ARTHUR JARVIS UNIVERSITY

AKPABUYO CROSS RIVER STATE

LECTURE NOTE:

ECO 101

PRINCIPLE OF MICROECONOMICS 1

COURSE LECTURER:

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COURSE OUTLINE

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3.1   Basic Economic Concepts

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3.1.2 Scale of Preference

3.3.3 Opportunity Cost and Production Possibility Curve

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    (ii)   Microeconomics

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    (b)   Economic Theory

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    (e)   Normative Economics

4.1.3 Classification of Economic System

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5.1   Economic Problems/Question

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6.1   Economic goals

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8.1   Price Theory – Theory of Demand and Supply

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Lecture 1:

Learning Objectives

- **Students should be able to identify the evolution of economics as a discipline**

- **Know the various era of its evolution.**

- **Know the various school of thought in Economics**

Evolution of Economics as a Discipline

A Brief History of Economics

We learn from history that the modern Economics as we know today existed as political economy, it is the effort of various political and philosophical thinkers who contributed to the field that led to the name economic which was first used by Adam Smith in 1776 in his "inquiry into the causes and nature of wealth of nations". It is the result of the efforts of ancient or pre-classical (384BC-1776), Classical (1776-1871), Neo-classical 1871-today and Islamic economists that the discipline is what it is today.

Ancient or Pre-Classical (384BC – 1776)

The study of the economy in Western civilization was begun largely with the Greeks, particularly Aristotle (384-322BC) and Xenophon (420-355BC). The ancient economic thinkers were concerned with the

theories of money, taxation, usury, property rights, enter premiership, price differentials, justice in economic exchange and analysed the impact of ethics in economies.

Famous economists of the ancient school include St. Thomas Aquinas (1225-1274), John Duns Scotus, (1320-1382), Gabriel Biel (1425-1495), Sir William Petty (1623-1687).

Classical (1776-1871)

The classical economists developed the theories about how markets and market economics work focusing the dynamics of economic growth which stressed economic freedom and promo ideas such as laissez – faire and free competition. They introduce the labour theory of value, theory of distribution (smith) principle of political economy and taxation (Ricardo 1817, Mill 1848), the theory of surplus value (Karl Marx), principle of comparative advantage, international trade theory (Richardo) and monetary theories.

Famous economists of the classical school include Adam Smiths. David Ricardo, W, Jerons, Jean-Baptist say, John Smart Smith, Thomas Mathias, Professor Pigon and Alfred Marshall.

Neo-Classical (1871-Today)

Neo-classical economists first introduce the theories of rationality and individual preference, utility maximization (utilitarianism, Jeremy

Bentham) and information economics, theories of market forms and individual organization, general equilibrium, theories in difference curves and the theory of ordinal utility. Neo-classical economics also increased the use of mathematical equations in the study of various aspects of the economy.

Famous economists of the Neo-classical school are William Stanley Jeron (theory of Political Economy 1871), Carl Merger Principles of Economics (1871), Leon Walres Elements of Pure economics (1874-1877), Joan Robbinson (The Economics of Imperfect competition (1933), Edward H. Chamberlin (the theory of monopolistic competition (1933), Paul Samuelson and so on.

Islamic Economics

The practice of Islamic economics was begun in the state of median in the 6th century. After that, the process of development of this discipline was handled lay the different scholars and economists on different centuries. Many of them are Abu Yusuf (731-798), Al Farabi (873-950), Al Gha Zali (1050-1111), Al Manaridi (1675-1158), Nasir Al-Din Al – Tusi (1201-1274) Ibn Taymiyyah (1263-1328), Ibn Khaldun 1334-1406) History of the world (Kitab-al Ibar), Asaad Darani (1944) they amplified the ideas of consumer theory, supply and demand, elasticity, taxation.

Khaldun – Laffer curve (the relationship between tax rate and tax revenue) etc in the light of Islmaic economics. Ibn Khaldun was considered as a forerunner of modern economics. The tools of Islamic economics are also employed in modern economics, by some economic thinkers. Among them, the contribution of M. Umer Chapra (Islamic and economic challenges, Monzer Kaht Najar Ukah Siddigui M. A. Mannan, Fahim Kham are well known for the ………………

School of Economic Thought

- **Classical Economist:** Thomas Hobbes, John Locke, Adam Smith. They advocate full employment without inflation, non government interference and Laissez Faire system.

- **Traditional Economist**: - Plato, Aristotle, Xenophon

  * they Supported common ownership of resources and diversification of occupation

  * They supported exchange of good, natural right of acquisition and supply

  * Support agricultural fundamentalism – Xenophon (O'Konomic – Household management)

- **Socialist or Communist Economist**: Rev. Robert Malthus,

* Population increase through geometrical progression as food increasing at arithmetic progression – Rev. Malthus in his book "Essay on the principle of population".

Karl Marx – "Communist Manigesto" – condemned capitalism and preached a worldwide revolution by the workers against the capitalist.

The Mercantilists – Nicolo Machiaveli, Thomas Munn,

Nicolo Machiaveli: **"Prince"** – state regarded as alpha and Omega. He believe head of state can do no wrong if run in the interest of the state. He explains the role of state as;

    (i)   Provide internal prosperity

    (ii)   Economic stability

    (iii)   Economic welfare

Thomas Munn: England treasure by foreign "Trade" – credited to be the originator of balance of payment theory. He believed more should be produced and exported.

Basic tenet of Mercantilist

- Growth in commodity production and exchange. To them the objective of government was to increase the wealth, and power of nation state through accumulate of gold.

Neo-Classical Economist

- Alfred Marshall – reporters father of modern microeconomics. He introduced mathematics into economies (principle of economic) 1890. His student JM Keynes. His believe, study poverty, that poverty is the causes of degradation of a large part of mankind.

Keynesian Economist: John Maynard Keynes – father of modern macroeconomics. "The general theory of employment, interest and money" – 1936.

- Government interference, by increasing spending so that more goods could be produced and more people employed.

- Discretionary monetary and fiscal policies to check the shortfall between investment and savings.

Lecture 2:

Objectives

- **Students should be able to know what is economics**

- **Definition of economics**

- **Reasons for studying the course**

DEFINITION OF ECONOMICS BY ECONOMIC THINKERS

John Maynard Keynes (1883-1946) one of the greatest 20th century economist pointed out that economics is not just a subject area

but also a way of thinking. He wrote in his introduction to famous economist book that economics is a method rather than a doctrine, an apparatus of the mind, a technique of thinking, which helps its possessor to draw correct conclusion. In other word, economics teaches you how to think, not what to think.

Learning economics helps you understand the major problems facing the world today prepares you to be a good citizen, and help you became thinker.

DEFINITION OF ECONOMICS BY 10 DIFFERENT ECONOMIC THINKERS:

(1) James Stuart (1967) economic as a science of political economy which is involves with the art of providing for all the wants of a family.

(2) Adam Smith (1776) defined economics as "an inquiry into the nature and causes of wealth of nations.

(3) Jean Baptiste say (1803) define economic as the science of production, distribution and consumption of wealth.

(4) John Stuart Mill (1944) defines economics as a science which traces the laws of society as arise from the combination of operations of mankind for the production of wealth.

(5) Alfred Marshall (1890) defines economic as a study of mankind in the ordinary business of life.

(6) Lionel Robbins (1932) define economics as a science which studies human behaviour as a relationship between ends and scarce, means which have alternative uses.

(7) Paul Samuelson (1948) defines economics as the study of how societies use scarce resources to produce valuable commodities and distribute them among different people.

(8) Allen (1977) defines economic as a social science that analyzed and describes the consequences of choice made concerning scarce productive resources.

(9) Inannaccone, L R (1998) assert that economics aims to explain how economics work and how economic agents interact.

(10) Harper Canadian (2001). Economics is the social science that analyzes the production, distribution, and consumption of goods and services.

ECONOMICS DEFINED

I) Economic is a science of production and distribution of goods and services.

II) It is a science of making choices in the presence of scarcity

III)   An acceptable definition which was generally agreed is that of Prof. Robbinson, who says Economic is a social science that studied human relationship, ends and scarce means which have alternative uses.

Lecture 3:

Objectives

- **Students should be able to identify define the basic concepts**

BASIC ECONOMIC CONCEPTS

1   **Scarcity:** The word scarcity refers to the state of affairs in which given the wants of a society at any particular moment. The means available to satisfy them are not sufficient or unlimited.

