CONCEPT OF ECONOMICS AND FINANCE

Dr. Mounica Vallabhaneni
Yelahanka Lokesh

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CHAPTER 1

AN INTRODUCTION TO MICROECONOMICS AND ECONOMYPROBLEM

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ABSTRACT:

This study covers the issues that economies face while also providing an introduction to microeconomics. The study of individual economic agents, such as households, businesses, and markets, and how they allocate scarce resources is known as microeconomics. It looks at the concepts of supply and demand, consumer and producer behavior, and how the government affects economic outcomes. The essay examines crucial microeconomics ideas and emphasizes how important it is to comprehend these ideas in order to analyses and resolve economic problems.Microeconomics is a subfield of economics that examines how individualssuch as customers, producers, and businessesact and make decisions within an economy. It examines the decisions these actors make in order to maximize their well-being or gain.In the realm of microeconomics, the difficulties or problems that result from the dearth of resources in comparison to the insatiable desires of people are referred to as an economy's problems. Individuals and society are forced to make decisions about how to effectively distribute few resources as a result of this basic economic challenge.

KEYWORDS:

Cost, Economics, Opportunity, Production, Resources, Science.

INTRODUCTION

Economizing, or choosing between various uses of finite resources, is what economics is all about. Millions of people, businesses, and governmental entities make decisions every day. Economics looks at how these decisions combine to form an economic system and how that system functions. By L.G. Reynolds in economic theory, scarcity is key. Economic analysis is primarily about maximizing anything within certain bounds (free time, wealth, health, and happiness are all frequently reduced to the concept of utility). A tradeoff is unavoidably defined by these limitations, or scarcity. For instance, one can earn more money by working longer hours but with less time available (there are only so many hours in a day). Since there is a limited amount of land available for food production, one can only have more apples at the expense of, instance, fewer grapes. For instance, Adam Smith thought about the compromise between convenience or time and money. He talked about how someone may choose to live close to town and pay more for rent or live farther out and pay less, paying the difference out of his convenience [1].

With the release of Prof. Adam Smith's widely read book "An Enquiry into the Nature and Causes of Wealth of Nations" in 1776, the study of economics as a discipline was established. Political economy was the term used at the time, and it was still in use at least into the middle of the 19th century. Since then, economists have created methods and ideas based on inductive and deductive reasoning. The "Wealth of Nations" is actually a turning point in the development of economic theory since it distinguished economics from other social sciences. The Greek terms "Oikos" (house) and "Nemein" (to manage) are the roots of the English word "economics," which originally meant administering a home while making the most of the resources available. A science of wealth, according to early economists like J.E. Cairnes, J.B. Say, and F.A. Walker. According to Adam Smith, who is also known as the father of

economics, economics is a study that examines the origins and dynamics of global wealth. In other words, economics is concerned with how a country can amass more and more money. According to J.S. Mill, it is the applied science concerned with the creation and distribution of wealth. According to American economist F.A. Walker, economics is the body of knowledge that has to do with wealth. All of these concepts so have to do with wealth [2].

Economics is largely a science of people rather than a science of wealth. It might be referred to be the science that investigates human welfare. Economics is concerned with those wealth-related activities that increase human welfare rather than riches for its own sake. Cannan claims that "the purpose of political economy is the explanation of the general causes on which the material welfare of human beings depends." Marshall defined economics as "the study of mankind in the ordinary business of life; it examines that part of the individual and social action which is most closely connected with the attainment and with the use of the material requisites of well-being" in his book "Principles of Economics," which was published in 1890. According to Marshall's concept, the following four points are very important: Economics is a field of study that encompasses both the study of wealth and the study of people. To advance the welfare of people, wealth is necessary. (b) Economics deals with regular people who are affected by their natural inclinations, such as love, affection, and altruism, and who are not just driven by the desire to amass the greatest amount of wealth for its own purpose. Wealth by itself has no use until it is used to acquire worldly possessions. Economics is a social science, to be clear. It studies all people who are a part of a society, not just solitary individuals. Its goal is to help find answers to many social issues. (d) Economics focuses solely on the "material requirements of well-being." In other words, it researches what leads to wealth or welfare. It disregards the intangible facets of human existence [3].

The conventional understanding of the nature of economic science was contested by Lionel Robbins. His 1932 work "Nature and Significance of Economic Science" introduced a fresh way of considering what economics is. All of the prior definitions were described by him as classificatory and unscientific. He asserts that "Economics is the science that examines human behavior as a relationship between ends and limited resources that can be used for other purposes." This concept concentrated on a specific element of human action, namely that which involves using limited resources to fulfil limitless objectives (wants). Therefore, Robbins' definition placed special focus on the following ideas: The wants that every human being yearns to have satisfied are known as "ends" (a). Want is a strong desire for something that can be sated by exerting effort to acquire it. We have countless desires, and as soon as one is satisfied, a new one appears. One might want to purchase a car or a home, for example. Once the house or automobile is bought, the person wants to acquire a bigger, more aesthetically pleasing car, and the list of his needs only keeps going. We must choose between the most urgent want and less urgent wants because human wants are limitless. Choice becomes a difficulty as a result. Because of this, economics is frequently referred to as a science of decision. There wouldn't have been an economic issue if wants had been constrained, as they would have been gratified. Resources or means are scarce.

In order to satisfy different demands, means must be used. For instance, money is a crucial tool for achieving many of our desires. As was previously mentioned, resources are limited and must be used as efficiently as possible. In other words, it is necessary to make the most of limited or few resources. We must make the most of the scarce resources available by using them wisely in order to achieve our goals. Robbins said that the limited resources can be used for other things. It implies that a resource or good can be used in a variety of ways. As a result, the overall demand for that good or service is nearly endless. For instance, if we have a hundred rupee note, we can buy a book or some stylish clothing. It is ours to utilize in any other manner, illimitably [4].

DISCUSSION

Subject Matter of Economics

Microeconomics and macroeconomics are the two subfields in the study of economics. Macroeconomics, which looks at the economy as a whole and takes into account the aggregate supply and demand for money, capital, and goods, and microeconomics, which deals with individual agents like individuals and enterprises. Resource allocation, production, distribution, trade, and competition are some of the aspects of economics that are given special focus. In theory, economics can be used to solve any problem involving choice under scarcity or evaluating economic value. Professor Ragnar Frisch of Oslo University is credited for coining the terms "Micro" and "Macro" economics in the 1920s. Micro refers to a millionth of something. Greek for small is mickros[5].

Thus, only a small portion of the entire economy is covered by microeconomics. For instance, examining the price of a specific good instead of the overall level of prices in the economy is essentially studying microeconomics. Microeconomics is the precise study of how individual economic agents'consumers, businesses, industries, etc.behave. Consequently, it is the study of a specific unit rather than all units taken as a whole. Price theory, a branch of microeconomics, explains the distribution or composition of total production. Microeconomics, in a nutshell, is the study of how organisations, industries, and consumers behave economically as well as how output and money are distributed among them. Individuals are taken into account as both labour and capital suppliers as well as the ultimate consumers of the finished good. On the other hand, it examines businesses as both labour and capital consu6mers and product suppliers.The goal of microeconomics is to examine the market structure or other pricing processes that determine relative prices for commodities and services and/or distribute societal resources among the numerous possible uses. In the field of microeconomics, we look at:

1. Product pricing theory, which incorporates (a) consumer behaviour theory. The cost and production theory (b).

2. The theory of factor pricing, which includes the wage theory. The rent theory. Interest-generating theory. Theory of profits is (d).

3. Economic welfare theory. Microeconomics has played a significant role in the investigation of economic theory. In actuality, it serves as a foundation for economic theory. It has ramifications for both theory and practice. Important aspects of its importance are listed as follows:

1.Microeconomics is very helpful in managing the scarce resources a nation has effectively.

2. Microeconomics is useful in understanding how a free enterprise system operates in an environment without centralized authority.

3. Microeconomics is used to explain the benefits of global trade, the imbalance of payments, and the setting of exchange rates.

4. It explains how products and services created locally are dispersed through market mechanisms.

5. It aids in the creation of economic policies that are intended to advance production efficiency and human welfare.

6. The foundation of welfare economics is microeconomics.

7. Microeconomics is applied in the development of economic models to enhance comprehension of real-world economic processes [6], [7].Even though it offers so many advantages, there are certain flaws or restrictions in it.

These include:

1. It is unable to explain how an economy functions as a whole.

2. Full employment is assumed, which is seldom in actual life.

3. It cannot be utilized to solve issues with public finance, monetary policy, fiscal policy, etc.

Positive and Normative Economics

We consider whether economics is a positive or normative science while debating the field's application. Normative science explains "what should be," whereas positive science depicts "what is." Positive science, then, presents a situation as it actually is, while normative science analyses the context and suggests/comments on whether something is wrong or right. Examples include the positive statement "Population in India is rising" and the normative statement "Rising population is a barrier to development."Economic theory is viewed as a "positive science" by classical economists. They declined to comment on whether the current economic climate is right or incorrect. Robbins agreed with the classical school of thought and claimed that the desirability or lack thereof of 'goals' is unimportant to economics. An economist's job is to research and explain rather than to advocate or condemn. But economics shouldn't be viewed as a purely constructive science. It should be acceptable to make moral assessments on economic circumstances. As a result, it is seen as both normative science and positive science. Economics is the social science that investigates how few resources are distributed to meet boundless wants. Analyzing the creation, transfer, exchange, and consumption of products and services is necessary. When economics recommends a specific course of action, it is considered to be normative. Positive economics aims to explain the effects of various decisions given a set of assumptions or observations.

Problems of an Economy

All economic issues are rooted in a lack of resources. We are aware that resources are finite or in short supply compared to demand, but desires or goals are limitless. As a result, we struggle to decide between all of our desires. This is so that limited resources can be used for other things. We must therefore pick between our most pressing needs and less pressing wants. In actuality, the choice dilemma is the fundamental issue with economies. More specifically, the challenge we face is making the best choices for the aims to be achieved and the methods for making use of the limited resources. Every economy deals with a few core issues known as an economy's primary concerns. These are listed below:What kinds of commodities and services should be produced is the first significant issue a country's economy faces. We must pick from a variety of alternative collections of products and services that can be produced since resources are limited. It could also mean whether to generate consumer products or capital/producer goods. Additionally, we must choose how many items will be created in the economy.How to generate the sought-after items in the economy is the next issue we must solve. In light of this, the issue of the production's techniques becomes relevant. if we should employ capital-intensive or labor-intensive techniques. A method of production that is labor-intensive implies that more labour is used per unit of capital, whereas a method that is capital-intensive implies that more capital is used per unit of labour. The decision is based on the resources that are available. The labor-intensive technology can certainly be used in a labour surplus economy.Once we have chosen the items to manufacture and the methods to employ in their creation, we next face the issue of how to distribute those goods across the economy. This is the issue with the distribution of national revenue.Additionally, we must ensure that finite resources are used effectively. This

is the issue with maximizing welfare or economic efficiency. An economy must make sure it is achieving a sufficient growth rate so that it can expand and develop more quickly. It should be able to alter the country's structure from an agrarian to an industrial one while simultaneously raising the per capita and overall national GDP. An economy cannot be stagnant. Its capacity for production must always rise [8], [9].

Production Possibility Curve

The potential for production a graph called a curve shows the trade-off between any two goods generated. The Production Frontier, also known as the Transformation Curve, depicts the maximum practicable quantities of two or more items that may be produced using the available resources. In other words, it represents the potential cost of producing more of one thing compared to the units of the other that are lost. Professor Samuelson used the production possibility curve to analyses the challenge of economizing.

In light of the availability of the various production components as well as the technology and managerial abilities of the society, a PPC illustrates the maximum amount of one commodity that can be obtained for any given amount of another commodity. The idea is used in both macroeconomics and microeconomics to illustrate the output alternatives open to a country or economy, as well as the choices available to a specific enterprise. It is impossible to increase the output of one good without decreasing the output of another at any point on a production possibilities curve because resources are allocated in such a way that this is not possible. To increase the production of any good, a sacrifice—or an opportunity cost—must be made. The fullest and most effective use of all resources is made, while still maintaining sustainability. The curve for production possibility is not stationary. With the expansion of resources and advancements in technology, it expands with time. This is so that we can produce more using the same amount of resources. The production potentials of a straightforward economy generating cars and computers are shown in the table below. Two production optionsE and Fare displayed. The economy must give up some resources from the production of cars when it decides to devote more resources to the manufacture of computers. Therefore, if it is determined to produce 10,000 computers, 5,000 vehicles cannot be produced since resources are being diverted to the creation of computers**.**

Uses of Production Possibility Curves

Multiple applications exist for the production possibility curve. It assists in identifying solutions to the fundamental production-related issues of what to produce, how to generate it, and for whom in the economy. In addition, the government may use the concept of a production possibility curve if it decides to shift resources, say, from necessities to pleasures. Additionally, it can aid in directing the transfer of funds from current consumption items to capital goods and boost productive capacity in order to reach higher levels of production.

Opportunity Cost

Opportunity cost, often known as the most valued forgone alternative, is the price of something in terms of an opportunity foregone (and the advantages that may have been obtained from that chance). In other words, a commodity's opportunity cost is its best alternative cost or transfer cost. Production of one good means that another good cannot be produced because productive resources are in short supply. The real cost of the produced commodity is the one that is sacrificed. The opportunity cost is as follows. Let's use an illustration to clarify this. Let's say a producer has the resources to build a car or a computer. The real cost of the automobile, or the alternative foregone, is equivalent to the cost of the computer if the maker chooses to produce cars rather than computers. To further illustrate the idea, let's use another example. The opportunity cost is anything else that could have been done with the land and building costs instead, such as something else if a firm decides to

build hotels on vacant property it owns. The corporation lost the chance to develop the site into, for example, a sports complex, parking lot, housing development, or other structure by choosing to build the hotels instead. To put it another way, the opportunity cost of going on a picnic with your friends may be the amount of money you could have made if you had used that time to put in more hours at the office.

Opportunity cost is measured in terms of anything that has worth to the person or people performing the assessing rather than having to be measured in monetary terms. One of the primary distinctions between the ideas of economic cost and accounting cost is the taking into account of opportunity costs. A crucial step in determining the true cost of any course of action is to evaluate opportunity costs. Asking yourself, "What is the next best alternative choice that could be made?" is the simplest way to calculate the opportunity cost of each single economic decision. The capacity to purchase certain clothing could be the opportunity cost of paying for college. A Goa vacation's opportunity cost may be used to finance the purchase of a motorbike. It should be highlighted that opportunity cost isn't the total of the available options, but rather the value of the best one [10].A graphic that shows the potential cost between any two given items generated by a particular economy can be used to teach the notion of opportunity cost.It is also referred to as the production possibility curve in economics. If all resources (inputs) are utilized fully and as efficiently as possible, the economy in the hypothetical economy outlined abovewhich exclusively generates cars and computerswill be running on the PPC. The precise mix of automobiles and computers manufactured relies on the mechanisms employed to determine resource allocation (i.e., a mix of markets, government, tradition, and community democracy).In recent years, the idea of opportunity cost has gained a lot of traction. Only the principle of opportunity cost is used in contemporary cost-benefit analysis. In the contemporary economy, the cost-benefit analysis is a helpful tool for entrepreneurial decisions. Opportunity cost is universal and extremely palpable on a personal level, despite the fact that it can be challenging to quantify. The underlying idea of opportunity cost in economics applies to all decisions, not just financial ones.

CONCLUSION

Understanding individual economic agents' behaviour and the issues that economies face is made possible by the study of microeconomics. We learn about the laws of supply and demand, consumer and producer behaviour, and market structures through studying microeconomics. Our ability to analyze and handle a variety of economic problems, such as scarcity, market imperfections, income inequality, and unsatisfactory competition, is made possible by this knowledge. Policymakers, firms, and individuals can make better decisions and contribute to the economy's effective operation by having a deeper understanding of microeconomics.The distribution of resources, including components of production like labor, capital, and land, among multiple competing uses is one of the main issues in an economy. Microeconomics looks at how pricing and markets affect how resources are allocated. Additionally, it looks at market imperfections like externalities and market power that might obstruct effective resource allocation and provide subpar results.The distribution of income is another issue in an economy. Microeconomics investigates issues like salaries, profits, and rents in order to understand how income and wealth are distributed across people and families. It discusses concerns of inequality and examines how economic policies affect how money is distributed.

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CHAPTER 2

ANALYSIS OF CONSUMER BEHAVIOR AND LAW OF DEMAND

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ABSTRACT:
Consumer behavior is a key component of marketing and economics since it looks at how people decide whether to buy, use, and discard products and services. Businesses must comprehend consumer behavior in order to promote their goods efficiently and create marketing plans that appeal to their target market. This summary gives a general review of consumer behavior, its importance, and the major variables affecting consumer choice. Consumer behavior refers to a variety of psychological, social, and economic elements that affect the decisions people make when shopping. Personal preferences, attitudes, views, motivations, social influences, cultural conventions, and financial limitations are some of these elements. To create successful marketing campaigns, product positioning, pricing strategies, and customer relationship management, marketers work to understand these effects.Consumer behaviour is the study of how people, families, or other consumers decide whether to buy, use, and discard products and services. It entails examining the elements that impact customer decisions, such as preferences, needs, financial restrictions, and outside influences.A key idea in economics, the law of demand outlines the connection between the cost of a commodity or service and the amount that customers are willing to purchase. The law of demand states that if a commodity or service's price rises, fewer people will buy it, providing all other variables stay the same. On the other hand, the amount requested rises as the price falls

KEYWORDS:

Commodity, Demand, Law, Price, Utility.

INTRODUCTION

The study of consumer behavior serves as the foundation for the demand theory. In our daily lives, we purchase and use goods and services in a variety of ways. The straightforward calculations and human judgement we use when conducting any transactions have been translated into guiding concepts that help us achieve economic harmony or satisfaction. We determine in advance what to buy and how much to spend when we go shopping. It makes sense because we want to maximiser our spending. In other words, we constantly want more of whatever, and to get it, we bargain and come to a price that we are happy to pay. Therefore, understanding consumer behaviour, which serves as the foundation for demand theory, is a prerequisite. The rationality of consumers is taken for granted. A consumer always aims to maximise his satisfaction given his financial situation and the costs of goods. Specifically, to maximise welfare (state of well-being) by using the allocated funds to purchase a variety of goods. Although it is believed that the satisfaction a customer experiences after purchasing a commodity can be quantified (measured in terms of money), in reality, satisfaction cannot be quantified because it is a psychological concept.

We only experience the same amount of satisfaction and communicate it in other ways. By acting in a certain way, such as laughing or jumping with excitement, we might express our satisfaction. As a result, we are unable to quantify satisfaction in the same way that we can measure time in seconds, weight in kilogrammes, or length in metres. Additionally, it is also thought that each consumer knows what he wants. Additionally, he is well informed about the market, including the products that are offered, their prices at a specific time, and so forth.

Each customer makes use of this information in a way that maximises his overall happiness. It is beneficial to be familiar with several key terminology used in discussing various concepts and theories of demand in order to understand consumer's equilibrium, or how a consumer achieves maximum pleasure by spending his money income on specified units of commodities [1], [2].

Utility

Utility is the ability of a good or service to fulfil a need in a person. The term satisfaction has been equated with utility by economists. Since it is a subjective concept, it differs from person to person. Since it exists in one's head and cannot be quantified, as was already mentioned, it cannot be measured. Despite the fact that utility and satisfaction are sometimes used interchangeably, it is important to remember that utility refers to expected satisfaction while satisfaction refers to "realized satisfaction". It is the total utility (pleasure) a customer receives from consuming all of a commodity's units.The total utility of a commodity is equal to the sum of the utilities of all n units of the commodity if there are n units in total. As a result, if a commodity has four units, its total utility is given by U = U1 (n1) + U2 (n2) + U3(n3) + U4(n4).U1.U4 are the utilities of n1.n4 units of the commodity, where U = total utility.As a result, if a consumer consumes an apple and receives 12 utils of satisfaction from it, 10 utils from the next apple, 9 utils from the third, and 7 utils from the fourth, his total utility is U = 12 + 10 + 9 + 7 = 38.Thus, the benefits of several items can be combined. This entails that the various commodities' utility are independent of one another. The utility of one commodity does not influence the utility of another [3], [4].

Law of Diminishing Marginal Utility

The law of declining marginal value is one of several key principles governing how human desires are satisfied. The law clarifies what every customer would generally feel. Take the example of someone eating apples one by one. He feels the most satisfied after eating the first apple since he can be in the mood for food at that moment to state his hunger. He consumes the second apple, but feels less satisfied because he has already satisfied some of his appetite at this point. He gets less satisfaction or use out of the third and subsequent apples.

It implies that when a customer increases his consumption, he experiences a decreasing level of satisfaction. When a customer is completely repulsed by the thought of eating any more apples, the satisfaction is likewise likely to be zero. If he consumes more, his happiness changes, or utility becomes disutility. The law of diminishing marginal utility therefore implies that the additional satisfaction that a person obtains from using a good or service continues to decrease as he consumes more and more of that good or service. "The additional benefit that a person derives from a given increase of his stock of a thing diminishes with every increase in stock that he already has," wrote Marshall [5].

So, as a customer consumes more and more of a commodity, his need is met, and he no longer desires to see the commodity's price rise. Therefore, when consumption rises, his marginal utility decreasesProducts can only be partially substituted for one another, i.e., one product cannot completely replace another: No two products can be equally satisfying. Various products gratify a variety of desires. Another want would have been met if a good could flawlessly replace another. Therefore, its marginal utility would not have decreased but instead rose.

DISCUSSION

Meaning of Demand

Demand in economics refers to the desire to have a thing or service backed by sufficient funds to purchase it. As a result, in economics, we are only concerned with effective demand,

which is effectively supported by a sufficient supply of purchasing power. So, in order fordemand to be effective, a person must have enough money to purchase what they want, in this case an automobile. Additionally, it should be noted that a consumer's willingness to purchase an item or service is necessary for demand to be fully realised. A person may have the means to purchase the thing at a certain time but not be ready to do so because of a sudden change in his preferences. For instance, a person might visit a shop to purchase his ideal car but decide against it because his desired hue is not available. Additionally, the demand for a good is always represented in connection to a specific price and period. As a result, we can define demand for a good as the quantity that will be bought at a specific price per unit of time. According to F. Benham, "The amount of anything at a given price that will be purchased per unit of time at that price is the demand for it." Bober provides another excellent definition of demand: "The various quantities of a given product or service which customers would buy in one market in a given period of time at various prices, at various incomes, or at various prices of related items. Demand is always a schedule in economics. It doesn't come in a single quantity. The quantity demanded is the amount that is purchased at a specific cost [6], [7].

Determinants of Demand

Thus, the following variables affect commodity demand:

1. **Commodity price**: A commodity's price is a key component in determining demand for a commodity. Consumers buy less of a commodity when the price goes up, and more of it when the price goes down. Here, we use the ceteris paribus assumption that all other factors will remain constant.

2. **Consumer income**: The demand for commodities is influenced by people's income levels. The demand for a good will increase as income increases. A higher salary translates into more spending power. As people's salaries increase, they can afford to purchase more. On the other hand, if income declines, so does the demand for a commodity.

3. **Costs of associated goods**: There are two categories of related goods: complements and substitutes. You can use substitute products interchangeably. Tea and coffee are two examples of replacement goods. Coffee can be substituted for tea when the price of tea is higher. Similar to how food and butter or petrol are demanded together, complementary items are. Demand for a good decrease when its substitute's price decreases, and increases when its substitute's price rises. When two items are complimentary, the demand for either one is impacted by the price change of the other. For instance, if two-wheeler demand declines, so does petrol demand.

4. **Consumer taste and preferences** are significant aspects that influence the demand for a product. When tastes and preferences are positive, there will be a high demand for a certain good. On the other side, demand declines when a good is no longer in demand or when people's tastes and preferences change.

Law of Demand

The functional link between a good's price and the quantity demanded is expressed by the law of demand. One of the most significant laws of economic theory is this one. This law states that, other things being equal (ceteris paribus), if the price of a good decreases, the quantity requested will increase, and vice versa, if the price of the good increases, the quantity demanded will decrease. Price and quantity demanded are therefore inversely related. As a result, when the price of one apple drops from Rs. 4 to Rs. 2, we purchase more units. Only when the requirements listed below are satisfied does the law of demand apply.

Assumptions of the Law

This is what the law of demand presupposes:

1. Consumers' incomes remain stable. The law will not be upheld whether consumer income rises or falls.

2. People's preferences and tastes do not change.

3. Prices of alternatives and complements remain constant. Generally speaking, the demand curve slopes rightward and downward. This occurs as a result of the law of diminishing marginal utility in action. New demand is produced when a commodity's price falls. Moreover, repeat customers purchase more. Some people will choose to buy the specific product now that it is less expensive than other commodities. The demand curve must slope downward if the law of diminishing marginal utility is valid. This is because an increase in demand brought on by a decrease in the price of a commodity can only be represented by a demand curve that slopes downward. Furthermore, people's real income rises when the price of a commodity declines. In other words, people can now spend the same amount of money on more goods and services. It's known as the income impact.Likewise, when an item is less expensive, it frequently replaces more expensive alternatives. It's known as the substitution effect. When a commodity's price drops, both the income effect and the substitution effect combined improve customers' ability to purchase more of it. Another explanation for a downward sloping demand curve is that when a good or service is less expensive, more or less urgent uses can be found for it. Additionally, this increases demand when prices decline [8], [9].

Exceptions to the Law of Demand

The law of demand has a few exceptions. It refers to situations in which the law is inapplicable. Which are:

1. Some products are referred to as Giffen items. The law of demand does not apply in the case of such items. According to Sir Francis Giffen, when Irish potato prices rose during difficult economic times, people reduced their expenditure on other goods and increased their spending on potatoes. They were no longer able to afford meat and other items because of the high prices of potatoes and the stagnant growth in their financial incomes. Therefore, they had to eat more potatoes to stay alive. In other words, when potatoes' costs rose, people demanded more of them and vice versa. It's known as the Giffen Paradox.

(Also notice the comment on Giffen products at the chapter's end.)

2. According to Thorstein Veblen, the demand curve does not slope downward in the case of conspicuous consumption. People occasionally purchase goods to demonstrate their social rank. They believe that the ownership of such commodities may elevate the holder's social status. Diamonds, other valuable stones, and other items make up these goods. To demonstrate their status as members of an exclusive class, the wealthy class purchases these items at exorbitant costs. In addition, see the comment about Veblen commodities at the end of this chapter.

3. A product whose quality is determined by its high price does not also fall under the law of demand. Some consumers purchase more of a commodity at high prices than at lower prices because they believe high prices are superior to reduced prices. People act in such a manner due of their blatant ignorance.

4. Another exception to the law of demand is speculation, which is the conjecture or prediction of a future event and taking appropriate action. People will typically purchase more of a commodity at a higher price than they did at a lower price if the price is rising and

they anticipate that the price will continue to rise. Recently, it has been noticed that some consumers increased their purchases of edible oil in anticipation of future price increases.

