ECONOMICS OF PRODUCER BEHAVIOURS AND SUPPLY

Dr. Dasinis Nathan Annette Christinal

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CHAPTER 1

INTRODUCTION TO ECONOMICSTRATEGIES

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ABSTRACT:

Economic policies are very important in determining how a country will develop and thrive. This review introduces economic strategies by examining their definition, goals, and essential elements. It looks at a range of economic tactics used by firms and governments, such as trade agreements, industrial policies, and innovation plans. In order to achieve sustainable economic development, boost competitiveness, and solve socioeconomic concerns, the study also emphasises the significance of economic policies. In general, this introduction provides a basis for comprehending the importance of economic strategies in modern economies.In order to promote sustainable and equitable development, governments, organisations, and people use a variety of economic tactics. The research looks at the important variables affecting the creation and use of economic strategies and evaluates how well they work in obtaining targeted economic objectives. The study aims to give insights into best practises and identify possible difficulties and possibilities for improving economic strategies in various situations via a thorough review of case studies and empirical data.

KEYWORDS:

Economic Strategies, Industrial Policies, Trade Policies, Innovation Strategies, Sustainable Economic Growth.

INTRODUCTION

An Inquiry into the Nature and Causes of Wealth of Nations by Adam Smith, which was published in 1776, marked the beginning of economics as a discipline. The father of economics is regarded as Adam Smith. Economic theory was originally known as "Political Economy."By the turn of the 20th century, the term "economics" had largely replaced the term "political economy." The Greek words oikou (a home) and nomos (to manage) were combined to get the English term "economics." Thus, the term "economics" was used to refer to managing a household with limited resources in the most frugal way possible. According to Lionel Robbins, economics is the study of scarcity[1], [2].

"Economics is the science which studies human behaviour as a relationship between ends and scarce means which have alternative uses," writes Prof. Robbins in his book Nature and Significance of Economic discipline. Economic theory, according to Paul A. Samuelson, is "the study of how men and society choose, with or without the use of money, to employ scarce productive resources that could be put to other uses, to produce various commodities over time and distribute them for consumption now and in the future among various people and groups of

society." This definition puts a focus on development through time. Wider in breadth and contemporary. Consumption, production, distribution, and exchange of products are all included in the definition. As a result, it provides the best definition of economics. This definition is widely acknowledged.

Microeconomics and Macroeconomics

There was just one "economics" before to 1930. In 1933, Ragnar Frisch created the terms "micro" and "macro" to distinguish between the two subfields of economic theory, microeconomics and macroeconomics.Figure 1 represents the Subject-matter of Economics.

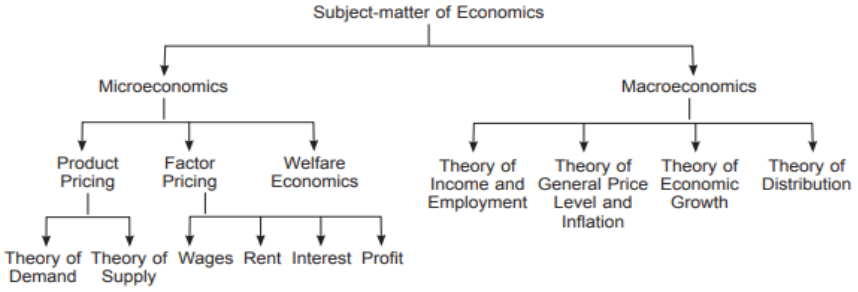

Figure 1: Represents the Subject-matter of Economics.

Meaning and Subject-matter of Microeconomics

The Greek word mikros, which means little, is where the name "Micro" comes from. Microeconomics focuses on discrete societal groups. The study of individual decision-making units, such as customers, resource owners, and businesses, is known as microeconomics. It sometimes goes by the name "Price Theory" since its main focus is on determining how much different goods and components cost. Microeconomics is important from a theoretical and practical standpoint. It resolves the three main economic issues of what, how, and for whom to create.

Importance of Microeconomics

Microeconomics is important from a theoretical and practical standpoint. As shown by the following examples:

1. Microeconomics assists in the creation of economic policies that increase productive effectiveness and increase social welfare.
2. Microeconomics describes how a capitalist economy, in which producers and consumers are each free to make their own choices, operates.
3. Microeconomics explains how individual units reach equilibrium positions in a free market system.
4. It aids in the creation of sensible pricing policies by the government.
5. It aids enterprises in making effective use of their resources.
6. It aids in the creation of corporate projections and conditional predictions.
7. It is used to explain trade benefits, imbalances in the balance of payments, and how the exchange rate is set internationally.

