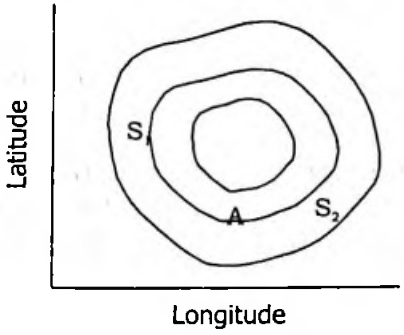


Fig. 17.6: Location and production differentiation

Identical products at identical costs. Suppose the ATC of production was N5 per unit and that the cost of transportation to point A from S_1 is N0.5 per unit while from point S_2 it is N1.50. This means the cost of supply from S_1 and S_2 is N5.50 and N6.50 respectively. Consequently consumers will be loyal to S_1 and product

differentiation will be very strong.

(ii) Tastes and Product Differentiation: Differentiation can be explained by product characteristics and consumer tastes. Location in the product space is defined for a buyer at A. since utility decrease with distance, A will choose to buy from S_1 as the preferred alternative. Figure 17.7 explains this.

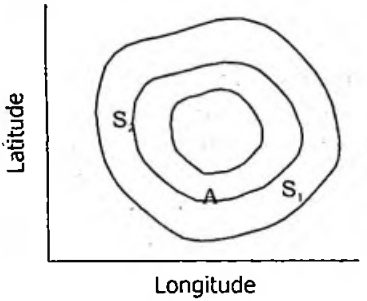
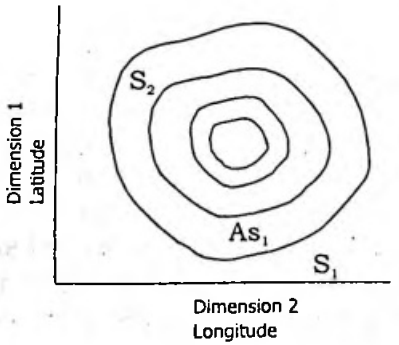


Fig 17.7: Taste effect on differentiation.

(iii) Information and Product Differentiation: Differentiation can be explained by information or the lack of it. Location in the space is defined relative to ability to obtain information about different product. Since search costs increase with distance, A will choose to but from S_1 or S_2 rather than from S_4 or S_5. This is illustrated in figure 17.8.



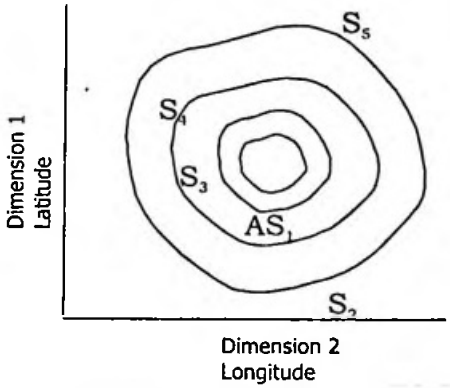


Fig. 17.8: Information effect of differentiation

MARKET EFFECTS OF PRODUCT DIFFERENTIATION

Product differentiation is a characteristic of demand. The important effect of production differentiation can be illustrated with the aid of demand curve, assuming that the demand for products can be expressed as function of price with income tastes and information taken as given. We also assume that set of differentiated products is fixed. Now consider two cases:

(i) Vertical differentiation (VD)
(ii) Horizontal differentiation (HD)

VERTICAL PRODUCT DIFFERENTIATION

Vertical differentiation describes a market situation in which the products vary in quality and in price accordingly. Let us analyze the process by considering the demand curve (D_1) for a differentiation product as shown in figure 17.9.

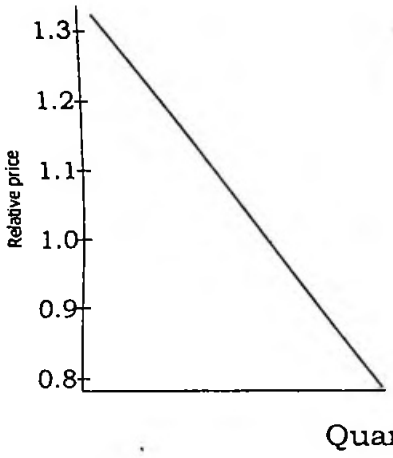


Fig. 17.9: Demand curve for product differentiation

Product differentiation may provide the seller the power to control price. The demand curve D_1 demonstrates this dimension of product differentiation: a high quality brand may command a price significant higher than the average for the market. We note (i) price of the product is expressed in relative terms, and (ii) price is shown as an index number which compare the price of a single product to the standard or average price of goods in the market. If the total revenue (TR) for all brands is R and if the number of units sold by all firms is equal to M, the average price is R/M (i.e. AP = $^{TR}/_{M}$) and the index number for such a price will be set equal to 1.0. The price of an upscale product will be some multiple of R/M and its relative price will be indexed accordingly.

The demand curve indicates:

(i) How consumers value the particular product design (or location or image)

(ii) The gradient or slope of the demand curve indicates how strongly attached the consumers are to the particular product.

(iii) The elasticity of demand finally related to its gradient indicates how much market power the seller has over price.

HORIZONTAL PRODUCT DIFFERENTIATION (HD)

Horizontal product differentiation describes a situation in which products differ in popularity quality is not the issue in this case. The differentiated product contains unique attributes such as (i) the product's image, (ii) the product's appeal.

The degree of product differentiation is indicated by the breath of the product's appeal.

If the total sale for all brands in the market is Q_1 and the number of brands in the market is N, the average brand will sell

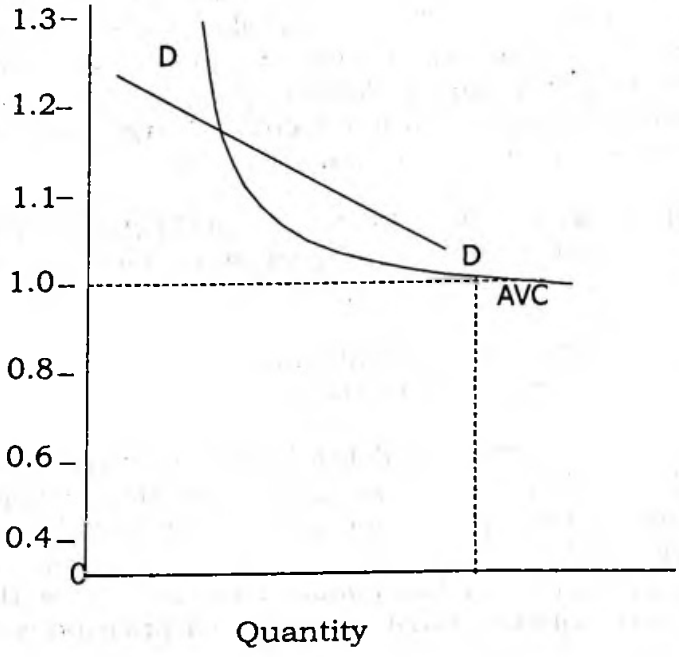


Fig. 17.10: Demand curve for a leading brand

Q/N, and the index number for such a quantity will equal 1.0. Thus, the leading brand in the market will sell some multiple of Q/N and its relative quantity will be indexed accordingly. At this point, we need to ask, what are the implications of horizontal differentiation? Does the leading brand have market power?

In figure 17.10 the demand curve (D_1) was drawn with a less steep slope. We assumed that the firm has only a weak ability to control price. The leading brand has a strong market position we have assumed that the leader sells more than twice the quantity of the average brand in the market when all prices are equal; that is, when the leader's relative price is equal to 1.0. In the diagram, we showed a declining cost curve (AVC) as a function of the index quantity. Let us assume that is $Q_1 = 1.0$, the firm will break even. If the firm supplies the leading brand, it will make a substantial profit. Thus, horizontal differentiation may yield extra profits, due not to higher prices but rather to lower costs. Market position may just be as profitable as market power.