The problem of scarcity refers to the situation that arises as a result of limited productive resources, the amounts of goods and services that can be produced are also limited and inadequate. As a result, society must use its scarce resources as

efficiently as possible to produce the goods and services most wanted by the people

It is because resources and goods and services are scarce that they are not free but command price. And it is because most goods and services can be bought and sold at a price that they are called economic goods.

2   **Choice:** Choice in economic refers to an act of selecting from an existing resources. Economic choices are made possible because resources are scarce. It is the scarcity of resources that forces every economic system to make choices.

In general, economics is fundamentally concerned with choice or decision in the use of resources. Since all desires cannot be totally satisfied, and choices have to be made as to which of them are going to be satisfied, and to what extent, it follows that say that economic is about scarcity then is also to say that it is about choice. Invariably, any social or private situation, which involves a choice of some sort, has an economic aspect.

3   **Scale of Preference:** The concept of scale of preference is used in economics to show the arrangement or ranking of economic needs according to the order of importance. For instance food, shelter and clothing are essential for human

living, so when face with numerous needs, scale of preference allows economist to choose from existing needs to satisfy want.

4   **Opportunity Cost:** It is also known as a forgotten alternative or real cost. The concept of opportunity cost describes the sacrifice made in making a choice. Therefore, the opportunity cost or real cost of anything is the most desirable alternative commodity project or service forgone.

5   **Production Possibility Curve:**   The concept of opportunity cost is central to macroeconomics and is usually illustrated diagrammatically using production possibility curve or frontier which is sometimes called transformation curve.

Definition: The production possibility curve or frontier is an economic model that helps us to see what we have to sacrifices in order to produce more goods of a certain type. It is diagrammatical represent thus:

Fig 1
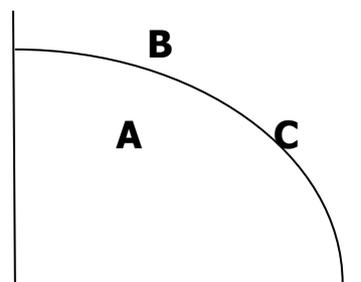
Point ABC in fig 1 represent inefficient, attainable and unattainable points.

The production possibility frontier or curve joins together the different combinations of goods and services which a country can produce using all available resources and the most efficient techniques of production possible curve in concave to origin.

Assumption of Production Possibility Curve

(1)   Assumption of only two goods in the economy, say food and cloth.

(2)   It is assumed that all factors production are fully employed. What this means is that everyone who wants a job has one, land and capital are fully employed as not just labour, can experience unemployment.

(3)   Assumption of homogeneity of factors of production. (Being exactly alike). By this, it means that one unit of labour or capital or kind is perfectly substitutable for another unit of the same factor. The scope of production possibility curve is called marginal rate of transformation.

Economics is all about man and his society with the aim of studying how certain decisions are made. This concerns decision on what, how and for whom to produce. Decisions relating to

consumption re not also left out. The consumption and production decision made by man in the society is the concern of economies

Making these decisions involves the understanding of the central problems of economics – scarcity. This arise due to man's unlimited wants and limited resources. The inability of resources to match man's wants is the cause of scarcity. If means and wants study match (i.e nothing wanted cannot be obtained), then there will be no scarcity, no choice to make, no economic problem and therefore no economic system or economics.

But this is not the case, man's wants are diverse and unmatch by the limited resources. There is therefore the need for choice. Choice making is the crucial aspect of decision making in economics. All the economic units, household, firm and government, makes choice. Just as the household decides on which of its wants to satisfy with its available resources, the firm also allocate resources to produce, while the government equally faces the wants/means dilemma.

Scale of Preference and Opportunity

Choice making is not at all easy and to avoid making wrong choice, the diverse wants are ranked in their order of preference. This is based on the importance attached to them. Such ranking or priorities in the order of important in descending order, is the problem of scale of

preference in economic. The scale of preference which indicates the priorities attached to each wants enhances the choosing of wants that yield highest satisfaction to the consumer and highest return to producer. Since not all wants can be satisfied, some will be left behind. This brings about the concept of opportunity cost in economies.

Opportunity cost is the forgone alternative, the choice not made. In economies therefore, the real cost of not doing something is not necessarily the monetary cost or value but rather the cost of forgoing the alternative to the thing actually chosen. This is basic fact to economic life that every economic unit must face whenever a decision is made on consumption or production.

Lecture 4:

Learning Objectives:

- **Students should be able to identify and defined the branches of economics**

BRANCHES OF ECONOMICS

Economic is classification into two major branches;

I)   Microeconomic: Science which studies behaviour and interactions of smaller units or agent such as household, firms and government.

II) Macroeconomics: Science which studied the economy at large or aggregate demand and supply and the interaction between aggregate expenditure and various economic unit at large.

Classification of Economic

- **Normative:** "What ought to be" e.g Sin is bad, unemployment is too high, inflation ought to be stopped

- **Positive Economic:** "What is" e.g the higher the price, the lower the demand.

Economic is also classified into:

(a)　　**Descriptive**: Collect relevant facts about particular topics e.g Nigeria's Agriculture system or Nigeria Petroleum Industry).

(b)　　**Economic Theory**: Gives a simplified explanation of the way in which an economic system works.

(c)　　**Applied Economics**:　Make use of the framework of analysis provided by economic theory to explain the causes

equipment theories justifying them through statistical and other evidence about the real work.

Microeconomics:

- Study economic behaviour of smaller units and as household, firm and government.

- It is also called price theory because it determines relative price of small economic element and various equivalent reached.

Goals of Microeconomics:

- Improvement of material welfare through the more efficient use of existing resources.

Uses of Microeconomic

- It explain the behaviour of a free market economy

- It determine how equilibrium is achieve in various product and factor market

- Provide framework for study different kinds of market structure

- Useful in the study public finance as it explains taxes incident.

Uses of microeconomic

- It is useful for the study of welfare economics by defining and analyzing the rule of economic efficiency.

- It is useful in the field of international economics as it helps in explaining why, to different countries engage in trade, and how gain from trade is distributed.

- Contribute immensely in the area of managerial economics towards the improvement of decision making in business through demand analysis, cost analysis.

Limitation of Microeconomics

- Fallacy of composition regarding the fact that, what is true in the case of individual units is not necessarily true of the whole society.

- Assumption of full employment

- This assumption is patently wrong because generally, conditions of less than full employment prevail in the real world.

- Assumption of laissez-fare-no longer practiced. It ended with the great depression of the 1930's

- It concentrates analysis on a single issue, involving the ceteris-paribus and not considering mutalis-mutandis (other influence are allowed to operate).

Analysis in Both Microeconomics/Macroeconomics

Microeconomic: Adopt Partial equilibrium analysis while

Macroeconomic adopt General equilibrium analysis, Dynamic – analyse – trace time party of economic variables

Microeconomic often adopt positive analysis what is

While macroeconomic adopt normative analysis (what would be) concern with ethics, values, opinion of what ought to be example of normative.

Classification of Economic System

Economics as a subject could be examined from various sub-division. The content of economics has been given a microscopic sub0dvision such as economic theory, monetary economics, financial economics, mathematical economics, statistical and quantitative economics and economics, industrial economics, trade or international economics among others. It is these various sub-division that led to the classification of economics as described below:

CLASSIFICATION BASED ON PRINCIPLE/THEORY

Economics as a subject could be divided conveniently into 5 broad categories;

(i)   Descriptive Economics

(ii)   Economic Theory

(iii)   Applied Economics

(iv)   Positive Economics

(v)   Normative Economics

(1)   **DESCRIPTIVE ECONOMICS:** Descriptive economics collects fact about a particular topics. Ex. Nigeria's Agricultural System or the Nigerian Petroleum Industry. Such facts are descriptive in nature.

(2)   **ECONOMIC THEORY:** Economic theory gives simplified explanation of the why in which an economic system works. It explains the relationship between certain facts obtained.

(3)   **APPLIED ECONOMICS:** Applied economics makes use of the framework of analysis provided by economic theory to explain the causes and significant theories, justifying them through statistical and other evidence about the real world.

(4)   **POSITIVE ECONOMICS:** Positive economic talks about what should be

(5)   **NORMATIVE ECONOMIC:** "What ought to be"

BRANCHES OF ECONOMICS

There are two branches of economics as a discipline:

(1)   Micro Economics

(2)   Macroeconomics

(i)   **MICROECONOMICS:** This is that branch of economic concerned with the economic behaviour of small economic units such as the household, firm and units of government.