Macroeconomics

The Greek word makros, which means enormous, is where the term "Macro" comes from. Aggregative economics is the focus of macroeconomics. The study of macroeconomic phenomena, such as the issue of full employment, the GNP, savings, investments, aggregate consumption, aggregate investment, economic growth, etc., is referred to as macroeconomics. Given that the determination of income and employment is one of its main topics, it is also known as the Theory of Income and Employment.The study of macroeconomics is used to address a variety of economic issues, including disequilibrium in the balance of payments situation, general unemployment, inflation, and monetary issues.

DISCUSSION

Positive or A Normative Science

Positive economics focuses on how economic issues that affect a society are genuinely resolved. According to Robbins, economics is only a positive science. He thought that economics should be impartial or mute in regards to goals, meaning that there shouldn't be any interest in learning about the moral implications of economic choices[3], [4].In other words, positive economics treats judgements made by people as verifiable truths that may be supported by real evidence. Examples of good economics include: (a) India's high population density.

1. A decrease in an item's price causes an increase in the amount requested of that commodity.
2. India has seen an increase in prices.
3. Employment is affected by the minimum wage law.
4. A business that seeks to maximise profits will set its pricing at the point where marginal revenue and marginal cost are equal.
5. A variety of gases make up air.
6. Raising the actual per capita income improves peoples' standards of life.

Economics as a Normative Science

Normative economics is the study of what ought to be or how an issue in economics ought to be resolved. Pigou and Alfred Marshall have thought about the normative dimension of economics.

They contend that since economics prescribes the path of action that is both desirable and essential to achieving societal objectives, it is a normative science.In other words, there is no hesitation in normative economics when it comes to making value judgements about what is morally good or bad.

Prescriptive assertions are provided by normative economics. Examples of normative economics include:

(a) The government should ensure that every worker receives a minimal wage.
(a) The government need to discontinue giving farmers a minimum support price.
(b) India shouldn't accept loans from other nations.
(c) India needs to increase its military budget.

Meaning of Economic Problems

The choice problem is an issue in economics. No matter how mature or growing an economy is, it must deal with the choice dilemma. People can never get enough of what they desire. New desires arise once these ones are gratified. The number of human desires increases quickly. There are not enough resources available economically to meet all of these desires[5], [6].In other words, there is a shortage of resources or components of production (defined as the products and services required to carry out production, such as land, labour, capital, and entrepreneurship).In accordance to the demand, they are only offered in small amounts. Resources are not just limited but also have other uses. Due to all of this, a decision must be made on which products and services to launch initially. This decision must be made by the economy, which consists of people, businesses, and society.

Prof. Robbins claims that "the economic issue is the problem of choosing or the problem of economising, that is, it is the problem of fuller and more effective use of the finite resources to fulfil the greatest number of demands. This condition is brought about by a lack of resources. An economy will be forced to give up producing good Y if it uses more resources to create good X. Therefore, economics must decide which of the two items, X or Y, would provide more pleasure. On the same piece of land, an economy may grow both wheat and rice. Wheat production is a choice that has an effect.

Causes of Economic Problems

Human desires are limitless. Humans are creatures with limitless needs. The desire of people to consume more superior products and services has always grown. For instance, the demand for housing has increased from a modest home to a luxurious home, the need for transportation has increased from scooters to vehicles, etc.

Human desires are limitless. They continue to grow as people's capacity to fulfil them rises. They are attributed to

(i) People's desire to improve their standard of living, comforts, and efficiency;
(ii) The tendency of humans to accumulate things beyond their current need; and
(iii) The multiplicative nature of some wants, such as the purchase of a car, which results in the desire for a number of additional items, such as petrol, a driver, a parking space, safety locks, spare parts, insurance, etc.
(iv) Fundamental need for clothes, food, and shelter,
(v) The demonstration effect and new types of needs are created by the impact of ads in contemporary society. Because of these factors, our desires never stop growing.

While certain needs, like food, clothing, shelter, and water, must be met immediately, others, like the purchase of a luxury automobile, may be put off. From person to person and sometimes for the same individual, different demands are prioritised differently. As a result, the issue of "which want to satisfy first" and "which the last" emerges. Therefore, consumers must decide "what to consume" and "how much to consume."