Movement along and Shift in Demand Curve

When studying demand theory, it is crucial to understand the difference between movement along the demand curve and alterations in the demand curve. When a good's price changes while other factors stay unchanged, the demand curve moves along. Another name for this is a variation in the quantity requested. That is a shift in demand brought on by a change in a commodity's price, all else being equal. In other words, the demand curve remains the same; only the equilibrium point on the demand curve is altered when the demand increases owing to an increase or drop in the price of an item. This is referred to as demand extension and contraction. Therefore, it is argued that demand has expanded when the quantity of an item is increased only as a result of a price decrease. And because prices have increased, less is being demanded; this is known as a contraction in demand.

Giffen Goods

Giffen products have a favourable price elasticity of demand. We are aware that the price elasticity of demand is generally negative. In other words, when the price rises, the quantity demanded decreases, or vice versa, as the demand for a good or service pulls in the other way. Goods made by Giffen are an exception to this. Demand increases in tandem with price increases, and vice versa.A product must only vary in price in order to change in demand in order to be considered a true Giffen good. Giffen commodities are named after Sir Robert Giffen, who Marshall credited in his book Principles of Economics as the originator of this concept. Marshall's classic illustration involves low-quality staple foods, whose demand is fueled by poverty and prevents consumers from affording higher-quality items [10].As the cost of the inexpensive staple increases, people are forced to eat more of it since they can no longer afford to supplement their diet with healthier foods. "As Mr. Giffen has pointed out, a rise in the price of bread makes such a large drain on the resources of the poorer labouring families and raises so much the marginal utility of money to them, that they are forced to curtail their consumption of meat and the more expensive farinaceous foods: and, bread being still the cheapest food which they can get and will take, they consume more, and not less of it," wrote Marshall in the 1895 edition of Principles of Economics.Three prerequisites must be met for this circumstance to occur:

1. The good in question must be inferior.

2. There must be no close substitutes.

3. The good must account for a sizeable portion of the buyer's money.

CONCLUSION

Consumer behavior is a multifaceted field that studies people's decision-making process. It comprises elements that affect decision-making processes on a psychological, social, and economic level. For businesses to successfully promote their goods, satisfy client requests, and forge long-lasting customer connections, they must have a solid understanding of consumer behavior. Businesses may react to changing consumer tastes and improve their competitiveness in the market by incorporating consumer insights into their plans.The declining marginal utility theory, on which the law of demand is founded, contends that when people consume more of a given commodity, the pleasure or value they obtain from each extra unit declines. As a result, customers are more prepared to pay more for the first unit of an item than they are to pay the same price for subsequent units.For companies, decision-makers, and economists alike, the rule of demand has significant ramifications. It assists companies in determining how pricing adjustments may affect the level of customer demand

for their goods. When creating taxes, subsidy, or price control programmes, policymakers might use the law of demand. To examine market behaviour, pricing elasticity, and consumer welfare, economists use the law of demand.

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CHAPTER 3

DETERMINATION OF ELASTICITY OF DEMAND IN THE FIELD OF ECONOMICS

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ABSTRACT:

Elasticity of demand, a key idea in economics, quantifies how responsively the quantity wanted is to changes in price or other demand-determining factors. The elasticity of demand is discussed in general, along with its significance for comprehending market dynamics and its ramifications for firms and policymakers. Demand elasticity measures how responsive consumers' purchase decisions are to price fluctuations. It makes it easier for economists and other market participants to comprehend how price changes impact how much of a good or service is sought. This idea is frequently used to assess the effects of policy actions, forecast consumer behavior, and analyses market dynamics. Price elasticity of demand, income elasticity of demand, and cross-price elasticity of demand are a few examples of elasticity of demand. While income elasticity of demand measures responsiveness to changes in income, price elasticity of demand measures the responsiveness of quantity required to changes in price. Demand responsiveness to price changes for related goods is measured by cross-price elasticity of demand.Elasticity of demand is a term used in economics to describe how sensitive an item or service's amount of demand is to changes in price. It measures how much a product's customer demand varies in response to price variations.

KEYWORDS:

Demand, elastic, inelastic, percentage, price.

INTRODUCTION

Elasticity is a general term for responsiveness. Elasticity is used to illustrate how demand for a commodity responds to changes in price, either upward or downward. By understanding the elasticity of the things he sells, managers have many advantages. A larger response indicates more flexibility, whereas a smaller response suggests less elasticity. A manager is really curious to discover whether lowering prices by 8% will result in an increase in sales of 4%, 10%, or more. Elasticity of demand, then, gauges how responsively demand responds to changes in the commodity's price. Economics was first exposed to the idea of demand elasticity by Professor Alfred Marshall. "The elasticity (or responsiveness) of demand in a market is great or small depending on the amount demanded increasing much or little for a given fall in price and diminishing much or little for a given rise in price," he wrote. Thus, the ratio of the percentage change in quantity demanded to the percentage change in price may be used to determine elasticity of demand [1], [2].

Both elastic and inelastic demand exist. Demand is said to be elastic when it can shift significantly in response to a modest change in price. Demand is said to be very elastic if a 5% decrease in automobile pricing results in a 30% rise in sales. In other words, demand has significantly increased. On the other hand, inelastic demand occurs when a large change in price is followed by a modest change in demand. For instance, it is argued that the demand for salt is inelastic because the same amount would be bought regardless of price changes. But the demand for cars is elastic since even a slight increase or decrease in price could have a significant impact on consumer demand [3], [4].

1. **Perfectly Inelastic Demand**: If the quantity demanded for a good change not at all in response to a given change in price, the demand is said to be perfectly elastic. If a 10% increase in price results in a 0% increase in demand, it is exact lack of elastic demand. As illustrated in Fig. 1, the demand curve in this instance is a vertical straight line perpendicular to the Y-axis

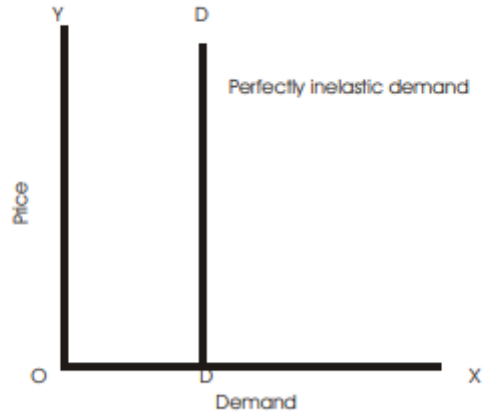

Fig.1 shows price vs demand curve for Perfectly Inelastic Demand (scholar.cu.edu.eg)

2. Inelastic or less than unit elastic demand

If the percentage change in quantity desired is smaller than the % change in price, the demand for the commodity is said to be inelastic (or less than unit elastic). Inelastic demand occurs when a 10% change in price causes a 6% change in demand. In Fig.2, it is displayed.

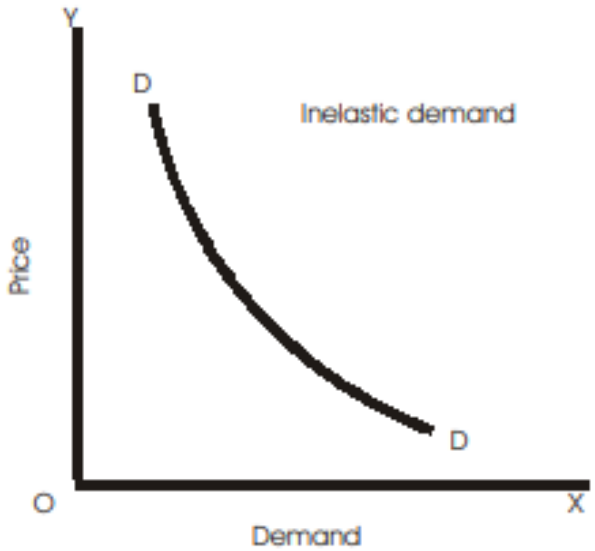

Fig. 2 shows Price vs Demand curve for Inelastic or less than unit elastic demand. (scholar.cu.edu.eg)

3. Unitary elastic demand

If the percentage change in quantity sought equals the percentage change in price, the demand for a commodity is said to be unit elastic. Unit elastic demand occurs when a 10% change in price causes a 10% change in demand. In this scenario, the demand curve is referred to as a rectangular hyperbola and is depicted in the adjacent Fig.3.

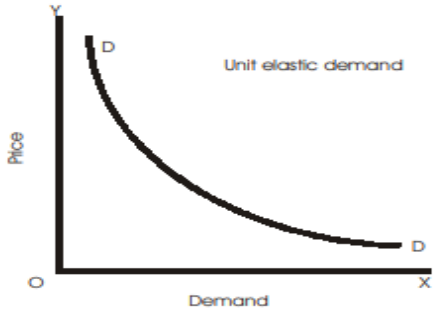

Fig.3 shows Price vs Demand curve for unitary elastic demand. (scholar.cu.edu.eg)

1. More than Unit Elastic

If a change in price causes a sizable change in the demand for a commodity, the demand is said to be more than unit elastic. Elastic demand occurs when a 10% change in price causes a 14% change in demand. Elastic demand is depicted in Fig.4 below.

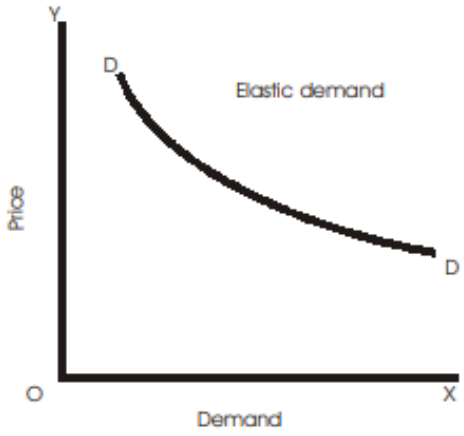

Fig.4 Price vs Demand curve for shows more than unit elastic. (scholar.cu.edu.eg)

2. Perfectly Elastic Demand

When a minor change in an item's price results in an infinite change in the quantity sought, the demand for that commodity is said to be fully elastic. Demand is perfectly elastic if a 10% change in price causes a % change in demand. As illustrated in Fig. 5, the demand curve in this instance is a horizontal straight line parallel to the X-axis. Real-world instances of the first and last situations are uncommon [5], [6].

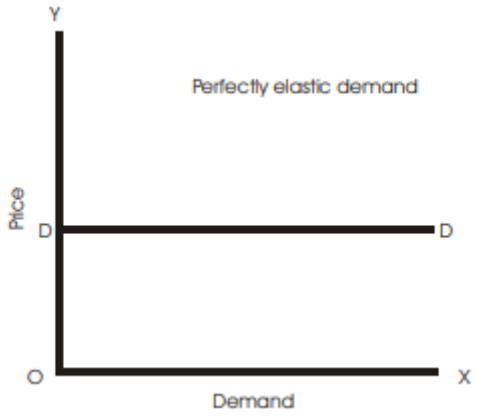

Fig. 5 shows Price vs Demand curve for Perfectly Elastic Demand. (scholar.cu.edu.eg)

DISCUSSION

Measurement of Price Elasticity of Demand

It is very important to know to what extent demand is responsive, that is elastic or inelastic. For this purpose measurement of elasticity is necessary. The important methods to measure elasticity are the following:

1. Percentage method.

2. Arc method.

3. Total outlay method.

4. Point/Geometrical method.

5. Revenue method.

Total Outlay/ Expenditure Method

The Total Outlay/expenditure made by a family on the purchase of a commodity can be used to gauge how elastic demand is for a given good. TQ stands for total outlay, p and q for price and quantity, respectively, and the formula for total outlay is (TQ = p q). The three measurements of the elasticity of demand that are provided by this method are as follows:

(1) Less than Unit Elastic (e < 1)

(2) Unit Elastic (e = 1)

(3) More than Unit Elastic (e > 1)

Total outlay method to measure elasticity of demand was primarily used by Professor. Marshall. According to this method, elasticity is measured by comparing the total money spent by the consumer on the goods before and after the changes in price. Elasticity can be measured for the following three situations:

1. **Unit Elastic (e=1)**

Elasticity is referred to as unitary when the total expenditure (TE) does not change despite though the price of the good changes. Consider the scenario below, where TE is left unchanged. When the price drops to Rupees 2 per unit, it can be seen that the overall cost remains the same.

2. **More than unit elastic(e > 1)**

Elastic demand is the situation in which the total amount of money spent increases with a decrease in price and decreases with a rise in price. The table will make this evident. When the price per unit decreases from Rupees. 5 to Rupees. 2, the overall cost increases from Rupees. 50 to Rupees. 60. As a result, the connection between price and overall spending is inverse.

3. **Inelastic Demand (e < 1)**

Demand inelasticity, also known as elasticity less than one, occurs when the total amount of money spent increases with an increase in price and decreases with a decrease in price. This instance is displayed in the Fig. 6 below. In this instance, when prices drop, so does total spending. Price and overall spending are therefore directly related.

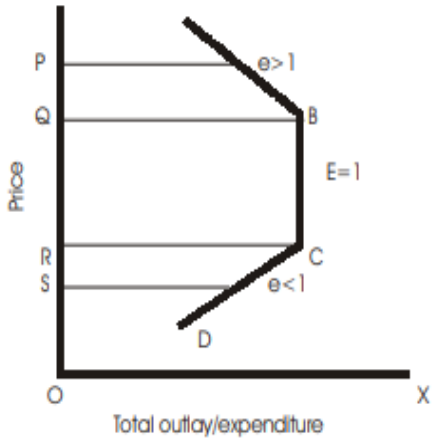

Fig. 6 shows inelastic demand for e < 1. (scholar.cu.edu.eg)

Determinants of Price of Elasticity of Demand

1. **Good substitutes**:

A commodity's demand will be elastic if there are quality alternatives available. This is due to the fact that as a good's price increases, consumers would instead buy its equivalent.

2. **Commodity nature**:

All essentials like salt and rice, which have few or no replacements, will have an inelastic demand. Such goods must be purchased by people in order to survive. Therefore, despite the price modifications, there will be some demand. On the other hand, demand for luxury items will be flexible. Consumers choose not to purchase such goods if the price even slightly increases. At the same time, a small price reduction on these goods draws in a lot of buyers.

3. **Commodity's number of uses**:

A commodity's elasticity will increase with the number of uses it can be put to. As a result, the demand for such commodities will be elastic. For instance, milk can be utilised in a variety of ways to make curd, cake, desserts, and other things. Demand rises when its price decreases, but falls sharply when its price is raised.

4. **The possibility of delaying consumption**:

If a commodity's consumption can be delayed, demand will be elastic; otherwise, it won't be. Demand for some products, such as computers, printers, scanners, etc., can be delayed for a while. People might wait until they are less expensive. Their demand is elastic as a result. The need for food or electricity, however, cannot be put off. Consequently, their demand is inelastic [7], [8].

5. **Percentage of income spent**:

The percentage of income used to buy a commodity has an impact on the elasticity of demand as well. The demand will be inelastic if the percentage is relatively low. As an illustration, we spend very little of our overall revenue on items like agarbatties (candlesticks), matches, pens, and pencils. Our demand is not diminished if the price of such things also rises. Inelastic demand exists for such commodities as a result.

6. **Fashion**:

Demand for commodities that are in style will be inelastic. People that care about fashion don't cut corners on budget. Some consumers will expect more even though the pricing is high simply because the product is in style.

7. **Change in taste**:

A commodity that has become a consumer's habit or for which they have developed a taste will have an inelastic demand. A chain smoker constantly needs a cigarette, no matter the cost. Similarly, despite price increases, a habitual paan (betel nut) chewer cannot break his or her habit. Demand is consequently elastic in these circumstances.

8. **The price of the commodity**:

Items with extremely high or extremely cheap prices have low elasticity, whereas items with moderate prices have a high degree of elasticity. Even if a good's price somewhat decreases, demand will not rise significantly if it is extremely costly. And because individuals have already purchased their needs at low prices, demand won't increase even at extremely low levels.

9. Income Elasticity of Demand

When the price is constant, it is the ratio of the percentage change in the amount spent on the good to the percentage change in the consumer's income.

Ie = Proportionate change in demand / Proportionate change in income

10. Cross Elasticity of Demand

Cross elasticity of demand describes how responsively demand is to changes in the cost of complementary and replacement goods [9], [10].

Cc = Proportionate change in demand of X / Proportionate change in price of good Y

CONCLUSION

In conclusion, the idea of demand elasticity is critical in economics since it sheds light on consumer behavior and market dynamics. Elasticity of demand, which measures how sensitive changes in quantity required are to changes in price or other determinants, is a tool used by businesses, decision-makers, and economists to assist them understand the effects of various factors on market outcomes.

The idea of demand elasticity enables companies to choose the best price plans for their goods and services. Setting the best prices to maximize profit requires an understanding of the elasticity of demand. Businesses must exercise caution when raising prices if demand is elastic because this could result in a considerable drop in the quantity required. On the other hand, if demand is inelastic, businesses may be more able to modify prices without seeing a significant drop in demand. Businesses can use information about demand elasticity to estimate demand and set production levels. Businesses can forecast the potential effects of price changes on their sales volumes by taking into account how sensitive quantity requested is to price changes. This information assists in enhancing inventory and production management, guaranteeing effective resource allocation, and preventing unforeseen costs or shortages.

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CHAPTER 4

THEORY OF PRODUCTION AND CONCEPT OF COSTS MAXIMIZATION

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ABSTRACT:

The theory of production and the idea of costs are key ideas in economics that shed light on how businesses act and how resources are allocated during the production process. This essay tries to investigate these ideas, how they relate to one another, and how they affect corporate decision-making. The theory of production investigates how businesses convert inputs like labor and capital into outputs in an effort to maximize profits or cut expenses. Production functions, which outline the technological link between inputs and outputs, are used to analyses the relationship between inputs and outputs. The theory of production also addresses elements that have an impact on production, including scale economies, technological improvements, and the law of diminishing returns.The link between inputs (factors of production) and outputs (goods or services) within a production process is examined by the theory of production in economics. It looks at how businesses decide on the best way to combine inputs to effectively create a certain amount of output. The philosophy of production is strongly related to the idea of cost maximisation. It implies that businesses work to provide products and services at the lowest feasible cost in order to maximise their profits. This entails maximising resource allocation and lowering production costs while obtaining the target output level.

KEYWORDS:

Supply, Costs, Price, Production, Expenses.

INTRODUCTION

The conversion of inputs into outputs is referred to as production in economics. The raw materials or other productive resources utilized to create output, or finished goods, are referred to as inputs. Production is the technical term for the act of creating something useful or something that satisfies a consumer's want. Any good that is valuable to us or meets our needs qualifies for consumption. Thus, boosting utility can increase the usefulness of a good. For instance, unless it is made into bread (output), we cannot eat raw wheat flour when we are hungry (desire). The process of producing usefulness is the turning of wheat flour into bread. There are three ways to construct utilities. These are listed below:

1. By altering a good's form, shape, or size. Bread slices have replaced the wheat flour that was previously powdery. As a result, the good's form has been altered. Similar examples of altering the shape or size of a good and so producing utility are a carpenter giving a piece of wood the shape of a chair or a chef transforming a lump of dough into mouthwatering pizzas.
2. Making use of the limited resources at the precise moment when they are most needed.
3. The government has a buffer supply so that it can distribute food grains to the market to meet demand during a crisis.

4. By moving a good to a location where its use will be beneficial. Sand's utility is increased when it is moved from the riverbank to the construction site.

The process of enhancing a good's utility through form utility, location utility, and time utility is hence called manufacturing [1], [2].

Returns to a factor and Returns to a Scale

In economics, two different types of production functions are typically utilized. First, the production function where certain input numbers are fixed and one or a small number of input quantities are altered. The law of changing proportions is used to study this type of production function. Additionally known as short-run production functions, these. The short-run is a time frame in which the amount of one or more production elements is fixed. A business cannot afford to change its plants or equipment. The second category is the production processes, where all inputs are modified. This is what the law of returns to scale is based on. Additionally known as long-run manufacturing functions, these. The long term is a time frame in which every aspect is subject to change. An outdated plant can be replaced by a new one [3].

Law of Variable Proportions/ Law of Diminishing Returns

The law of changing proportions is a key concept in economic theory. While maintaining the quantities of other variables constant, it investigates the production function with just one factor variable. This law explains how a change in the proportion of the factors used has an impact on the total output or marginal production. The law asserts that the marginal and average product gradually decreases when one element is increased while keeping others fixed. According to Stigler, "the resulting increments of product will decrease beyond a certain point, i.e., the marginal products will diminish," when equal increments of one input are added while the inputs of other productive services are held constant. As a result, increasing the amounts of a variable factor to a fixed factor causes output to increase until a certain point, after which it begins to drop [4].

Assumptions of the Law

The following is a legal presumption:

1. It is thought that technology is always in a state of flux.

2. A certain number of inputs must have a set quantity.

3. The law is founded on the idea that different combinations of the various elements can result in different products. It cannot be utilized in situations where the factors must be combined in a specific order to get a result.

Returns to Scale

Size of the plant has an impact on production volume. Every business owner must make a decision on the size of his facility or operation. How big should a firm be is the question. 'Economies of scale' exist up to a particular size of plant, for this reason. Economies are advantages that result from a business's growth. Internal and external economies of scale can be broadly separated into two groups. Internal variables that are unique to the company and unshared by other enterprises are what lead to internal economies. One or more examples of internal economies/benefits that a corporation enjoys include the use of superior technology, the acquisition of raw materials at lower costs and the sale of finished items at higher prices, the simplicity of obtaining financing from financial institutions, etc. All businesses located in a region can take advantage of external economies. Examples of external economies include the advancement of transportation, quick and efficient communication, and good banking and

insurance services. A plant or business that is either too large or too tiny is not economically viable. Optimal scale is preferable to too small or too large plants since it at least covers the cost per unit of output [5]

DISCUSSION

Meaning of Supply

The quantity of goods available for purchase in the market at a specific price is referred to as supply. Supply and stock should not be confused. Stock is the quantity of goods that can be quickly brought to market for sale. In this way, stock is a potential supply whereas supply is the quantity that is actually provided to the market. Let's use an illustration to support this. A farmer makes 1,000 kg of rice, and at a certain price, he will sell 500 kg of it on the market. The supply in this case, or 500 kg, is greater than the stock, or 1000 kg, in this case.

Supply Schedule

The relationship between pricing and the quantity of goods delivered is represented by the supply schedule. It is a list of the quantities that producers have supplied at various prices. This is depicted as follows:

When the price is Re 1, 10 units are provided, and when the price rises, the supply rises as well. This demonstrates the clear correlation between the commodity's supply and price.

Supply Curve

The x-axis in Fig.1 represents the quantity of the good delivered, while the y-axis represents the price of the good. The supply curve (SS) slopes upward and to the right, showing that as the price of the good rises, so does the supply. It should be remembered that producers stop producing products if the price drops too low. The reserve price is thus the price below which the seller will decline to sell [6], [7].

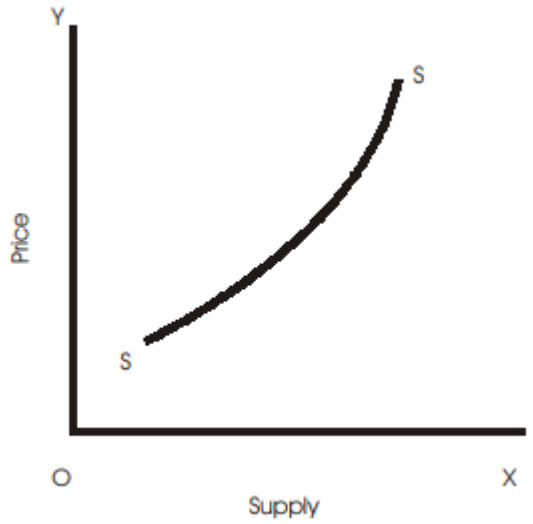

Fig. 1 shows Supply Curve.(scholar.cu.edu.eg)

Law of Supply

According to the law of supply, when all other factors are held constant, a commodity's supply grows as its price rises, while its supply decreases as its price decreases. As a result, there is a direct and positive relationship between supply and price of a good; the supply will increase with price and vice versa."As the prices rise, other things remaining the same, the supply rises, and as the price falls, the supply decreases," asserts Marshall.Fig. 2 shows law of supply. (scholar.cu.edu.eg).

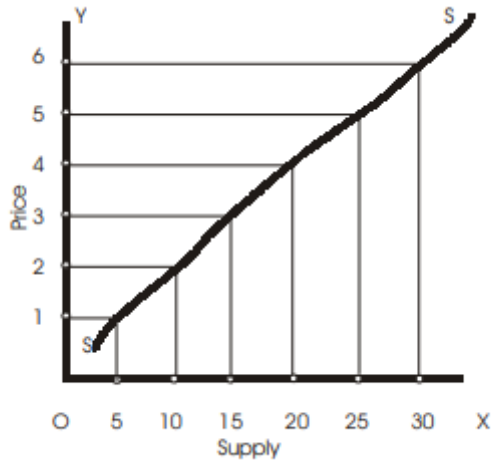

Fig. 2 shows Law of Supply (scholar.cu.edu.eg).

Determinants of Supply

The term "supply function" refers to the relationship between the supply of a good (let's say, "X") and other factor that affect supply, such as the price of the good (PX), the price of goods that are similar to it (PY), the price of the production's inputs (F), the price of technology (T), and the goals (G) or overarching objectives of the producer.Let's talk about the following aspects that affect a product's supply:

1. **Product price**: As previously said, a product's price impacts its supply.

Supply increases in response to rising prices and vice versa. Because of the huge profit margin, producers are driven to create more while prices are high.

2. **Technology**: A product's supply is also impacted by changes in technology. It might lower the cost of production, increasing supply in the process. The speed of photocopying per unit and consequently high production have grown thanks to automatic and digital photocopier equipment.

3. **Factor price variations** also result in changes to the cost of production, which affects how much of the product is available. When factor costs decrease, the entire cost of manufacturing decreases, which encourages manufacturers to produce and supply more.

4. **Other product prices**: The cost of alternatives and complements also has an impact on a product's supply. For instance, if tea prices increase, producers would divert resources away from coffee production and put them towards the production of tea, which will lead to a decrease in the production and supply of coffee.

5. **Expectation of future prices**: If sellers believe that prices will increase in the future, they will restrict the supply of a product on the market and hold onto the product to sell later.

This is done specifically to generate large revenues. For instance, when traders predict that the price of paraffin oil will increase further, they artificially reduce supply and demand in order to sell at a profit in the future [8], [9].

Movement along and shifts in Supply Curve

Changes in quantities supplied as a result of a price change are simply indicated by movement along the same curve. Shifts in the supply curve are when the supply changes not as a result of changes in the product's price but rather as a result of other variables, such as changes in technology, changes in the prices of related commodities, changes in the price of inputs, etc.Fig. 3 shows supply vs price curve.