(ii)   **Macroeconomics:** Macroeconomic on the other hand, deals with the economic behaviour of the society at large or aggregate economic. It concerns aggregate economic phenomena such as inflation, unemployment and economic growth.

ECONOMIC SYSTEM

An economic system is the set of ownership, resources allocation, incentive, and decision – making arrangements that a society uses to solve the economic problem (Elikwu 2005). Economic system is simply set of ownership of resource allocation and distribution.

Basically, economic system are differentiated according to four major dimension.

(i)   Ownership of resources – who own factors of production

(ii)   Allocation of resources – Goods and factors of production can be allocated by forces of demand as supply or government planners

(iii)   Incentive – motivation and moral incentives

(iv)   Level of decision-making – individual and government decision making.

TYPES OF ECONOMIC SYSTEM

(i)   Traditional Economics

(ii)   Capitalist Economics

(iii)   Mixed Economy

(iv)   Socialist/Communist Economy

(1) **TRADITIONAL ECONOMIC SYSTEM**: The traditional economies refer to economies in which decisions as to how to grow subsistence crops and how these should be distributed are matters of custom and habit.

(2) **CAPITALIST ECONOMIC SYSTEM:** This is an economic system characterized by private ownership of factors of production, market allocation of resources, the use of economic incentives and decentralized decision-making. It is a system where free market forces of demand and supply determines the prices and distribution of income with little or insignificant government intervention in the market system of operation. It is system advocated by the classical economists led by Adam Smith who in his book, in 1776 proclaim a laisser Faire system

with less government involvement, e.g of capitalist – USA, China etc.

(3) **MIXED ECONOMIC SYSTEM:** This is a system of economic where there is an element of both private and state enterprise. It is a system where both capitalist and socialist system are combined. The government shows concern to its citizenry by controlling certain industries and providing certain amenities which ordinarily the private would find unprofitable and therefore not interest, in but are required for developmental purposes. Ex. UK, Nigeria etc.

(4) **SOCIALIST/COMMUNIST ECONOMY:** This is a system of economics in which non-human means of production are owned by society or the state. The central control of the national resources and determination of prices and resources allocation was centrally planned. It is a system that was made popular by Karl Marx through his communist manifesto. E.g Serbia, Russia etc.

Lecture 5

- **Students should be able to identify and defined the various economic problems in the society**

ECONOMIC PROBLEMS

If we refer to definition of economics given by Lord Robbinsons certain concept quite crucial to economics could be extracted. Such concepts are: man and its society, scarcity, choice, scale of preference and opportunity cost.

Economics is about making choices in the presence of scarcity. The notions, "scarcity" and "choice", are very important in economics. Scarcity and choice go together, if things were available in plenty internally, then there would have been no choice problem. You can have anything you want.

Unfortunately, this may be true only in heaven, not in the real world. Even the kichest person on earth would have to fall scarcity and make choice. If nothing else, time is scarce. Think about the length of syllabi of various subjects that you have to cover before the final exam. We do not need to convince you that time is scarce. Likewise, food, clothing, housing, clean air drinkable water etc, are scarce in every country in the world, except that the degree of scarcity varies. The point is that problems of choice arise because of scarcity. The study of such choice problems", at the individual social, national and international level is what economics is about.

CENTRAL PROBLEMS OF AN ECONOMY:

The central problems of any given economy the world over can be categorize into three (3) parts:

(i)   What to produce

(ii)   How to produce

(iii)   For whom to produce

(1) **WHAT TO PRODUCE:** The problem of what to produce in economics shows what goods and services that are to be produce and in what quantity. For instance, in the fiscal year 2007-2008, the Nigeria economy produce 20.1 million tons of cements. Why is it 20 million tons and not 40 million tons. What factors determine these quantities? And so on.

(2) **HOW TO PRODUCE:** How mean "by which method" would the goods and services be produced? Should garments in Nigeria be produced by relatively labour intensive or machine-intensive methods? What techniques of production are to be used.

(3) **FOR WHOM TO PRODUCE:** Given that various goods and services are available to an economy, who gets how much to consume? This essentially refers to who earns how much or who has more assets than others. For example, how much a computer engineer consumes is based on his earnings compared to a chemical engineer or a high school teacher? This

is the "for whom" question. It refers to distribution of income and wealth in the society.

In a market-oriented or capitalist economy, these fundamental problems are solved by the "market". There is a price, which is influenced by the forces of demand and supply. These forces guide which goods and how much is to be produced and consumed.

Lecture 6:

Learning Objectives

- **Students should be able to mention and identify the major economic goals.**

ECONOMIC GOALS

Economics has been defined and described in terms of how human beings make their living, how they acquire food, shelter, clothing and other material necessities and comforts of this world. It was concluded that economics is a study of the problems human beings encounter in the process of living, thus the need to examine these problems.

The ways in which these problems can be reduced or completely solved is the aim of economic goals.

DEFINITION: Economic goals or objectives are broad macroeconomic objectives of price stability, full employment of resources, efficient

allocation and distribution of income, economic growth and development.

STABILITY OF PRICE:

The economic goal of stability f prices of goods and services such as wages, interest and exchange do not preclude the non-existence of changes but the level of changes should be so minimal and acceptable such that it does impact negatively on the citizenry.

(2) **FULL OR FULLER EMPLOYMENT OF RESOURCES:**

It is a known fact in economic theorizing that not enough resources are available to satisfy all the wants of the people as a result of scarcity, it is therefore certain that the ability to fully utilized resources available to achieve maximum possible satisfaction of the society is the major economic goal. It is therefore unreasonable for society to allow its resources, either human or material to lie idle.

However, in capitalist societies and developing economics it so happens that at times of depression large working population are rendered unemployed. This situation of involuntary unemployment persists in a depressed economy like ours. The situation is such that factories which can employ people are there, but they are not working, or operating at ridiculously low levels below their installed capacities.

(3) **EFFICIENT ALLOCATION OF RESOURCES AND INCOME**

DISTRIBUTION

The scarcity of resources leads to the problem of what goods to produce, in what quantity, how and for whom. If the resources are unlimited vis-à-vis the wants, the problem of what to produce will not arise because it would have been possible to produce will not arise because it would have been possible to produce all the goods requires and as the desired quantities. What determines the resources allocated has occupied the minds of economist from the very beginning of our economic science. Whatever the type of economy, be it capitalist or socialist, decisions have to be made concerning resource allocation and income distribution.

(4) **ECONOMIC GROWTH AND DEVELOPMENT**

The increase in the nations capacity to produce goods and services over time is called economic growth, While development is a persistent and consistent process of changes in the nations capacity to produce. It is therefore very important to know if the productive capacity of an economy is increasing, static or sharing over a period of time.

Lecture 7:

Learning objectives

- **Students should be able to;**

- **Defined price theory**

- **Defined demand and supply**

- **Changes and movement along the demand and supply curve**

PRICE THEORY – THEORY OF DEMAND/SUPPLY

The determination of price is one of the main tasks of economic theory. Price determination is however not an easy process, since it is affected by the economic system. Considering a free market situation will be relevant to bring out how prices are determined and explain how goods have prices (in a modern economy).

Prince theory is that part of economics concerned with analyzing the ways in which prices are determined in a free market economy and the role they play in solving the problems of resources allocation.

The central concept of price theory is the market and these are essential elements in a market; namely the behaviour of buyers, the behaviour of sellers, and the ways in which these interact.

Price is determined as the rate at which one things is exchanged for something else. The concept of price therefore plays an important

role in solving the economic problems of what gets produced, how and for whom.

However, the study of markets is usually organized into sub-theories as follow:

(1) Theory of the behaivour of buyers or theory of demand

(2) Theory of the behaviour of sellers, or the theory of supply in which the theory of the firms plays central role

(3) Theory of market behaviour – which examines how prices are determined by the interaction of buyers and sellers in various states of the environment considered as perfect competition monopolistic competition, slyopoly and monopoly.

Also significant in this respect is the market. Economists define the market as a situation whereby consumers and producers (in form of buyers and sellers) are in close contact with each other. It is not necessary that it should be situated at a particular place or building.

THE THEORY OF DEMAND

This is the branch of economic theory concerned with analyzing the determinants of a consumer's choice of a particular set of purchases from all those that are open to him. The buyer is willing to buy only those commodities that are useful to him.