There are Fewer Resources. All economic issues are rooted in a lack of resources. All of the resources that may be used by humans to fulfil their desires at any one moment are restricted and scarce. In theory, a resource is everything that is accessible and may be utilised to satisfy human desires. However, in economics, resources are often natural resources (land) that are always accessible to people, families, businesses, and society. Labour, capital (such as machines, buildings, etc.), and entrepreneurship are all in short supply. A related concept is resource scarcity. According to the demand for resources, it suggests that resources are few. The root of all economic issues is resource scarcity. It makes people make decisions[7], [8].

Resources Can Be Used in Other Ways. Resources are not only in short supply, but they also have other applications. The same resources cannot be utilised simultaneously for more than one purpose. For instance, $100 may be used for a variety of other things, such purchasing gas, a notebook, ice cream, a burger, a cool beverage, etc. Similar to how a piece of land may be used for farming, a playground, the construction of a school, college or hospital, a residential building, etc. However, the profit from using 100 square feet of land or other resources for diverse purposes differs depending on how those resources are used. People must choose between alternate uses of the resources as a result.

The landlord must forfeit the revenue anticipated from the land's various potential uses if it is put to a specific purpose. The phrase "opportunity cost" refers to this.As a social science, economics studies how people (individuals and the whole society or economy) choose between the commodities and services they want to generate, the economic objectives they want to attain, and the alternative uses of their resources that would maximise their profits.

Economic Problems of an Economy

Central or Basic Problems of an Economy are a reflection of economic issues.These issues must be dealt with by all economies, whether they are market, centrally controlled, or mixed.What, how, and for whom are three essential and interconnected issues that Samuelson claims are gathered under the heading of resource allocation. How much of each resource is allocated to the creation of products and services is referred to as resource allocation?

Every economy must choose which things to create and in what quantities due to limited resources. If the resources were limitless, redemption would be possible.However, since resources are few and the means are constrained, the economy must choose the most effective way to distribute them to maximise production and output mix. An economy must decide which desires are crucial for the economy as a whole. For instance, if the economy chooses to increase the production of fabric, it would unavoidably decrease the production of food.The supply of resources needed to manufacture food and clothing is constrained and fixed. An economy cannot create more food and clothing at the same time. As a result, an economy must choose the items it will create based on the availability of technology, production costs, supply costs, and commodity demand.

It has to do with selecting a manufacturing method. Because resources are limited, it is impossible to use an inefficient manufacturing method that would result in waste and expensive costs. Use a manufacturing method that will maximise output while lowering costs.Labor-

intensive and capital-intensive procedures are the two categories of production methods we often take into account. More labour and less capital are employed in labor-intensive techniques. More capital and less labour are employed in capital-intensive techniques.Technically speaking, it is always feasible to produce a certain quantity of wheat or rice either with more labour and less capital (i.e., with labor-intensive technology) or with more capital and less labour (i.e., with capital-intensive technology). This is true for the majority of goods. However, there are not many options available for particular commodities. For instance, it takes a lot of work to produce woollen carpets and other handicrafts, but it takes a lot of capital to produce things like automobiles, TVs, computers, aeroplanes, etc.

Alternative technologies may, however, be accessible for the majority of commodities. Different manufacturing methods have different costs. Consequently, the issue of technology selection emerges. The fundamental idea behind this issue is to choose a method of manufacturing that has the lowest production costs per unit of the good. The macro level strategy that utilises the least amount of precious resources is the most effective.Therefore, manufacturers must constantly use the most efficient technologies to make goods effectively.Therefore, every economy must choose the method of manufacturing a good that is the most effective[9], [10]. The issue at hand is how to disperse the good across the many societal groups. The entire output produced by the enterprises is known as the national product. In the economy, goods and services are created for those who have the capability to purchase them. People's capability, ability, and buying power are dependent on their income. More money implies having more money to spend. In the end, the whole production is distributed to the families as income in the form of wages, rent, profits, or interest. In a society, there are millions of people. No one can earn enough money to cover all of his needs. This brings up the issue of how the national product is distributed among various families. So, who should get how much is the issue. Therefore, the guiding premise of this issue is that economic production should be allocated among various societal groups such that everyone receives a minimal level of consumption.