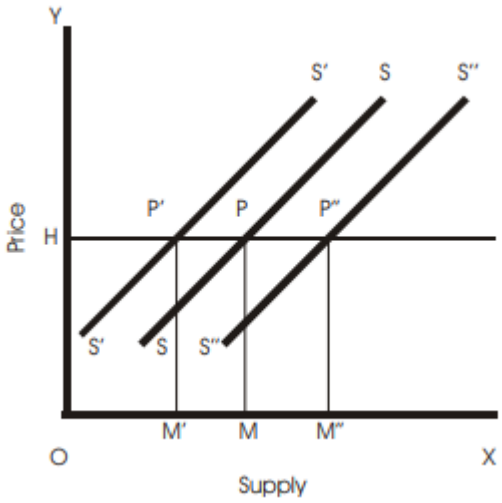

Fig. 3 shows supply vs price curve (scholar.cu.edu.eg).

When more products are offered for sale while the price remains the same, supply is considered to increase (supply curve shifts to the right) and to decrease (supply curve shifts to the left) respectively. This is demonstrated in the previous Fig.3.The supply curve prior to the alteration is shown by SS. Because OM' (OM' OM) is being sold for the same price, S'S' displays a drop in supply. Given that more are being given for the same price as OH (OM" > OM), S"S" indicates an increase in supply.Supply expands and contracts when prices vary (rise/fall), and this phenomenon is known as supply expansion and contraction. The equilibrium point in this scenario shifts left or right along the same supply curve. Supply curve SS and equilibrium point E at OP price are shown in Fig. 4. Supply decreases by N"N when the price drops to OP" and increases to ON' when the price rises to OP'. When prices decrease, the equilibrium point E shifts to E', and when prices increase, it shifts to E'.

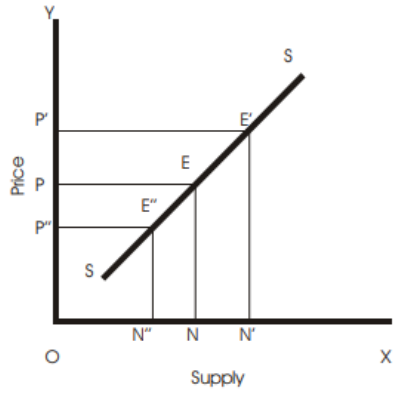

Fig.4 shows supply vs price curve(scholar.cu.edu.eg).

Concepts of Costs

In the context of microeconomic theory, the idea of cost is extremely important. An entrepreneur whose primary goal is to maximize profit makes manufacturing decisions based on the cost of production. A lower production cost results in a higher profit margin.

Real and Nominal Costs

The payments provided to production factors in exchange for their labor and other expenses are referred to as real costs. Real cost is calculated based on labor's suffering and sacrifices. It also includes the price of waiting. The nominal cost of a product is the sum of all the production charges paid for different inputs.

Explicit and Implicit Costs

The paid-out costs are the explicit costs. These are the sums paid for the firm's acquisition or employment of productive resources. These include labor wages, building rent, payments for raw materials, payments deposited into depreciation accounts, and premiums for insurance against fire and theft, among other things. Explicit costs are the cash payments that businesses make to third parties in exchange for their services and commodities, according to Left witch. These expenses can be found in the company's accounting records.

Contrarily, implicit costs of production are the expenses related to resources that are owned and used by independent contractors. Normally, these expenditures are not taken into account when estimating a producer's costs. These include the compensation for the entrepreneur's own work, capital, and land. These expenses are not listed in the company's accounting records. The entire cost of producing a commodity is the sum of its explicit expenses and implicit costs [10].

Opportunity/Alternative/Transfer Costs

The most significant idea in economic theory is opportunity cost. The cost of the next best alternative given up in order to make a decision is the simplest definition of opportunity cost. The value of the best alternative or chance passed up is the opportunity cost of employing resources to produce a thing. Both explicit and implicit expenses are included in opportunity costs. For instance, suppose a producer has the option of making a radio set or a bicycle with the sum of Rs. 2000. In this instance, the opportunity cost of a radio equals the price of the bicycle he gave up.

Private, External and Social Costs

An external expense is one that is not borne by the company but rather by members of society. All expenses, regardless of who pays for them, must be included in the total cost to society. Private costs are the expenses incurred by a company when providing a good or service.

It is actually the business's financial expenses.A car's purchasing price, for instance, accounts for the manufacturer's personal expenses. However, the air pollution generated during the car's production has an external cost. These expenses are referred to as "external" to the market pricing process because neither the manufacturer nor the car's price cover them. Another externality related to driving a car is air pollution. The cost of the environmental harm incurred by utilizing the vehicle does not fall on the driver.The sum of all the expenses related to an economic activity is known as the social cost. It comprises all costs incurred by society as a whole as well as costs borne by the economic agent. It covers both the expenses external to the firm's private costs and the costs represented in the production function of the organization (referred to as private costs or external costs). In other words, it is the price that society as a whole pays to produce a good. The total of private and external costs is hence the social cost.

$$\text{Social Cost} = \text{Private Cost} + \text{External Cost or External cost} = \text{social cost} - \text{private cost}$$

A negative externality exists when social costs outweigh private expenses. A social cost that is rarely fully paid by the polluter, such as environmental contamination, results in a negative externality.

A positive externality exists if private costs are higher than social costs. When a provider of educational services only gets paid for the direct advantage that the recipient of the education receives, they are only providing an indirect benefit to society as a whole. This is an example of a positive externality.

Economic Costs

Economic costs are the sums of money that resource owners must be paid in order for them to keep providing resources for use in production. Economic cost consists of typical profit.

Short Run Costs and Long Run Costs

The term "short run" refers to a time frame within which a company can alter its output by just altering the number of variable components, such as labor, raw materials, etc. Fixed elements like land, machinery, etc., cannot be modified in a short period of time. Short run costs are manufacturing expenses incurred in the short run, or on movable factors. The expenditures incurred over a time in which all variables are modifiable are the long-term costs. Costs of production on all factors are therefore long-term costs since, in the long run, all components become variable.

Fixed/Supplementary and Variable/Prime Costs

While expenses incurred on variables may be referred to as variable costs, those incurred on fixed components are referred to as fixed costs.The costs of (a) administrative staff salaries and other costs; (b) production staff salaries on a fixed-term basis; (c) machinery wear and tear (standard depreciation allowances); (d) building maintenance costs; (e) land maintenance costs; and (f) normal profit, which is a lump sum that includes a percentage r; are all considered fixed costs.The cost of (a) direct labor, which fluctuates with output, is one of the variable costs.

(b) Raw materials; (c) Machinery operating.

The sum of fixed and variable costs constitutes the total cost of production.

Symbolically, TC = TFC + TVC

Total Fixed Costs

The total fixed cost is the sum of expenditures for inputs that remain constant over a range of output levels. In Fig. 5, the whole fixed cost is represented graphically. It runs directly down the x-axis or output. The total fixed cost curve (TFC) is parallel to the x-axis, suggesting that it is constant at all production levels.

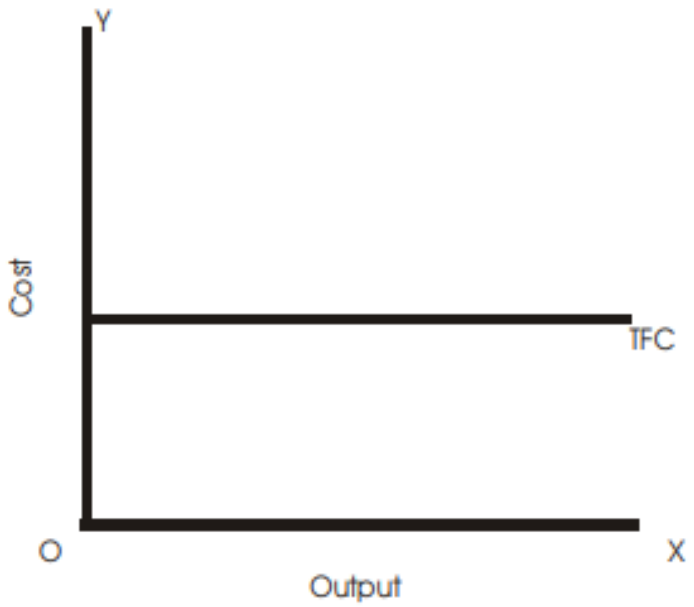

Fig.5 shows costs vs output (scholar.cu.edu.eg)

Total Variable Costs

The sum of expenses paid for those input factors whose quantity changes in response to changes in output level is known as total variable cost. In Fig.6, the total variable cost curve TVC is displayed. Its form is an inverse-S. As output level grows, total variable costs rise.

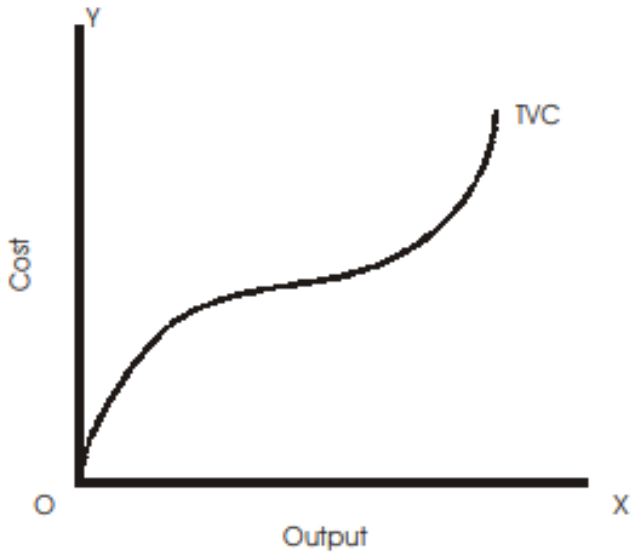

Fig.6 shows costs vs output.

CONCLUSION

The cost idea and the production theory are key elements of economic analysis for businesses. They offer a framework for comprehending the processes businesses use to generate goods and services as well as the variables affecting costs. By putting these ideas into practice, businesses may decide wisely how to allocate resources, set production goals, and set pricing policies, which boosts productivity and profits. Managers and policymakers must have a solid grasp of the theory of production and the idea of costs in order to navigate the complexity of contemporary economic systems.Numerous production components, such as labour, money, raw materials, and technology, are used throughout the manufacturing process. The objective is to generate products or services that satisfy customer demand while making optimal use of these resources. In order to understand how changes in input levels or technological advancements affect output levels, the theory of production examines the links between inputs and outputs.By minimising both apparent costs (such as labour and materials) and implicit costs (such as missed opportunities to utilise resources in other ways), companies that practise cost maximisation aim to maximise profitability. Utilising techniques like technical improvements, economies of scale, or optimising the usage of resources, one might reduce costs.

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CHAPTER 5

AN OVERVIEW OF THE CONCEPTS OF REVENUE STRUCTURE

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ABSTRACT:
An essential component of both business and financial analysis is the idea of revenue. It stands for the overall revenue obtained from goods sold, services rendered, and other commercial ventures. This essay tries to examine key revenue-related ideas and their importance in comprehending a company's financial performance. Gross revenue, net revenue, operational revenue, total revenue, and average revenue are among the revenue concepts covered. Gross revenue is the total income before any costs or expenses are subtracted. After refunds, allowances, and discounts are subtracted, the remaining money is known as net revenue. Focus is placed on the income produced by the main business operations, or operating revenue.over a certain time frame. In many analyses, decision-making procedures, and financial statements, revenue is a key indicator of a company's financial performance. There are a number of crucial ideas in relation to revenueWhile average revenue sheds light on revenue per unit or client, total revenue includes all sources of income.

KEYWORDS:

Average Costs, Income, Marginal, Output, Revenue, Total Costs, Unit.

INTRODUCTION

A fundamental idea in both economics and business is revenue. It refers to the total revenue that a business made through the sale of goods or services over a certain time frame. In many analyses, decision-making procedures, and financial statements, revenue is a key indicator of a company's financial performance. There are a number of crucial ideas in relation to revenue:

a) **Total Revenue**: Total revenue refers to the total amount of money a business makes from the sale of its goods and services. It is computed by dividing the volume of products or services sold by the cost of each. Total revenue is a crucial factor in assessing a company's financial health since it shows the scope of commercial activity generally [1].

b) **Average Revenue**: To calculate average revenue, divide total revenue by the number of items or services sold. It indicates the typical revenue generated by each sold unit. When examining a company's pricing strategy and demand elasticity, average revenue is particularly helpful.

c) **Marginal Revenue**: The difference in total revenue brought on by the sale of one more unit of a good or service is known as marginal revenue. It offers information on the earnings produced by each extra unit sold. Because it enables businesses to understand the effects of raising or lowering their output, marginal income is essential in identifying the best level of production and pricing decisions.

d) **Revenue Streams**: A company's various revenue sources and channels are referred to as revenue streams. Businesses frequently have many sources of income, including product sales, service fees, licensing deals, money from advertising, and subscription fees. Diversifying sources of income can lower risks and boost financial stability [2].

e) **Revenue Recognition**: When and how revenue should be recognized in financial statements is decided by the accounting principle of revenue recognition. Recognizing revenue includes doing so as soon as it is earned and practically assured to be collected. To guarantee consistency and accuracy in financial reporting, many regulations, including the Generally Accepted Accounting Principles (GAAP), provide frameworks for revenue recognition.

f) For businesses, understanding and managing revenue is essential since it has a direct impact on profitability, investment choices, and growth strategies. Businesses can see trends, analyses the effectiveness of marketing initiatives, gauge the performance of various products or services, and make educated decisions to maximize revenue production and overall business performance by analyzing revenue patterns.

g) **Gross Revenue**: Before deducting any costs or fees, gross revenue is the whole amount of money a business makes from its core operations. All sales proceeds, service charges, license payments, and other income sources are included [3].

h) **Net money**: The money that remains after subtracting any sales returns, allowances, and discounts is referred to as net revenue, also known as net sales, or net income. It indicates the actual revenue that the company actually brought in, taking into account any price reductions or adjustments for returned goods.

i) **Operating Revenue**: Operating revenue is the income produced by a company's main operations or principal lines of business. Any non-operating income, such as gains from the sale of assets or investment income, is excluded. The ability of the business to make money from its core operations is revealed by operating revenue.

j) **Total Revenue**: Total revenue is made up of both operating and non-operating revenue sources that a company generates. Sales, investment, interest, royalties, and any other types of income are all included in this. Total revenue offers a complete picture of the company's total financial performance.

k) **Average Revenue**: Average revenue is determined by multiplying the total revenue by the volume of products or services sold. It is useful in evaluating pricing strategies and customer value because it indicates the revenue made per unit or per customer [4].

Businesses must comprehend these income ideas because they affect financial analysis, performance assessment, and strategic decision-making. Analysis of revenue is a useful tool for evaluating the success of marketing and sales initiatives, pricing plans, and the general state of the company. Additionally, it gives businesses information about market dynamics, client preferences, and revenue patterns, allowing them to make wise judgments about their product lineups, growth strategies, and resource allocation.

DISCUSSION

The money that an entrepreneur makes through the sale of the products they produce is referred to as revenue. If a producer can sell 200 pens for Rupees. 5 apiece throughout a week, his total revenue for the week is Rupees. 5 x 200 = Rupees. 1000.

Total Revenue

Total Revenue is the sum of all the money that a company makes from the sale of its goods. He earns a total of Rupees. 100 by selling 20 apples at a price of Rupees. 2 apiece (20 x Rupees. 5). TR is therefore equal to Q P, where Q is the overall quantity sold and P is the price per unit [5], [6].

Average Revenue

A producer's average revenue is calculated by dividing their total revenue by the total number of units they sold. The average revenue curve of a company is identical to the customer demand curve. It therefore refers to the product's pricing.

AR = TR/TQ

Marginal Revenue

The difference in total income caused by a unit (one unit) variation in the output sold is known as marginal revenue. In other words, it is the money that a manufacturer would make if he sold one more unit of his goods.

$$MR = \Delta TR / \Delta TQ$$

Total Costs (TC)

The sum of total fixed costs and total variable costs represents the overall cost to a producer for each level of production.Fig. 1 shows costs vs output for total costs (scholar.cu.edu.eg).

$$TC = TFC+TVC$$

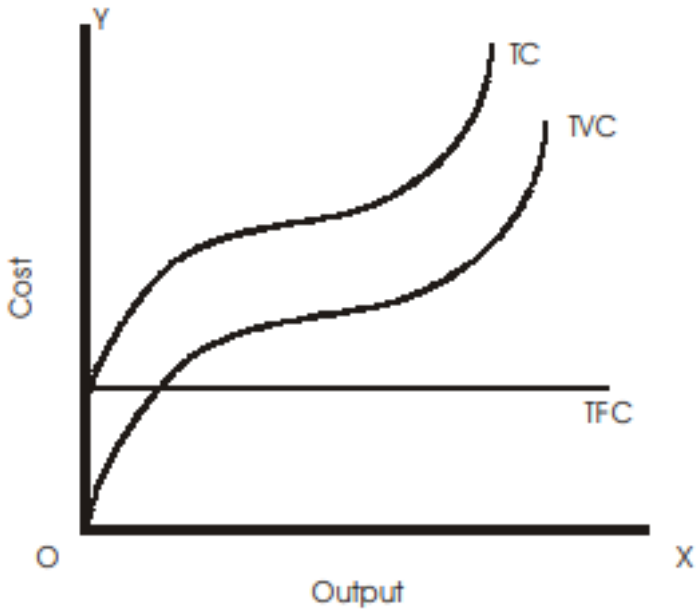

Fig.1 shows costs vs output for total costs (scholar.cu.edu.eg)

Average Fixed Costs

Total fixed cost divided by total output equals average fixed cost. Cost per unit based on constants.

$$AFC = TFC/ TQ$$

Where, TQ is the total output. Average fixed cost is shown as under. AFC curve is a rectangular hyperbola, indicating same magnitude at all points as TFC remains constant throughout. This is shown in Fig. 2.

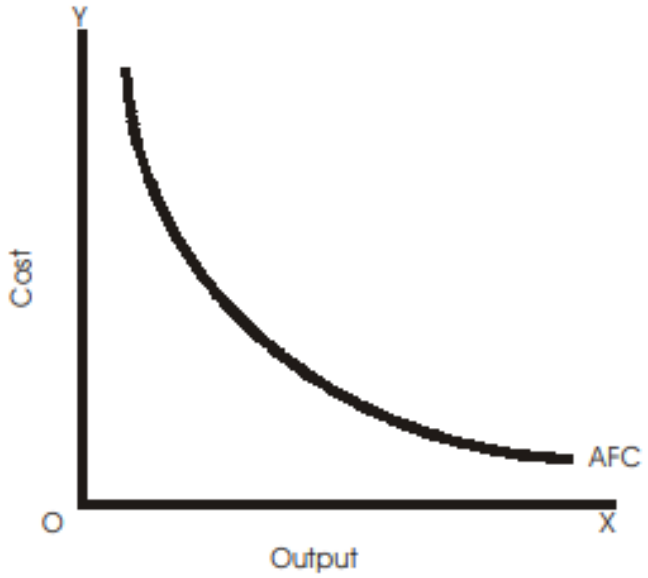

Fig.2 shows costs vs output curve for average fixed costs. (scholar.cu.edu.eg)

Average Variable Costs

The average variable cost, or the variable input cost per unit, is calculated by dividing the total variable cost by the total units of output.

$$AVC = TVC / TQ$$

The average variable cost decreases initially, drops to zero while the facility is being operated at its best, and then starts to increase once normal capacity has been reached.Below is a diagram Fig. 3 that illustrates this[7], [8].

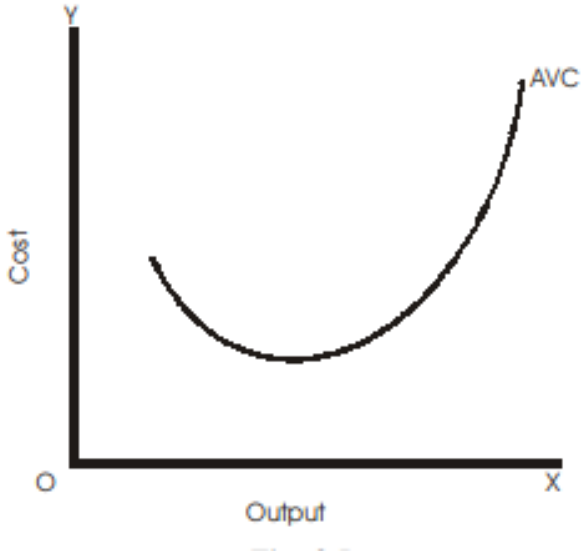

Fig. 3 shows costs vs output for average variable costs. (scholar.cu.edu.eg)

Average Total Costs

The cost per unit of combined fixed and variable inputs is known as ATC. By dividing total cost by units of output, you may determine what the average total cost of production is, i.e.

$$AC = TC /TQ \text{ or } = TFC + TVC/ TQ \text{ or } = AFC + AVC$$

Average total cost or ATC curve has the similar shape as that of AVC, that is, U-shaped. Fig. 4 shows AC curve.

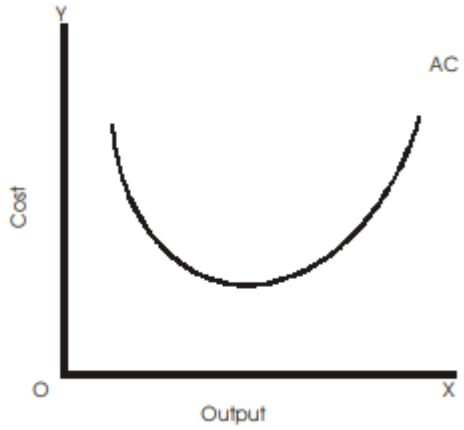

Fig. 4 shows AC curve (scholar.cu.edu.eg)

Marginal Costs

A unit (one unit) increase in output results in an addition to the overall cost, which is known as the marginal cost.

It is written as: $MC_N = TC_N - TC_{N-1}$

Where, N is the number of units of output. Alternatively, marginal cost can also be expressed as follows:

$$MC = \Delta TC / \Delta TQ$$

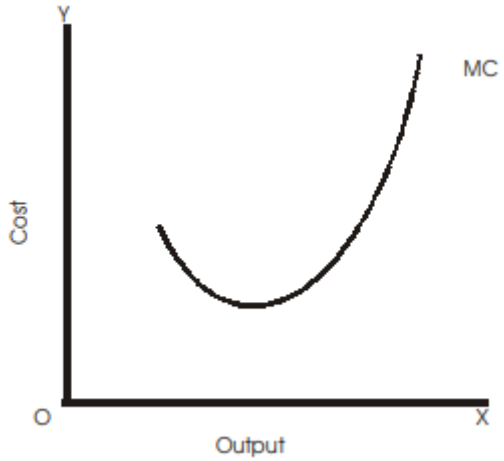

Fig. 5 shows cost vs output curve (scholar.cu.edu.eg)

Where TQ denotes total production and TC denotes the change in total cost. The slope of the TC curve, which is depicted in Fig. 5, is known as the MC curve graphically. The MC curve is also U-shaped. It initially decreases, reaches a minimum, and then abruptly increases.

Relationship between Average Costs and Marginal Costs

Total costs are divided by output units to determine average cost. The difference in total costs brought on by an increase in output per unit is known as the marginal cost. The following describes the connections between the two:

1. Marginal cost is lower than average cost (before point P) when average cost declines with an increase in output.

2. The marginal cost is higher than the average cost when the average cost increases (see point P) [9], [10].

3. The marginal cost curve intersects the average cost curve at its lowest point, which also happens to be the point of maximum capacity, or point P. At this point, MC = AC.Fig. 6 shows relationship between Average Costs and Marginal Costs. Fig.7 shows relationship between AR and MR under imperfect condition.

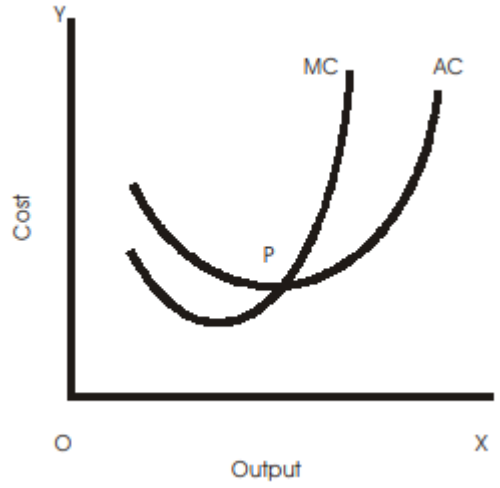

Fig. 6 shows relationship between Average Costs and Marginal Costs (scholar.cu.edu.eg)

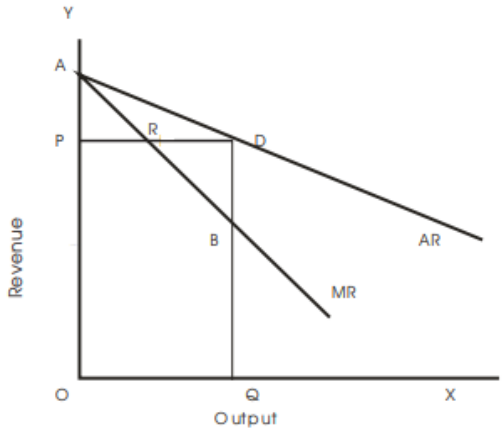

Fig. 7 shows relationship between AR and MR under imperfect condition.

CONCLUSION

For organizations to assess their financial performance and make wise decisions, understanding the basics of revenue is essential. While net sales take into account adjustments for returns and discounts, gross revenue offers a complete picture of overall income. By concentrating on income from core operations, operating revenue enables companies to evaluate the success of their core business operations. All sources of income are included in total revenue, providing a comprehensive picture of the financial health of the company. In order to develop pricing strategies and analyses customer value, average revenue is used to estimate revenue per unit or customer. Businesses may analyze their income sources, spot trends, and gauge the success of their plans by knowing these revenue principles. They may decide wisely about product development, price, marketing strategies, and resource allocation thanks to this information. For firms to maximize their financial performance, retain their competitiveness, and promote sustainable growth, accurate revenue

analysis is essential.Analysis of revenue is a useful tool for evaluating the success of marketing and sales initiatives, pricing plans, and the general state of the company. Additionally, it gives businesses information about market dynamics, client preferences, and revenue patterns, allowing them to make wise judgments about their product lineups, growth strategies, and resource allocation

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CHAPTER 6

AN OVERVIEW OF THE FORMS OF MARKET AND PRICE DETERMINATION

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ABSTRACT:
The types of markets and how prices are established are fundamental economic ideas that aid in understanding how various market structures operate and how prices are established in them. This essay will examine the various market structures, including oligopoly, monopoly, perfect competition, and monopolistic competition, as well as the processes by which prices are set in each of these markets. Large numbers of customers and sellers, homogeneous goods, complete knowledge, and unrestricted entry and exit are the characteristics of perfect competition. No single firm has power over the market price in this market system; prices are set by the interaction of supply and demand forces. On the other hand, monopoly occurs when a single company rules the market, giving it the power to set prices and regulate output. Monopolistic competition entails a large number of businesses offering distinctive products, and prices are established by brand recognition, product differentiation, and non-price rivalry. An oligopoly is a market structure in which a small number of dominant, large enterprises are interdependent with one another and may engage in price-setting strategy. For firms, politicians, and analysts, understanding these various market and pricing determination systems is crucial. It offers information on market dynamics, rivalry, and consumer welfare. Businesses can use market structure analysis to identify potential entry obstacles, pricing strategies, and marketing strategies. This information can be used by policymakers to create the best regulations and policies to encourage competition, stop monopolistic behavior, and improve market efficiency. Based on their knowledge of market structures and how prices are set, analysts can evaluate the state of the market and make wise investment choices.