MEASUREMENT OF PRODUCT DIFFERENTIATION

Two most popular approaches to measure product differentiation are:

(i) Seller independent; and
(ii) Buyer independence

(i) Measures of Seller Independence: The measure of seller independence gauge the degree to which the supplier of a particular product or brand is able to control its price. Its is an aspect of vertical differentiation. Let us consider two measures, the price elasticity of demand, and the relative price index. These

are illustrated in table 17.2 for the market of regular sugar an inexpensive, nondurable consumer good.

Table 17.2: A hypothetical measures of differentiation for brands of regular sugar:

Brand	Price (price elasticity)	Relative Price
A	- 2.32	1.072
B	- 4.60	1.037
C	- 0.21	1.050
D	- 4.23	1.044
E	- 1.63	0.897

Seller of brand C is favourable placed to exploit i.e. having the independence to control price. With such an inelastic demand (-0.21), the price of brand C could be increased while total sale would be slightly affected. In relative terms, quantity would fall only by one-fifth as much as the rise in price, with the result that total revenue would rise sharply.

From the relative prices, it would appear that there is little vertical differentiation in the markets for regular sugar the highest price brand sells for a higher percentage over the average for the market, while the lowest price brand sells at a lower percentage.

(ii) Measures of Buyer Attachment: the measures of buyer attachment gauge the degree to which the consumer is bonded to a particular product design or brand (and to the seller of it). It is one aspect of horizontal differentiation which is based upon the behaviour of individual consumers and measure of loyalty in terms of the probability that the individual routinely repeats the purchase of a product: This is shown in table 17.3.

Table 17.3: Buyer attachment indication: (hypothetical data)

Brand	Rank 1990	Rank 1992
Coke	1	1
Fanta	2	4
Mirinda	3	6
Pepsi	4	2
Seven-up	5	2

The rank of 1990 and 1992 for Coke is 1. This shows that the buyer is attachment to Coke with a traceable probability.

15.9 ENTRY BARRIER

Entry barriers may be defined as obstacles that prevent new firms from engaging in the production and sale of products in market. Inter alia, they enable existing firms to obtain larger profit margins on their sales than would otherwise be the case without attracting competition from new entrants. The obstacles take four main forms.

(i) Legal obstacles: These include patent rights or the forms f legal protection from new entrants into the market.
(ii) Buyer loyalty: To product brands of established firms, reinforced by the cumulative impact of advertising.
(iii) Absolute cost advantages, where the cost of established firms are lower than those of potential entrants at a comparable scale of output.
(iv) Economics of scale in production, which discourage new entrants because of
(A) high initial capital requirements for an economic level of production, and
(B) risk of substantial price reductions following entry, resulting from the increase in total supply on the market.

15.10 DETERMINANTS OF MARKET STRUCTURE

Studies have shown that the factors underlying differences that exist between the structures of different markets and changes over time of the structure of many individual markets particularly in relation to seller concentration ratios in an economy are due to the interplay of scale economics, market size and growth rate, government policies, merger activities by participating firms, and chance factors. Similarly, changes over time in the structure of particular markets are probably the product of the following.

(i) Technical changes resulting in product and process innovations.

(ii) Long-term changes in demand and supply conditions.

(iii) Government policy changes in such matters as monopolies, mergers and restrictive practices, patent protection, and import controls.

(iv) Chance factors such as interruptions in suppliers.

(v) Corporate policies of establishment firms and new entrants.

Review Questions

1. What is industrial economics?

2. What are the problems facing industrialization in your country?

3. To what extent can you say the industrial policies introduce in your country have achieved designed objectives?

4. Explain the following:
   (a) Seller concentration
   (c) Buyer concentration
   (d) Product differentiation
   (e) Entry barriers

5. What are the determinants of industrial growth?

CHAPTER SIXTEEN

INTRODUCTION TO URBAN ECONOMICS

16.1 Meaning of Urban Economics

16.2 Definition and Growth of Urban Centres in Nigeria

16.3 Migration, Urbanization and Rural and Urban Poverty

16.3.1 Rural-Urban Migration

16.3.2 Social Economic Effect of Migration

16.3.3 Urbanization and it's problems

16.3.4 The Impact of Localization of Firms on Urban development

16.3.5 The Problems of Housing and Transportation in Nigeria Urban Centres

16.3.6 Government Policy on Housing

16.3.7 Solution to the problems of Housing in Nigeria

16.3.8 Transportation in Nigerian Urban Centres

16.3.9 The Problems of Transportation in Nigerian Urban centres

16.3.10 Government Policy on Transportation
Review questions

INTRODUCTION TO URBAN ECONOMICS

16.1 Meaning of Urban Economics

Urban economics may refers to the study of the growth, functions, characteristics and socio-economic problems of urban centres. That is, it is the study of the causes of growth, of urban centres and the socio-economic problems associated with them.

Urban economic is basically rooted in microeconomics, and it is usually based on three strands of interest, namely"

(i) An industry in location and localization of industries. This is important because, it provide means of explaining why some economic activities are located in places where population is dense, or where there is a particular raw materials, etc.

(ii) The concern with the welfare economic problems posed by the growth of urban areas, e.g. congestion, pollution, housing, public transport, and more recently urban unemployment and poverty.

(iii) The gradual development of a theory of land used and urban land rent policies due to much pressure on the land, and a lasting solution to the problem of rural depopulation.

16.2 Definition and Growth of Urban Centres in Nigeria

The definition of urban centre varies from country to country and from time to time. This is because of the variations in the criteria used for its definition.
According to the United Nations definition which Nigeria

adopts a settlement become urban if it has no less than 20,000 inhabitants.

In 1890, there were only 25 urban centres in Nigeria. This figure rose to 56 in 1953 (a period of 63 years). Between 1953 and 1963 (a 10 year period), the number of urban centres in Nigeria grew astronomically by about 228.6% from 56 to 185, due principally to the creation of regions and independence.

Similarly, the total population in urban centres rose by about 240% between 1890 and 1953 from 0.94 million to 3.2 million. It increased by about 236% between 1953 and 1963 from 3.2 million to 10.75 million.

In Nigeria, during the pre-colonial time, a settlement was called urban is a chief lives there or it is a seat of power and authority rather than an agglomeration of two or more settlement.

Even in the colonial times, most definitions of urban centre used administrative status and/or size, partly because there are generally insufficient data for definition based on functional criteria, such as the proportion of labour force engages in non-agricultural occupations.

In the area of evolution it is observed that the determinants of growth and development of urban centres varies with regions.

In the north, urban development began in the medieval period and evolved in relation to the needs of the trans-Saharan trade. At that time, the urban areas showed the administrative structure of the north.

In the West, urban development also dated back to the

medieval times, but have been primarily influenced by trading relationships.

In the East, there were few urban centres before the impact of the British and most are colonial or post-colonial creations, especially along the railway between Port Harcourt and Enugu.

16.3 Migration, Urbanization and Rural and Urban Poverty

The situation in urban centres as well as rural areas in Nigeria is a product of many circumstances. The urban centres are the principal places in which the country's economic activities have been promoted. Some policies that have been put in place to support the growth of industries and services have been determined to rural development so that the towns which are the beneficiaries of these policies are attraction for migrants and thus a major cause of rural-urban migration.

Migration has been a prominent feature of human life from the earliest time. Many of the great migrations of history have mostly been and are still been promoted by economic reason.

Migration is the movement of people, including their residences, from one place to another for a substantial period of time.

Men have traveled in search of new lands to exploit economic resources. The desire for economic betterment induced many Europeans to cross the Atlantic Ocean to the U.S.A. It also caused the migration of Englishmen to common wealth countries (including Nigeria).

Today, the same economic motives have been responsible for rural-rural migration, urban-urban migration, urban-rural migration and rural-urban migration in Nigeria.

16.3.1 RURA-URBAN MIGRATION

This movement which involves the flow of ruralists in large volumes into the urban centres is the most intentional of all migrations, with economic motives as the main driven force and the, the major cause of urbanization. The major causes of rural-urban migration include:

(i) Employment Opportunity in Urban Centre: The concentration of manufacturing and service industries in the urban centres has created opportunities for wage employment. The youths therefore drift into the cities to take advantage of these employment opportunities in the urban areas.