Production Possibility Curve

When all resources are used effectively and completely, the production possibility curve or frontier (PPF) illustrates the different potential combinations of commodities and services that a country may generate. PPC displays the available choices.An economy can only create so many products and services given its available resources and current technological level. Production possibilities are the numerous products that might be made from the resources, and production possibility curve is the graph that depicts these possibilities.

Premises

The following assumptions underlie the production possibility curve: (a) The economy only produces X and Y. (Examples of the items X and Y include, but are not limited to, a gun and butter, wheat and sugar cane, cricket bats and tennis rackets, etc.)

a. A given and fixed amount of resources are made accessible in an economy.
b. Resources may be transferred from the production of one good to the production of another good since they are not specialised.

c. Resources are completely used, so there is no resource waste. Resources aren't sitting around idly.
d. The technological state of an economy is stated and is unchanging.
e. Resources are used effectively (in manufacturing, effectiveness refers to output per unit of an input).

Production Possibility Schedule and Curve

The term "PP schedule" refers to a tabular presentation of several potential pairings of two items that a country may manufacture using its existing resources and technological capabilities. A production potential schedule is shown in Table 1.3. It demonstrates that an economy may generate either zero units of X and 21 units of Y, one unit of X and 20 units of Y, two units of X and 18 units of Y, three units of X and 15 units of Y, four units of X and 11 units of Y, five units of X and six units of Y, or six units of X and zero units of Y with given resources.

a curve of output potential. On the x-axis, excellent X is shown, and on the y-axis, good Y. The needed production possibility curve is denoted by PP'. Given the quantity of the other item, it demonstrates the maximum amount of good X that might be generated. Each alternate scenario, such as (0, 21), (1, 20), (2, 18), (3, 15), etc., is displayed in panel (A), and the points P, A, B, C, D, E, and P' are connected by line segments. On the premise that there are limitless manufacturing options in reality, a smooth PPC is shown in panel (B).

The economy may generate either OP of excellent Y or OP' of good X, as well as any other combinations indicated by the points A, B, C, D, or E. Every point on the curve is reachable. The issue is one of choice, or making a decision between the curve's reachable points. It relies on the personal interests and inclinations of the individual. This is the fundamental issue with an economy. Any point within the curve, such point F, indicates a lack of resources or an ineffective utilisation of those resources. Given the lack of resources, any point outside the curve, such point G, is unreachable. A PPC always yields results in an economy.

Opportunity Cost

Opportunity cost is a commonly used notion in economic research. The expense of a missed or abandoned alternative chance is known as the opportunity cost. For instance, on the same plot of land, wheat and sugarcane may both be cultivated. If wheat is cultivated, the amount of sugarcane sacrificed represents the potential cost of growing wheat.It is obvious that if resources have other uses, the issue of opportunity cost emerges. These resources don't necessarily have to be tangible; they could sometimes include time and money. As an example, the opportunity cost of dining out may be a book that you might have bought with the same money. Opportunity cost is the loss of leisure or play time as a result of time spent on education, effort, or job. The slope of the production possibility curve at each point represents the opportunity cost of manufacturing additional units of good X relative to good Y sacrificed.

CONCLUSION

Governments and corporations use economic strategies as a framework to negotiate the difficulties of contemporary economies. They are created to encourage long-term economic

growth, boost competitiveness, and address social and economic issues. Through targeted interventions and incentives, industrial strategies seek to promote the growth of certain sectors. Trade strategies prioritise fostering export-oriented development and enhancing global trade links. Technology developments are supported by innovation plans, which also support R&D operations. Nations may enhance business climates, draw investments, provide job opportunities, and raise citizen living standards by successfully adopting these tactics. Economic tactics are also essential in solving socioeconomic problems including unemployment, income inequality, and environmental sustainability. An effective economic plan may provide a road map for long-term economic development and social well-being.In conclusion, economic policies are crucial in determining how communities and economies evolve in ways that are inclusive and sustainable. The many economic tactics used by governments, organisations, and people at all levels have been clarified through this study. The results show that a thorough grasp of the economic, social, and political elements driving development is necessary for developing efficient economic policies. Additionally, they must think about the trade-offs and possible unexpected effects linked to certain techniques.

REFERENCES

[1] X. Zhang, M. E. Warner, and G. C. Homsy, 'Environment, Equity, and Economic Development Goals: Understanding Differences in Local Economic Development Strategies', *Econ. Dev. Q.*, 2017, doi: 10.1177/0891242417712003.