KEYWORDS:

Business, Company, Competition, Market, Oligopoly, Price.

INTRODUCTION

The term "market" often refers to a location where buyers and sellers typically congregate to buy and sell a specific commodity. In economics, the word "market" has a different meaning. Rather than a location or an area, it refers to a specific commodity that is offered for sale and purchased. For instance, cotton and tea markets. In economics, the term "market" refers to any effective system for connecting buyers and sellers. A market needs the following components:

a) The term "market" does not refer to a specific location but rather to the entire region where buyers and sellers of a certain good are dispersed.

b) There must be buyers and sellers, even though physical presence is not required. In the modern world, we sell products via websites, electronic marketplaces, or telephone media;

c) There must be a good that is purchased and sold;

d) There should be open communication between buyers and sellers so that a single price is established for the good.

Forms of Market

Markets have been categorized by economists based on factors such as:

a) The quantity of buyers and sellers of the commodity;

b) The type of commodity produced by the sellers;

c) The degree of freedom in the movement of goods and factors;

d) Whether buyers and sellers have perfect or imperfect knowledge of the prices in the market [1].

Economists have identified four fundamental market types based on these criteria:

a) Perfect competition

b) Monopoly

c) Monopolistic competition

d) Oligopoly

Perfect Competition

When there are many consumers and sellers of the goods and there is no business competition at all, the market is considered to be ideal. The businesses market uniform items.

Features of Perfect Competition

The following is a summary of the key characteristics of this kind of market:

(1) Numerous purchasers and sellers. The quantity of buyers and sellers is so great that no one buyer or vendor can independently affect the market price or output. This is due to the fact that each buyer and seller only purchases or sells a relatively small portion of the overall output.

(2) Products that are uniform. A company creates a good that consumers perceive as uniform or homogeneous. A buyer has no way of knowing which things were sold by which merchants. The presumptions of numerous vendors and purchasers and a homogeneous product suggest that there is only one firm that is a price-taker. Demand curve, also known as the average revenue curve, is a horizontal straight line that is parallel to the output axis and is infinitely elastic. As a result, a company operating in a market with perfect competition can sell any quantity of goods at the going rate.

(3) The enterprises' free entrance and exit. Every company is free to enter or exit the sector [2], [3].

New businesses can enter the market to share in the profits if the sector is profitable. Similar to this, individual businesses can leave the market if the industry experiences losses.

(4) No rules from the government. No taxes, subsidies, rationing of necessities, or other forms of government meddling in the market exist.

(5) Consistent pricing. A commodity's price at a given time is consistent throughout the market.

(6) Complete understanding of market circumstances. Both buyers and sellers are fully aware of the market price at which transactions take place.

(7) The factors are perfectly mobile. Production inputs are easily transferable between businesses in the sector. Additionally, they have the option of switching jobs, which provides the opportunity to pick up newer abilities.

(8) There are no selling or shipping expenses. In an ideal market, selling and other promotional costs do not exist [4].

Price and Output Determination under Perfect Competition

Under perfect competition, the industry (all firms collectively) determines the equilibrium price rather than the seller or firm. All businesses agree to pay the price set by the sector. Individual sellers or firms are therefore price takers in a perfect market. The diagrams below help to clarify this.Fig. 1 shows price and output determination.

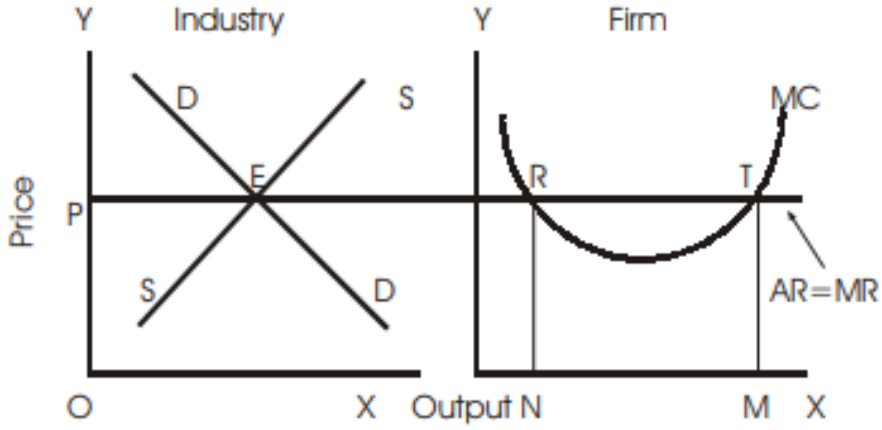

Fig.1 shows price and output determination(scholar.cu.edu.eg).

The demand and supply curves are represented by DD and SS, respectively, in the industry diagram. E is the equilibrium point and where SS and DD are equal. The price of OP has now been established. In a perfect market, all businesses will accept the OP price and sell any quantity of goods at it. Because of this, the average revenue curve that a particular firm face is horizontal, parallel to the x-axis, or perfectly elastic. Finding equilibrium production is now the responsibility of the enterprise.It should be kept in mind that each seller will create or sell at the level where its profit is highest. And where the two conditions listed below are met, profit is maximized [5], [6].

1. MR = MC

2. The MC curve removes the MR below.

Because the first condition is satisfied at R and T in the second picture (Firm), it can be seen that there are two equilibrium points there. Point T, however, meets both requirements.

As a result, the company will be in equilibrium at time T and produce at OM level at OP price. The company won't cease making products at point R since, beyond this point, AR > MC, leaving ample room to continue making profits and maximizing them. Similar to this, every production level over OM will result in losses for the company as MC > AR (=MR) past point T.There are three options available to a company in the near future. These include (a) a company making abnormal profits (AR > AC); (b) a company making only regular profits (AR = AC); and (c) a company making losses but continuing to operate. Businesses will continue to run till they can obtain variable costs. If they are unable to cover even their average variable expenses of manufacturing, they will close their business [7], [8].

DISCUSSION

Monopoly

The Greek terms "monos," which means "single," and "polus," which means "a seller," were used to create the English word "monopoly." In a monopolistic market, a single seller has complete control over the supply of a good. He creates a unique product that cannot be replaced.

The characteristics of a monopoly market are as follows:

1. The product is sold only by one person.

2. The product made by the monopoly seller has no comparable substitutes.

3. There are limitations on other firms' ability to enter or leave.

4. In a monopoly, there is no differentiation between a corporation and an industry.

5. The seller sets the price.

6. A monopoly business makes abnormal profits over the long and short terms.

7. Selling expenses are minimal.

8. A monopolist is able to practice price discrimination, which means it can charge certain customers varying prices for its products.

Monopolistic Competition

Although there are many vendors in a monopolistic competitive market, each seller has a product that sets him apart from his competitors. What one company produces is not exactly the same as what any other company produces. The term "monopolistic competition" refers to the reality that each company possesses a form of limited monopoly over its own product. The monopolistic competitive market has the following key characteristics.

1. **Large number of firms**: An industry is made up of a sizable number of businesses.

2. **Product Differentiation**: Each firm creates a differentiated product in monopolistic competition. Differentiating a product's form or quality may involve the use of various raw materials as well as craftsmanship, colour, packaging, design, durability, and other factors. As an illustration, various companies manufacture soft beverages including Coca-Cola, Limca, Sprite, Thums Up, etc. Despite having the same ingredients, the items have a different brand name.

3. **Free Entry and Exit**: Under monopolistic competition, businesses are free to enter and exit the market whenever they choose.

4. **Individual pricing by a Firm**: In this type of market, each individual producer has a unique, independent pricing strategy.

5. **Selling Costs**: Every firm tries to promote its sales through expenditure on advertisement and on other promotional activities such as sales men’s incentives, gifts etc.

Oligopoly

Oligopoly is a market structure in which there are more than two producers of a commodity, but only a small number of them, who are in direct competition with one another. "Few" refers to a sufficient number of businesses to allow them to monitor the activities of competitors and act appropriately. A company cannot behave independently without considering how its rival companies may respond. Precisely, the term "few" can refer to

three, four, twenty, or thirty businesses, some of which are important participants and others of which are modest producers.

Manufacturers of TVs (BPL, Videocon, Onida, LG, Samsung, Sony, etc.) and automobile businesses that produce two- and four-wheeled vehicles (Ambassador, Maruti, Tata, Mahindra & Mahindra, etc.) are examples of oligopolies. Oligopoly comes in two varieties:

Pure Oligopoly

It is a market with uniformly distributed goods. Businesses are dependent on one another. Any price change made by one company has a significant impact on the sales of other companies, which in turn causes them to adjust their prices. Cement, coal, gas, steel, and other industries are examples of pure oligopolies.

Differentiated Oligopoly

Products in a differentiated oligopoly are almost identical alternatives for one another. Price changes made by one company have less of a direct impact on competitors. Appliances like refrigerators, televisions, air conditioners, cars, motorbikes, scooters, instant coffee, etc. are examples of differentiated oligopolies [9], [10].

Characteristics of Oligopoly

Following are some crucial oligopoly characteristics:

1. **Interdependence**: In an oligopoly, a firm is unable to independently decide on its prices and output. Each firm must consider the responses of the rival firms because there are only a limited number of competing firms. The price and output choices made by one oligopoly firm have a big impact on the choices made by the competing firms.

2.**Indeterminate Demand Curve**: An oligopoly corporation can never accurately forecast sales due to the indeterminate demand curve. Regarding the characteristics and location of its demand curve, it can never be definite. Any adjustment to a firm's output or price triggers a chain reaction among the competitors. As a result, the oligopoly firm's demand curve continues to be ambiguous (indefinite and moving).

As a result, once a price is established under an oligopoly, it stays in effect for a long time. Paul M. Sweezy asserts that an oligopolistic firm experiences a kinked demand curve at the current pricing, as depicted in the picture below Fig. 2. Because the demand curve is extremely inelastic in its lower half, EB, other businesses will follow if one company lowers the price of their goods. As a result, the company that reduced the price will not profit from its decision. The demand curve above the prevailing price (upper half) AE is more elastic, so if it raises its price above the current price OP, other businesses won't follow.

3.**Selling expenses**: Advertising, marketing, and other sales strategies are crucial to oligopoly pricing. An oligopoly corporation will use a variety of sales promotion strategies to draw in lots of customers and increase revenues. The oligopoly firm's sales are directly impacted by the selling price.

4. **Price Rigidity**: Oligopoly enterprises typically adhere to a price that has been established through extensive planning and negotiations with other firms. A company won't lower its prices since doing so might incite a price war among its competitors. A company operating in an oligopoly won't raise prices either because the competition might not do the same, costing the firm a large portion of its clientele.

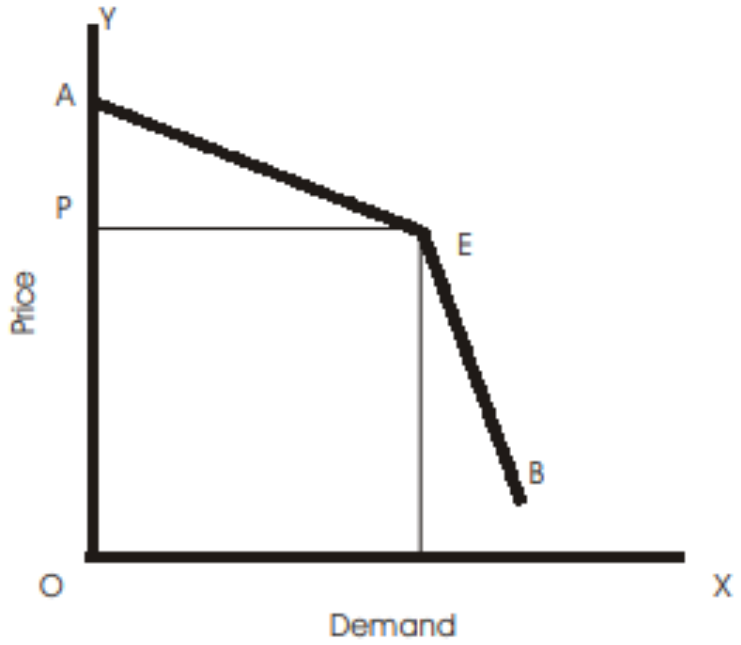

Fig. 2 shows indeterminate demand curve

5. **Group Behavior**: The pricing and production choices of an oligopoly firm directly affect the rival firms. The interdependence of the businesses forces them to consider mutual cooperation. Through collusion, businesses attempt to maximize their earnings.

Oligopoly enterprises prefer collective decisions that will safeguard the interests of all the firms over individual pricing output strategies.

Duopoly

A market with only two sellers is said to be in a duopoly. With or without product distinction, duopoly is possible. The crucial aspect of duopoly is that each firm must carefully analyze the consequences of any decisions it makes to alter its output, pricing, or both.

CONCLUSION

Economic fundamentals include the ways in which markets work and how prices are established. Perfect competition, monopoly, monopolistic competition, and oligopoly are some examples of diverse market systems. Each has unique traits and effects on how prices are set. For organizations, decision-makers, and analysts, understanding these types of markets and how prices are set offers useful insights. They can use it to understand market dynamics, create practical plans, and reach wise conclusions that will maximize efficiency, encourage competition, and improve consumer welfare. Understanding the intricacies of contemporary economies and maintaining their sustainable development require a thorough understanding of market structures and price formation.Businesses seek the ideal input mix that maximises production while minimising expenses. The production function, which illustrates the connection between inputs and outputs, is often used to describe this. The ideal input level is found via marginal analysis, where the marginal cost of a new unit of input matches the marginal output produced.Businesses aim to increase profitability and competitiveness by maximising costs. Long-term market sustainability and profitability depend on efficient manufacturing methods and cost management. To obtain sustainable business results, it is crucial to take into account aspects outside cost, such as quality, market demand, and competition.

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CHAPTER 7

CONCEPT OF FACTOR PRICE DETERMINATION: AN ANALYSIS

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ABSTRACT:

An essential component of economics is the determination of factor prices, which focuses on comprehending the variables affecting the costs of productive resources including labor, capital, land, and entrepreneurial endeavors. The purpose of this essay is to examine the idea of factor price determination and the numerous variables that affect the costs of these productive resources. The combination of supply and demand in factor markets determines factor pricing. While the supply of factors is determined by persons or entities that make their productive resources available on the market, the demand for factors of production is determined by the demand for goods and services. The productivity of the resource, its scarcity or availability, the amount of demand for the resource, and the bargaining power of the parties involved are some of the variables that affect factor pricing. The equilibrium price of a factor in a market for factors that is competitive is established at the point where the demand and supply curves converge. Any of the influencing factors that change can cause the supply or demand curves to move, changing factor prices. Government regulations, technical developments, and alterations in the market environment can also have an impact on factor prices.Services of a factor refers to this productive ability or actual production contribution. Producers seek out factor services, which factor owners provide. In economics, the elements of productionthose that aid in the creation of products and services are roughly categorized as either human or non-human. Buildings, machinery, and capital are examples of non-human factors, whereas labor, which is provided by employees, is a human factor

KEYWORDS:

Factor, Labor, Marginal, Productivity, Supply, Wage Rate.

INTRODUCTION

A factor is a person or thing that adds something to the production process. A worker, a machine, a structure, or a plot of land are all examples of factors. Every factor has some form of productive power that it can release when it is utilized in a manufacturing process. Services of a factor refers to this productive ability or actual production contribution. Producers seek out factor services, which factor owners provide.

In economics, the elements of productionthose that aid in the creation of products and services are roughly categorized as either human or non-human. Buildings, machinery, and capital are examples of non-human factors, whereas labor, which is provided by employees, is a human factor. Prices of factors refers to the compensation a factor should receive for rendering its services. Labor is compensated with wages, and capital utilization is rewarded with interest. Land, an essential component of production, generates rent, and an entrepreneur who takes the risk of operating in an uncertain environment generates earnings, whether good or negative [1].

Demand for a factor

The supply and demand for a factor affect the price of a factor service. For the purpose of creating goods and services for the market, producers need a variety of factor services. Making decisions about the payments that producers must provide to suppliers in exchange

for their services can be difficult. One of the most important questions a producer must answer is this one. Knowing how a factor contributed in such a situation is necessary. It is necessary to assess how much more a factor contributes to the overall production produced by a corporation at that point. This additional contribution is referred to as the marginal output of labor or factor in economics. Therefore, the addition made to the total output by using one extra unit of labor or factor is known as the marginal product or marginal physical product (MPP) of labor or factor. When five workers work together to build a road length of 20 meters in a day, and when a sixth worker is added, the road length climbs to 25 meters, the sixth worker's contribution to the whole effort is 5 meters. This is the sixth laborer's marginal physical productivity. Although the concept of MPP was initially conceived in relation to labor, it may also be used to other elements including land, capital, and organization. Thus, the MPP of labor determines the cost of labor, or wages. In order to maximize his happiness and profits, a producer will equate its marginal cost of manufacturing things with the marginal productivity of labor. MPP is therefore crucial to the notion of factor pricing [2], [3]. Fig. 1 shows graph of wage rate vs labor units.

Supply for a factor

Assuming that labor is a homogeneous factorthat is, that all labor units are the samewe can calculate the supply of labor. The following are significant variables that affect the availability of labor on the market:

1. The wage rate, which is the cost of labor.

2. Consumer preferences that have an impact on how they balance work and play.

3. The population density.

4. The percentage of people who are working.

5. The geographic, occupational, and educational distribution of the labor force

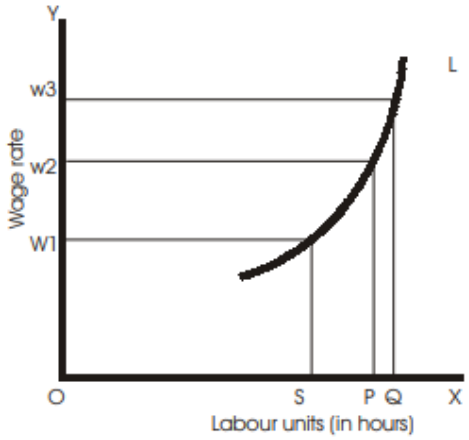

Fig.1 shows graph of wage rate vs labor units(scholar.cu.edu.eg).

DISCUSSION

The supply curve is determined by the connection between the availability of labor and the wage rate. Therefore, when calculating the supply curve of labor, variables other than pay rate are considered to remain constant. The total amount of labor supplied to the market by individuals[4], [5].Individual labor is in equilibrium when the wage rate is W1, working OS hours, and as the wage rate increases to W2, labor hours also increase to OP hours. However, the number of labor hours may decrease at a greater wage rate. As seen in the fig. 1 above, when the wage rate increases to W3, the employee works OQ hours. The fact that PQ SP

indicates that the person works less than at the W2 salary rate. The number of hours available for employment decreases even more when wage rates rise further. As seen in Fig. 2, the behavior of workers earning higher wages results in a backward-bending supply curve for labor.

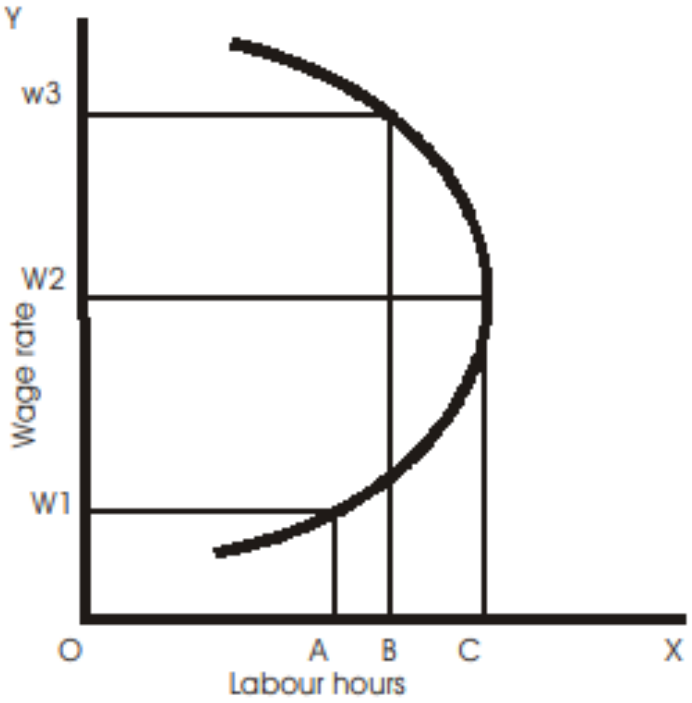

Fig. 2 shows graph of supply curve for labor. (scholar.cu.edu.eg)

Up until a certain point, wage rate increases encourage workers to put in more hours; but, as wage rates rise further, there is less motivation to put in more hours. The cause is that more workdays entail less free hours.

The individual's income increases along with the wage rates, allowing him to have more free time. As a result, once the pay rate reaches a certain point, less people are willing to work since they would rather spend their higher income on more leisure activities. It basically means that as wages rise to the point where a comfortable standard of living is achieved, workers prefer to take more vacation time and work fewer hours per day than to continue working for higher pay rates [6], [7].

However, this is not how the labor supply curve as a whole behaves. The supply curve, according to economists, must have a positive slope over the long term in order for this pattern to be present in the short run. Although higher pay can make some people work fewer hours, they will eventually draw new workers to the market.

Determination of Price of a Factor under Perfect Competition

Thus, using a factor's supply and demand curves, we may calculate the factor price in ideal markets. Fig.3 illustrates how the junction of these two curves determines price. The equilibrium wage, and the employment level is shown as OM. As a result, we discover that setting a pay rate and setting a commodity's price are identical processes. However, a factor's supply and demand factors are distinct from those of goods. The demand for factors is derived, meaning that it results from the demand for the numerous commodities that the factors are used to produce. Like the supply of commodities, the cost of labor is not driven by worker attitudes towards labor and leisure.

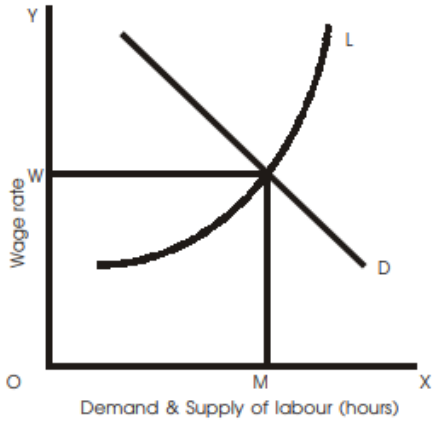

Fig. 3 shows graph of wages vs demand (scholar.cu.edu.eg)

Marginal Productivity theory

The marginal productivity hypothesis aims to clarify how factors' services are chosen. As was previously mentioned, a firm operates to maximize profits, hence no factor will be paid more than its marginal productivity. No factor will accept a price that is lower than its marginal productivity, in a similar vein. Therefore, a factor's price is determined by its marginal productivity. Entrepreneurs will switch out one element for another until all of their marginal productivities are equal [8], [9]. At the margin of employment, the payment provided to the factor in question is just greater than the value of the increase in overall production brought about by the addition of an extra unit of a factor. More labor will be used if the going wage rate is lower than the marginal productivity. The pay rate will increase to the level of marginal productivity as a result of competition between the enterprises. On the other hand, businesses will require less labor when marginal productivity is below wage. The pay will thus decrease to the level of marginal productivity. In this way, salary tends to match the marginal productivity of labor due to competition. This holds true for additional production aspects. The marginal productivity curve for labor is known as MRP.It is the factor's demand curve. OM quantity of labor is employed at wage rate OW because at this level of employment, wage is equal to marginal labor productivity.Fig. 4 shows graph depicting wages vs labor units.

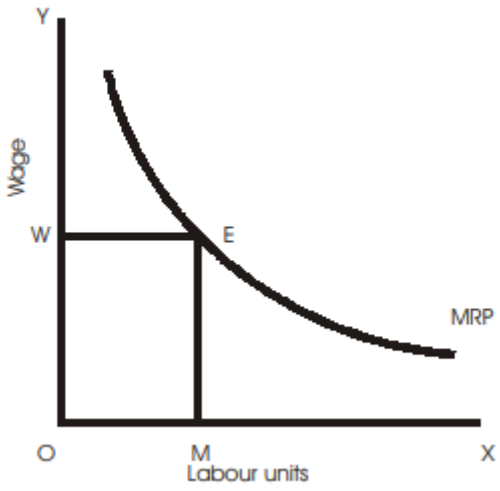

Fig. 4 shows graph depicting wages vs labor units.

The marginal productivity theory, sometimes referred to as the theory of marginal productivity, is an economic idea that clarifies the connection between a factor of production's marginal productivity and the factor price that corresponds to it. It offers insights into how businesses allocate resources and decide how much to pay workers or capital as

wages or other forms of compensation.The marginal productivity hypothesis states that a factor's marginal productivity—the additional output or contribution to production that results from using one additional unit of the factor—determines the value or price of the factor. According to the principle, a factor's price will typically be equal to its marginal productivity in a market where there is competition. The hypothesis is founded on the decreasing marginal productivity principle, which holds that as more units of a factor are introduced to the production process while keeping other variables constant, their marginal productivity will eventually start to decline. Due to reasons including specialization, declining returns, and a lack of resources, this happens [10].

There are various consequences of the marginal productivity theory. First, it implies that businesses will employ production inputs until their marginal productivity and price are equal. This is due to the fact that hiring more units of the factor would cause returns to decline after a certain point, decreasing profitability overall. The theory further suggests that higher marginally productive factors of production will fetch higher prices or wages in the market. It offers an explanation for wage differences between workers with differing productivity levels. Marginal productivity theory is criticized for failing to take into consideration institutional issues, market power, and the impact of non-market influences on factor prices. Additionally, the marginal productivities of some components of production might not be well specified, which limits the theory's applicability.

Shortcomings of Marginal Productivity theory

On the following basis, marginal productivity theory is criticized:

1. It is incorrect to assume that all units of components are homogenous. Not all workers are the same. Efficiency differs from job to job. Similar to that, there are various forms of capital units.

2. It is not always possible to substitute other components as is commonly believed.

3. Factors are also thought to be portable between different purposes. Land is immobile.

Both labor and capital are not completely mobile.

4. Market power is not taken into account: The theory operates under the assumption of perfect competition, in which firms are price takers and have no control over factor pricing. In practice, market-dominant companies, such monopolies or monopsonies, have the ability to control factor prices and depart from the marginal productivity-based pricing model.