(ii) Pressure on Lands in Rural Area: In the rural areas, natural increase in population has brought about pressure on rural lands and other environmental resources, which lead to their exhaustion and cause the ruralists to move away to urban areas.

(iii) Modernization of the Agric Sector: The modernization of the agric sector which lays emphasis on the use of machines could cause rural-urban migration, since agricultural mechanization may lay off some labourers.

(iv) Provision of Social Amenities in Urban Centre: Urban centres have advantage of attracting amenities like electricity, pipe borne water, school, etc, thus attracting people from the suburbs and rural areas to enjoy these amenities.

(v) Parental Influence: The relative state of independence in the urban centres is conducive for youths in search of staying out of parental control. Thus the youths migrate in their numbers to urban centres.

(vi) Glamour of Cities: Some ruralists move to urban centres to watch the beauties of the cities, including tarred roads, stadia, airports, high rising, etc.

16.3.2SOCIO-ECONOMIC EFFECT OF MIGRATION ON:

(a) Rural Areas:

Negative: Migration lead to depopulation in the source region thereby resulting in a change in the spatial distribution of people. The movement is known to have an adverse effect on rural agricultural productivity. It creates an acute shortage of labour as young and able men and women move into the cities. It results into serious deterioration in the rural social structure as well as disorganizing the stability of the rural areas. Schools become empty and taxation suffers adversely as payers are not easily to come by.

Positive: On the other hand, rural-urban migration results in the remittance of capitals by migrants to their homes. It also results into easy diffusion of innovations in the rural areas.

(b) Urban Areas:

Negative: In urban areas rural-urban migration usually lead to unemployment, underemployment, social decays, such as crime, armed robbers, broken marriages, prostitution, etc. It also creates urban congestion leading to rapid depletion of resources and amenities in the cities. Other problems have to do with food scarcity, inadequate housing, transportation problems, etc.

Positive: Rural-urban migration has some advantages on urban centres too. In the first place, there is the assurance of un-interrupted supply of labour. The incoming migrants constitute a consumption base for domestic production which in turn stimulates industrial growth.

Besides, taxation is readily realized. Lastly, there is the easy adoption of new trades, skills and self-employment ventures.

Causes of Rural-Urban Migration

There are a number of causes of reasons why people migrate. They are thus:

1. Employment Opportunities: Many people migrate to look for better job opportunities and improve their standard of living. Rural-urban migration is partly due to the existence of greater employment opportunities in towns and cities. Most towns have many industries and commercial activities, which provides employment. Also, average income is higher in towns than in rural areas.

The types of educational system in West African countries (which was primarily grammar-oriented, until recently) does not produce people who are willing to stay on the land. They do not wish to farm and prefer white-collar jobs. They look upon farming as a dirty job. They, therefore, migrate to the towns where these jobs exist.

2. Education: People migrate for the purpose of studying in educational institutions in other places. Many people leave the rural areas with fewer educational opportunities to the urban centres with better-equipped educational institutions.

3. Social Amenities: This factor is particularly important in rural-urban migration. Life in the town is usually more attractive than life in the rural areas. The urban centres have more social amenities such as electricity, pipe borne water, cinemas, hospitals, and good means of communication etc, which makes life worth living.

4. Religious/Political Crisis: People sometimes migrate to escape from religious/political crisis or persecutions. People usually want to avoid areas of religious and political turbulence. They, therefore, emigrate from such areas to other places, which are

relatively quite and secured.

5. Desire for Change of Environment: After staying in a particular place for a long time, people may get bored. They may, therefore, move to another place to settle just for the sake of change.

6. Availability of Urban Relatives: People sometimes migrate to the urban centres to join other members of the family or other relatives. For example, a newly married lady whose husband lives in a town is likely to move to that town to join the husband. People could also migrate to another country to join other members of their families.

7. Weather and Climate: Migration could be brought about by the desire to escape from adverse weather and climate conditions and settle in areas, which are more pleasant. Some people move from the very hot and dry areas to places, which are relatively cool. For example, some people migrate to the Jos area because of its cool weather condition.

8. Adventure: Some people migrate for the mere sake of adventure. There are some people who are daring and like taking risks. They would just take a plunge into the unknown. They move to other places to settle, expecting new excitements and challenges.

9. The Social Burden of the Extended Families: There are some people who got to other places to live to escape the burden posed on them by members of the extended family. Such people migrate to the towns and many only go home occasionally or in some cases, not at all.

10. Commerce: This particularly affects the rural-urban migration. Urban centre have a lot of commercial activities (in particular, trading activities). This enables people to engage in trading or to purchase a variety of their requirement with ease. Others include banking, etc, people migrate to towns because of such commercial activities in them.

18.3.3 URBANIZATION AND ITS PROBLEMS

Urbanization is a process during which a settlement grows from hut (or village) to towns and cities. In order words, it is a process during which both physical structure and economic activities settlement change and their changes from of a primary to secondary and/or tertiary as well as its functions.

During urbanization, the local buildings in the form of huts, and thatched houses give way to the modern ones in form of flats, bungalows, upstairs, etc, and the economic activities changes from farming, hunting, fishing, to commerce, transportation, banking, administration, etc. The factors responsible for these changes include migration, increase in birth rate and decrease in death rate.

It is important to mention that as settlements grow to become urban centres, there are a number of problems bedeviling it. These include:

(i) Increase Pressure on Infrastructural Facilities: In Nigeria, the rate of provision and expansion of infrastructural facilities such as: good roads, housing, electricity, piped water supply, schools, hospitals, etc, do not match with the scale and rate of population growth.

In addition to increase in population, there has been increase in recent times, in the number of industrial establishment around the cities. Many of the new factories where consumer goods like plastics, bear and various fruits drink, were produced, required great amount of water, electricity, etc, than domestic uses.

(ii) Increase Dependency Ratio: In urban centre many children are depending on their parents who are employed in the formal sector where (parents) cannot

call on them (children) for direct and regular assistance in the their (parents') occupation. This goes on to increase dependency ratio. and unless the parents' spendable income is increased, the result is making the parent poorer in the long-run.

(iii) Unemployment: Unemployment is one of the major problems confronting Nigeria in recent times. It is to a large extent an urban phenomenon, even though it has its root in the rural area.

A major characteristics of urban unemployment is that most of the unemployed are young school leavers or drop-outs, who are new entrants into the labour market with hardly any professional training or experience.

(iv) Increase Poverty in Urban Areas: Various conditions in the urban areas such as rapid urban population growth, unemployment, high cost of living, luxurious temptations, etc, contribute in various degrees to impoverish urban dwellers, with a disproportionate of the burden falling on children (as manifested in child labour) and women.

16.3.4 THE IMPACT OF LOCALIZATION OF FIRMS ON URBAN DEVELOPMENT IN NIGERIA

1. Heavy concentration of firms in urban areas has provided employment for both skilled and unskilled workers. Recruitment of required skilled labour is possible from other industries. For example an accountant from a nearby factory can be employed on part time basis to lecture in a nearby University. It has further lead to the development of other subsidiary firms. Industries such as hotels, banking, insurance service, estate consultancy etc, have sprang up and provided services and additional employment opportunities. Other subsidiary firms will engage in

either use the waste product of the main industry as their source of raw materials or help in the marketing of finished products of the mother industry. This will lead to more productivity.

2. Localization of firms has improve the living standard of urban settlers and enhanced their income, which create greater demand for goods and services and increased the level of productivity.

3. Another area where localization of firm could have significant impact is in acquisition. Most firms embark on on-the-job training for their staff to improve their efficiency and productivity.

4. Abundant infrastructural facilities, such as electricity, water, schools, hospitals, etc are provided in urban areas as pull factors towards industrial concentration and this enhances the development of the area. Localized firms combine their resources together in order t o provide joint infrastructural facilities such as recreational facilities, school for the children in the environment, assist the community in providing roads, electrifications and hospital among others.