[2] R. Lestari, 'Economic Development Strategy of Halal Tourism in Sembalun Lombok Timur', *Sumatra J. Disaster, Geogr. Geogr. Educ.*, 2017, doi: 10.24036/sjdgge.v1i2.68.

[3] K. Cho, H. Chang, Y. Jung, and Y. Yoon, 'Economic analysis of data center cooling strategies', *Sustain. Cities Soc.*, 2017, doi: 10.1016/j.scs.2017.03.008.

[4] J. Kelly, M. Ruther, S. Ehresman, and B. Nickerson, 'Placemaking as an Economic Development Strategy for Small and Midsized Cities', *Urban Aff. Rev.*, 2017, doi: 10.1177/1078087416657895.

[5] J. Carlson, M. Johnston, and J. Dawson, 'Territorial economic development strategies in Nunavut: A hindrance or a help to community economic development?', *J. Rural Community Dev.*, 2017.

[6] W. Ocampo *et al.*, 'Economic evaluations of strategies to prevent hospital-acquired pressure injuries', *Adv. Ski. Wound Care*, 2017, doi: 10.1097/01.ASW.0000520289.89090.b0.

[7] T. D. van der Pol, E. C. van Ierland, and S. Gabbert, 'Economic analysis of adaptive strategies for flood risk management under climate change', *Mitig. Adapt. Strateg. Glob. Chang.*, 2017, doi: 10.1007/s11027-015-9637-0.

[8] A. P. R. Jeanjean, J. Gallagher, P. S. Monks, and R. J. Leigh, 'Ranking current and prospective NO2 pollution mitigation strategies: An environmental and economic modelling investigation in Oxford Street, London', *Environ. Pollut.*, 2017, doi: 10.1016/j.envpol.2017.03.027.

[9] H. W. Yeung, 'The strategy of economic development', *Reg. Stud.*, 2017, doi: 10.1080/00343404.2016.1260251.

[10] Y. Du, W. Pei, N. Chen, X. Ge, and H. Xiao, 'Real-time microgrid economic dispatch based on model predictive control strategy', *J. Mod. Power Syst. Clean Energy*, 2017, doi: 10.1007/s40565-017-0265-4.

CHAPTER 2

ECONOMIC THEORY AND ITS IMPACT

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ABSTRACT:

Understanding how economies work and how people, organisations, and governments behave within them is made possible by economic theory. This essay examines the idea of economic theory and how it affects choices, the creation of policies, and economic results. Key economic theories are examined, with discussions of their underlying assumptions, guiding principles, and ramifications. These include classical economics, neoclassical economics, Keynesian economics, and behavioural economics. The impact of economic theory on a variety of societal facets, such as resource allocation, income distribution, market effectiveness, and economic development, is also examined in this essay. Policymakers, companies, and people may make wise choices and enhance the health of economies by comprehending the function of economic theory.This study tries to investigate how economic theory affects welfare, corporate strategy, and policy-making. The research aims to comprehend how economic theories impact decision-making processes and their effects on numerous parts of society by examining the function of economic theory in these domains. The study looks at how economic theory's fundamental ideas and principles are applied to company operations, welfare analysis, and policymaking. The study seeks to shed light on the merits and drawbacks of economic theory in influencing economic results and advancing social well-being via a thorough review of case studies and empirical data.

KEYWORDS:

Economic theory, Decision-Making, Policy Formulation, Classical Economics, Neoclassical Economics.

INTRODUCTION

Economics is the study of how to allocate few resources to satisfy the endless desires of people. Humans have limitless needs and desires, but there are limits to the resources or ways by which they may be satisfied. Thus, economics is the study of how to effectively use the resources at hand in order to satisfy these endless needs[1], [2].A consumer is someone who purchases products and services to fulfil demands. A consumer's goal is to maximise happiness from his money spent on different products and services, given the costs.

1. Utility strategy
2. The approach of the difference curve

The availability of resources is a problem that affects a whole civilization, a whole nation, or perhaps the entire globe. Common natural resources like oil, gas, and iron ore come to mind when the term resource is mentioned. However, the phrase has a far larger economic

connotation, and economists include a wide range of additional elements that would not occur to anyone who have not studied economics, in addition to fundamental natural resources.The quantity of labour that is readily accessible in a community is a crucial resource. Another essential resource in a society is the money utilised to build the factories that make the goods that people demand. Even broader definitions of resources are possible. People differ in their aptitude for doing tasks. A society with a majority of highly educated and skilled people will be significantly more productive than one with a majority of unskilled people. As a result, job holders' education and abilities must be seen as a limited resource in an economy[3], [4].