5. Ignoring institutional influences: The theory fails to account for the importance of institutional influences including labor unions, collective bargaining, minimum wage laws, and governmental rules. These variables might not match the assumptions of the marginal productivity theory and have a major impact on factor pricing.

6. Non-market forces: Since the theory only considers market forces, it ignores the influence of non-market factors including social norms, discrimination, and other societal issues that could affect factor pricing independently of productivity.

7. Unrealistic presumptions: The theory is predicated on the notion that the components of production are readily subdivided, homogeneous, and replaceable, which may not be the case in many real-world circumstances. The assumptions of the theory might not hold true for elements like highly skilled labor or specialized capital.The exact marginal productivity of a factor can be difficult to ascertain in practice, especially when taking into account intricate production processes, interdependencies between factors, and the long-term effects of investments in elements like education or technology. Limited scope for some components: The theory mainly emphasizes labor as a factor of production, and its relevance to other

factors, such natural resources or entrepreneurship, may be more complicated or require extra considerations. The theory assumes static conditions and does not explicitly account for changes in factor productivity over time or uncertainty in the production process, which might affect the precision of price calculation based simply on present marginal productivity.Fig. 5 shows a graph between marginal physical productivity vs labor units.

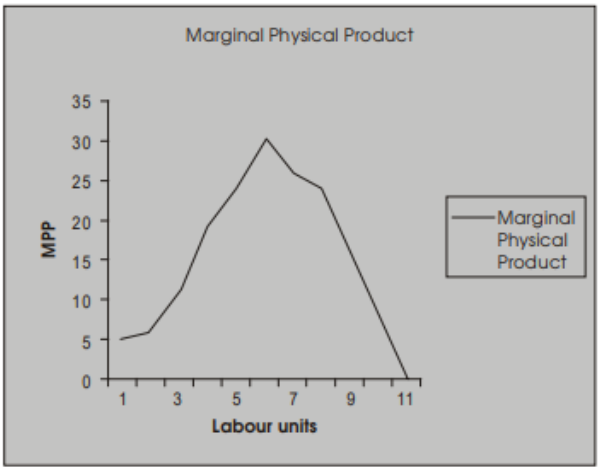

Fig. 5 shows a graph between marginal physical productivity vs labor units(scholar.cu.edu.eg).

CONCLUSION

The allocation of resources, distribution of income, and economic efficiency are all impacted by factor price determination, which is a critical aspect of economics. The combination of supply and demand forces in factor markets determines the pricing of productive resources such as labor, capital, land, and entrepreneurship. Factor prices are affected by a number of variables, such as productivity, scarcity, demand, and bargaining power. Understanding these elements enables firms, employees, decision-makers, and economists to develop policies that support a healthy and equitable economy. marginal productivity of a factor can be difficult to ascertain in practice, especially when taking into account intricate production processes, interdependencies between factors, and the long-term effects of investments in elements like education or technology. Limited scope for some components: The theory mainly emphasizes labor as a factor of production, and its relevance to other factors, such natural resources or entrepreneurship, may be more complicated or require extra considerations. The theory assumes static conditions and does not explicitly account for changes in factor productivity over time or uncertainty in the production process, which might affect the precision of price calculation based simply on present marginal productivity.Limited scope for some components: The theory mainly emphasizes labor as a factor of production, and its relevance to other factors, such natural resources or entrepreneurship, may be more complicated or require extra considerations. The theory assumes static conditions and does not explicitly account for changes in factor productivity over time or uncertainty in the production process, which might affect the precision of price calculation based simply on present marginal productivity.The determination of factor prices is a crucial component of economic analysis and helps us comprehend the complexity of resource allocation and income distribution.

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CHAPTER 8

FACTOR PRICES, COMPARATIVE ADVANTAGES AND INTERNATIONAL TRADE

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ABSTRACT:
Economic theories that integrate the notions of factor prices, comparative advantages, and international trade help to explain the trends and advantages of global trade. In this essay, the relationship between factor prices, comparative advantages, and global commerce will be examined, as well as how it affects economic specialization and well-being. The compensation or rewards received by production elements including labor, capital, land, and entrepreneurship are referred to as factor prices. Contrarily, a country has a comparative advantage when it can manufacture a certain commodity or service for less money than another nation.

Countries engage in international commerce when they exchange commodities and services based on their comparative advantages in order to gain from specialization, greater productivity, and improved wellbeing. The David Ricardo-developed idea of comparative advantage emphasizes that countries can profit from trade even if one country is more effective at manufacturing all items. Countries can enhance their consumption options and general welfare by specializing in the production of commodities or services where they have a comparative advantage and trading with other nations. The comparative advantage and trade patterns of a nation are greatly influenced by factor pricing. In places where they are numerous, production factors often tend to be more readily available and cheaper. As a result, factor prices decline, increasing the cost-effectiveness of producing things that demand numerous inputs. Contrarily, it will be more expensive to make things that demand scarce resources. Countries can benefit from variations in factor pricing and comparative advantages through international commerce. For instance, nations with cheap and plentiful labor might specialize in labor-intensive businesses, whereas nations with an abundance of natural resources might focus on resource extraction and export. This specialization boosts productivity, scale economies, and global welfare.

KEYWORDS:

Capital, Country, Exports, Income, Nation, Production, Terms, Trades.

INTRODUCTION

Understanding international trade is essential to understanding why countries engage in trade. The existence of pricing variations in goods and services between nations is the direct cause of international commerce. Different supply and demand factors result in price variations. Different supply circumstances result from a variety of elements, including natural endowments of economic resources, the degree of factory utilization efficiency, the level of technology, worker skill levels, factor abundance, etc. Demand variations are mostly caused by the income and dietary preferences of people in various nations. International trade will lead to an equalization of factor prices and product prices. It would be essential to familiarize ourselves with some key terms employed in the study of international trade before we continue our analysis [1], [2].

Internal and International Trade

A definition of internal or interregional trade is the exchange of goods and services among citizens of the same nation. The exchange of products and services between citizens of one country and those of other countries is referred to as international trade. Trade within a nation and trade between nations are both governed by the same basic principles. Within a single country, manufacturing factors can move around freely, but this is not the case internationally. In the first scenario, regional disparities in factor prices were not possible.The places with greater pricing are always the ones that draw the factors. As a result, they would relocate from the areas where they are paid poorly to those that would pay them more. This movement would continue until there were no longer any regional price discrepancies. In the latter scenario, immigration regulations that forbid unrestricted labor movement between nations impede mobility. The limitations apply to both the movement of capital and investment between the nations as well as the movement of workers. The movement of capital and labor is also hampered by social, political, and cultural barriers. It is free to move products and services throughout a country. The cost of transportation and the distance are the only internal obstacles. Due to different restrictions, such as exchange controls, non-tariff barriers, import and export levies and quotas, etc., mobility in the case of international trade is not free.

The national economic climate is largely consistent throughout all areas. Within a country, the economic environment, including the legal system, rules governing the production and trade of products, infrastructure, etc., are all the same. But the economic environments of different countries varies significantly.When it comes to monetary units, there is a major difference between domestic and foreign trading. Different nations have different currencies. All regions of a country have access to the same money and capital markets, which facilitate the interchange of commodities and services. But this is not true in a global context. International transactions are complicated by disparities in currencies, which are not present in local trading [2], [3].

Absolute Factor Price Difference

It happens when a factor's price in one country differs, in absolute terms, from that factor's price in another. For instance, if a worker earns Rupees. 100 a day in India and receives Rupees. 500 in Japan for the same amount of work, there is an absolute factor price difference between these two nations.

The Classical Theory of International Trade

The foundation for the traditional notion of global trade was laid by Adam Smith. The hypothesis of Absolute Advantage is the name given to his hypothesis. Smith argues that if one country has a definite edge over another in one area of production and the second country has a definite advantage over the first country in a different area of production, then commerce would benefit both nations. Thus, he demonstrated how the global division of labor will benefit all nations through commerce. Let's use an illustration to explain Smith's notion of global trade.Assume that there are only two nations in the world: America and India. Additionally, we assume that both tea and textiles are traded between these nations. Assume further that both nations are capable of producing both items if they so choose. Assume that America can manufacture 50 units of rice or 100 units of textiles with a certain number of production components, or any other combination of two items, as long as the opportunity cost ratio stays at 2:1. It would entail giving up the chance to create two units of textiles in order for America to produce one extra unit of rice. India can create 50 units of textiles, 100 units of rice, or any other combination in the opportunity ratio of 1:2 in the same way and with the same number of production inputs. It implies that India must forgo producing 1 unit of textiles in order to produce 2 units of rice. Therefore, it is obvious that

India has a distinct advantage in the production of rice whereas America has a distinct advantage in the manufacture of textiles. This indicates that India has the potential to develop commercial connections with America by focusing on producing that good where each has a distinct edge [4], [5].

Theory of Comparative Advantage

Smith's concept has been improved upon by Ricardo's theory of global trade. Hemaintained that international trade would be profitable even if the countries did not have an absolute advantage over the other countries in any area of production. Let's break down Ricardo's model as follows.Let's use the scenario of a world with just two nations, America and India, and two products, rice and textiles. According to Ricardo, one nation has a definite advantage over the other in both output sectors.

It implies that both manufacturing lines are at the absolute disadvantage of the other nation. Additionally, he makes the assumption that the first country has a greater comparative advantage in one production line compared to the other and that the second country has a smaller comparative disadvantage in the second production line compared to the first production line. In other words, one country has a bigger comparative advantage in one area of production whereas the other country has a lesser comparative disadvantage in that area. The establishment of trade between these two nations would boost both consumption and production.

Theory of Opportunity Costs

The labor theory of value, which was the foundation of Adam Smith's and David Ricardo's theories, has been criticized since it assumes that labor is a homogenous quantity and the only factor in production. In order to make goods, one must use all four components of production—land, labor, capital, and organization rather than just labor. Thus, using labor and capital, Heberler created a theory of opportunity costs in 1936. Upon defining comparative advantage in terms of opportunity costs, it is irrelevant whether things are created just by labor or in conjunction with the other inputs of production. Let's use an illustration to clarify the theory. Assume that the United States can produce 100 units of either wheat or cloth when every factor is used to its full potential. However, the nation will be more interested in developing some dual-good combinations than single-good ones [6], [7].

Modern Theory of International Trade

Eli Heckscher and Bertil Ohlin created the Modern Theory of International Trade.They contend that disparities in the relative prices of commodities among the nations are the direct cause of international commerce. These variations result from the different factor supply between the two nations. The following presumptions form the foundation of the theory:

1. Labor and capital are the only two factors.

2. There are only two nations, one of which has an abundance of capital and the other, an abundance of labor.

3. Only two commodities utilize both of the components in their production.

4. The marketplaces for products and factors both exhibit perfect competition.

5. The resources are fully utilized.

6. Technology has not changed.

Factor Abundance

Factor pricing can be used to define factor abundance. Accordingly, a country is said to have an abundance of capital if capital is comparatively cheap and labor is relatively expensive, independent of the actual physical quantities of capital and labor in the two countries. A country with a high labor force is one where labor costs are lower than those for capital.Ohlin discovers that the variations in factor supplies between the two nations are what account for the variations in factor pricing. You can define factor abundance in terms of physical properties. If a nation has a larger ratio of capital to labor than another nation, that nation is considered to have comparatively abundant capital. In a similar vein, a country that has an abundance of workers is one where labor outnumbers capital.

If the following condition is true, country "A" would have an abundance of capital, while country "B" would have an abundance of labor. Here Country A's total capital and labor amounts are KA and LA, while country B's total capital and labor amounts are KB and LB. Since country A has an abundance of capital, it will manufacture commodities that require capital, while country B will generate goods that require labor. This is depicted in Fig.1. The curves AB and CD represent the production possibility curves of country A and country B, respectively. While fabric requires more work than capital, steel does.Country A would create at Q' on its production potential curve AB and country B at Q" on its production possibility curve CD if the two nations produced the items in the same proportion along the OR ray. It is obvious that the slope at Q' is steeper than that at Q. In other words, P'P' displays a steeper commodity price line than P"P. This implies that, assuming two countries produce at Q' and Q," respectively, steel is more affordable in country A and fabric more affordable in country B [8], [9].

As a result, nation A would create more steel than cloth and export it to country B, while country B would concentrate on producing cloth and export it to country A. As can be seen from the image above, the two nations produce these numerous items with a higher degree of specialization. However, because to the declining returns to scale conditions for both items, total specialization is lacking. It should be emphasized that the production and export of a nation's goods are influenced by factors affecting demand. According to the physical definition of factor abundance, the hypothesis is true if consumers have identical desires in commodities.Fig. 1 shows graph steel vs cloth.

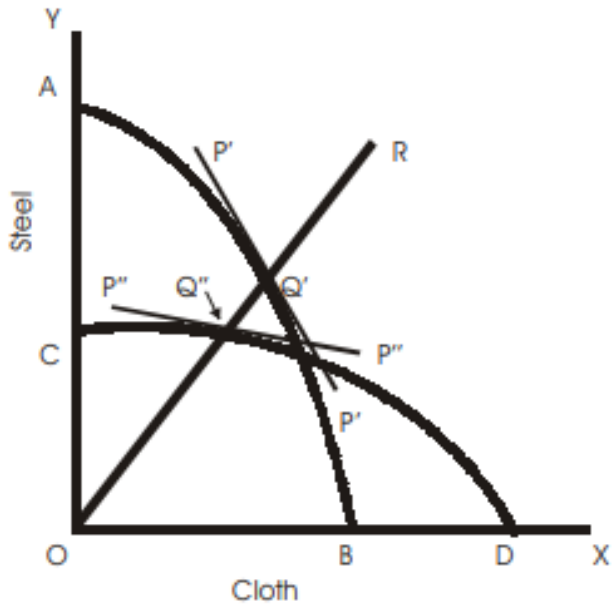

Fig. 1 shows graph steel vs cloth.

DISCUSSION

Terms of Trade

The rate at which a nation trades its exports for its imports is known as the terms of commerce. Trade agreements are very useful and important. The terms of the trade determine the profits. Terms of trade can take many different forms. The following explanations describe the topics that are most pertinent given the study's objectives.

Gross Barter Terms of Trade

The ratio of the quantity of imports to the quantity of exports is known as the gross terms of trade. Thus, gross terms of commerce are represented as TG = M/X if TG stands for gross terms of trade, M for imports, and X for exports.

The better the terms of commerce, the larger the ratio of imports to exports. Import and export volume indices for the base year will always be equal to 100. To calculate changes in the gross terms of trade in any given year, the base year is used.

The phrase "gross barter terms of trade" refers to a theory used in international trade to calculate the proportional exchange rates of products between two nations without taking monetary values into account. It shows how much of one country's exports must be obtained in order to receive a specific amount of imports from another. By dividing the index of export prices by the index of import prices, both expressed in physical quantities, one can determine the gross barter terms of trade. The following equation can be used to determine the gross barter terms of trade:

Index of Export Prices / Index of Import Prices equals Gross Barter Terms of Trade.A score larger than 1 show that the country's trade terms are favorable, as it must export more items to offset a given amount of imports. The terms of trade, on the other hand, are said to be unfavorable if the value is less than 1, as more exports are needed to acquire the same number of imports.

It is significant to highlight that changes in the nature or composition of the traded products are not taken into account by the gross barter terms of trade. It just concentrates on the proportional amounts of items traded. The impacts of inflation, exchange rates, and other monetary considerations are also not taken into account.A country's trading position and capacity to get imports through exports can be gauged using the gross barter terms of trade. A nation's balance of payments, economic expansion, and development plans may be impacted by this analysis of trends and changes in trade competitiveness [10], [11].

Net Barter Terms of Trade

The ratio of a country's exports to imports is known as the net barter terms of trade. The symbol for net barter terms of trade is TN = Xp /Mp, where Xp and Mp are the price index numbers of exports and imports, respectively. A rise in these terms of trade would boost the nation's economic welfare. Tn stands for net barter terms of trade.A phrase used in international trade to evaluate relative exchange rates of products between two nations that takes into account both changes in the physical quantities and values (in monetary terms) of the goods traded is the net barter terms of trade. Compared to the gross barter terms of trade, it offers a more thorough evaluation of a nation's trading status.The ratio of export purchasing power to import purchasing power is determined by taking into account changes in export prices, import prices, and exchange rates. It gauges how a nation's capacity to import products has changed in relation to its capacity to export those same things. The following equation can be used to determine the net barter terms of trade:Net Barter Terms of Trade are calculated as follows: (Index of Export Prices in Local Currency) / (Index of Import Prices in

Local Currency) (Local Currency Exchange Rate).A score greater than 1 shows that the country's terms of trade have improved since it can now afford to buy more imports than it can export. In contrast, a number smaller than 1 denotes a worsening of the terms of trade, which means the country must export more or more expensive commodities in order to match its importsSince it takes both changes in prices and exchange rates into account, the net barter terms of trade give a more thorough understanding of a country's trading position. It displays the true purchasing power of an exporting nation's goods as well as the effects of global market conditions on its trade performance.

Countries can evaluate the effects of changes in export and import prices, currency exchange rates, and market dynamics on their trade competitiveness by analyzing the net barter terms of trade. It affects a nation's trade policy choices, income distribution, economic growth, and balance of payments.It should be noted that accurate and trustworthy information on export and import prices, as well as exchange rates, are necessary in order to calculate the net barter terms of trade.

Additionally, in order to fully comprehend a country's trade performance, it is important to combine the net barter terms of trade with other pertinent economic and trade indicators, just like you would with any other economic statistic.

Income Terms of Trade

It is calculated by dividing the value of exports by the import price index. In order to account for changes in export volume, income terms of trade assist in adjusting changes in net barter terms of trade. The income terms of trade is a term used in international trade to describe how changes in a country's terms of trade affect changes in its purchasing power. It gauges the link between an economy's income from exports and the price of its imports by dividing the index of export earnings by the index of import payments.

The income terms of trade account for changes in both the physical quantities and prices of products as well as their effects on income. It depicts how variations in the volume of exports and imports, as well as price changes for both, affect a country's overall income. The following equation can be used to determine the income terms of trade.

Index of Export Earnings / Index of Import Payments is the formula for income terms of trade.An improvement in a country's income terms of trade is shown by a number larger than 1, which means that the country's export revenues have grown in comparison to its import expenses. This shows that a nation's income and purchasing power have increased. On the other hand, a number less than 1 denotes a worsening of the income terms of trade, which means that a country's income and purchasing power have decreased as a result of an increase in import payments relative to export revenues. Analyzing the income terms of trade enables governments to evaluate the effects of variations in export and import volumes and prices on their overall income and economic welfare. It gives information about how benefits and losses from trade are distributed and has an impact on a nation's balance of payments, economic expansion, and development plans.It's vital to remember that the income terms of trade have restrictions much like other terms of trade measurements. It does not take into account other aspects of a nation's wellbeing, such as variations in productivity, exchange rates, or non-financial gains from trade. The index's calculation also depends on precise and trustworthy data on export receipts and import expenditures. Therefore, for a thorough evaluation of a country's trade performance and economic well-being, the income terms of trade should be taken into account alongside other economic indicators and factors, even though it offers useful information on how changes in a country's income result from changes in its terms of trade.

CONCLUSION

Understanding the trends and advantages of international commerce depends on how factor pricing, comparative advantages, and trade interact.

Countries can take advantage of variations in factor pricing to boost economic efficiency and welfare by specializing in the production of commodities and services where they have a comparative advantage.

International commerce enables nations to profit from the advantages of specialization, resulting in gains for both parties and increased economic development on a global scale. a nation's income and purchasing power have increased. On the other hand, a number less than 1 denotes a worsening of the income terms of trade, which means that a country's income and purchasing power have decreased as a result of an increase in import payments relative to export revenues.

Analyzing the income terms of trade enables governments to evaluate the effects of variations in export and import volumes and prices on their overall income and economic welfareTo create successful trade policies, find possibilities for specialization, and encourage sustainable economic growth, policymakers, entrepreneurs, and economists must have a solid understanding of the dynamics of factor prices, comparative advantages, and international commerce.

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CHAPTER 9

INVESTIGATINGTO ROLE OF MACROECONOMICS: A COMPARATIVE STUDY

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ABSTRACT:
The area of economics known as macroeconomics is the study of how an economy functions as a whole. It focuses on fundamental ideas and principles that explain how the overall economy works and how different things affect it. The introduction of the paper defines macroeconomics and emphasizes its importance in examining economic events on a local and global level. The discussion of important macroeconomic indicators, including GDP, inflation, and unemployment, is followed by an explanation of how to measure and apply each one to gauge the state of an economy. a nation's income and purchasing power have increased. On the other hand, a number less than 1 denotes a worsening of the income terms of trade, which means that a country's income and purchasing power have decreased as a result of an increase in import payments relative to export revenues. Analyzing the income terms of trade enables governments to evaluate the effects of variations in export and import volumes and prices on their overall income and economic welfareThe study also examines the fundamental macroeconomic theories and models, such as aggregate supply and demand, that economists use to assess economic variations. It explores how fiscal and monetary policies help to stabilize the economy and foster growth. The importance of macroeconomics in guiding policy decisions and comprehending the many interactions inside an economy is emphasized in the paper's conclusion.

KEYWORDS:

Domestic, Economy, Goods, Income, National, Product, Services, Taxes.

INTRODUCTION

Macroeconomics is the study of the entire economy, taking into account all of the goods and services produced, all of the revenue generated, how much of the productive resources are used, and how prices typically behave. The most effective ways to impact policy objectives including economic growth, price stability, full employment, and the achievement of a sustainable balance of payments can be determined through macroeconomic analysis. Up until the 1930s, the majority of economic research was focused on specific businesses and industries. However, the discipline of macroeconomics started to grow with the advent of the Great Depression in the 1930s (for further information, see the Great Depression note at the end of this chapter). John Maynard Keynes' theories, which used the idea of aggregate demand to explain changes in output and unemployment, were particularly important [1].

The main contributor to modern macroeconomics is J.M. Keynes. In his 1936 book "The General Theory of Employment, Interest, and Money," he conducted an analytical investigation into the factors that contribute to significant and protracted changes in the level of employment. Macroeconomics is concerned with system aggregates. Macro is short for big. Thus, macroeconomics examines how diverse economic variables behave when they are applied to the economy as a whole. These factors include total national income, total employment, the percentage of resources in the economy that are fully used, total saving and investment, and the overall level of prices in the economy. Therefore, macroeconomics is the study of the economy as a whole. "Macroeconomics deals not with individual quantities as such, but with aggregates of these quantities, not with individual income, but with national

income, not with individual prices, but with price levels, and not with individual outputs, but with national output," claims Kenneth E. Boulding [2].

Difference between Microeconomics and Macroeconomics

The two main subfields of economic theory are microeconomics and macroeconomics. Prof. Ragnar Frisch of Oslo University is the author of these two terms. Since just a small portion of the economy is covered by microeconomics, this is already known. It investigates how each individual unita person, a business, or an industrybehaves economically. Product and factor pricing, as well as the notion of economic wellbeing, are all studied in microeconomics. Due to the fact that it focuses primarily on the costs associated with various variables, it is occasionally referred to as pricing theory. On the other hand, macroeconomics examines the aggregates of the entire economy. In other words, it is a study of every unit taken as a whole. It is an examination of the economy as a whole. It addresses aggregates including overall employment and income, general price level, overall output, consumption, and investment, among others. Thus, theories relating to income, output, employment, and growth are studied in macroeconomics [3], [4].

Meaning of National Income

The value of the finished goods and services produced in a nation during a fiscal year is the standard definition of national income. It can, however, be described in terms of total production (as previously stated), total factor income, and total expenditure.In terms of total factor income, it is the total of a nation's annual factor earnings (wages, rent, interest, and profit). The production factors of land, labor, capital, and company/entrepreneur receive compensation in the form of rent, wage, interest, and profit, respectively. The total of these benefits represents the country's economic output in terms of revenue. In terms of overall spending, national income is the sum of a nation's annual expenditures. By using the expenditure technique, a nation's household, private, and public spending adds up to its total national income [5], [6].

National Income at Current and Constant Prices

The monetary value of all commodities and services produced in a nation calculated at the going rates is known as national income at current prices.The national income calculated in a base year, which is a previous year to the present year, is the national income at constant prices. For comparisons of national income and associated data, national income at constant prices is used.

$N.I_{\text{constant prices}}$ = National income at current prices/Price Index × 100

Circular Flow of Income

As previously stated, national income is the total factor income (labor and property earnings) resulting from the factors of production's current production of goods and services. This is illustrated by a circular flow see Fig.1 below.Consider an economy with just two sectors: consumers and businesses. Families are essentially consumer units, and they own the manufacturing inputs. While families offer these businesses with services related to the factors of production, firms manufacture goods. Production factors are paid for the labor they perform. The sum of all payments made by the enterprises to the factors of production in the form of wages, rents, interest, and profits must match the sales value of net production. Households use these earnings to buy a range of goods and services. As a result, corporations provide productive services to households in exchange for income, and consumers purchase goods in return.

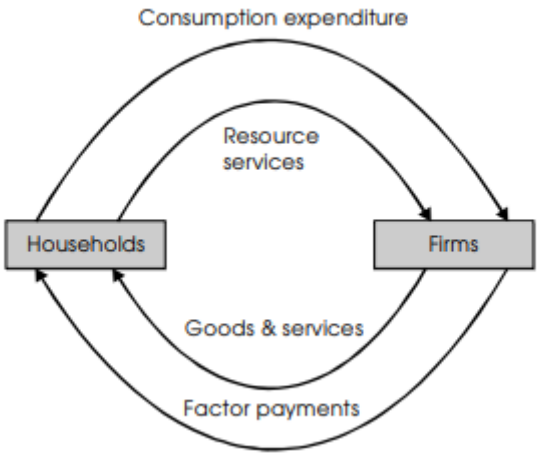

Fig.1 shows relation between households and firms (scholar.cu.edu.eg)

The movement of payments and receipts for products, services, and factor services between various economic sectors is referred to as circular flow of income. Money flows and real flows are the two different sorts of flows. Income and payment flow is referred to as money flow. Real flow is the movement of products and services. Both a flow of commodities and services and a flow of money income make up national income [7], [8].The following presumptions are taken into account to explain the circular flow of revenue in the two-sector simple economy model.

1. An economy that is closed that is, there is no foreign sector;

2. There are no taxes.

3. Businesses, or the business sector are the only producers.

4. Whatever businesses produce is sold.

5. Consumers, or the household sector, do not save their income.

6. There are no government expenditures on goods and services

7. There are no firms, which is the only sector that produces.

Thus, it is evident that in a two-sector model, production equals sales and income equal spending. However, there are injections and leakages in the economy when the circular flow of revenue is actually in operation. Leakages are those variables that cause spending to decrease, whereas injections cause spending to grow. As an illustration, families typically save a portion of their income. Savings lead to leaks in the economy's income stream or flow. Similar to this, when we pay taxes to the government, that amount is deducted from our income. This is yet another significant type of leakage. On the other hand, if the government spends money on products and services, income rises and output is stimulated. The economy is receiving a boost from this.