5. Localization has lead to invention, innovation and technical progress. Innovations pre-dominantly occur as a result of interactions. Firms pull their resources together to undertake a common research so as to improve their productive capacity.

The efforts to improve the standard of living of man through the concentration of firms have also resulted into chronic problems, which have bedeviled many poorly planned cities.

1. During the period of economic depression, localization of firms leads to mass unemployment s a

especially of unskilled labour. As urban centres expand, its disutility becomes more manifest. Some of the general problems that are not planed and cannot be controlled include over crowding, poor and sub-standard housing, development of slums, environmental pollution, diminishing open spaces and a host of social aberrations. As a result of this unhealthy situations many of the inhabitants develop phobias.

2. Another major problem associated with localization of firms in urban centres is congestion and conurbation. As the populations of urban settlers keep increasing, the existing facilities can no longer cope with the increasing demand. Traffic flow and accidents constitute the real cankerworm of the city. The traffic situation in Lagos is one of the experiences that cannot be adequately described in words.

3. Heavy concentrations have social effects that are harmful such as crime and prostitution.

4. Since rural areas continue to witness acute shortage of labour for agricultural production, prices of available foodstuff in the urban centres has increased, rents on houses have gone up because of increased demand for more accommodation.

Other negative impact of localization of firms include:

5. Uneven development between rural and urban areas.
6. Environmental pollution
7. A target during war.

16.3.5 THE PROBLEMS OF HOUSING IN NIGERIAN URBAN CENTRES

Nigeria's housing problems like those of other developing countries is essentially in urban centres. These problems are as follows:

i. Land: Land in question constitute a major problem in home ownership or housing development. The degree of accessibility in terms of availability and cost remain a big challenge. The cost of urban land is a big discouragement to urban poor. Only marginal land, with no document and infrastructure at the periphery are available for the poor to build on. This has resulted into urban sprawl and housing development that are not qualify as homes. The cost of processing title document is exorbitant and also time wasting. Cost of urban land and documentation in most cases is about half of what is required for housing development.

ii. Indiscriminate allocation of building plots as revealed by the present probe set up by the Ministry of Federal Capital Territory for example, also constitute a problem in urban development.

iii. Cost of Construction and Income: Since cost or price is a function of demand and supply, the cost at which the housing reach the market will go a long way to determine affordability. Where per unit cost is abnormally high as we have today, the simple implication is that few people will be able to afford it. The limited finance will not be able to spread around the potential homeowners.

iv. High Cost of building Materials: The rising cost of building materials will only make the possibility of owing a house a dream for many urban dwellers who under conditions of stable prices could have been able to build house of their own.

v. High Rent: Most people in urban centres live in rental accommodations. This is because of the land competition, high cost of building materials, etc. These problems resulting to increase in rent which average income workers often pay as much as 60% of their monthly income as rent as happened in Lagos, Port

Harcourt, Ibadan, Kaduna, etc.

vi. Construction Industries: The absence of large real estate development companies with access to the relevant technology and financial muscle to developed cheap on mass-scale for the urban poor bring a drawback to housing delivery system in the urban centres. The effect of this is the acute shortage of accommodation for the urban population.

vii. Within the urban centres, parcel of land were allocated among alternative potential users on the basis of the relative ability of those users to outbid their competitors for a chosen site. The successful bidders for slightly less accessible land are the developers of the tall residential building (skyscrapers), multistores apartments. This has pose a lot of inconveniences and wasting of efforts (energy) in getting up to such apartments, particularly when there is no light to operate the lift.

16.3.6 GOVERNMENT POLICY ON HOUSING

One major component of the construction industry in Nigeria is residential construction (Housing). As a matter of policy, the government's approach to increasing residential houses is to provide both land and building materials at reasonable prices. A part from the provision of housing to its servants, some of the state governments as well as the federal government have housing corporations or boards which either build houses for sale to the public or loan out money to government officials to build houses of their own, and also through federal mortgage banks, individual, group and private investors build houses and dispose it out to people. Example, the Kano State Housing Estate a t Kundila area of Kano City, 2004 Housing Estate in Lagos, and Games Village which were disposed recently by the Federal Government of Nigeria.

16.3.7 SOLUTIONS TO THE PROBLEMS OF HOUSING IN NIGERIA

Housing problems have not only remained largely unsolved, but have even become much worse. Rising cost of building materials, such as cement, iron pipe, rods, roofing sheets, and water toilet basins have continued to soar. The situation calls for government prompt and positive intervention in these ways"

Government should ensure that the flow of funds into the housing sector is not hindered through improper budgetary allocation, misappropriation of public funds, and malfunctioning of the housing finance system.

The construction of low-house by government specifically for low-income earners will assist significantly in ensuring their access to decent housing in our urban centres.

Where possible, government should give building materials to the people at reduce prices. This will reduce the cost of building houses.

Government should sensitize the private sector to remove the existing constrains in housing delivery experienced by private entrepreneurs.

Government should also harness for the channeling of physical development loans (housing, transport, etc) to the low-income earners to enable them own their personal houses.

Government should increase its investment and modernize the urban transportation sector. Well developed and efficiently managed public transportation in the urban centres will, for instance, help to reduce the number of privately owned vehicles plying the

streets, the long queues of traffic hold ups and pressures on parking space or even the total demand for petrol.

Government should embark on metro, underground rail line network in cities like Lagos, Ibadan, Port Harcourt, Kano, Kaduna, etc, to reduce the on-line transport problems in the urban centres.

Government should encourage small-scale industries in the rural areas, thus encouraging economic activities in the rural areas as well as discouraging rural-urban drift. The social status of the rural populace will be changed. Consequently, inhabitants facing problems of housing and transport in urban centres will be attracted back to the rural areas to be part of work force in such rural industries, therefore, the urban social problems which include transportation and housing would be reduced.

16.3.8 TRANSPORTATION IN NIGERIAN URBAN CENTRES

Transportation which in ordinary sense involves the movement of people, goods and information from one place to another, is just as old as man. Transportation is a necessary ingredient of nearly every aspect of economic and social developments. It plays a key role in getting land into production, in marketing agricultural commodities and in marketing forest and mineral wealth accessible, in the development of industries, in the expansion of trade, the role of transport cannot be overemphasized. The mode of transport include:

Rail

Historically, railways remain the nation's largest transportation carrier, within the island of Africa especially during the colonization era. Railroads are one of the most cost effective modes of shipping carload. Quantities of bulk product (coal, sand, mineral, forest

products and farm products) are transported over long distances. Its merits include economy of cost, frequency of service, monopolistic position as rail tracks cut across hinterlands and agricultural product concentrated areas. It has its demerits in the sense that it incurs high operational cost and heavy engineering components tat pose problems of continuity as against the highway transportation.

Highway

Highway transportation has expanded rapidly since the end of the Second World War. The rapid growth in the automobile industries has resulted to greater flexibility door to door operations and greater speed and flexibility as against railways in comparism. They account for the largest portion of intercity transportation. Trucks are efficiently made for transportation for short hauls of high value merchandise. Their rates are competitive with railways rates in most cases and it can offer faster services over a short distance.

Water

Water is the oldest form of transportation. The originally sailing vessels were replaced by stream-boat in the early 1800 and by power in the 1920's. A distribution is generally made between Deep water and Navigable inland Water Transportation. The major advantages of water transportation is its ability to move extremely large shipments. And is very low in cost for shipping bulky, low, value, non perishable products such as sand, coal, oil and metallic ores. Its demerits is that it is very slow or the slowest of all modes.

Air

This is the newest and the most glamorous and far the least utilized mode of transportation. The glamour of airfreight lays in the speed with which a shipping can be transported, although airfreight rates are considerable

higher than rail or truck freight rates, airfreight is ideal where speed is essential and distant markets have to be reached, among the most frequently air-freighted products are perishables (e.g. fresh fish, cut flowers and high value items e.g. technical instrument, jewelry etc). Its restriction relates to the volatile nature of air transport and limitation posed by point of landings, which are restricted airports.