THE CONCEPT OF DEMAND FUNCTION

Demand and desire are seen as synonymous from the layman's view. In economics, demand refers to effective demand which implies three things:

(i)   Desire for a commodity

(ii)   Sufficient money to purchase the commodity

(iii)   Willingness to spend money to acquire that commodity

Demand is therefore the quantity of a commodity the consumer is willing and able to buy at a particular time, place and price such demand that possesses purchasing power is termed "effective Demand".

LAW OF DEMAND AND DEMAND CURVE

From time immemorial sellers have known that one way of selling more of a product is to reduce the price. It is from these behaviours of sellers and buyers that the nature of demand was obtained. This is now expressed in form of a law guiding demand that have been tested over time. The demand law state that in any given market, ceteris paribus (other things being equal); the quality of a good demanded will rise as the price falls and fall as the price rises.

FACTORS RESPONSIBLE FOR NEGATIVE SLOPE OF DEMAND CURVE

(i)   price

(ii)   Substitution and volume effect

Demand curve is not stationary because of the effect of income. It either move to the left o right depending on the effect of income………..

This law states a relationship between the quantity of a good (ceteris paribus) and the price.

A demand curve or function is a graphical representation of this relationship between price and quantity demanded. It is a curve showing how much of a good consumers will buy at each price.

N/B: The demand curve is downward slopping as a result of the negative relationship between price and quantity. This is derived from the law of demand. The law expresses a negative relationship or inverse relationship between price and demand.

MATHEMATICAL REPRESENTATION OF THE DEMAND CURVE

Mathematically, the demand curve represents a functional relationship between price and quantity demanded. The quantity demanded is the dependent variable determined in the price which is the independent variable).

The function is stated as

$Qd = f(P)$

Where Qd = the amount of that commodity demanded

     P = the price of the commodity

F   = simply mean "is a function of".

Graphically, the demand curve is obtained from the hypothetical table as shown below, showing the amount of yam demanded at a various prices.

HYPOTHETICAL DEMAND TABLE

Price of Yam per Tuber (₦)	Amount Demanded
100	0
90	40,000
80	80,000
70	120,000
60	160,000
50	200,000
40	240,000
30	280,000
20	320,000

Y – Price of Yam (per Tuber)
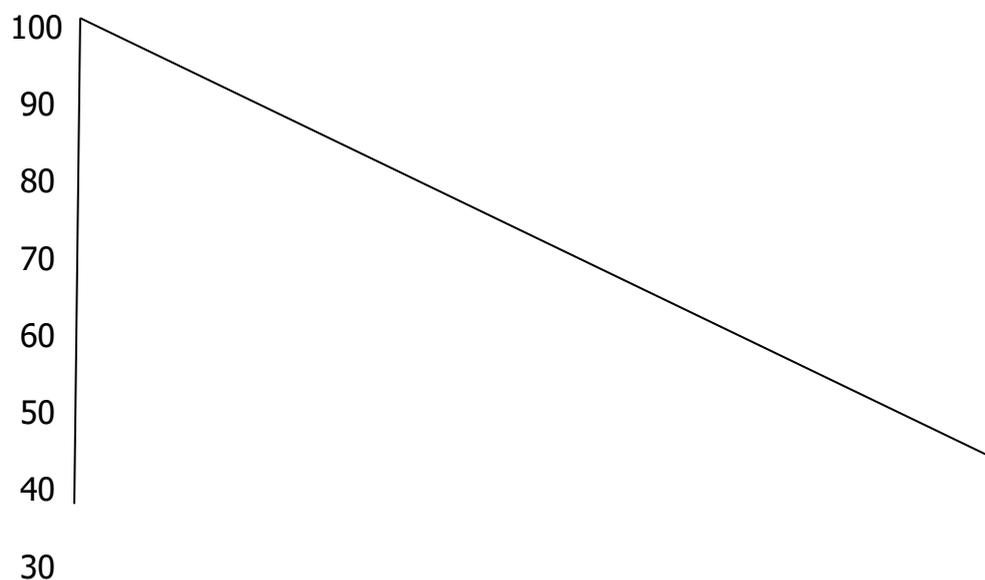
   40,000 80,000 120,000 160,000 20,000   240,000 320,000

As depicted by the hypothetical table, the demand curve slopes downward from left to right. As price falls, the quantity of yam demanded increases. At a high price (N100) nothing is demanded.

INDIVIDUAL AND MARKET DEMAND

Individual demand expresses the quantity that the individual will buy of a particular commodity at a given price.

ASSUMPTIONS UNDERLYING THE ANALYSIS DEMAND

(i)   Fixed amount of money income

(ii)   Fixed prices of other commodities except the commodity under considered

(iii)   Independent demand and supply schedules

(iv)   Constant consumer taste

(v)   Only our Market exist

These assumption will ease our purpose of price determination.

CHANGE IN QUANTITY DEMANDED/CHANGE IN DEMAND

Quantity demanded has been expressed as a function of price ceteris paribus. It is important to note that the assumption of other things being equal indicates that it is only the price of a good that affects its quantity. There are other factors such as, consumers income price of other commodities, taste, custom race, religion nationality, habit and expectation etc. All these also affect the quantity demanded.

The effect of change in price of a good, other things being equal, is the movement along the demand curve for that good, hence changing the quantity

demanded of such good. Economists describe such movement as a change in quantity demanded.

On the other hand, changes in other factors (apart from price) results in a complete shift in the demand curve. A change in income for instance, will change the demand curve. Likewise a change in taste and habit. Economists referred to such changes (as a result of an economic factor other than price of the good) as a change in demand.

This is illustrated below, which shows a rise or positive shift in demand curve from D to D, as a result of an increase in income price.

D   D1

O————————————Quality

Q   Q
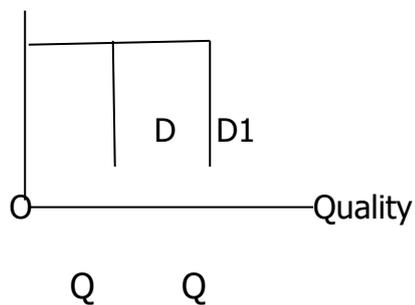
Due to this rise in income, the quantity purchased of the commodity in question increases from Q to Q1 at the same price P. More question this commodity can therefore be demanded and consumed as the money income will make this possible (provided such a commodity) is a normal good)… if the income falls the demand curve shifts backward as depicted below:

Price

o

Q1 Q2 Quantity
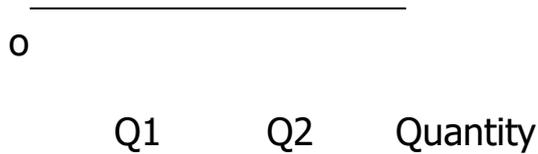
The quantity demanded at price P_2 will fall from Q_2 on demand curve D_2 to Q_1 on demand curve D_1. This shows that less or the commodity in question will be demanded as income falls (if a normal goods).

THEORY OF SUPPLY

Definition of Supply

We can now change our focus from demand, to the producers side supply. Supply is the quantity f commodity the producer is willing to offer for sale to the market at a particular price and time.

What is demanded by consumer is supplied by the producers. It is important to point out from the on-self that the general public's view point of supply is extremely different from the economists. Supply is not the total production of the producing firm.

LAW OF SUPPLY AND SUPPLY CURVE

Sellers are believed to aim at maximum profit obtainable. This underlying objective transforms itself in the response of suppliers to changing prices. This could be stated at it is in the popular law of supply that: More of a commodity will be supplied if price rises while less will be supplied if price falls.

Suppliers are therefore willing to sell more if price is high than when it is low. The higher the price, the higher the quantity supplied.

SUPPLY CURVE

The supply curve can be expressed as the relationship between the price of good and the quantity supplied, other things being equal. It is a functional relationship showing the positive relationship between price and quantity supplied.