Students may enrol in college in the hopes of developing the abilities necessary to command greater salaries. They see their inability to get an education as a barrier to their capacity to find work. This has the fundamental motivation of limitless human desires at its core. The fundamental issue that must be addressed by both people and society is how to effectively employ limited resources in an effort to achieve these endless demands since human wants and desires are limitless but the resources beneficial in achieving them are rare.

The Logic of Economic Theory

Many people, including economists, have tried to define the term "theory." A theory is a representation of a collection of connections, according to a definition that is largely recognised among economists. Either the collection of interactions guiding the behaviour of specific producers and consumers, or the set of relationships governing the broader economy of the community or country, may be represented by economic theory.

However, a hypothesis, or a claim about how something functions, is sometimes referred to as a theory by certain scientists, including economists. Some hypotheses could have little or no observational support. A hypothesis on how the cosmos was created is an illustration. Physics theories often come before real observations. Despite the absence of direct observation, physicists have highly developed ideas concerning the behaviour of electrons, protons, and neutrons in atoms.

Although theories may be employed to explain occurrences in the real world, actual observations are not required for their foundation.A collection of linkages that control how people behave in a certain sector of the economy may be represented as an economic theory. A hypothesis or group of hypotheses on a certain feature of an economy's operation may also be referred to as an economic theory. These theories might be put to the test by looking at how well they match up with the behaviour that has been seen in the economy. The applicability of a theory to explain the behaviour of a certain person or group of people is examined, not the theory itself.A social scientist's finding that a theory does not sufficiently explain the behaviour of a certain set of individuals does not invalidate the theory as a whole. Other individuals may find the same principle to be very useful in slightly different situations.

Economic Theory as Abstraction

The actual world is very intricate. As opposed to spending a lot of time trying to understand the underlying ideas that control how people behave when it comes to production and consumption,

economists spend relatively little time in the actual world. The economies of all industrialised societies, and by extension, the economies of almost all societies and countries, are very complicated, much as the actual world is. The level of intricacy makes it often difficult to understand the essential links.

Economists abstract from reality while creating their ideas in an attempt to more clearly perceive the linkages that are significant. In an attempt to concentrate more intently on the ties they believe are crucial, they exclude interactions that have been recognised as being unimportant to the issue. Economic theory often simplifies reality to the point that it seems unreal or even ridiculous to someone who has not studied economics[5], [6].The phrases theory and model are occasionally used synonymously by economists. A model could be seen by a youngster as a toy or tiny replica of, example, a car or a farm equipment. This is a reasonable method to consider an economic model. A model has to be detailed to be realistic. The main components of the actual item must be represented in the model in order for it to be recognised as such.

The model wouldn't be expected to serve the same purposes as the actual thing, however, at the same time. The functioning of the US economy cannot be controlled by an economist using a model of the economy, just as one would not expect to travel in a toy car. To better understand how the real thing might look, an automobile designer might build a model of a new car before it is actually built. Similarly, an economist might build a model of the U.S. economy to better understand how a particular government policy, if implemented, might affect people and businesses within the economy.Models are a tool that economists use to measure or simulate the consequences of a policy without having to actually execute it. The most important query is "What would happen if..?"Without actually adopting any of the potential policies, the model may be used to provide a response to the issue and evaluate their effects. Therefore, a model may also be seen as a collection of connections (or theory) that is useful for posing hypothetical questions.

Furthermore, it seems like economists are always arguing. An outsider with little knowledge of economics would think that economists never appear to agree on anything. It is inevitable that simplification will be used in the process of developing an economic theory into a formal set of connections regulating some part of an economy. Some connections will be covered, while others won't. The linkages are those that the economist who developed the theory thought were significant and reflected the salient characteristics of the specific economic issue he or she wished to investigate.However, economists may and do have spirited discussions over whether or not a specific theory (one that takes into account certain linkages but leaves out others) is the most accurate one. The process through which economic theories are continuously improved over time is debate, which is a fairly natural and common component of economists' behaviour.Without it, the field of economics in the social sciences would not advance.