Pipeline

Pipelines are specialized means of shipping petroleum, coal and chemicals from sources to marketers. Pipeline shipping of petroleum product is less expensive that rail shipment, although more expensive than waterway shipment. Most pipelines are used by their owners and least variable costs. Its limitation could be only when there is need to change over products transported.

In choosing a transportation mode for a particular product, shippers consider such criteria as speed, frequency, depart ability. If a shipper seeks speed, air and trucks are the prime contenders. It the aim is low cost, then water and pipeline are suitable.

16.3.9 PROBLEMS OF TRANSPORTATION IN URBAN CENTRES NIGERIA

Despite the points highlighted above on the importance of transportation, the following are some problems facing it in urban centres.

i. Land Use and Aesthetics: There is always the need to expand the capacity of urban transportation facilities. With the increase in population, such expansion usually requires more land for freeways, rapid transit lines, parking space and garage. With the continued urbanization, more land is required within the town and at times some of these highways create

barriers. The beauty of the environment is then destroyed and land or other development is lost to transportation.

ii. Accidents: One of the most disturbing by-products of urban transportation is injury and loss of life. In 1995 for instance, over 8000 persons lost their lives in Nigeria through auto related accidents in urban centres with many sustained injuries, which may be serious or minor. Heavy truck which are highly vulnerable to accident since they carry highly inflammable and volatile materials which can spill all over the place causing accidental deaths are more pronounce in our urban centres today.

iii. Energy Consumption: Energy consumed in the course of operating transportation system in the urban centres is quite enormous. The consumption of fuel in various sorts is an example of a cost of transportation, which is often viewed as improperly measured by the price of fuel. Energy consumed in operating transportation system in the urban centre is creating a lot of concern because the world's supply of fuel, oil amongst is limited and at the present rate at usage it may be depleted within the next few decades.

iv. Vehicle Emissions/Combustion: The congestion of motor vehicle in urban centres resulted in mass combustion and emission of evaporative hydrocarbons occurring through the fuel system. Majority of the urban vehicles are not duly serviced, this resulting in incomplete combustion of hydrocarbons which produce carbon monoxide and carcinogen which are generally toxic and hazardous to health. The poor and the pedestrian (who constitute the majority) tend to be the most affected by the rising degradation because they are more likely to walk than to ride private air-conditioned vehicles and they are more exposed to obnoxious and toxic fumes and lead (PB) which contaminated food in

open air restaurants mostly patronized by the poor.

v. Noise Pollution: The noise from traffic constitute another problem particularly in urban centres. Traffic noise comes from various sources such as the engine, exhaust, horn, tires among others. The noise is disturbing and annoying when it is above the acceptable maximum level. It disturbs concentrations at work and conversation. Domestic life like sleeping and relaxation are also disturbed by noise.

vi. Dislocation and Relation: Most transportation facilities require the acquisition of property for right way. When property is taken homes are removed, families are displaced, business are displaced, public facilities (parks, cemeteries, etc) are removed and space are depleted. These problems are more acute where the construction of urban highway is concerned.

Others Include:
- Poor condition of urban roads
- High transportation fares
- Inadequate spare parts.

16.3.10 GOVERNMENT POLICY ON TRANSPORT

The major objective of government transportation policy has been geared towards meeting the demands of the economy with a minimum expenditure of resources. Government policy on transportation was first laid down in Sectional Paper No. 1 of 1965 entitled "Statement of Policy on Transport". Government, according to this statement, would pursue coordinated development of various forms of transportation by concentrating on developing those modes, which are capable of carrying persons and goods at lowest cost per unit or service. This policy was to be pursued through a combination of administrative regulations, suitable traffics, use of new

technology and direct investments in this way, transportation policy will promote economic efficiency as it smoothly integrates the inputs and output markets in the country, ensures increased safety and provides better service to those who use the transportation network. Public policy in the all development plans since independence, has aimed at investing in modes of transport to meet the needs, forecast traffic requirements and to induce new flows of good and services and opening up ports of the country.

Various state governments on the other hand, formulate and execute their transport policy, which was aimed at easing the transportation problem within and outside their states, by providing Mass Transit Buses owned and control by government and given buses on the basis of loan to the general public to operate transport business in their various states. Though, in this case, even federal government provides Federal Urban Mass Transit, buses in various cities especially in Federal Capital Territory and other major cities. Example of the state government that gives buses on the basis of loan to the public is Zamfara State Government through Zapa Lion Scheme.

Revision Questions

1. What are the causes and effect of rural-urban migration in your country?

2. Identify and discuss the problems facing transportation and housing in urban centres of your country, and how can these problems be solved?

3. Urban poverty is rooted in rural areas. Discuss

CHAPTER SEVENTEEN

17.0 INTRODUCTION TO INTERNATIONAL ECONOMICS

17.1 Meaning of International Economics

17.2 Theories of International Trade

17.3 Differences Between international and Internal Trade

17.4 Reasons or Basis For International Trade

17.5 Restriction to International Trade

17.6 Reasons for The Imposition of Trade Restrictions

17.7 Balance of Payment

17.8 Causes of deficit Balance of payment

17.8 Solution to Deficit balance of Payment
Review Question

INTRODUCTION TO INTERNATIONAL ECONOMICS

17.1 MEANING OF INTERNATIONAL ECONOMICS

It is an area of economics which deals with the study of the economic relationships between different countries. In other words, international economics is the application of economic theories in the study of how countries relate with one another, in the areas of international trade, aids and grants, borrowing etc.

In its narrow sense, international trade is the trade in tangible goods like cars, cocoa, maize, etc.

But, buying and selling of physical goods is accompanied by services. Thus, in its broader sense, international trade refers to the sale of purchase of goods and services between government and peoples of two or more countries.

Central in the study of international economics include international trade and balance of payment as well as international economics institutions.

17.2 THEORIES OF INTERNATIONAL TRADE

International trade exists at three levels, namely:

(I) Bilateral Trade: This is the trading agreement in which two countries exchange goods and services.

(ii) Multilateral Trade: This is the type of trading arrangement in which there are more than two countries exchanging goods and services. This would encourage division of labour and increase the total volume of world output trade.

(iii) Globalization: This is an advanced level of multilateral trade which involves free flow of goods and services across international boundaries (see chapter 20). There are several theories of international trade. They are:

(1) Absolute Advantage Theory: The absolute advantage theory was propounded by Adam Smith (1723-1790). The theory states that a country should specialize in the production of goods and services in which it has absolute advantage over other countries. He believed that the values of a good will be determined by the amount of labour that was used for t production; that is, given two goods A and B absorbing different labour units, the value of the good with great labour units, will be greater than the value of the other good which absorbs less units of labour. To explain the labour theory of value with regard to the concept of absolute advantage, we shall assume the following:

(i) The two countries in the world, i.e. country A and B, producing two goods X and Y
(ii) Labour is homogenous between the two countries. Each country has 40 unit of labour.
(iii) There is perfect competition in the two countries.
(Iv) The exchange ratio in the international market lies between the two domestic exchange ratios. This is shown in the table below:

	Countries	
	A	B
X Goods	30	60
Y	60	30

The relative price will be given by the ratio of the labour used in production of the goods. For country A in isolation the relative price is that 30 units X is equal to 60 units of Y.

$30x = 60y$ ---------- (1)

$X = 2y$ ---------- (2)

This implies that with 20 units of labour, country A can either produce 30 units of X or 60 units of Y. This means that 1 unit of labour is used to produce 1½ units of good X, but that same units of labour can be used to produce 3 units of Y. Using the labour theory of value, 1½ units of X is equal to 3 units of Y in country A.

In country B, with 20 units of labour the country can produce 60 units of X but only 30 units of goods Y. This means that the value of 3 units of X in country B is equal to 1½ units of Y.