The function representing supply is expressed thus:

$Qs = f(p)$

Where Qs = Amount of Commodity Supplied

P = The price of the commodity

F = is a function of

HYPOTHETICAL REPRESENTATION OF SUPPLY

Price of Yam Per Tuber	Amount Supplied
100	320,000
90	280,000
80	240,000
70	200,000

60	160,000
50	120,000
40	80,000
30	40,000
20	

Prince of yam

100	
90	
80	
70	
60	
50	
40	
30	
20	Qty

0   40,000, 50,000, 120,000 160,000 20,000, 240,000 280,000
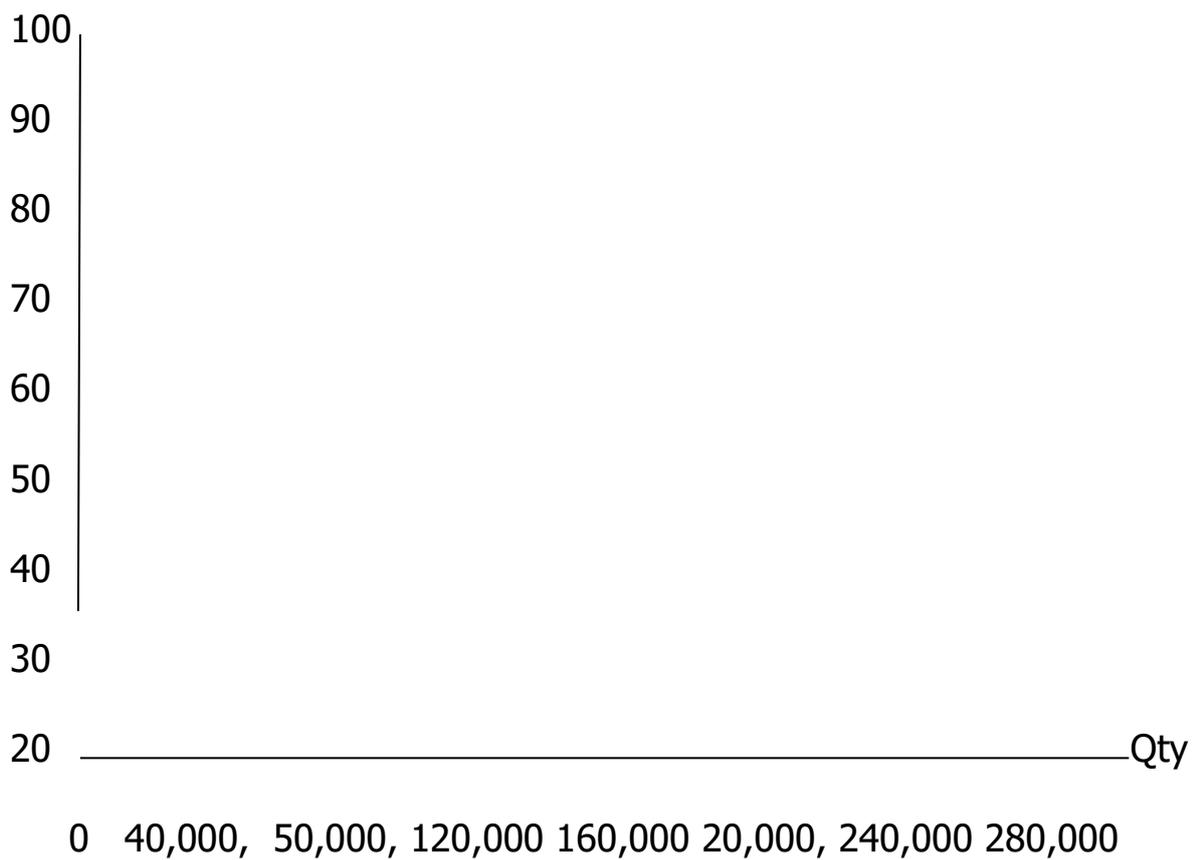
CHANGE IN QUANTITY SUPPLIED/CHANGE IN SUPPLY

Price

A Q_1
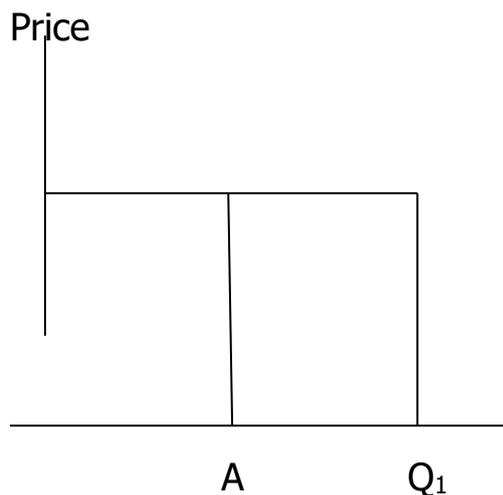
A change in supply curve as a result of a change in production techniques (i.e improvement technology) will shift the supply curve forward to the right.

As quality supplied changes from Q to Q1, the new supply curves, is still at the same old price P. this is because the improvement in technology makes possible the supply of more of the commodity at the going price of economist refers to it as a change in supply.

Increase/Decrease in Supply

P2

P1

P1

  Q_1 Q^x Q_2
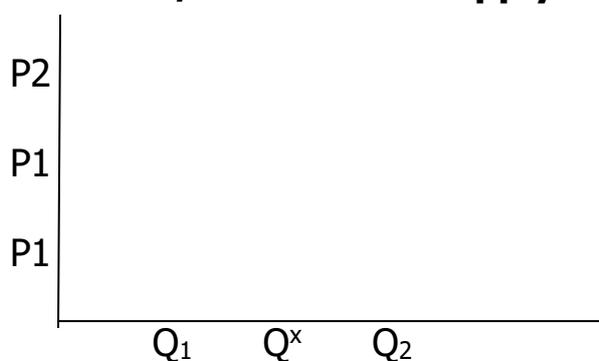
As supply shift from SS to $S_2 S_2$, brining the equilibrium down, to P, from P^x and increasing the equilibrium quality to Q2 from Q^x. On the

otherhand, a leftward shift (fall in supply) increase the price to P_2 from P_x while the quality drops to Q_1 from Q^x.

It should be noted that there exception are of demand to the above stated points. On the demand side, exceptional demand curve slopes upward from left to right. In this case, more will be demanded at higher price. Cases where the demand curve is the reverse as stated are:

When goods are inferior (Giffen goods)

   (1)   Articles of snob appeal (e.g jewelry)

   (2)   When consumers expect price to rise

For supply, there are cases where

However, such change could be otherwise. For instance, if the cost of production rises, the supply curve will shift backward from S_2 to S_1 as depicted below;

Price | Change in supply (Backward supply)
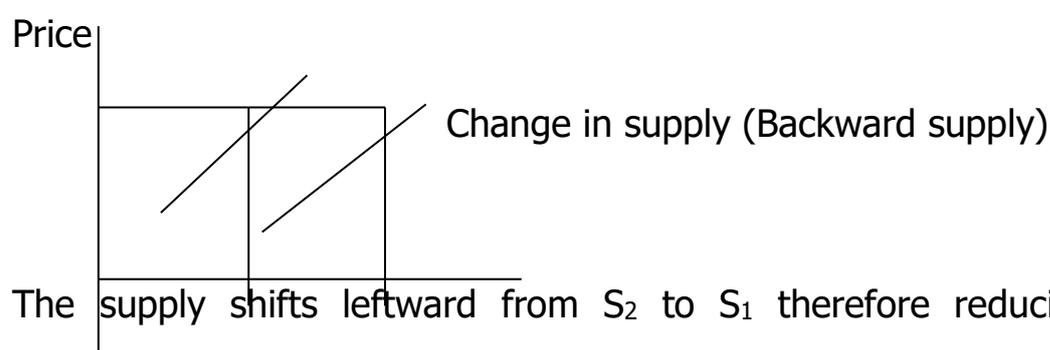
The supply shifts leftward from S_2 to S_1 therefore reducing the quantity supplied at P_2 from Q_2 to Q_1. As the cost of production rises, less will be supplied to the market at the former price.

Lecture 8:

Objectives

- **Students should be able to defined equilibrium and identify equilibrium in product market.**

EQUILIBRIUM

Definition

The equilibrium is a stationary point where a balanced is reached. The forces of demand and supply exert opposing forces. While demand is negatively slope, supply is positively sloped. Since both moves in opposite directions, there will be a point at which they will strike a balance. It is this point of intersection that economists refers to as point of equilibrium. Here there is no tendency of a change in either price or quantity.
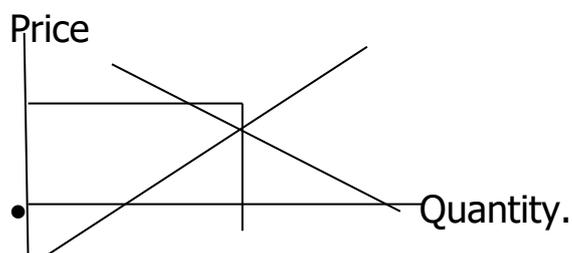
Individual Equilibrium/Market Equilibrium

The quantity demanded by individual consumer equals that supplied by the individual producer. The price at which the balance is struck is known as the equilibriums. Price is therefore

determined by the interaction of the demand and the supply curve.