DISCUSSION

Concept of National Income

Before learning how to assess national income, it is imperative that we understand the following fundamental national income ideas. The key terms or components of national income areIncome from private sources, personal income, net domestic product, and personal disposable income.

Gross National Product

The total market value of all finished goods and services generated by a nation's citizens in a given year is known as the gross national product (GNP). It is a monetary indicator of the volume of economic activity that an economy is now producing. We should only factor in the value of final goods and services when computing GNP, not that of intermediate goods. The value of factor income that citizens of a nation receive from overseas is taken into account when calculating its GNP. The term "final goods" refers to products that are being bought for their intended purpose onlynot for resale or further processing items that go through one or more production phases before becoming finished items are referred to as intermediate goods. In other words, they contribute to the creation of finished items. It would be redundant to count these commodities and services' values if we did.

$$GNP_{mp} = GDP_{mp} + \text{Net factor income from abroad.}$$

Gross Domestic Product

The GDP_{mp} is the monetary worth of all finished goods and services produced within a nation's domestic market in a calendar year at market-prevailing prices. The value of foreign factor income received by citizens of a nation is not taken into account when calculating GDP.A nation's many production sectors typically create a set quantity of commodities and services, such as rice, fertilizer, cement, steel, the services of physicians, educators, engineers, and attorneys, among other things. The GDP_{mp} is the total monetary worth of all these goods and services.

$$GDP_{mp} = GNP_{mp} - \text{Net factor income from abroad.}$$

Net Domestic Product at Market Prices

The money worth of the final goods and services generated by the citizens of a country inside its domestic territory in a year less consumption of fixed capital/depreciation is known as the net domestic product at market prices (NDP_{mp}). The cost of capital goods' wear and tear during the production process is referred to as depreciation or consumption of fixed capital. In order to truly raise the supply of products in the economy, depreciation value must be subtracted [9], [10].

$$NDP_{mp} = GDP_{mp} - \text{Depreciation}$$

$$NDP_{mp} = GNP_{mp} - \text{net factor income from abroad} - \text{Depreciation}$$

Net National Product at Market Price

NNP_{mp} is the market value of all goods and services produced in a nation after depreciation has been taken into account.

$$NNP_{mp} = GNP_{mp} - \text{Depreciation}$$

$$NNP_{mp} = NDP_{mp} + \text{net income from abroad}$$

NNP_{mp} is a more accurate measure of the true output of the economy than GNP_{mp}.

Gross Domestic Product at Factor Costs

Gross domestic product is measured using the earnings of the production factors, or GDP at factor cost. It is the total of all income earned within a country's domestic territory, including wages, interest, and rent.

$$GDP_{fc} = GDP_{mp} - \text{Net indirect taxes (indirect taxes - subsidies)}$$

$$GDP_{fc} = GNP_{mp} - \text{Net factor from abroad} - \text{net indirect taxes}$$

Gross National Product at Factor Cost

It is the entire amount of income that regular citizens of a country receive from different sources of output in the form of wages, rent, interest, etc.

$$GNP_{fc} = GNP_{mp} - \text{Net indirect taxes}$$

$$GNP_{fc} = GDP_{mp} - \text{Net indirect taxes} + \text{net factor from abroad}$$

Net Domestic Product at Factor Cost

The measurement of a country's domestic product in terms of the earnings of its domestic production factors is called net domestic product at factor cost.

$$NDP_{fc} = GDP_{fc} - \text{Depreciation}$$

National Income or Net Product at Factor Cost

It is the total worth of all finished goods and services produced by citizens of a nation, both inside its borders and abroad, at their factor costs. It is, to put it simply, the factor of revenue that goes to a nation's citizens.

$$\text{National Income/}NNP_{fc} = \text{domestic factor income} + \text{net factor income from abroad}$$

$$\text{National Income/}NNP_{fc} = GNP_{fc} - \text{depreciation}$$

Private Income

Private income is the current revenue obtained from all domestic and international private sector sources, including private businesses and factor owners. It excludes the revenue the government receives from its assets, commercial ventures, and savings from non-departmental businesses. However, the private sector also receives transfer income. Additionally, the private sector receives interest on the public debt, which is added to the private income.

Private Income = national income – income from property and entrepreneurship accruing to the government-saving of non-departmental enterprises + interest on national debt + current transfers from government + net current transfers from the rest of the world

Personal Income

The term "personal income" refers to the total of all current incomes that individuals or households received throughout an accounting year from all domestic sources. It should be remembered that a portion of a person's annual income might not really be received. For instance, individuals may not actually get the undistributed profits, corporation taxes, and net retained earnings of foreign companies that have been paid by the enterprises. Additionally, in addition to factor revenues, personal income also includes transfer earnings, etc.

Personal income = Private income – undistributed profits – corporate taxes – net retained earnings of foreign companies – contributions for social security. Personal income = National income – undistributed profits – corporate taxes – net retained earnings of foreign companies – contributions for social security + transfer payments.

Personal Disposable Income

The portion of personal income that is actually available to households for spending and saving is referred to as personal disposable income. In other terms, it is a person's money that he or she is free to use anyway they see fit. In real life, a person or household must make a lot of mandatory payments. These are government revenues such as property taxes, income

taxes, and other levies. After subtracting the amount of such payments, one obtains income that can be used anyway they like.

Personal disposable income = personal income – personal taxes – miscellaneous receipts of the government.

National Disposal Income

By including net indirect taxes and other current transfers from abroad to national revenue, net national disposition income is calculated.

Net national disposal income = national income + net indirect taxes +net current and capital transfers from abroad.

Income from Domestic Product Accruing to Private Sector

The portion of domestic product at factor cost that accrues to the private sector in an accounting year is referred to as income from domestic product accruing to the private sector.

Transfer Payments

These are the payments that the government makes to people's homes, businesses, and nonprofit organizations, as well as vice versa, without making any promises to provide products or services. For instance, the government may compensate households in the form of unemployment benefits, pensions for the elderly, scholarships, etc. Similar to this, the household contributions to the government in the form of direct and indirect taxes, donations, etc. Direct taxes are those whose cost cannot be passed along to others. For instance, we are responsible for paying any income taxes that the government imposes on our earnings. Nobody can be forced to pay our taxes. As a result, we are responsible for paying the tax. The taxes that can be easily transferred to others are known as indirect taxes. For instance, sellers first pay the sales tax that is imposed on different commodities, and then final customers. By including the tax in the price of the items, vendors move the tax, raising the cost of the goods. Transfer payments also include money the government gives to businesses in the form of subsidies, investment allowances, etc. The government provides subsidies to producers in order to maintain low prices for particular goods. Typically, when a tax is implemented or raised, market prices for items increase, which hurts the lower class. The government may provide producers with subsidies in this case to cut the price. In a similar vein, transfer payments include corporation taxes, excise taxes, customs charges, and gifts from businesses to the government.

Current Transfer Payments and Capital Transfer Payments

The following makes a distinction between capital transfers and current transfers. For consumption expenses, current transfer payments are made from the payer's current income and added to the recipient's current transfer income. Consumption is impacted by current transfers.Payments for capital transfers are made in kind and cash and are applied to gross capital.

These are fabricated from the payer's past savings or fortune. Capital transfers have an impact on the quantity and pace of capital production in the economy.

Relationship among important National Income Aggregates

The relationship among important national income aggregates can be analyzed as under:

1. GDP_{mp} = Price × Quantity of final goods and services

2. $NDP_{mp} = GDP_{mp}$ - depreciation

3. NDP_{fc} or domestic income = NDP_{mp} – net indirect taxes

4. NNP_{fc} or national income = NDP_{fc} + net factor income from abroad

5. Private income = NNPfc - income from property and entrepreneurship arising to the government – savings of non-departmental enterprises + national debt interest + current transfers from government + other current transfers from the abroad

6. Personal income = private income – undistributed profits – corporation taxes – net retained earnings of foreign companies – contributions for social security

7. Personal disposal income = personal income – personal taxes and other miscellaneous receipts of the government or consumption + saving

CONCLUSION

Macroeconomics gives us a framework to comprehend the interactions between various sectors, including households, businesses, and the government, and how their combined decisions affect the overall functioning of the economy. Macroeconomic indicators, such as GDP, inflation, and unemployment, provide us with information on the state of an economy and any possible problems. We can better understand the forces behind economic swings like recessions and expansions by studying aggregate demand and supply. The government provides subsidies to producers in order to maintain low prices for particular goods. Typically, when a tax is implemented or raised, market prices for items increase, which hurts the lower class.

The government may provide producers with subsidies in this case to cut the price. In a similar vein, transfer payments include corporation taxes, excise taxes, customs charges, and gifts from businesses to the government.In addition, fiscal and monetary policies are essential for maintaining economic stability, controlling inflation, and promoting long-term growth. Overall, macroeconomics is an important field of study that provides information to individuals, businesses, and policymakers, empowering them to traverse the intricacies of the modern economy and make informed decisions.

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CHAPTER 10

MEASUREMENT OF NATIONAL INCOME:AN OVERVIEW

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ABSTRACT:

6The calculation of national income, a crucial metric for evaluating a nation's welfare and economic performance. In particular, the gross domestic product (GDP) and other terms that are utilized to calculate national income are given an overview. The paper describes how GDP is calculated and covers its components, which include consumption, investment, government spending, and net exports. It also examines the difficulties and restrictions associated with measuring national income, such as the elimination of unofficial and covert economic activities. The Human Development Index (HDI) and other alternatives to GDP as a measure of economic well-being are also covered in the study. The overall goal of the paper is to give readers a thorough understanding of how national income is measured and what that means for evaluating economic development and growth.the net final output or net value created by all the enterprises over the course of a year to calculate national income. The difference between the value of a firm's output and the value of its intermediate inputs (materials, services, etc.) is known as the net output or value-added. It displays the contribution that a specific business or industry made to the overall output of the economy.

KEYWORDS:

Domestic, Government, Income, National, Services, Value.

INTRODUCTION

The national income can be determined using one of three approaches. Here are some of them:

1. Net output method/Value added method/product method/industry of origin method
2. Income method
3. Expenditure method

Net output method

This approach totals the net final output or net value created by all the enterprises over the course of a year to calculate national income.The difference between the value of a firm's output and the value of its intermediate inputs (materials, services, etc.) is known as the net output or value-added. It displays the contribution that a specific business or industry made to the overall output of the economy.

The net output approach involves adding the net output or value-added of each sector, accounting for all economic sectors, to estimate the national income. The primary, secondary, and tertiary sectors agriculture, business, and services, respectively net production are taken into account. We can estimate the overall national revenue by adding up the net output or value added across sectors.This approach emphasizes the value produced at each stage of the manufacturing process and offers insights into how various sectors contribute to the overall health of the economy.It's crucial to remember, nevertheless, that without further background or details, it might be challenging to give a more detailed description of the precise technique

or computations involved in the "Net Output Method of National Income." I'll attempt to respond more specifically if you can provide me more information or explain the particular context in which this method is being mentioned [1].Steps for Value Added/Product Method National Income Estimation 6The steps listed below can be used to determine national income using the product method:

Identification of production units and classifying them into industrial sectors

Recognizing manufacturing units and grouping them according to industrial sectors The initial stage is to identify every manufacturing unit and group them into the primary, secondary, and tertiary industrial sectors, respectively.

Estimation of net value added

Calculating the net value added by calculating the gross output created by each firm, intermediate consumption, depreciation, and net indirect taxes, net value added is computed. By multiplying the commodities produced by the businesses by their market prices, the gross value of output can be calculated. In other words, the value of gross output is determined by the combined sales and stock-value changes of all enterprises. The value of intermediate consumption, or the inputs that a company purchases from other production units, and depreciation are subtracted from the gross value of output to arrive at the net value added at market price. Additionally, we must subtract net indirect taxes in order to obtain net value added at factor cost. Indirect taxes less subsidies are referred to as net indirect taxes. Net domestic product at factor cost is calculated as the total net value added of all industrial companies inside a nation [2].

Estimating net factor income from abroad

Now combining it with net domestic product to produce national income, or NNP_{fc}, is the last phase. The difference between the factor income earned abroad by a country's citizens and the factor income earned domestically by foreigners is known as net factor income from abroad.

National Income or NNPfc = NDPfc + Net factor income from abroad.

Precautions in Estimation of National Income by Product Method

While calculating the national income using the value-added approach, we must exercise particular prudence. While estimating national income, there are some elements that should be excluded and others that should be included. Residential structures are built by households for their own use, while factory structures are built by the business sector to produce things. These are fixed assets produced on one's own account, whose worth must be calculated using the current market price and included in the national income. Similar products are created for personal usage and do not reach the market.They must also have their value determined using the current market pricing. Rent for owner-occupied homes is computed using imputed rent. Owner-occupied home rent is typically not calculated. National income must be approximated at the going market rate in order to be measured. Products that are worn out or torn out are sold by households, the government, and the private sector [3], [4].

DISCUSSION

These products are used. Secondhand products are not included in any transactions (sale or purchase) related to the national income because their value was already taken into account during the year they were produced. These don't involve any additional economic production. To measure national income using the income approach, we must remember to include the commission or brokerage gained from such transactions. The calculation of national income is also not to include any financial asset-related activities, such as the sale and purchase of

bonds and shares. Such transactions don't increase the flow of goods and services or produce any new income. These claims are only paper transfers from one hand to another. For instance, when we purchase stock in a corporation, the money leaves our hands and enters the companies without any additional productivity. As they serve their families out of love, affection, and a sense of duty, housewives' services are also not included in the calculation of national income. Even though these exchanges are good, they are not economic because no income is produced [5], [6].

Difficulties of the Product Method

When using the product approach to estimate national income, the following issues occur:

1. Price instability is one. These frequently alter. Finding the value of inventories might be challenging in these circumstances.

2. It is challenging to estimate the prices of commodities that are held for personal consumption rather than being sold on the market. For instance, it is difficult to estimate the value of owner-occupied buildings or imputed rent.

3. It is never feasible to make a clear separation between the intermediate goods and the final commodities. For some, intermediate products may be final goods.

4. It becomes challenging to calculate depreciation when a capital good's value varies owing to shifts in market conditions.

5. The inclusion or exclusion of services from national income is still up for debate.

6. Another significant issue with the value-added method of measuring national income is the lack of accurate and trustworthy data, particularly in the unorganized and unincorporated firms.

Measurement of National Income method

The income method calculates the nation's income at the point where primary factors are paid for their use of the production process. In other words, the total of all incomes attributable to the main factors of production is used to calculate national income. Rent, labor, interest, and profits are added together to create national income. The actions that must be taken in order to calculate national income using the income technique are briefly discussed below.

Identification of production units and classifying them into industrial sectors

Finding manufacturing companies that use factor services and categorizing them into different industrial sectors, such as primary, secondary, and tertiary, is the first stage.

Classification of factor incomes

Employee compensation, property income, and mixed earnings are the three divisions of factor incomes. Employee compensation consists of payments given by producers in the form of wages and salaries, both in cash and in kind, as well as contributions to social security programmes. Property income includes dividends (part of a company's profit distributed to shareholders), undistributed profits (part of a company's profit retained for development and other purposes), corporate taxes (taxes imposed on a company's income), interest, rent, royalties (payments made for the use of mineral deposits, patents, copyrights, trade marks, etc.), profits, and other types of income paid for the ownership and control of capital. For those who are self-employed (those who provide their own labour and capital services), such as doctors, lawyers, shop owners, farmers, barbers, etc., mixed income is the combination of wage and property incomes.

Estimation of domestic factor income

The total money produced by each industrial sector is used to calculate domestic factor income. In other words, the value of domestic factor income is equal to the amount of employee remuneration, property income, and mixed incomes generated by all of the production units inside the domestic economy for a given accounting year.

Estimation of net factor income from abroad

Estimating net factor income from abroad and combining it with net domestic product the final step will yield national income [7], [8].

Precautions in the Estimation of National Income by Income Method

As previously indicated, earnings from the sale and purchase of used products should not be included, but commissions from these deals should be because they represent fresh revenue produced in the economy. Transfer payments that don't produce income should not be included in the calculation of national income. Gambling and other illegal activities like smuggling are not to be included in the calculation of income. Windfall earnings or gains are unforeseen incomes that occur because of advantageous circumstances at specific times, such as lottery winnings, etc. These weren't obtained through hard work. Such earnings are not counted towards the national income. Additionally excluded from the national income is income from interest on the national debt. The income from financial capital, which consists of just paper claims and does not produce any fresh income, comes from the interest paid on the nation's debt. They are basically money transfers from the general populace to the government.One of the three primary methods for calculating a nation's gross domestic product (GDP), which is a gauge of its national income, is the income method. By adding up all of the money received during a certain time period by people and organisations engaged in the production of goods and services within an economy, the income approach estimates GDP.In addition to employee compensation, business profits, rental income, interest income, and indirect taxes (such as sales taxes) less subsidies, the income method also takes into account other types of revenue. Let's talk about the key elements of the income method: Employee compensation consists of the money that workers receive in the form of wages, salaries, bonuses, and benefits in return for their labour. It encompasses both commercial and public sector employee compensation, including that of governmental employees.

Operating surplus/profits

This category includes the profits made by corporations, partnerships, and sole proprietorships. It comprises both the operational surplus of enterprises with incorporation and the mixed-income of businesses without incorporation.

Rental income

This comprises the money made from people or companies using land, structures, and other assets. It includes the rents that property owners are paid to use their assets.Interest income is the money that people, businesses, and other organisations make through lending money or owning financial assets like bonds and savings accounts. Both interest accrued and interest received are included.

Subsidies and indirect taxes

Excise taxes and sales taxes are examples of indirect taxes that are imposed on the production and consumption of products and services. On the other hand, government payments or benefits are given to people or organisations in order to support or promote particular economic activities. The income method takes into account the net impact of indirect taxes minus subsidies.The entire revenue earned in each category is added up to determine the

national income using the income technique. This comprises the revenue generated by people, families, businesses, and the government. It gives a rough estimate of the total income produced by the economy over the designated time frame.It is important to remember that while the income approach accounts for the revenue produced by the creation of products and services, it does not explicitly account for other economic activity, such as non-market activities or transactions in the shadow economy. The GDP is calculated using this method, and adjustments and statistical techniques are used to ensure accuracy and consistency.In addition to the expenditure and production methods for estimating national income, the income approach provides insights into the income distribution and economic activity inside a nation [9], [10].

Difficulties of the Income Method

The income technique presents the following challenges for determining national income.

1. Estimating the combined income of independent contractors is a difficult process. It is challenging to obtain trustworthy information from the unorganized or unincorporated sector.

2. According to some economists, the value of the interest paid on the national debt should be included because it is employed for productive purposes. As a result, there is debate regarding whether to include it.

3. The basis for calculating the amount of money obtained in the nation is a person's income tax returns (an account of their earnings). Only a relatively small minority of those who earn money actually pay taxes in undeveloped nations. Therefore, the income technique may only have a limited application in these nations.

Expenditure Method

The expenditure technique calculates national revenue at the point of disposition or spending. By calculating final spending on gross domestic product by families, the government, and the private sector, it calculates national income.The expenditure technique divides overall spending into several categories, including net exports (NX), government spending (G), investment (I), and consumption (C).

Utilization (C)

This sums up what households spend on both durable and non-durable products, as well as services like healthcare and education, as well as durable goods like vehicles and appliances.

Investment (I)

Spending on capital goods, such as machinery, equipment, and building construction, is included in investment (I). Changes in inventories (stocks of items produced but not yet sold) and research and development investments are also included.

Government spending (G)

This is the amount of money spent by the government on products and services such public administration, infrastructure, education, and defense.

Net exports (NX)

It is determined by deducting the value of imports (items and services purchased from other nations) from the value of exports (items and services provided to nations outside of the United States). A trade surplus or deficit is indicated by a positive net export value, whereas the opposite is true for a negative value.

Components of the Final Expenditure

The following constitutes the gross domestic product's final outlay:

(i) **Private final consumption expenditures**: These comprise purchases made by households and private non-profit organizations like clubs, schools, and other organizations.

(ii) **Government final consumption expenditures**: These costs include those for administration, defense, upholding the rule of law, and education, among other things.

(iii)**Gross domestic capital creation** is the sum of producer purchases of capital goods. It raises the economy's capital stock.

(iv) **Net exports of goods and services**: Net exports are the difference between the value of imported goods and services and the value of exported goods and services.

The actions that must be taken in order to calculate national income using the expenditure technique are briefly discussed below.

Estimation of private final consumption expenditure

The number of goods and services purchased is multiplied by their retail prices to determine the final consumption expenditure by households and non-profit organisations acting as households.

Estimation of government final consumption expenditure

As government services have no market price, government final consumption expenditures are calculated in terms of the cost to the government. This is true since the government as a whole does not engage in market commerce. Cost to the government is therefore the total of employee salary and the price of the goods and services the government purchases. The net worth of the goods and services the government purchases on both the local and global markets, as well as personnel remuneration (wages and salaries), are all included in the government's final consumption expenditure.

Estimation of gross domestic capital formation

It includes investments in stock changes, machinery, and equipment, as well as construction costs.

Net exports

Finding the value of net exports, or the difference between exports and imports of goods and services, is the final phase.GDP is calculated at market prices as the total of gross domestic product, net exports, private and public final consumption expenditure, and gross domestic capital formation. Depreciation and net indirect taxes must be subtracted from GDP at market prices, and net factor income from abroad must be added in order to obtain NNP at factor cost or national income.

Precautions in the Estimation of Expenditure

Following are the items that should be included and excluded when assessing national income using spending method:

(1) Because used items are part of the stock of products produced in the past, they shouldn't be included in expenditures.

(2) Since shares, bonds, and other similar paper titles solely serve to demonstrate property ownership, expenses for their purchase should be excluded. The buying and selling of shares, bonds, etc. does not result in the production of any tangible goods.

(3) Transfer payments like pensions, scholarships, unemployment benefits, etc. shouldn't be included in the calculation.

(4) To prevent double counting, expenses for intermediate or semi-finished goods should be disregarded

CONCLUSION

An essential instrument for evaluating a nation's welfare and economic performance is the measurement of its national income. The main metric used to calculate the total worth of products and services generated inside a nation's boundaries over a given time period is called gross domestic product (GDP). It acts as a gauge for overall economic activity and offers information on the population's standard of living and material well-being. Policymakers and economists can pinpoint the factors that stimulate economic growth and formulate well-informed policy choices by examining the GDP's constituent parts, such as consumption, investment, government spending, and net exports. However, it is crucial to be aware of the limitations of measuring national income, such as the removal of unofficial and covert economic activity, which can have a substantial impact on the precision of GDP estimates. Alternative measures, which take into account things like income distribution and quality of life, include things like gross national income (GNI) and the Human Development Index (HDI). In general, the measurement of national income offers a basis for evaluating and contrasting the economic performance of nations, directing the creation of policy, and advancing sustainable development.

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CHAPTER 11

AGGREGATE DEMAND, SUPPLY AND DETERMINATION OF INCOME AND EMPLOYMENT

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ABSTRACT:
The ideas of total demand and total supply when assessing the amounts of income and employment in an economy. It investigates the connection between these two total measurements and how they affect overall economic activity. The analysis takes into account variables that affect aggregate demand, such as consumption, investment, government spending, and net exports. It also looks at how variables like manufacturing prices, technology, and resource availability affect total supply. In order to manage economic stability and encourage sustainable growth, the paper's conclusion emphasizes the significance of policymakers and economists understanding the dynamics of aggregate demand and supply.The demand from outside for the goods and services generated by an economy is referred to as net exports (exports minus imports).national income depends on total employment in the economy over the short term, income and employment are sometimes used interchangeably in macroeconomics. The calculation of income and employment has frequently been a key topic of discussion among economists. It is impacted by a number of variables, including the trading partners' trade policies, the relative prices of goods, the incomes of the countries, and foreign currency rates, among others

KEYWORDS:

Demand, Economy, Employment, Income, Investment, Unemployment.

INTRODUCTION

The overall demand for all products and services combined is referred to as aggregate demand. The entire number of purchases that investors, consumers, and the government are willing to make is, in other words, "it." Charlie Schultze Because national income depends on total employment in the economy over the short term, income and employment are sometimes used interchangeably in macroeconomics. The calculation of income and employment has frequently been a key topic of discussion among economists. To assess the modern version of the employment theory proposed by J.M. Keynes in his book "General theory of Employment, Interest and Money," it is necessary to first understand how classical economists have examined the determination of income and employment. So, the four elements that make up aggregate demand or aggregate expenditure are as follows:

1. **Household consumption demand**: The total amount of goods and services that all households in a nation are requesting for consumption purposes is known as the household consumption demand. The amount of household disposable income determines the level of consumption demand. The overall amount spent on consumption increases along with an increase in a household's disposable income. However, consumption does not rise as quickly as income. With a rise in household income comes an increase in savings [1], [2].
2. **Private investment demand**: Investment is the money used to create new capital assets. The marginal efficiency of capital (anticipated rate of return on an additional unit of capital goods) and interest rates both influence private investment.

Entrepreneurs will keep making investments until the interest rate equals the marginal efficiency of capital (MEC).

3. **Government demand for goods and services**: The government has recently emerged as a significant consumer of goods and services. These are required by the government in order to fulfil public necessities such as the upkeep of law and order, infrastructure, roads, schools, and **hospitals**.
4. **Net export demand**: The demand from outside for the goods and services generated by an economy is referred to as net exports (exports minus imports). It is impacted by a number of variables, including the trading partners' trade policies, the relative prices of goods, the incomes of the countries, and foreign currency rates, among others [3], [4].

DISCUSSION

Meaning of Aggregate Supply

It describes the total amount of products and services generated over a specific time period in an economy. The only thing it is is net national product. The whole cost of generating the product, which is represented by the aggregate supply, is then distributed to factors as income in the form of wages, rent, interest, and profits. The price of creating the output in the economy must be paid to the producers.

Aggregate Supply = Consumption + Saving i.e. Y = C + S Where, Y is total factor income, or domestic product, C is consumption, and S is saving.

Classical theory of Employment

The traditional view of employment makes the assumption that labour and other productive resources are fully utilised.The traditional economists also believed that full employment in the economy is caused by the flexibility of prices and wages. According to traditional economists, there can never be a general overproduction that leads to a general unemployment. The economy may experience brief turbulence, but it quickly returns to normal. They consequently thought that there will always be a stable equilibrium at full employment. Government intervention or any other factors in a free market economy could be the cause of any disturbances in the full employment condition. There is no chance of widespread unemployment or instability in the normal scenario, which is a stable equilibrium at the full employment level, because government does not interfere with free market operations. According to traditional theorists, market forces such as supply and demand dictate how resources should be distributed as well as what rewards they should receive [5], [6].According to traditional economists, prices and salaries are variable. This contributes to full employment on its own. When the economy is generally overproducing, depression (a state in which all commercial activity is at a relatively low level) and hence widespread unemployment would occur. Therefore, prices would decrease. This then causes a rise in demand, which raises prices. As a result, commercial activity is boosted, and unemployment is eliminated. If wages are flexible, they may also contribute to a rise in unemployment. For instance, wages are reduced to spur demand for labour.