In summary, it is quite clear that country A has an absolute advantage in the production of good Y while country B has an absolute advantage in the production of good X.

We can now demonstrate that both countries will benefit from the international trade if each country can concentrate on the production of goods in which it has absolute advantage and exchange this in the international market, as long as there are differentials in the domestic price ratios.

The domestic exchange ratios of each country are represented by equations (2) and (3) as:

1X = ½Y in country B
1X = 2y in country A

Our (iv) assumption above is that the exchange ratio in the international market lies between the domestics exchange ratios of the two countries. This means that the international exchange ratio is represented by equation (1)

It can now be demonstrated that free trade will enhance economic benefits to the two countries if country A concentrate on the production of Y. In the international Market, country A will obtain 2 units of X by exchanging 2 units of Y in the international market. Compared with domestic exchange rate, it has gained 1 unit of X. In the same way, country B specialize in the production of X and exchange a unit of commodity X with a unit of

commodity Y. Compared with her domestic price ratio, she would gain ½y from every unit of X traded.
This means that specialization in the production of different commodities in which each country had absolute advantage will be beneficial to both countries. An analogy of this is the trade between Nigeria and Uganda in the production of cocoa and cotton. Both countries will benefit if Nigeria can concentrate on the production of cocoa and Uganda on the production of cotton.

(2) Comparative Advantage Theory

The concept of comparative advantage has been a step further to the concept of absolute advantage. The theory has been the contribution of David Richardo to the theory of international trade.

There is the relevance of the labour theory of value to the concept. Richardo was of the opinion that the absolute advantage theory might not be sole determined of the international trade for one of the trading countries might have absolute advantage and yet incur greater cost in the production of the commodity in question. He emphasized that the real basis of international trade lies in the ability of each country to produce a unit of commodity under trade at minimum cost compared to the other country.

Our earlier assumption still holds. We can now demonstrate that free trade will benefit both countries, even though one country has absolute advantage in the production of the commodities. Given the following table:

		Countries	
		A	B
Goods	X	100	200
	Y	200	600

Country B is more efficient in the production of two goods. Don't forget that we are still discussing labour theory of value with regard to international trade. Going by our assumptions above especially (ii) both countries will benefit by trade. Though country B has absolute advantage in the production of both goods, yet it has comparative advantage in the production of country Y.

With reference to the table above, the domestic price ratio of both commodities X and Y in country A is:

$$100x = 200y$$

$$\text{i.e. } x = 2y \quad \ldots\ldots (4)$$

Also in country B, the price ratio of the commodities is:

$$200x = 600y$$

$$x = 3y \quad \ldots\ldots (5)$$

Using assumption (iv), the exchange rate in the international market that will lie between the two domestic price ratio i.e. 1x should exchange in the international market, for between 2 and 3 ys and international price of 1x = 2½y will be beneficial to the two countries.

By trading, country A will now gain a half of commodity Y (½y) by exchanging a unit of commodity X (1x) and country A will also gain half a unit of commodity Y on every unit of commodity X bought. This means that both countries' economic welfare has been enhanced.

Weakness of the Labour Theory of Value: There is an implicit assumption in labour theory. The fact is that labour is just a part of all resources that go into the

production of any commodity. The theory therefore is unrealistic. This is why the classical economics have been criticized on this score.

(3) The Modern Theory

The modern theory of international trade makes use of the concept of opportunity cost. We can demonstrate the gain from trade through the use of opportunity cost concept and do away with the ridiculous assumption that only labour cost determines production.

The bundle of resources endowment can be assumed to be labour, land, capital and entrepreneur. The quantity of commodity X and Y produced will be determined by the bundles of resources endowment combined in the country:

QA = f(Ld, C.E, Lb) ..... (6)

There is no way we discuss advantage or cost whether absolutely or comparatively without reference to the concept of opportunity cost. The domestic price ratios in each country as demonstrated earlier are the opportunity cost of producing each unit of the commodities in question. They should be used to determine which good a country should specialize in its production.

17.3 DIFFERENCES BETWEEN INTERNATIONAL TRADE AND INTERNAL TRADE

There are several differences between international trade and internal trade. These include:

(i) Foreign trade involves the exchange of goods and services across national frontiers while internal trade involves the exchange of goods within the border of a country.

(ii) In foreign trade, buyers and sellers use different

currencies whereas buyers and sellers in home trade use the same type of currency.

(iii) There is possibility of restriction tariffs, import duties, export duties, quotas, embargoes when goods are exchange across national boundaries while these do not occur in home trade.

(iv) There are differences in systems of weighing and measuring in one country vis-à-vis another. A country has only one system of such weighing and measuring.

(v) Differences in transport cost due to distance between buyers and sellers, documentation requirement, need for insurance in respect of foreign trade distinguished foreign trade from home trade.

(vi) There are also differences in legal systems and culture under international trade but the legal systems are the same in domestic trade.

(vii) Foreign trade requires knowledge of new languages and interpretations while in domestic trade, a common language is used.

17.4 REASONS OR BASIS FOR INTERNATIONAL TRADE

There are reasons why countries trade with one another. These include:

(i) The need to satisfy a required demand: A country may trade with other countries because it wants more of a particular commodity to satisfy its required demand since what it produces is inadequate. For instance, the USA imports more crude oil in order to meet its total demand for it.

(ii) The need to increase market for home commodity: The internal demand for a country's product may not be enough to generate large scale production and hence full

utilization of its domestic resources. Thus, international trade may increase market for home produced commodities. E.g., Kuwait's deposit of oil would lie untapped if not for international trade.

(iii) Differences in National Endowment: The differences in climates and soils account for differences in quantity and variety of goods produced in different parts of the world. E.g., Cocoa and rubber are found in the forest regions of the tropical countries and cattle, groundnuts and wheat in the tropical and temperate grasslands.

(Iv) Differences in Mineral Resources: Different types of minerals are found in different areas of the world. E.g. Diamond in Zaire; Gold in South Africa and Ghana; Petroleum in Kuwait and Nigeria, etc. Exchange of these resources necessitate international trade.

(v) Differences in Capital Goods: Some countries have more capital goods and therefore can produce goods in greater and more varied quantities than countries with less or no capital goods. E.g. Britain, USA and Japan have more capital goods than less development ones like Nigeria, Ghana, Sierra Leone, etc. By countries trading with one another these differences in the demand for and supply of resources are greatly reduced since each country's needs become satisfied.

17.5 RESTRICTIONS TO INTERNATIONAL TRADE

These are taxes of duties imposed on imports and exports to restrict the volume of trade or improve the terms of trade. The instruments of trade restriction include:

(i) Import duties or tariffs: This is a tax imposed on imported goods to reduce the amount of trade.

(ii) Foreign exchange control: trade can be controlled

by reducing the foreign exchange available for trade transactions.

(Iii) Devaluation: By lowering the value of a country's currency vis-à-vis the currencies of other countries importation becomes costly while export becomes cheaper.

(iv) Embargo: This is the prohibition or out-right ban placed on some imported goods.

(v) Import monopoly: This refers to a situation in which the government of a country takes over the importation of certain goods which are only essential to the country.

(vi) Import quota: Import quota restricts imposts by imposing a limit on the quantity of goods that can be imported at a particular country.

vii) Preferential duties: In order to either encourage or discourage the importation of certain goods from certain countries, discriminate duties are charge on these goods.

(viii) Exercise duties reduction: This method helps to reduce the prices of locally made goods so as to enable people to patronize them instead of foreign made goods.

(ix) Import licence: Import licence is a permit that allows an importer to bring a certain quantity of foreign goods into a country and allows him to purchaser the foreign currency required to pay for them.

17.6 REASON FOR IMPOSITION OF TRADE RESTRICTIONS

The reasons why nations impose trade restriction include:

(i) To protect infant industries: Tariffs are imposed to protect infant industries from undue competition with foreign firms.

(ii) Generation of revenue: Tariffs are also imposed to generate revenue for the country. Many countries derive

their revenue from import and export duties.