In the market equilibrium there are numerous consumers and producers expressing their demands and supplies. The market demand is the combination of consumer's demand. Therefore the market to be at equilibrium, there will be a price when no consumer will demand for the commodity.
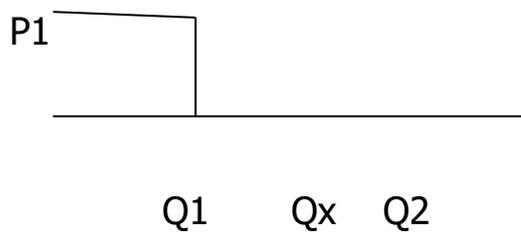
EXCEPTIONAL CASES

In summary, we can highlight the law relating to demand and supply as follows:
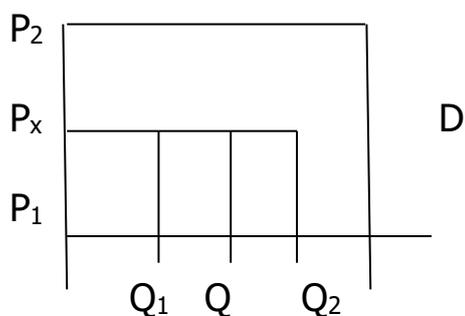
In this figure, 90 is Q2 which $Q_s = Q_1$ demand exceed supply at this low price (excess demand is $Q_1 Q_2$). However at p1 pd equals Qs. At P2 a price higher than p1 and px, qd is Q1 while Qs in Q2, there is excess supply in the market.

P1

Q1   Qx Q2
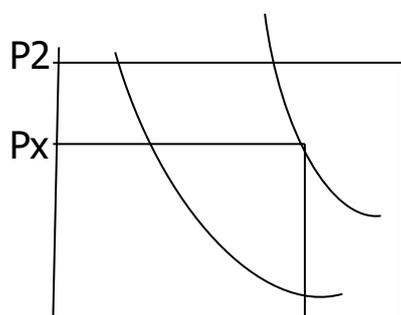
Increases/Decreases in Demand

A shift from demand to demand increases the equilibrium price to P_2 and equilibrium quantity to Q2. A leftward shift of demand from demand D1 D1 will however reduce equilibrium price and quantity form Px and Qx to p1, and Q1 respectively.

Lecture 9:

Learning Objectives

- **At the end of the lesson, students should be able to:**

    i)   **Defined the concept of elasticity**

    ii)   **Defined price and cross elasticity of demand**

    iii) **Calculate the elasticity of demand**

    iv) **Know the implication of elasticity concept on sales revenue and consumers expenditure.**

ELASTICITY THEORY

Demand is the quantity of a commodity required at a particular time and price. It depends on a variety of variables, which determines its positions. The demand function has the price of the commodity,

prices of other commodities, income, tastes and population, among others as its variables.

$$Qd \quad = \quad f(p; \ p; \ \text{where } j = 1 \ldots n, Y, T, N)$$

$$Dq = (f(p)$$

P; T, T, N i.e demand is regarded as a function of price holding other things constant. The demand curve is therefore is a temporal (same time frame.) the question how does a consumer react to a change in price? Could be answered by analyzing the demand curve through the elasticity of demand which is define as the percentage of change in quantity over the percentage% change in price expressed mathematically as $\dfrac{DQ/Q}{DP/P}$

Definition 2

The degree of responsiveness of percentage change in quantity over the percentage change in price.

PRICE ELASTICITY OF DEMAND

Price elasticity of demand is the measure of the degree of responsiveness of quantity demanded to price change. In otherwords, it is the change in quantity demanded of a particular commodity as a result of change in the price of that commodity.

Price elasticity of demand could be:

(i)   e < 1 = inelastic demand = consumer is not responding to price change

(ii)   e > 1 = Elastic demand = consumer is responding more than proportionately to price change

(iii)   E = 1 = The consumer is responding just proportionately to price change
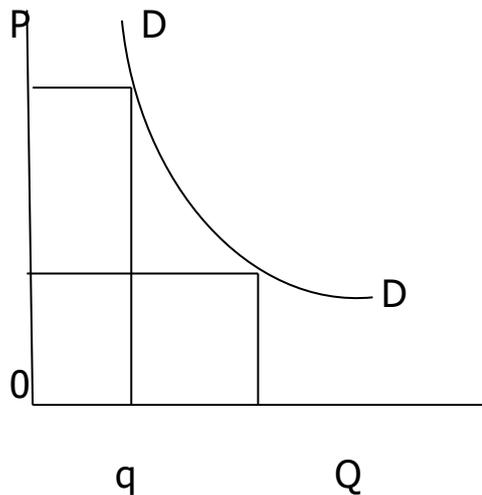
IMPLICATIONS FOR ELASTICITIES (E) FOR SALES REVENUE OR CONSUMER EXPENDITURE

1. When Demand is Elastic, i.e e > 1

(i)   If price increase, revenue decreases since the relative quantity decreases will be greater than price increase.

(ii)   If price falls, revenue rises since the relative rise – quantity will be much greater than the price fall.

Therefore, price is negatively related to revenue when demand is elastic.

(2)   When demand is inelastic, i.e e< 1

If price increase revenue increase since the relative quantity decreases will be smaller than the price increase.

But if price falls, revenue also falls since the relative rise in quantity will be significantly smaller than the price fall.

Therefore, price is positively related to revenue when demand is inelastic.

(3)   When demand is equal to 1 i.e e =1

Price increase or price decrease will keep revenue constant or unchanged.

INCOME ELASTICITY

Income elasticity of demand is the measure of the degree of responsiveness of changes in quantity demanded to change in income. (the percentages change in quantity demanded all over percentage change in income. Expressed mathematically as:

$$\frac{\Delta Q/Q}{\Delta Y/Y}$$

The change in quantity demanded of a commodities as a result of change in the consumers level of income.

A commodity is income elastic if people will buy more of the commodity when their income increases. However, it is inelastic if the demand for it will be less when income increases.

Examples of income elastic commodities are protein sources of goods, shoes, houses, books and periodical. E.g of income inelastic goods are staple foods like garri, use of public transport, inferior commodities.

$\sum Ya > 1$ $\sum Ya > 1$ $\sum Ya < 1$
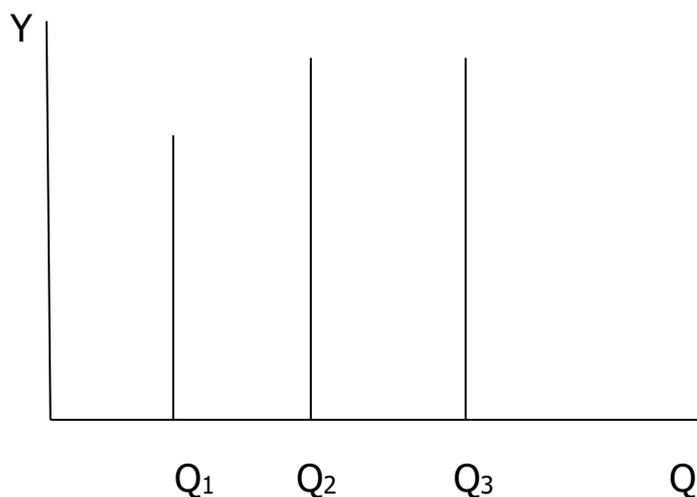
Income elasticity can be negative or positive as against price elasticity which has positive value only.

CROSS ELASTICITY

Cross elasticity is the change in quantity of a product as a result of a change in the price of another product.

Cross elasticity is the percentage change in the quantity of one product all over the change in the price of another product i.e. $\frac{\Delta Qi}{\Delta py}$

For substitute goods, the cross elasticity is always position, but the elasticity depends upon the degree of substantability. If it is poor substitute then the elasticity (a) < 1 while if it is a good substitute while if it is a good substitute (e) is elastic.

For complement goods elasticity is always negative. The extent of elasticity depend upon the extent of complementality. The "absolute values" of the elasticity determines this. For strong complement i.e/>/ while for weak complements /e/</. The former implies that e is elastic while the latter implies that e is inelastic e.g if e=3, it is a strong complement hence elastic but if e = 0.5 it is a weak complement, i.e inelastic.

TASTE: This can be changed through advertisement which may be in form of a propaganda, education or enlightenment.

POPULATION: This should be taken into consideration in the analysis of demand for commodities.