Say's Law of Markets

The law of markets developed by French economist Prof. J.B. Say serves as the cornerstone of traditional employment and income theory. According to this law, there is no chance for widespread overproduction and thus widespread unemployment in the economy. Say asserts that "production creates the market for commodities; selling involves both buying and more production, which increases demand for other goods. Every producer locates a customer. This

prevents widespread overproduction by automatically creating demand for whatever is supplied in the economy. It follows that "supply creates its own demand." Production results in earnings for the factor resources used in it. The money made in this way is used to buy things made in the economy. As a result, income is created concurrently with the production of things in the economy. Thus, the market for commodities or demand is created through production.Say's law is that there should always be an acceptable amount spent on commodities to fully utilise available resources. Factor resources spend some of their money on purchases while saving some of it. However, the money saved in this way is used to buy capital items. Because of this, traditional economists assumed that investments and savings were equal. Since there is no chance that the income stream would stop flowing, supply will always generate its own demand. The current market rate of interest would equalise any discrepancies between savings and investments [7], [8].

Assumptions of Say's law

The following are the key presumptions of Say's law of markets:

1. There is a free exchange economy and no interference from the government. It adheres to the laissez-faire philosophy. The buying and selling of goods is completely up to the buyers and sellers.

2. The market is experiencing perfect competition.

3. The income stream remains uninterrupted. Everything that is earned is put to use. Additionally, it is believed that investments and savings are equal.

4. The amount of output restricts the market's size.

On the grounds that supply does not generate its own demand and that a pay rate reduction cannot enhance employment during a slump, J.M. Keynes severely criticised the classical view.Saving cause's revenue streams to leak, which disrupts the flow of income and expenditure during the economic. It prohibits using all of the income received to purchase what is created. The whole effective demand won't be sufficient to consume the entire supply of production unless investors are prepared to invest an equal amount of projected savings. The demand for both consumer and producer goods is referred to as effective demand. As a result, unemployment and general overproduction will occur.Different factors motivate different types of savers. Investors also have many motivations for making investments. Because planned investments and savings are made by different people for various reasons, there is no method to guarantee that they are equal.Savings are a result of income. It is based on the individual's income. On the other hand, the demand for investments depends mostly on the marginal efficiency of capital and the interest rate in the short term.Long-term influences on investment demand include population increase and technological advancements. The yield anticipated from a new capital asset is known as marginal efficiency of capital (MEC). A businessman's propensity to invest depends on the marginal efficiency of capital. Investment is encouraged by high capital marginal efficiency.

Given that wages comprise a significant portion of the population's income, Keynes suggested that a general decrease in wages won't lead to an increase in employment. Reduced purchasing power results in decreased demand for goods and services. Effective demand, or total expenditure, determines employment in the economy, not pay level [9], [10].Say's "law" implies, in Keynes's view, that a free-market economy is always at what Keynesian economists refer to as full employment. Say's rule thus fits within the broader framework of laissez-faire economics, which holds that the economy's problemsin this case, recessions, stagnation, and involuntary unemployment—can be resolved by free markets on their own. Government or the central bank action is not necessary for the economy to reach full employment.

Modern advocates of Say's law even contend that such intervention is almost always ineffective. Take into account Keynesian-inspired economic stimulus measures. Increased public spending on commodities (or reduced taxation) merely "crowds out" private sector output and consumption. Say's law is debatable from a macroeconomic perspective in the present day. Say's law has been criticised by numerous people, including John Maynard Keynes, who interpreted it as "supply creates its own demand". According to this notion, consumers will surely start to desire a product once a producer has established a supply of it. Keynes' alternate viewpoint that "demand creates its own supply" (up to full employment but not beyond) was made possible by this interpretation. This is referred to as "Keynes' law" by some.

Full employment and Involuntary Unemployment

Five main types of unemployment are identified by economists: cyclical, frictional, structural, classical, and marxian. Different types of unemployment may coexist in the real world, and all five may be present at once. It is challenging to quantify the size of any of these, in part because they overlap and are challenging to distinguish from one another. The amount of employment and unemployment that serves as the inflation barrier to demand-side development can be viewed as existing at full employment, with the exception of cyclical unemployment.Although there may be different sorts of employment such as frictional, structural, or voluntary employment, according to classical economists, full employment is a state in which there is no "involuntary unemployment." As a result, full employment refers to an economic condition in which all available resources are being utilised. In other words, there is no deflationary unemployment, meaning that everyone who wants to work for the going rate of pay is actually employed. When a worker declines to work for the going pay, he is said to be voluntarily unemployed.There is cyclical unemployment because the effective aggregate demand is insufficient. Its name comes from the fact that it fluctuates with the economic cycle, however it can also last for a long time, as it did during the Great Depression of the 1930s. Due to demand failure, for example, gloomy company expectations that discourage private fixed investment spending, the gross domestic product is not as high as it could be. This can also happen as a result of poor government spending, high taxation, insufficient consumption, or low exports relative to imports.

In this situation, there are more unemployed workers than vacant positions, thus even if all open positions were filled, and some workers would still be without a job. This type of unemployment is related to idle capital goods and unused industrial capacity. According to Keynesian economists, the issue might be resolved by government deficit spending or by expanding the money supply by lowering interest rates.A worker may experience frictional unemployment if they are not given the proper training or are given the incorrect jobs. This kind of unemployment is brought on by the inactivity of the labour force, the seasonality of the work, the short-term scarcity of raw materials, the breakdown of machinery, etc.In order to put it another way, it calls for people to temporarily switch occupations while looking for new ones; it is compatible with full employment. (It is occasionally referred to as search unemployment and is thought to be mostly voluntary.) It occurs when either employer’s fire employees or employees leave their jobs, typically as a result of the employees' unique traits not matching those of the employment.This kind of unemployment is accompanied with an equal number of openings, and it cannot be resolved by stimulating aggregate demand. The greatest method to reduce this type of unemployment is to give companies and job seekers more and better information. The emphasis of an economy may theoretically be changed away from jobs with high turnover, potentially through the use of tax incentives or employee training initiatives. However, some frictional unemployment can be advantageous because it enables both employees and employers to select people who best advance their businesses' bottom lines. Wait unemployment is a particular type of frictional unemployment that results

from the existence of some industries where employed employees are compensated above the market-clearing equilibrium pay. This not only limits employment in the high-wage sector but also draws candidates from other industries who are waiting to try to land jobs there. The fundamental flaw in this argument is that these individuals will probably "wait" while employed in order to avoid being counted as unemployed.

When a substantial number of people are unemployed due to a lack of completely available cooperative production factors, structural unemployment is said to exist. Lack of land and capital in the economy could be producing structural unemployment. In other words, there is a mismatch between the number of job seekers and the number of openings. The number of open positions may be equal to the number of unemployed people, but the unemployed people lack the necessary qualifications for the open positions or are in the incorrect region of the country or the world to accept them. That is, matching workers with employment is quite expensive.The dynamic shifts in a capitalist economy, such as capital flight and technological progress, lead to structural unemployment. Workers are "left behind" as a result of migration and training expenses, as well as labour market inefficiencies. With the exception of the fact that it lasts longer, structural unemployment is difficult to empirically distinguish from frictional unemployment. The pain is also increased. Similar to frictional unemployment, this sort of unemployment cannot be quickly eliminated by simple demand-side stimulus. Better remedies include direct attacks on the labour market's issues, such as training initiatives, mobility subsidies, or anti-discrimination laws. The preservation of strong aggregate demand may strengthen these programmes, resulting in a complementary relationship between the two types of policy.

Persistent cyclical unemployment may also contribute to structural unemployment because it demoralises many jobless people and renders their skills (such as job-searching abilities) "out of date" and obsolete. This is the case in economies that have experienced persistently low aggregate demand. Debt issues may result in homelessness and a descent into a cycle of poverty. This implies that they might not be a good fit for the openings generated when the economy improves. It follows that persistently high demand may reduce structural unemployment. However, it may also promote inflation, necessitating the use of some wage and price regulations in addition to certain labor-market measures.

Many instances of technological unemployment, such as those brought on by the automation of labour, may be considered structural unemployment. An alternative definition of technical unemployment is the reduction in the number of workers required to create a given level of output as a result of consistent advances in labour productivity. The fact that this issue can be resolved by increasing aggregate demand shows that cyclical unemployment is to blame.Since seasonal unemployment is associated with specific job types like construction labour, migrant farm work, etc., it may be considered a form of structural unemployment. When there is insufficient aggregate effective demand for jobs, people who are willing to work at the current wage level or a little less often find themselves involuntarily unemployed. When there is involuntary unemployment, the level of full employment is not reached by the aggregate demand and supply. In other words, the equilibrium reached is the equilibrium of underemployment.

Effective demand (E) = national income (Y) = national output (O) = expenditure on investment goods (I) + expenditure on consumption goods (C)

Therefore, E = Y = C + I = O = Employment. Hence, effective demand determines employment at a particular time. In modern days, the role of government has increased significantly. Therefore, we have to include government sector.

E = C + I + G The principle of effective demand occupies an important place in the Keynesian theory of employment since total demand in the economy determines employment level. A deficiency of effective demand causes the situation of unemployment.

The following are significant factors that affect effective demand:

(a) **Aggregate demand function** is a schedule of the revenue or money anticipated from the sale of the output produced at various output levels. In other words, the amount of money that all producers in the economy anticipate earning from the sale of the goods and services produced by the employed workers is the aggregate demand price at any level of employment. Thus, unlike when determining demand for a specific firm's products, aggregate demand is assessed in terms of the amount of labour employed rather than a unit of a commodity. Aggregate demand is a function of employment that rises with time. It demonstrates a rise in aggregate demand price as employment grows.

(b) Aggregate supply function: This is a timetable that outlines the minimal sums of money that must be made in order to persuade producers to provide various levels of employment. In other words, aggregate supply price is the least amount of money that can be expected to be made from the sale of the product that results from a certain level of employment. These are therefore the minimal predicted sales proceeds that producers must get in order to be persuaded to create a specific number of jobs. This is another growing employment-related function.Fig. 1 shows total expenditure vs national income.

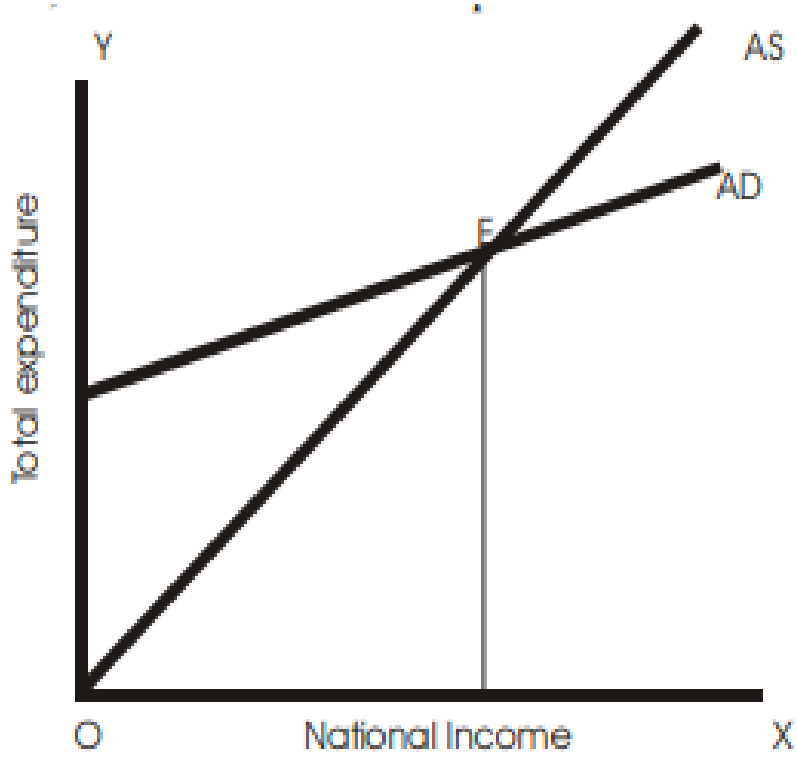

Fig. 1 shows total expenditure vs national income (scholar.cu.edu.eg)

Determination of Income and Employment

When total demand (AD) equals total supply (AS), the level of income in an economy is said to be at equilibrium. The aggregate supply and demand curves are abbreviated AS and AD, respectively. Since the total of all receipts of income equals the total of all production, AS is depicted as a 45-degree line. Point E, the equilibrium point, is where these two arcs intersect. At this equilibrium, all income, total supply, and total demand all equal Rs. 40 crores.Fig. 2 shows aggregate supply/demand vs income.

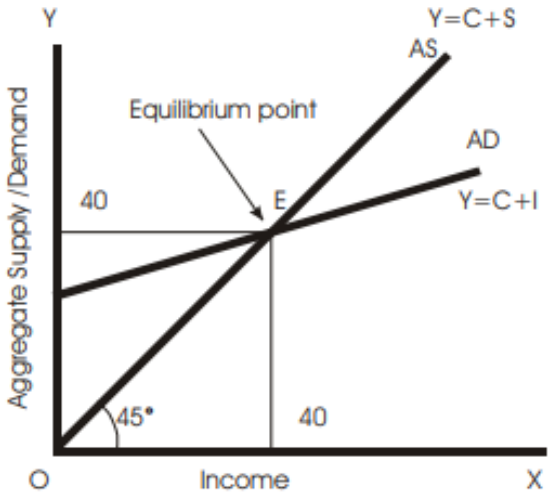

Fig.2shows aggregate supply/demand vs income(scholar.cu.edu.eg)

Most of the time, changes in inventories cause changes in production and income, which in turn cause changes in inventories. Inventory builds up when current output exceeds equilibrium, pushing businesses to reduce production and bringing the economy closer to equilibrium. Similar to this, if production is lower than the equilibrium level, stocks deplete and this encourages production to rise, moving the system closer to equilibrium. This equilibration process takes place at point E, where equilibrium is stable.It should be highlighted that point E, where there is no propensity for producers to either grow or decrease employment, is unquestionably the point of equilibrium for the economy, but it may not be the point of full employment. Possible full employment conditions include aggregate supply and demand. This is true if investment fills the gap between the price of total supply and the amount spent on consumption. Investment alone can never close such a disparity, according to Keynes.The underemployment equilibrium, also known as the point when aggregate demand and supply equalise, is hence likely to occur at a level below full employment. The aggregate demand line goes upward whenever any of its components increases at each level of income, such as when businesses gain more confident in their capacity to continue to be profitable in the future. Equilibrium income and output increase as a result. Similar to how falling AD elements push the line downward and reduce equilibrium output, falling AD elements do the same.

Saving and Investment EqualityAn Alternative Approach to Determination of Income and Employment

Another method of determining the equilibrium level of employment and income is to equalise saving and investment. Savings (S = Y - C) is the difference between income and consumption expenditures. According to Keynes, individual saving within the economy results in aggregate saving. As opposed to Robertson's assertion, it is current income that dictates current savings. Ex-ante and ex-post definitions of saving have been provided by Swedish economists. They define ex-ante savings as economic savings that are anticipated or planned. Actual or realised savings are ex-post savings.Keynes defined investment as the additions to the stock of real capital assets in the economy, such as the building of new roads, industries, infrastructure, etc. His definition does not include financial asset investments like buying stocks, shares, bonds, etc. The term "investment" also refers to increases in inventories (stock of products). Ex-ante investment refers to anticipated or planned economic investments. Actual or realised investment is ex-post investment.Saving, in some ways, is taking money out of the revenue stream, whereas investing entails adding money to the income stream. When anticipated investment exceeds planned saving, more money is added to the income stream than is subtracted. In such a scenario, national income will rise. If the

anticipated investment is less than the planned saving, more money will be taken out of the income stream than will be added to it. The national income declines as a result of this. When intended investing and saving are exactly equal, the amount withdrawn is added to the income stream. National income will be in equilibrium at this point. Fig. 3 below illustrates how equal amounts of saving and investing determine national income.The x-axis represents income, while the y-axis represents investments and savings. The saving and investment curves are designated as SS and II, respectively. It is expected that investment at a given period will remain constant regardless of income level. The investment curve is straight and parallel to the x-axis for this reason. At point E, the SS and II curves come together. At this time, intended investments and savings are equal. The national income is calculated OY.

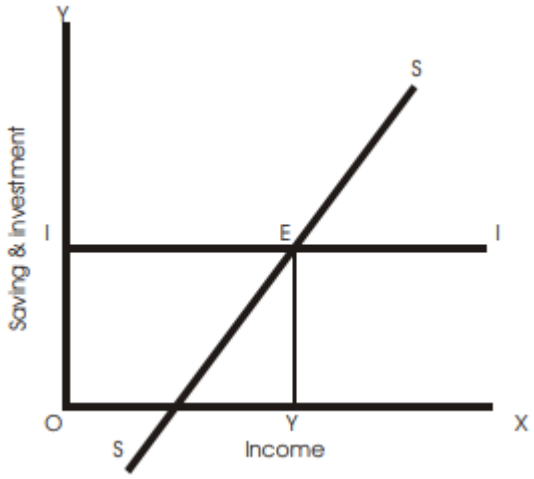

Fig.3 shows graph depicting saving and investment vs income. (scholar.cu.edu.eg)

Saving and Investment Equality-A Controversy

It is debatable if investing and saving are always equivalent. Some economists believe that two different kinds of people with different motivations make savings and investments. This means that planned (ex-ante) savings and planned (ex-ante) investment need not always be equal. However, actual (ex-post) savings and investment are always equal.The general equality of aggregate demand and supply (Y = C + I) leads to the equality of saving and investment. In a broad sense, what people intend to save and what businesses intend to invest are the same. Keynes claimed that the creation and sale of consumer and investment products is what generates national income. This is,

$Y = C + I$

We know that income is also equal to saving and consumption. Thus, $Y = C + S$

(ii) Where, C is consumption expenditure and S is saving out of total income.

From equations (i) and (ii), we get: $C + I = C + S \therefore I = S$

National income will be less than the equilibrium level of income when projected savings are less than planned investment. There will be too much demand for goods and services. To satisfy this surplus demand, output will therefore need to be raised. In cases where investments and savings are equal, this will enhance income. National income will be higher than the income level at which the economy is ideally positioned when expected savings exceed planned investments. As a result, production outpaces demand. This will cause stocks to build up, forcing manufacturers to reduce their levels of production. As a result, income will decrease and the equilibrium level will return to its initial state, when savings and investment will be equal.

CONCLUSION

The ideas of aggregate supply and demand, and how they affect employment and income, are fundamental to comprehending and regulating an economy's overall performance. The equilibrium level of income and employment is determined by the interaction between aggregate demand and supply. The elements that influence consumer spending, investment choices, government spending, and net exports are highlighted by the examination of aggregate demand. These variables can alter the aggregate demand curve, which can cause changes in income and employment levels. To maintain economic stability and encourage growth, policymakers must track changes in aggregate demand and take appropriate action. In contrast, the availability of resources, production prices, and technical improvements all have an impact on aggregate supply. The aggregate supply curve may move as a result of changes in aggregate supply, which will impact the level of income and employment. Policymakers might find potential obstacles or possibilities for boosting production capacity and enhancing economic performance by understanding the factors that affect aggregate supply.

The equilibrium level of income and employment in an economy is determined by the dynamic interaction between aggregate demand and supply. The economy is at maximum output and full employment when aggregate demand and supply are equal. Aggregate demand and supply mismatches, however, can cause recessions or inflationary pressures. Policymakers need to carefully balance supply and demand in order to manage the whole market. Adopting sensible monetary and fiscal policies can stabilize the economy and point it in the direction of long-term expansion. Additionally, policies that encourage investment, boost productivity, and optimize resource allocation can have a favorable effect on both aggregate supply and demand**.**

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CHAPTER 12

AN OVERVIEW OF THE CONCEPT OF MULTIPLIER AND SPECIFICATIONS

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ABSTRACT:
The knowledge how fiscal policy affects the economy requires a knowledge of the multiplier concept. The multiplier effect shows how a little adjustment to spending or investment can result in a much bigger adjustment to overall output and revenue. The multiplier's size is affected by a number of variables. The amount of additional money that is spent, or the marginal propensity to consume (MPC), is a key factor in determining the multiplier's size. A stronger multiplier effect is implied by a higher MPC. Leakages from the economy, such as saving or imports, also have an impact on the multiplier and can lessen its overall effect. The multiplier effect has a big impact on stability and economic growth. Fiscal measures that boost government spending or cut taxes can have a multiplier impact during economic downturns or recessions, boosting aggregate demand and fostering economic recovery. On the other hand, during times of economic growth, policymakers might need to put measures in place to control any potential inflationary pressures brought on by the multiplier effect.

KEYWORDS:

Demand, Economy, Employment, Income, Investment.

INTRODUCTION

The Keynesian theory of income, output, and employment places a lot of emphasis on the idea of multipliers. Keynes adapted R.F. Kahn's concept of a multiplier to explain the impact of increased investment on employment. Keynes outlined the connection between a modest increase in investment and a corresponding rise in income. J.M. Keynes claimed that effective demand, which is dependent on consumption and investment (Y = C + I), is a necessary condition for employment. The marginal propensity to consume is smaller than one, and the consumption function (propensity to consume) is stable over the short term. As a result, even with income rising at a faster rate than consumption, this is not the case. As a result, there is a discrepancy between earnings (output) and consumption that needs to be closed by increasing investment. Keynes thought that a larger initial investment would result in a significantly higher ultimate income. As a result, the investment multiplier illustrates the connection between an initial increase in investment and a subsequent increase in total revenue. In other words, the ratio between the ultimate increase in national income and the growth in investment, which causes the income increase, expresses the quantitative relationship between the two [1], [2].

$$\Delta Y = K.\Delta I$$

Where, ΔY is the change in income; K stands for multiplier and I for investment.

Assumptions of the Multiplier

The following are the multiplier assumptions that Keynes outlined:

a) The MPC has not changed.

b) No induced investment exists.

c) The new, higher level of investment is kept up long enough for the adjustment process to be finished.

d) There is no evidence of any government spending or taxation policies.

e) There is no delay in the time between receiving money and spending it.

f) The economy is closed.

Importance of the Multiplier

A significant contribution to economic theory is multiplier. It is an essential instrument for developing a variety of economic policies in addition to having theoretical significance. Investment has been emphasised as the economy's primary dynamic force. Direct job creation in the economy is facilitated by investment, which also multiplies income. The multiplier concept's adoption has increased the significance of public investment to the economy. It shows that even a modest increase in investment leads to significant increases in both investment and employment. The multiplier is useful for analysing business cycle-related issues as well. As a result, the multiplier notion is crucial to economic analysis [2], [3].

Leakages in the Working of the Multiplier

In practise, it is seen that the entire increase in income is not used for consumption.

Marginal propensity to consume is therefore never equal to 1. This is because the income stream has multiple leaks, which impede the spread of income. Following are some explanations for these leaks:

1. **Saving**: Saving is a significant income stream leakage. A portion of the income growth is saved, which reduces the multiplier's effect. It follows that the multiplier value will be smaller the more savings there are.

2. **Repayment of past debts**: The people utilise a portion of their income to settle past debts, which lowers the amount available for consumption and, in turn, the multiplier's value.

3. **Imports**: When imports exceed exports, a portion of the increased income is used to boost income in the other nations. In the long run, rising affluence in other nations will contribute to rising export demand and, as a result, will benefit the income of the nation importing goods. However, it's also possible that it won't. Imports are significant leakages as a result.

4. **Inflation**: Price inflation kills increasing income rather than boosting spending, earnings, and employment.

5. **Hoarding**: Hoarding refers to keeping unused funds on hand. It is a significant type of leakage. When consumers have a high desire for liquidity or a high demand for cash, their spending on consumption declines, which lowers the multiplier value.

6. **Stock and security purchases**: When their income rises, people often have a tendency to purchase older stocks and securities. Spending on consuming decreases as a result. Such a financial commitment limits the multiplier's value [4], [5].

Meaning of Excess Demand

A situation known as excess demand occurs when total demand exceeds total supply at the income level of full employment. The "inflationary gap" is the difference between total demand and total supply at full employment. When projected spending exceeds the value of the available output created by using all available resources, an inflationary gap in the economy results.

It should be noted that a rise in demand over the point at which there is full employmentdoesnot result in an increase in output or employment, just in prices. The economy's excess demand is depicted in Fig.1. At full employment, it can be shown that total demand is greater than total supply by an AB length. When aggregate demand is AY and aggregate supply is BY, there is a gap that is known as an inflationary gap. Overall demand is greater than overall supply, AY. AY - BY = AB (inflationary gap) follows as a result [6], [7].

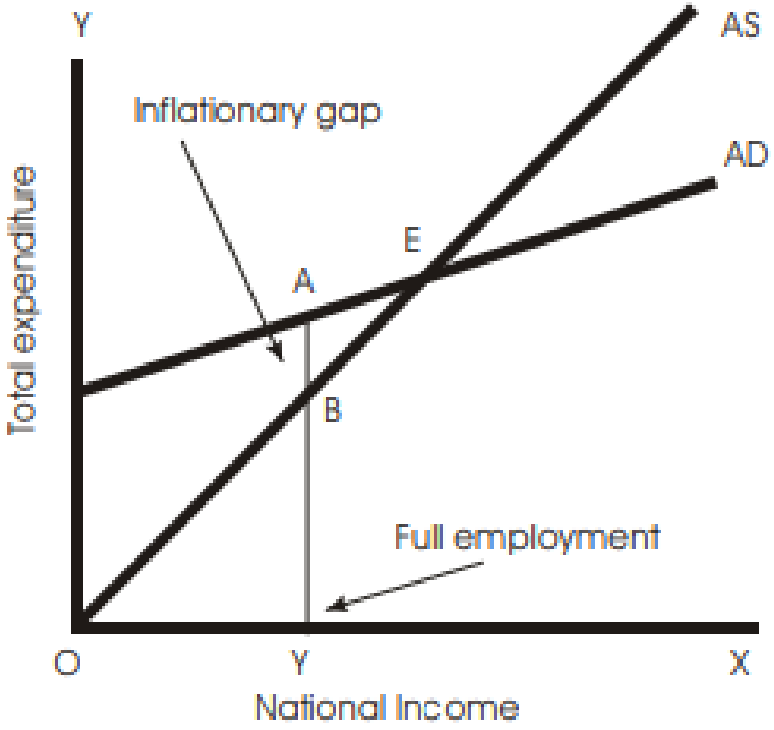

Fig. 1 shows total expenditure vs national income (scholar.cu.edu.eg).

Impact of Excess Demand in the Economy

A rise in demand will boost employment and output if the economy has involuntary unemployment. When the economy reaches full employment and demand rises further, it will result in price increases and an inflationary environment. Production cannot be increased, nor can employment. Although output could potentially grow with an increase in worker productivity, this is typically not taken into account in short-term business cycle analyses.Fig. 1 shows total expenditure vs national income.