(iii) To prevent dumping: Tariffs are imposed to prevent dumping of goods from foreign countries. This is to prevent foreign goods from being sold at prices lower than the home price.

(Iv) To improve balance of payment deficit: By imposing tariffs on imported goods, the unfavourable balance of payment can be corrected because importation will be discouraged.

(v) Retaliatory measure: This can be used in retaliate against countries which impose taxes on their imports.

(vi) To prevent importation of dangerous goods: Dangerous or harmful goods from other countries are prevented from being imported through restriction.

(vii) Employment generation: Countries impose tariffs to encourage the establishment of local industries or enhance the expansion and growth of existing one. This helps to provide job opportunities.

(viii) Political motives: Tariffs can be introduced as discriminatory measure against unfriendly countries.

(ix) To promote self-sufficiency: Tariffs are also imposed on imported goods to enable a country be self sufficient in production of numerous goods.

(xiv) To check consumption pattern: If all sorts of goods are allowed to come into the country, the citizens will develop uncontrolled appetite for foreign goods.

(xi) To protect strategic industries: Tariff may be used in most cases to protect certain strategic industries.

17.7 BALANCE OF PAYMENTS

(A) MEANING: Balance of payments (BOP) is an annual statement of all payments made by a country to other countries and receipts from them during a period of time usually one year. There are three accounts in balance of payment, namely:

(I) Current Account: This is the account which record the values of both tangible and intangible (export and imports) of goods and services. Thus, items here include: car, cocoa, banking, insurance, etc.

(ii) Capital Account" This is the account which records the value of capital as investments or loans. The country transferring the capital to other countries is spending such capital, and so it is recorded on its debit or expenditure side of its capital account. On the other hand, countries receiving the capital record it on their credit or income side of the capital account.

(iii) Monetary (or Gold) Movement Account: This is a balancing account. If the country's receipts is less than its payments, it can draw on its savings (which is in form of gold) to balance its account, since BOP must always balance. Items here include: loans, increasing investment abroad, exporting gold, aids, grants, etc.

17.8 CAUSES OF DEFICIT BALANCE OF PAYMENT

MEANING: Deficit balance of payment is a situation when a country's receipts from abroad is less than its payments to abroad. Some of the causes of deficit BOP include:

(i) Unfavourable terms and balance of trade: If the price of a country's exports is less than the price of its import it is likely to face deficit balance of payment, or vice verse.

Similarly, if the value of the country's exports is less than the value of its imports, it w ill experience deficit balance of payment.

(ii) Unfavourable exchange rate: If the exchange value of a country's currency is less than those of other country(ies), it will experience deficit balance of payment or vice verse.

17.9 SOLUTIONS OF DEFICIT BALANCE OF PAYMENT

The problems of deficit balance of payment can be resolved by the following policies:

(a) Increasing exports thereby increasing income (receipts) on the credit side of current account.

(b) Boosting domestic production by giving subsidies and tax holidays to producers. This will reduce imports and payments from the country.

(c) Cutting down government expenditure abroad will reduce the debit side of the capital account, and hence the overall deficit in BOP.

(d) Import restrictions by imposing the restriction measures such as quota, ban, etc. This will reduce payments on the current account of BOP.

(e) Development of external services by developing shipping companies and tourist industries will increase invisible earnings over invisible expenditure.

(f) Foreign exchange control can limit the outflow of capital account and its deficit.

(G) Domestic currency devaluation: this is the last option in solving the BOP deficit. Devaluation is the deliberate reduction in the value of a national currency in terms of currencies of other countries. It makes country's goods cheaper for foreigners to buy. This will stimulate exports and discourage imports.

(A) DETERMINANTS OF CURRENCY DEVALUATION

Devaluation of currency is determined by the following:

(i) Elasticity of Demand: The foreign demand for the devaluing nation's exports must be increasing for currency devaluation to succeed. Or the internal demand for foreign goods must be falling for devaluation to succeed.

(ii) Elasticity of Supply: Devaluation will be successful if the supply of the devaluing nation's export can easily change to meet changes in demand for its exports.

(iii) Other Countries' Reactions: Devaluation will succeed if other countries do not retatliate by devaluing their currencies.

REVISION QUESTION

1. What is international trade and how is it different from internal trade?
2. What are the basis for and problems facing international trade?
3. With appropriate examples, explain the following theories"

(a) Absolute advantage theory
(b) Comparative cost advantage theory
(c) Modern theory of international trade

4. What are the trade restrictions that are used in your country and why are they introduced?
5. What is currency devaluation, and under what conditions will it succeed?

CHAPTER EIGHTEEN

INTRODUCTION TO GLOBALIZAION

18.1 Meaning of Globalization

18.2 Origin of Globalization

18.3 Globalization and Internationalization

18.4 Likely positive Impact of Globalization on Economies

18.5 Likely Negative Impact of Globalization on Economies

18.6 Strategies that would Enable Nigeria benefit from Globalization

INTRODUCTION TO GLOBALIZATION

18.1 MEANING OF GLOBALIZATION

Globalization which is the highest level of international economic relationship is a world-wide phenomenon and as old as mankind. It means different things to different people and different things to the same people across time and space.

Obadan (2003) defined globalization as "increasing interconnectedness and interdependencies among the world's regions, nations, governments, businesses, institutions, communications, families and individuals. It is a process of which integrates world economics, culture, technology and governance, and has religious, environmental and social dimensions".

On economic front, the author defined globalization as "the process of changing towards greater international economic integration through trade, financial/flows, exchange of technology and information, and movement of people. Openness and markets constitute the platform of globalization while trade, finance and investment and entrepreneurs are the heart".

Ojo (2003) looked at globalization in multidimensional sense, spanning economic, political, cultural and social activities. He defined globalization as "a process of increasing interdependencies among economies through international trade, migration and capital flows". He also states that "it is characterized especially by an intensification of cross border, trade and increased financial integration, promoted by rapid liberalization and advances in information technologies".

Adewuyi (2003) described globalization as "the process of both vertical and horizontal integration involving increasing volume and variety of transnational transactions; in the good and services; in international capital flows; in human migration; and through a rapid and wide spread diffusion of technology". He thus viewed globalization as a single world market in the acquisition, utilization and development of productive resources.

According to Musa (2000) and Asobie (2001), the primary mechanism of globalization include: increased openness to international trade, removal of obstacles to international capital flows; international market integration and worldwide diffusion of knowledge and technology. Thus, according to them, globalization simply means "openness to international trade factor flows, ideas and information".

Oman (1996) defined globalization as "the integration of national economics through trade and financial interactions thus surrendering domestic economics to the influence of policies of other countries through trade and investment".

The definitions of globalization are numerous. But some things are common to all the definitions of globalization and that is: it is an increasing removal of obstacles to free movement of goods, capital labours, information and technology.

Thus, the definition of globalization is summarized in the words of Iniodu and Natan (2003) which says "declining barriers to trade, migration, capital flows, technology transfers and foreign direct investment".

18.2 ORIGIN OF GLOBALIZATION

Globalization is as old as the history of mankind.

This statement is amplified by Aluko (2003) when he stated that "since the beginning of history, inter-country movements, travels, trade and migration had been taking place. Even in the ancient world and in the medieval world, international trading companies were formed, promoted and financed by states, governments and groups of individuals to export and, at times pillage and conquer distant and less privilege communities and countries for the benefit of the more privileged ones. The Romans, Phoenicians, the Religious Crusaders, the European slave dealers and their collaborators and the colonizers operated internationally and in the globe-world of their time. Particularly after the 15th century, the various explorations, trading and colonizing groups of the West traversed East Indies, North America, South America and Africa in search of economic gains and empires usually at the expense of those with whom they made contacts, conquered or colonized. For example, it was at the Berlin (German) Conference of 1884 that the European powers partitioned Africa among themselves. Their political and economic domination of Africa assisted and complemented the Christian Missionary Evangelistic and Islamic Crusaders who brought new and different cultures, new and different goods and different gods into Africa. All these worldwide enterprises were "globalization" of a sort and were undertaken by almost the same group of countries and of races that are the main protagonists of today's globalization. Even though the present day globalization bogey differs in scope, manner and intensity from these earlier international processes, like slavery, colonialism or religious fervour, it benefits the same powerful nations at the expense of more or less the same weak nations. Perhaps, it is more appropriate to describe the pre-20th century entrepreneurial exploiters as internationalists than as globalists in order that we might get a deeper and more concrete insight into the definition and scope of globalization and how it has

affected the world in general and Africa in particular".