THE IMPORTANCE AND THE APPLICATION OF ELASTICITY CONCEPT

APPLICATIONS

(i) **Price determination Theory**

Application of the concept of elasticity can be seen in business decision regarding maneuvering of prices with a view to making larger profits. For instance when the cost of a product is increasing the prime would like to pass the incremental cost onto the consumer by raising the price following the rise in lost.

(ii) **In Public Finance**

Important for levying taxes as taxing of goods having inelastic demand would seem appropriate for generating expected revenue to government.

(iii) In international trace – determining the bargaining strength of a country in international market and reflects the state of the terms of trade.

Lecture 10:

Learning Objectives:

- **Students should be able to;**

    i) **Defined utility theory**

    ii) **Differentiate between the two school of thought in utility theory**

    iii) **State the law of diminishing marginal utility**

iv) Define total and marginal utility

UTILITY THEORY

A consumer derives some satisfaction from consuming a product otherwise he/she would not demand it at all. This is called total utility.

DEFINITION

Total utility is defined as a psychological satisfaction a consumer obtains from consuming a given amount of a particular goods.

For instance, the amount of satisfaction obtainable from the consumption of a bowl of ice cream or pop corn is term total utility. Besides total utility, there is another important concept called marginal utility which is the utility derivable from the consumption of last units of a commodity. Thus, if the marginal utility from consuming one bowl of ice cream is 20 and that from consuming a bowl of pop corn is 22, you can now notice the relationship that total utility is the sum of marginal utility.

Consider that total utility is the total satisfaction derived from consuming certain quantities of a good. Marginal utility is the extra utility or additional satisfaction derived by an individual from

consuming one additional unit of a good, the consumption of other goods remaining constant. Simply marginal utility is the increase in total utility as a result of the consumption of an additional unit (or due to a rise in the stock of a commodity by an additional unit).

In term of symbols, we can write $MU_x - TU_x - TU_{n-1}$ where, MU_x is marginal utility of nth unit. TU_x is total utility of n units. TU_{n-1} is total TU_{n-1} of (n-1) units.

## THE RELATIONSHIP BETWEEN MARGINAL AND TOTAL UTILITY

The relationship between marginal utility and total utility can be illustrated using the utility schedule given below and the graph plotted based on the utility schedule under references:

Units of Oranges	Total Utility (Units)	Marginal Utility (Units)	
1	30	30	
2	55	25	
3	75	20	
4	90	15	
5	100	10	Positive
6	105	5	
7	107.5	2.5	

8	107	0 Point of Satisfy	
9	102.5	-5	Negative
10	90	12.5	

 A study of the above schedule brings out the following points pertaining to the relationship between marginal utility and total utility.

(1)   The point where marginal utility becomes zero is called point of satisfy. Before this point is reached, though Mu tends to decline, it always remains positive. TU in this situation increases, the rate of increase however declines.

(2)   As the point of satisfy is reached, MU falls to zero and Tu stops rising. At this stage, Tu is at maximum.

(3)   If consumption is expanded beyond the point of satisfy, Mu turns negative, and as a result Tu declines. At this stage, Tu declines at an increasing rate.

0   I   2   3   4   5   6   7   8   9   10

-20-

-40-
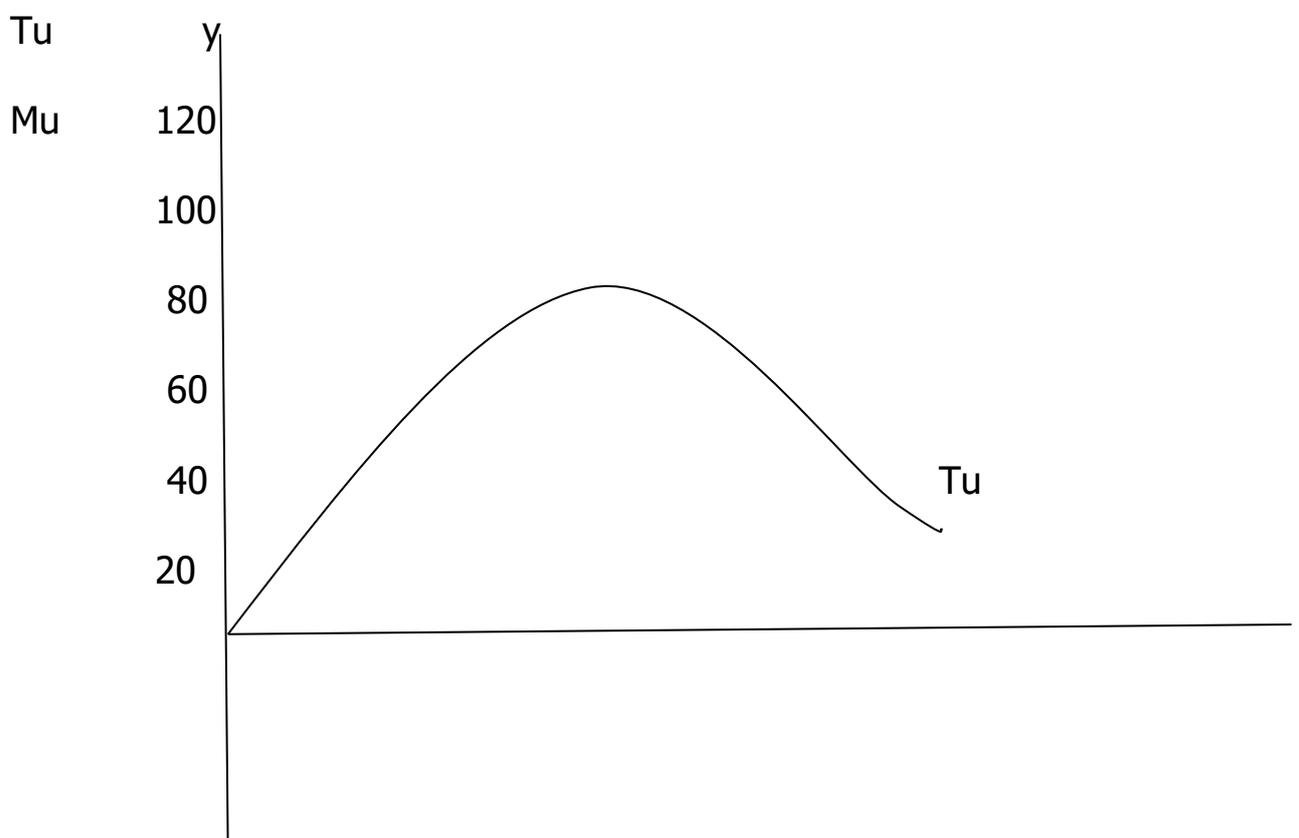
From the above diagram, the marginal utility curve starts from the point A. since Mu steadily declines from 30 units to 25 units to 20 units, and so on, Mu curve falls Mu of 68th units is zero. Therefore at this point (point B), the marginal utility curve cuts the x-axis. At this point, the consumer derives the maximum, total utility, which is this case is 107.5. As the consumer expands his consumption beyond this point, his total utility declines and thus Mu becomes negative. One would note in the diagram that initially, the total utility curve Tu rises upward from left to right. Once it reaches the point of satisfy it begins sloping downward to the right.

THE LAW OF DIMINISHING MARGINAL UTILITY

The law of diminishing marginal utility states that after consuming a certain amount of a good or service, the marginal utility from it, diminishes as more and more is consumed. The law of hypothesis of diminishing marginal utility has to do with fact that, the Mu derived from consumption of a good diminishes when the quantity of that good consumed per unit of time increases.

It is stated as the quantity of a good consumed by an individual increases, the marginal utility of the good will eventually decreases.

IMPORTANT OF THE HYPOTHESIS OF MARGINAL UTILITY

(1) It provides a general answer to the problem of specifying the condition for an individual to maximize satisfaction from the purchases of a range of goods and services.

(2) It help to explain why demand curves normally slope downwards.