DISCUSSION

Meaning of the Deficient Demand

When the total demand for goods and services is less than the total supply at the income level of full employment, this is known as a deficient demand situation. The 'deflationary gap' is another name for it. The economies deflationary gap results in widespread unemployment. When the amount of goods and services available does not equal the degree of demand for those goods and services, a surplus economy result. It rather falls short.

Deficient demand within the economy is explained in the adjacent Fig. 2. At full employment, the aggregate demand is perceived to be less than the aggregate supply by CD length. Where aggregate supply is CY and aggregate demand is DY, this discrepancy is referred to as a deflationary gap. Aggregate supply CY aggregate demand DY. CY - DY = CD (deflationary gap) follows.

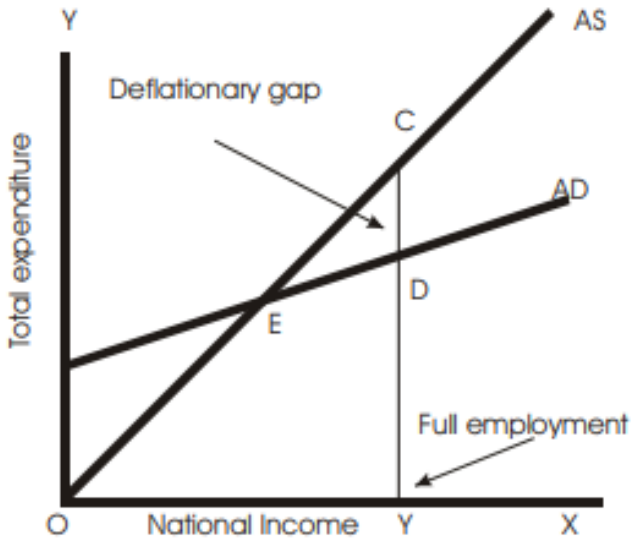

Fig. 2 shows total expenditure vs national income (scholar.cu.edu.eg).

Impact of Deficient Demand in the Economy

Deficient demand's effects on output, employment, and pricing can all be studied separately. One should be aware that its effects depend on a number of variables, the most significant of which are:

1.The economy's structurecompetitive or oligopolistic;

2. the elasticity of the supply of factors of production; and

3. the influence of trade unions. If the economy is competitive (has many producers), a decline in total demand will cause prices for products and services to drop quickly.

However, if the economy is oligopolistic (characterised by a small number of dominant sellers), then output and employment will be more significantly impacted than prices. In such an economic framework, output and employment may decline.The economy's output, employment, and prices are all impacted by the elasticity of supply of the production-related elements. Prices won't change if the economy is competitive and the supply of factors is completely elastic (small changes in price result in infinite changes in the supply of factors). This is due to the fact that changes in output and employment will correspond to changes in demand. However, prices typically decrease if the supply of factors is inelastic, depending on how inelastic the supply of factors is. The impact of trade unions is equally significant. It's possible that unions won't accept lesser pay. In other words, producers will be forced to decrease output and employment if salaries are prevented from falling along with a decline in overall demand.

Causes of excess and deficient demand

The following are crucial elements that affect whether there is too much or not enough demand in the economy:

(i) An increase in government expenditures that is not accompanied by an equivalent rise in taxes. If government spending is greater than receipts, deficient demand may result.

(ii) A rise in independent investment (caused by prior savings) without a rise in recent savings. Without a comparable rise in taxes. Reduced autonomous investment could result in insufficient demand.

(iii) A growing excess on the payments balance. Deficient demand could result from growing balance of payments deficits.

(iv)The supply of consumer products and services will decrease if available resources are employed to produce goods other than consumer goods. There will be surplus demand since the available output is insufficient to meet the total demand. In contrast, a decrease in capital formation will result in insufficient demand.

Measures to Correct Excess and Deficient Demand

There are generally the following ways to come out of excess or deficient demand:

1. Fiscal Policy

2. Monetary Policy

3. Foreign Trade Policy

1. **Fiscal Policy**

Government spending and taxation policy refers to this. A crucial factor affecting total demand is fiscal policy. In a scenario of excessive demand, it may be beneficial to limit government spending in order to lower the budget deficit and increase incomes and revenues through non-inflationary means, such as borrowing and progressive taxes.

Government spending on public works initiatives like road construction, rural electrification, etc., as well as investments in public health and education, defence, internal administration, and state maintenance, may be reduced. Borrowing will lower people's purchasing power, which will lower effective demand.

Similar to taxation, which removes money from circulation and lowers the real demand.Increased government spending can be used to address an increase in the budgetary deficit, while other inflationary methods such as printing more money can be used to address deficient demand. Taxes, especially corporation and income taxes, can be reduced to boost real demand by promoting private investment. Government spending on transfer payments, such as unemployment benefits, tax collections, etc., inevitably decreases during recessions. Intense public works projects could be launched to increase demand [8], [9].

2. **Monetary Policy**

The term "monetary policy" refers to the method through which the monetary authority alters the amount of money in the economy. In other words, it has to do with changes in interest rates and the accessibility of credit in the market.

Higher interest rates result in more expensive loans, which deters real demand. As borrowing costs rise, investors grow discouraged. Therefore, surplus demand is decreased. On the other side, a declining interest rate lowers the cost of borrowing. Borrowing by investors is encouraged to increase. The low rate of interest will boost investment if the marginal efficiency of capital stays constant. Consequently, the economy's weak demand tends to be addressed.

Availability of Credit

Credit is produced in the economy by commercial banks. It is necessary to affect bank credit in order to affect credit availability. Following are some key financial instruments that a nation's central bank can use to manage credit:

1. **Cash reserve ratio**: Each commercial bank in a nation must keep a certain proportion of its total deposits in cash with the central bank. The commercial banks' cash reserves decrease

if the central bank raises this ratio. They are consequently compelled to take out credit. As a result, the economy's excess demand is likewise decreased.The central bank lowers the cash reserve ratio in situations of low demand where increasing credit is the goal. As a result, commercial banks will have more cash available to lend and more credit to create.

2. **Bank rate**: The rate at which a central bank loans money to commercial banks is known as the bank rate. If this rate is increased, borrowing costs also climb as interest rates do. As a result, credit contracts.

Bank rates are decreased when demand is insufficient. The cost of borrowing drops when the bank rate is cut because the interest rate does too. As a result, the economy's credit supply grows. This is as a result of businessmen borrowing more money than before.

3. **Open market operations**: The central bank's selling and purchase of government assets on the open market are referred to as "open market operations." The amount of cash reserves and, consequently, the overall cost and accessibility of loans are both impacted by these procedures. When there is a surplus of demand, the central bank sells these securities, which are often bought by commercial banks or their clients. The sale of government securities lowers bank cash reserves, which limits the banks' ability to extend credit and pushes them to turn down deposits. The central bank's acquisition of securities boosts the commercial banks' cash reserves. In this scenario, money is transferred from the hands of governments to commercial banks and their clients. This increases deposits and subsequently credit. Deficient demand is therefore rectified [10].

4. Changing Margin requirements: The amount that must be put down as a percentage when a company borrows money to finance the purchase of stock. Commercial banks may only lend Rs. 6000 to the holder of the security, for instance, if the central bank sets a 30% margin on the value of a security valued at Rs. 20,000. The central bank increases the margin requirement to reduce excessive demand. The use of credit for speculation is discouraged when margin restrictions are increased. This causes economic activity to decline, which has a disinflationary effect. The central bank lowers the margin requirement to address inadequate demand.

5. Moral suasion: The central bank of a nation uses moral suasion as a means of persuasion, request, advice, and recommendation to the commercial banks. The central bank schedules a meeting with the leaders of the commercial banks and informs them of the necessity of implementing a specific monetary policy before requesting that they do so. This works in both situations of excess and insufficient demand.

Foreign Trade Policy

Exports and imports are the main components of foreign trade. A positive international trade policy can have a significant impact on both excessive and insufficient demand.More exports boost revenues immediately and raise spending. However, increased revenues also increase the need for imports. As a result, a portion of the money earned by the economy is used to buy items that are imported into the nation but produced in other economies. This will lower the extra demand to some extent.An economy can establish and grow its imports surplus (excess of imports over exports) to rectify excess demand, i.e., to lessen inflationary gap. Selling a nation's overseas asset holdings, obtaining loans from other governments or other international organisations like the IMF, World Bank, etc., and receiving grants from other nations are all ways to increase or establish an import surplus.

It is possible to reduce inflation by limiting wage growth and raising output by making better use of idle (inactive) capacity already in place. A wage increase that is accompanied by a rise in labour productivity is preferred since it strengthens the position of supply. However, when wages rise without a corresponding rise in productivity, costs and prices also rise.An increase

in production through increased investment is not advised in an inflationary environment as it would just drive up prices even more. Without making significant additional investments, output can be increased by fully utilising the industrial sector's significant underutilised potential. In other words, prices won't increase while real output does.

Surplus exports aid in battling insufficient demand. An excess of exports increases overall demand. Increasing net foreign investment can boost exports. In order to increase exports, an economy may have to give up some of the items that are produced domestically but are in high demand overseas. The government can take a variety of actions to increase exports, including removing unneeded restrictions, offering tax breaks, subsidies, and other incentives for exports, using cutting-edge technology, and creating contemporary infrastructure.

CONCLUSION

For policymakers to create successful fiscal policies to boost economic activity and encourage sustainable growth, they must comprehend the multiplier idea. An excess of exports increases overall demand. Increasing net foreign investment can boost exports. In order to increase exports, an economy may have to give up some of the items that are produced domestically but are in high demand overseas. The government can take a variety of actions to increase exports, including removing unneeded restrictions, offering tax breaks, subsidies, and other incentives for exports, using cutting-edge technology, and creating contemporary infrastructurePolicymakers can accomplish desired economic outcomes while managing risks and challenges by taking into account the factors determining the multiplier's amplitude and its ramifications.A positive international trade policy can have a significant impact on both excessive and insufficient demand.More exports boost revenues immediately and raise spending.

However, increased revenues also increase the need for imports. As a result, a portion of the money earned by the economy is used to buy items that are imported into the nation but produced in other economies. This will lower the extra demand to some extent.An economy can establish and grow its imports surplus (excess of imports over exports) to rectify excess demand, i.e., to lessen inflationary gap. Selling a nation's overseas asset holdings, obtaining loans from other governments or other international organisations like the IMF, World Bank, etc., and receiving grants from other nations are all ways to increase or establish an import surplus.

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CHAPTER 13

AN OVERVIEW OF THE MONEY-MEANING AND FUNCTION

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ABSTRACT:
As a means of exchange, a unit of account, and a store of value, money is a key idea in economics. The research looks at the qualities of money and the several forms it might take, as well as its historical evolution. Additionally, it talks about how money facilitates transactions, measures value, and can be used to postpone payments. For one to understand the dynamics of an economy and create efficient monetary policies, one must have a thorough understanding of the meaning and purposes of money.Every community considered a new kind of commerce to be necessary as a result. This led to the invention of a uniform means of exchange, which is what modern money is. But the creation of money did not happen suddenly. It took several millennia for it to take on its current form. Money itself must be a limited resource. From cigarettes to wholly artificial money like banknotes, many things have been used as money, including naturally rare precious metals, conch shells, and rare precious metals.The thing that is utilized as money in a commodity money system has intrinsic worth. It typically serves as a medium of exchange first since it is used to streamline transactions in a barter system. Due to the ease with which owners of perishable products may easily transform them into durable money, it quickly starts to act as a store of value. Commodity money has also been employed as a unit of account in contemporary economies.

KEYWORDS:

Commodity, Currency, Money, Value, Goods, Legal.

INTRODUCTION

Modern society uses money frequently, and it is essential to the functioning of the economic system. A common system in ancient times was barter, which was fraught with too many problems. Every community considered a new kind of commerce to be necessary as a result. This led to the invention of a uniform means of exchange, which is what modern money is. But the creation of money did not happen suddenly. It took several millennia for it to take on its current form. Money itself must be a limited resource. From cigarettes to wholly artificial money like banknotes, many things have been used as money, including naturally rare precious metals, conch shells, and rare precious metals.The first money to appear was commodity money. The thing that is utilized as money in a commodity money system has intrinsic worth. It typically serves as a medium of exchange first since it is used to streamline transactions in a barter system. Due to the ease with which owners of perishable products may easily transform them into durable money, it quickly starts to act as a store of value. Commodity money has also been employed as a unit of account in contemporary economies. Currency notes that are backed by gold are a typical type of commodity money. Various goods had been used as currency in the past. Cattle, leather and hides, bear, wine, maize, tobacco, salt, rice and other animals were the most often used commodities. Bread was utilized as an early form of currency in mediaeval Iraq [1], [2].

Paul Einzing compiled a list of about 172 items and materials that have historically been used as money in his book "Primitive Money. "Metal money has replaced commodity money as a result of economic development. Money was made using metals such gold, silver, copper, iron, lead, and bronze. Metal dust, nuggets, rings, bracelets, and other various items have all been used as commodity money for thousands of years, including gold and silver. Around

560 BC, the Lydians finally started minting gold and silver coins.Over time, gold and silver were accepted as the only true forms of money. Then followed the age of abstract money, which includes coins, bank deposits, and paper money; this is the contemporary monetary system, which emerged during the Great Depression of the 1930s. Money "began as commodity money and ended as a system of recording transactions and bringing every act of purchase and sale, borrowing and lending, working and producing at any time, into some degree of relation with every other such act," as stated by G.L.S. Shackle. The Latin term "moneta," which is derived from the temple of Hera the Moneta, where the Roman currency originated, is the source of the English word money [3], [4].

Hêra (Greek:), a member of the Olympian pantheon in classical Greek mythology, was Zeus's wife and sister. "Hera Monetas" is the Greek word for "alone Hera." Hera was once chastised by Zeus, who hung her between the ground and the sky with a golden chain. Hera was referred to as moneres or mone, which meaning lonely, because she was isolated between the sky and the earth and was bound with gold. This is where the term "money" originates. Hephaestus assisted Hera in releasing herself from the golden chain. According to legend, the pieces of this golden chain that fell from the sky and became human currency are the source of all the gold that has been discovered on earth, which is roughly a cube 20 metres in size.Gold was only used in ancient Greek temples, graves, and jewellery, maybe because of this legend. Golden coins were first minted in ancient Greece by the Greek monarch Philip II of Macedon somewhere around 390 BC. Croesus, a king of Lydia, struck the first golden coins perhaps around 560 BC. Because copper and iron were potent elements used to build weapons, the original Greek coins were first made of copper and then of iron.

Aristotle claims that Pheidon, king of Argos, dedicated some of the surviving iron coins (which were actually iron sticks) to the temple of Hera after switching the currency from iron to silver approximately 700 BC. The silver coins were struck by King Pheidon at Aegina in the temple of the goddess of war and learning, Athena the Aphaia (the vanisher), and were inscribed with a Chelone, a design that is still used today as a symbol of capitalism [5], [6].The earliest kind of currency that wasn't backed by a tangible item was chelone coins. Until the Peloponnesian War, when the Athenian Drachma replaced them, they were generally acknowledged and utilised as the global unit of commerce. Other stories claim that Erichtonius, the Lydians or the Naxians, Lykos, the son of Pandion II and grandfather of the Lycians, and Demodike (or Hermodike) of Kyme, the wife of Midas, were the creators of money.

Barter System

A barter system is a trading or exchange system in which one good or service is swapped for another good or service. Prior to the development of money, this approach was widely used. A producer of rice can exchange rice for fabric from a manufacturer of cloth to purchase cloth. This system predates all human civilizations together. The barter system of trading began because man needed goods that he could not produce on his own. He began creating the goods and services he is capable of generating and buying the goods he is unable to make to the highest standard from others to satisfy his needs. As a result, in a barter, one party exchanges products for another party's goods.

Difficulties of Barter

The barter system faces numerous challenges, which are listed below.

1. **Lack of double coincidence of wants**: The absence of two demands that coincide is the most fundamental issue with the barter system. As a result, a commodity seller is not required to find someone who will buy and sell his items to him. In other words, a person who owns goods and services must discover someone who not only wants this

commodity but also has the good and service that the first person wants. This is known as a double coincidence of wants. Finding a buyer who will purchase a cow in exchange for rice is necessary if someone wants to sell their cow [7], [8].

2. **Absence of common unit of measure**: There was no standard unit of measurement for the values of various commodities and services. As a result, the market's value for any commodity is not fixed and constant. It had to be calculated in as many different quantities as there were different sorts and levels of other commodities and services intended for market bartering.

3. **Lack of store of value:** There is no reliable way to store riches or general purchasing power. In the form of particular commodities, people can store wealth. With time, damage to the kept goods may cause them to lose value. Additionally, the way of storing products is fairly costly.

4. **Problem of Failure of Payments**: Lack of a suitable unit in terms of which deferred payments for any future contracts might be made was one of the drawbacks of a barter system. Contracts pertaining to payments in the future are a key component of an exchange economy. There are long-term agreements pertaining to the payment of salary, rent, interest, and other types of compensation. Future payments for these obligations are required. Such transactions cannot be carried out using the barter system. Reasons include disagreements about the calibre of the goods and services accepted as payment, opposition to the exchange of a specified good, and contract risks associated with changes in the value of the accepted good [9], [10].

Meaning of Money

Any marketable product or token that a society uses as a store of value, a means of exchange, or a unit of account is referred to as money. Some or all of these requirements can be satisfied by financial things. Since demands develop inevitably, civilizations automatically produce money where none already exists. In other situations, a centralised authority creates a unit of currency; paper money-based modern cultures are more likely to experience this.The determination of income and employment are significantly influenced by money. Different economists have defined money in different ways. It is described in terms of its functions by F.A. Walker. 'General acceptability' was defined by Cole, Keynes, Seligman, and Robertson. Robertson asserts that "money" is any item that is commonly accepted as payment for commodities or as payment for other types of business obligations. Prof. Crowther has provided a pretty thorough explanation of what money is. "Anything that is generally acceptable as a means of exchange and simultaneously acts as a measure and store of value," was how he described money.

Functions of Money

The following categories can be used to discuss the key roles that money plays:

1. Primary Functions

(i) Medium of exchange: Cash is a type of trading medium. It makes buying and selling products easier.

(ii) Measure of Value: Money serves as a common and consistent measure of value. Money is used to measure the worth of various goods. Nowadays, transactions are quick and easy because to money. Money is used as an accounting unit as a result. For instance, the unit of account in India is the rupee.

2. **Secondary Functions:**

(i) Store of value: Money also serves as a store of value. It means people can keep wealth in the form of money. In other words, storing money means holding of purchasing power. Money is a very liquid (quick conversion of assets into cash) asset, and therefore it can purchase goods and services at any time.

(ii) Standard of deferred/delayed payments: This word refers to the ability to make future payments of any transaction in terms of money. It indicates that payment may be dispersed over time. A person who borrows a specific amount of money now may have to pay it back later, but the total sum is fixed.

(iii) Transfer of value: Value is transferred from one person to another with the aid of money. For instance, when we buy something from a seller, we really transfer value to the seller by paying them with money that is equal to the good's cost.

3. **Contingent Functions**

This refers to the use of financial resources to support key economic decisions made by groups like consumers, producers, etc.

(i)**Distribution of income:** The distribution of national revenue is aided by money. In other words, elements of production participate in the production process by providing their services, and in exchange, they are compensated financially rather than with goods and services.

(ii)**Maximization of utility:** The goal of any rational producer or customer is to maximise utility (satisfaction). For instance, a consumer equalises his overall utility by balancing the marginal utility ratios of various products with the money-based price ratios of various goods.

(iii) **Basis of credit system:** In today's economy, credit is significant. The credit system is crucial to commercial and corporate activities. In the absence of funds, none of the credit instruments, such as checks and bills of exchange, may be employed.

Supply of Money

The total amount of money in circulation in an economy is referred to as the money supply. It is a stock that the general public owns at all times. The monetary authorities, banks, and general public all contribute to determining the money supply. The Reserve Bank of India states that public currency and deposit money are both included in the stock of money. All coins and paper money issued by the state and banks are considered currency. The four alternative money supply measures have been included by RBI. The numbering is M1, M2, M3, and M4. M1 is the total amount of money that the public, banks' net demand deposits, and other deposits with the RBI hold. M1 + savings deposits at the post office equals M2, while M1 + net time deposits at banks equals M3. M4 is equal to M3 plus all deposits, including post office savings. In addition to public and other deposits held by the RBI, net demand deposits also comprise deposits held by the government, banks, and other institutions.Ordinary currency and sophisticated currency: Money come in two varieties: regular money (M) and powerful money (H). Demand deposits added to currency equals "ordinary money." The currency issued by the RBI and the Indian government (small coins, including one-rupee notes), and held by the general population and banks, is referred to as high powered money (H). RBI refers to it as "reserve money."H is the total amount of money that the people, banks, and other institutions have deposited with the RBI. Demand deposits in ordinary money and cash reserves in high powered money are what make them different from one another. To establish demand deposits, banks must maintain a cash reserve, which is a portion of high-powered money produced solely by monetary authority and not by banks.

Demand deposits are produced by banks and are treated as money on par with currency. Demand deposits are many cash reserves, which are a component of H. This provides H the property of high powered, or the ability to act as a foundation for several demand deposit formations. For this reason, base money is another name for high powered money. H so dominates other factors in influencing the money supply.

DISCUSSION

Components of Economy

Money can be categorised based on its nature, legal status, or shape.

Metallic Money

It is composed of several metals, including gold, silver, copper, lead, nickel, and others. Three groups can be made out of metallic money. These are tokens and regular currency money and related money. Full-bodied money is another name for standard currency. Metals with well-defined weights and purity, such as gold or silver, are used to make standard coins. Their inherent (metallic) worth is always equal to their face value. Smaller payments are made using token currency.It is constructed of subpar metals like copper, nickel, etc. It is currency with a higher face value than actual value. Coins are a form of symbolic currency used to make smaller payments. Standard money is unrestricted legal tender in contrast to token money, which has a limited legal tender. Coins or subsidiary currency are used to make smaller payments, much as token currency. These are low-value coins that are often made of aluminium. Limited legal tender as well.

Paper Money

Paper money is made up of currency notes. Paper money in India refers to all paper money of all denominations issued by the nation's central bank (the Reserve Bank of India). In 1806, Bank of Bengal became the first bank in India to print money. Representative gold and silver reserves serve as the sole security for the printed money. Paper money that can be changed into common coins is known as convertible paper money. In transferable paper money cannot be changed into common coins or other precious metals. Today, practically all nations use an unchangeable paper money system. The governor's guarantee in Indian rupee simply implies that only notes and coins with an equivalent face value can be used to exchange the currency. The issuing authority does not maintain metallic reserves to support the amount of money printed while issuing this sort of currency. A type of inconvertible currency is fiat money. When there is a crisis or an emergency, it is released. Because the government has declared it to be legal tender, it is fiat.

It's a rather recent invention. A minimally valuable new money object is produced by a central authority. In this instance, the only reason the general populace has faith in the currency is because the governing body forbids its rejection. There is little a central authority can do to stop society from adopting other money objects when the public loses confidence in fiat money.

By enforcing legal tender rules, formerly known as "forced tender," whereby debtors are legally released from the debt if they (promise to) pay it off with the government's money, the government grants the money itself value. The Latin word fiat, which means "let it be done," or edict, is used to describe this process. The idea behind intrinsic value, in general, is that a product's value is inherent inside it rather than reliant on the buyer's perspective. The brand-new, global currency, the Euro, is an illustration of fiat money. Since its debut, many of the world's oldest currencies have been replaced.

Near Money

Money is divided into two categories based on liquidity: actual money and near money. Although near money is not a totally liquid asset, actual money may be turned into cash instantly and without losing any value. Treasury bills, bonds, debentures, and other forms of close money are examples.

Legal Tender Money

The accepted medium of exchange is money. It is money that is authorised by law. No one can reject it as a medium of exchange. There are two types of legal tender money: restricted legal tender and unlimited legal tender. People cannot be compelled to accept limited legal tender money past a certain point. For instance, in India, coins with face values of 1, 2, 5, 10, 20, and 25 paisa are legal tender up to a total of 25 rupees. It indicates that in India, one cannot refuse to accept coins totaling more than Rs. 25, but one might refuse to accept coins over this amount. Legal currency that is accepted without restriction is money. The one-rupee coin, the 50 paise coin, and all banknotes are therefore limitless legal tender. This money must be accepted by everyone.

Optional Money

It is money that has no legal backing but is yet widely accepted by society. No one may be coerced into accepting such payment. There is a choice to accept or reject. For instance, possible credit instruments include hundies, bills of exchange, and cheques.

Money Proper

The form of money that is used as a medium of exchange in a nation is known as "money proper" or "actual money." The premise for deferred payments is also this. With the aid of this cash, goods and services are bought and sold on the market. Benham refers to them as units of money.Keynes distinguished between two types of actual money: commodity money and representative money. Commodity money is treated as currency and is made of certain metals or commodities. It is often referred to as standard money or full-bodied money. It serves as a store of value in addition to being a means of exchange. Cheap metallic coins or convertible paper notes are the two main forms of representative money. Since it has no intrinsic value, purchasing power cannot be stored in this situation. When desired, a person can change representative money into commodity money.

Money of Accounts

In that kind of money, accounts are kept and value is calculated. Money of account, in Keynes's words, is "that in which debts and prices and general purchasing power are expressed." For instance, the dollar is used as the unit of account in America and the rupee in India. It is constant and does not alter with the passage of time.

CONCLUSION

The idea of money is extremely important to an economy since it fulfils several essential roles for economic stability and transactions. Money serves as a medium of exchange, facilitating transactions between buyers and sellers without any problems. By offering a commonly used form of payment, it reduces the necessity for bartering and streamlines trade. A standard measure of value for commodities, services, assets, and obligations is provided by money when it is used as an accounting unit. Money makes it easier to compare the value of different things by giving them monetary values, which improves the accuracy of economic computations and decision-making. Money also serves as a store of value, enabling people and organizations to conserve money and put off spending until later. Money is a useful asset for retaining value and preserving purchasing power over time since it is durable and liquid.

Commodity money (such as gold and silver), representational money (such as banknotes backed by a commodity), and fiat money (such as contemporary cash without any intrinsic worth) have all been forms of money throughout history. An economy's preferred mode of payment is influenced by historical, social, and technological variables. It is essential for policymakers and central banks to comprehend the meaning and purposes of money in order to develop efficient monetary policies. Money supply, interest rates, and total economic activity are all impacted by monetary policies. To encourage price stability, economic expansion, and financial stability, central banks control the money supply. It's crucial to understand that there are difficulties in how money functions. The stability and efficacy of money as a medium of exchange, a unit of account, and a store of value can be impacted by problems including inflation, counterfeiting, and the influence of financial institutions on the money supply. The development of digital currencies, for example, opens up new questions and prospects for the future of money.

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