18.3 GLOBALIZATION AND INTERNATIONALIZATION

Globalization as it is used today, refer to "the growing interactions in world trade, national and foreign investment, capital markets and the ascribed role of government in national economics. While the ancient medieval and the more recent international entrepreneurs depended largely on their national governments for support, sponsorship, financing, patenting and gun-boat diplomacy, today's globalizers want to minimize or neutralize the role of government in their national economics the difference between globalization and internationalization can thus be said to be that while globalization focuses on economic capitalism and world market power, internationalization is best exemplified in the founding and operation of the League of Nations, the United Nations Organization and other regional political organizations, like the African Union, that seek to create one world or continent based on strong and effective national, sovereign, individual state governments. Globalization seeks to encompass all the countries of the world into one economic unit, possibly, without governments or without borders. That is, while internationalization aims at improving relationship between and among sovereign nation states, globalization seeks to undermine the very concept of the sovereign nation state.

18.4 LIKELY POSITIVE IMPACT OF GLOBALIZATION ON ECONOMIES

The likely positive impact of globalization on economics include:

(i) It promote competition both locally and internationally thereby eliminating inefficiency and assist to produce high quality goods at low cost.

(ii) It encourages human capital development so as to promote innovations and inventions.

(iii) It encourages development of export sector since it create foreign market for domestic goods.

(iv) The booming export sector will assist in creating employment opportunities in the economy.

(v) The improved consumption and importation will improve welfare of households in the country.

(vi) It encourages transfer of technology.

(vii) It encourages foreign direct investment.

18.5 LIKELY NEGATIVE IMPACT OF GLOBALIZATION ON ECONOMIES

The likely negative impact of globalization on economics include:

(i) It may cause structural imbalance as more efforts world be concentrated on production of export commodities.

(ii) It causes reduction in government revenue from import taxes since all tariffs on imports and exports world be removed.

(iii) It encourages dumping of commodities in some countries thereby discouraging the domestic production of such goods in the economy.

(iv) It would erode national sovereignty as all national policies concerning economic, social, cultural and technological would increasingly come under the influence of international agencies and governments.

(v) It will lead to massive brain from developing to developed nations since the later could pay higher rewards than the former.

18.6 STRATEGIES THAT WOULD ENABLE NIGERIA BENEFIT FROM GLOBALIZATION

Because of uneven endowments in terms of human and material resources between developed and developing countries, the benefits from globalization would be unevenly distributed in favour of developed countries.

However, the following strategies would enhances Nigeria's chances of benefiting from globalization.

(i) Efficient and sincere implementation of the on-going privatization and commercialization programme will promote private sector activities in Nigeria.

(ii) Provision of infrastructural facilities should be seen as national priority.

(iii) Political stability, which will encourage investment should be encouraged.

(iv) Effort should be made by Nigerian government to develop the abundant human resources in the country.

(v) There is need to diversify agricultural production and trade within African countries. Nigeria needs to utilize its comparative advantage and resources endowment positions to specialize in producing goods and services for Africa as a whole.

(vi) It is essential that research be carried out to determine the cost effectiveness and possibility of transforming Nigeria's raw materials into final products for marketing within the African continent. Is it not

possible for Nigeria to refine diesel, petrol, kerosene and other petroleum related products and export them to other countries? This requires the provision of infrastructural facilities like pipelines, sea and land routes Nigeria and other countries. However, this requires the maintenance of product quality to meet global standards.

(vii) In the same way, the use of comparative advantage and resource endowment potentials will enhance specialization in production, manufacture and export of goods of Nigeria. Thus, forest products can be transformed into finished products for export.

(viii) There should be unimpeded movement of factors of production (men, materials and capital) and products within the country in other words, removal of movement barriers in Nigeria should be encouraged within the confirms of the Law.

(ix) Continued adherence to, and reliance on received western development models, especially models that turn the terms of trade against Nigeria should be discouraged. Nigeria should cease to be silent receiver of theories and start to develop unbiased models that are realistic and consistent with their development goals..

(x) Nigeria need to proactively pursue national and international competitiveness. At the national level, it should develop low-cost local products and marketing systems for the products, improve product quality and create innovative products through agro-processing at the national level and implement existing integration agreement. It is important to state here that it is necessary to harmonize national taxation policies, support policies for more efficient cost-local products and marketing system for the products, improve product quality and implement existing integration agreement,

for more efficient cross-border trade removal of institutional barriers to the flow of commodities across boarders. At the global level, Nigeria need to develop collective strategies for global trade negotiations to ensure fair access to markets.

(xi) Finally it is important to state that Nigeria need to maintain its agricultural production and trade on a sustainable basis.

(xii) Nigeria needs to:
(a) Improve the productivity of agriculture to achieve the global recommended 4.0 percent growth rate for the agricultural sector through in-depth scientific research into the sector,

(b) Boost national public investment in agriculture of at least 30.0 percent of the national budget outlay.

(c) Improve the quality, stability, probity and consistency of agricultural policy.

(xiii) Continued Reform of the Domestic Financial Sector: The financial system, particularly the banking sector and capital markets play a critical role in lubricating a country's wheels for beneficial participation in dynamics of globalization. This is particularly so in relation to international private capital flows which are key driving force in the globalization process. But then, the financial sector must be adequately prepared to withstand the force in the stresses arising from volatile capital flows. Therefore, in order to avoid financial distress and recession, the banking system and other segments of the financial system must be strengthened through adequate supervisory and prudential regulations.

(xiv) Promotion of Manufactured Exports

Dependence on primary commodity exports has not significantly aided Nigerians integration with the global economy nor minimized its marginalization, even though most of the economy is open. The development of the economy will therefore required a major commitment to policies and institutions that promote manufactured exports in areas of comparative advantage, as well as focus on the recovery of the real sector of the economies.

(xv) Raisin the level of Domestic Investment

If Nigeria must realize growth rates will enable it to achieve the International Development Goals by 2015, and participate meaningfully in the globalization process, the domestic investment levels must be raised substantially by raising domestic savings rates and mobilizing private capital, both domestic and foreign in investments.

(Xvi) Adequate Infrastructure

Policy must give priority to adequate provision and rehabilitation of infrastructure-electricity, fuel supply, water supply, transportation, telecommunication, etc as a critical element of an enabling environment for private sector-led growth and the development of entrepreneurship.

(xvii) Development of Technology

One of the key driving forces of globalization is cumulative development and improvement in information, transport and telecommunications technology. However, for Nigeria to benefit meaningfully from globalization, it must overcome its present situation of low level technological development. It must pay serious attention to adaptation and adoption of technologies that can enhance the competitiveness of its economies.

(xviii) Need for a Strong Public-Private Partnership
This type of partnership helped Japanese businesses to dominate the world markets within a relatively short period of time. Moreover Western businesses have used the partnership model, in terms of working closely with their government, to win contracts and buy foreign assets in the developing world, particularly in the context of deregulation and privatization of industries.

(xix) Addressing the Problems of Government and Civil Strife For Nigeria to take full advantage of the benefits of globalization and minimize its risks, improved policies and highly strengthened institutions are crucial. But these need to be complemented by good governance in terms of establishing greater transparency and accountability in public and private sectors, as well as tackling corruption and inefficiency in the management of public affairs. Besides, the need to put an end to civil strife in the country cannot be overemphasized.

REVIEW QUESTIONS

1 What is globalization?

2 How can Nigeria benefit from globalization?

3 Can globalization lead to diffusion of technology?