If a consumer is to choose between commodity X and Y which have prices Px and Py respectively, Assume that the individual's rational and so wishes to maximize his total utility subject to his income, he will be maximizing his total utility when he allocated his income in such a way that the utility to be derived from the consumption of one extra naira worthy of x is equal to the utility to be derived from the consumption of one extra naira worthy of Y. in otherwords the consumers will be maximizing his total utility when the marginal utility per naira of x is equal to the marginal utility per naira of Y. only when this is true will it not be possible to increase total utility by switching expenditure from one good to the other. The conditions for consumers equilibrium can be written as follows:

$$\frac{MU_x}{P_x} = \frac{MU_y}{P_y} \quad \text{or} \quad \frac{MU_x}{MU_y} \quad \frac{P_x}{P_y}$$

Ex. If Mux = 20 units, MuY = 25units, Px = 4, Py = ₦5. The consumer equilibrium condition =

$$MU_x = \quad MU_y = \quad 20/21 \quad 20/4 \quad 21/5 = 5 \text{ units}$$

P   Py

APPROACHES TO UTILITY CONCEPT

There are 2 major approaches to utility concept;

(i)   The cardinal utility approach

(ii)   Ordinal utility approaches

(1)   **The Cardinal Utility Approaches:** adopted by the neoclassical economist, and hence also called the neo-classical approach. Alfred Marshall popularizes this approach. The argue that utility can be measured.

(2)   **Ordinal Approach:** Known also as indifference curve analysis. JR Hicks and Allen popularized this approach. To them utility cannot be measured but rank the good in order utility or satisfaction.

- **Learning Objectives**

- **Students should be able to:**

    i)   **Define indifference curve analysis**

    ii)   **State the properties of indifference curve**

    iii)   **State the assumption underlying indifference curve analysis**

    iv)   **Defined the marginal rate of substitution for commodity x for y.**

    v)   **Defined budget line and budget constraint**

INDIFFERENCE CURVE ANALYSIS

An indifference curve is a locus of points of particular combination of goods each of which yields the same level of total utility or to which the consumer is indifferent.

OR

An indifference curve may be defined as the locus of points, each representing a different combination of two goods, which yield the same level of satisfaction to the consumer so that he is indifferent between any two combinations of goods when it comes to making a choice between them.

It is represented graphically thus:
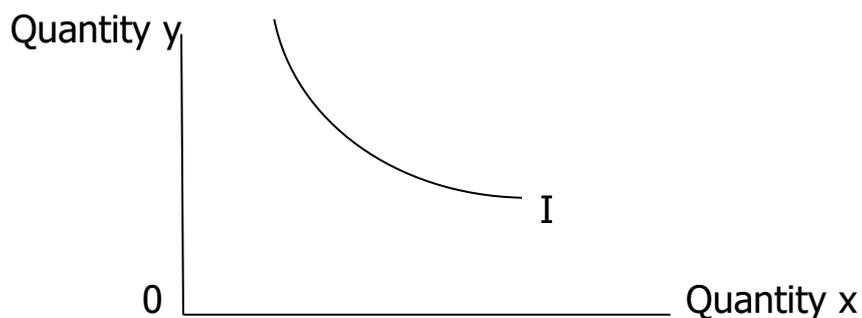
Indifference curve is a graph of the locus of points defining various combinations of two goods (X and Y) that yields the consumer same level of satisfaction.

As set of indifference curve is called indifference map. The indifference map can be defined on a psychological behavioural basis without making use of the concept of measurable utility so that all the bundles situated on the same indifference curve are equivalent and all bundles lying on the higher curves are prepared.
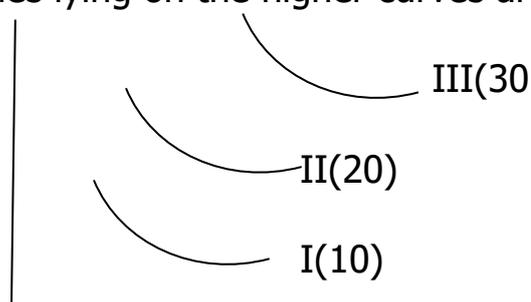
Given $U = f(q_1, q_2)$ - - - (I)

So that for a given level of utility Uo

$Uo = f(q\ q2)$ - - - (II)

Where Uo = Constant

Assuming that the utility function is continuous, then equation (II) would be satisfied by an infinite number of combinations q_1 and q_2 Ex: if

$q_1 \quad = \quad$ 5 units and q_2 = 5 units

A decrease in q_1 from 5 units to 4 units will need the consumer to be compensated by an increase in q_2 for him to remain on the indifferent curve Uo.

PROPERTIES OF INDIFFERENCE CURVE

(1)   An indifference curve passes through each point in commodity space so that indifferent curve corresponding to higher and higher levels of satisfaction as one move away from the origin are preferred to those nearer, the origin. i.e the further the indifference curve, the higher the level satisfaction.

(2)   Indifference curve negatively slope. Thus follows from the assumption that (strictly) larger bundles of commodities are preferred to smaller bundles. The law of diminishing marginal utility also support the downward sloping slope of the indifference curve.

(3)   Indifference curve cannot intercept. This property of indifference curve is denied from the axiom of transitivity

(4)   They are convex to the origin

(5)   Indifference curve cannot touch either axis

(6)   Indifference curves are not parallel to each other

ASSUMPTIONS OF INDIFFERENCE CURVE

(1)   The consumer acts rationally so as to maximize satisfaction

(2)   There are two goods X and Y

(3)   The consumer possesses complete information about the prices of the goods in the market

(4)   The prices of the two goods are given

(5)   The consumer's taste, habits and income remain the same throughout the analysis.

(6)   He prefers more of X to less of Y, which implies a negatively, inclined downward sloping indifference curve

(7)   The consumer arranges the two goods in a scale of preference, which means that he has both "preference" and indifference for the goods. He is supposed to rank them in his order of preference and can state if he prefers on combination to the other or is indifferent between them.

(8)   Axiom of transitivity – it mean both preference and indifference are transitive. It means that if combination A is preferable to B and B to C, then A is preferable to C. similarly, if the consumer is

indifferent between the combination A and B and B and C, then he is indifferent between A and C. this is an important assumption for making consistent choices among a large number of combination.

(9) The consumer can order only those combinations, which he is likely to consider.

(10) There is the assumption of non-station implying that a consumer always prefers to have more of a commodity than less of it.

CONSUMER PREFERENCE AND THE MARGINAL RATE OF SUBSTITUTION

Consumer's preference following indifference curves analysis can also be described by the concept of marginal rate of substitution.

DEFINITION: The MRSxy measures the number of units of Y that must be sacrificed per unit of X to gained so as to maintain a constant level of satisfaction.

Therefore, the marginal rate of substitution is the slope of in difference curve as shown below:

$$MRS_{LC} = \frac{DC}{DL}$$
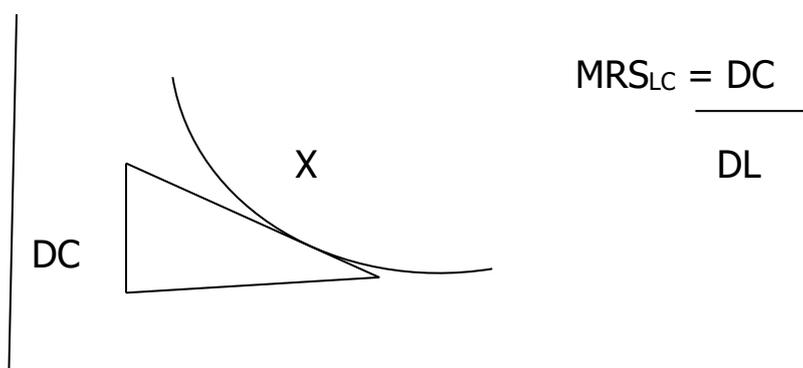
$$\text{DL} \qquad\qquad \text{L}$$

Where MRS_{LC} = marginal rate of substitution for Lemonade and Chocolate

DC = change in chocolate

DL = change in Lemonade

From the diagram above, MRS, measures the number of units or litres of chocolate (C) for example that must be given up to gain one unit or litre of lemonade (L) so as to maintain a constant level of satisfaction.

Also from the diagram, the MRS of L for C at point X is given by the slope of the tangent at point X and can be measured by the ratio DC/DL. Here, it is the number of units of C the consumer is willing to give up for one unit of L to stay on the indifference curve.

If we define the marginal rate of substitution of X for Y as:

$$MRSxy = \frac{\text{Loss of Y}}{\text{Receipt f x}} \quad = \quad \frac{-\Delta Y}{\Delta X}$$

Then the diminishing marginal rate of substitution of X for Y can be explained by saying that as more of X is acquired, less of Y will be substituted for a given increase in X.

N/B: The marginal rate of substitution of X for Y decreases as we move out along the X-axis, and increases as we move closer to the point of origin.

BUDGET CONSTRAINTS AND CONSUMER CHOICE

Indifference cure explained the rate of which a consumer would prepared to exchange one good for another, but chooses