DISCUSSION

Representing Economic Relationships

There are several methods to depict economic ideas and models. The Wealth of Nations, Adam Smith's renowned book from the 18th century, is credited with introducing economists to the use of language to describe economic connections. Words seemed to be less effective in providing

detailed "what if" type responses with time. In order to describe economic linkages, economists increasingly turned to graphical techniques in the late nineteenth and early twentieth century. Graphical tools may frequently be used to clarify difficult spoken arguments, but they often had drawbacks. Since it is impossible to draw in more than three dimensions, a graph depicting a production function on a farm, for instance, could only have two inputs and one output.With the release of Paul Samuelson's Foundations of Economic Analysis in 1947, the use of mathematics to describe economic theories and models received a significant boost. Since then, mathematics has grown in significance as a tool for creating theories and models. One cannot include fuzzy connections in a theory that is expressed mathematically. Math also provided new avenues for expressing complex connections. On the production side, there were no longer any restrictions on the amount of inputs or outputs that may be produced by a production function.

The use of statistics for inferring economic links from empirical data grew concurrently with the use of mathematics to describe economic interactions. Economic measurement, or econometrics, is a brand-new field of study. The mathematically based theoretical model's linkages might now be quantified.The fast expansion of computer usage as a tool for estimating or evaluating linkages inside an economy was the last development affecting economics throughout the second half of the 20th century. In order to estimate models, economists today often use computer methods that were thought to be impractical only five or 10 years ago.

Consumption Versus Production Economics

There are options in economics. Anyone with a restricted income must choose to spend their money on the things that will make them feel the happiest, subject to any economic restrictions. The core of consumer economics is choice. According to economists, a person gains value from a product or service that makes them happy. The core issue in consumer economics is how to maximise utility (pleasure) while keeping in mind the restrictions put forward by the availability of revenue.However, the set of options that the provider of the products and services that the customer wants is the subject of this book. Additionally, the manufacturer aims to maximise usefulness. The producer is driven to maximise utility by a desire to create money, again to better satisfy limitless desires. The producer typically tries to maximise profit as a way of gaining utility or happiness, even when the producer may have other purposes. Profit is the amount that is left over after expenses associated with making the items are subtracted from revenues from sales. However, manufacturers also have limitations. Producing as much as possible of anything that might be sold for more than the cost of production would be the producer's answer to the profit-maximization challenge if there were no restrictions[7], [8].

In order to maximise utility or happiness, producers could aim to maximise anything other than profit. Given resources like land, labour, and agricultural equipment, some farmers may in fact want to increase their farm's earnings.The fundamental justification for maximising farm earnings is that a portion of them will be utilised to pay for products and services that will provide the farmer and his or her family happiness or usefulness. Such a farmer acts just as any other customer would. In order to feel satisfied, other farmers could try to maximise something else, like the quantity of land they possess.

Similar to the consumer, the producer also has an allocation issue. Consumers typically want to spend their money in a way that maximises usefulness or enjoyment. The producer typically wants to allocate resources in a way that will maximise earnings. Economics is concerned with the fundamental decisions that must be taken in order to accomplish these goals. The utility maximisation issue is the main focus of consumption economics, while the profit maximisation problem is the main focus of production economics. The company's owner, however, spends the money on products and services that are useful or satisfying.

Microeconomics versus Macroeconomics

Microeconomics and macroeconomics are the two main subfields of economics. Individual decision-making units' behaviour is the focus of microeconomics. Small objects are often referenced with the prefix micro.Microeconomics examines how consumers behave when their money is distributed and how individual business managers, like farmers, try to spend resources in a way that advances their objectives.Macroeconomics focuses on the overall situation. For instance, a macroeconomics student could examine problems that affect a whole economy. For macroeconomists, unemployment and inflation are traditional sources of worry. They are interested in the whole interactions between producers and consumers in a society, a country, or perhaps the entire planet.Macroeconomists are also interested in how government policies could affect the solutions to the basic issues that every society must resolve.

Among these are:

(1) What should be produced?
(2) How much ought to be generated?
(3) How ought to the distribution of the available commodities and services?

Although macroeconomics and microeconomics are sometimes thought of as two distinct fields of economics, they are really extremely closely related. There are individual producers and consumers inside the macroeconomy. Furthermore, individual producers' and consumers' choices are in no way unrelated to what is taking place on a larger scale.The federal government's tax reductions and tax hikes affect the amount of disposable money that each individual consumer has. Prices paid to individual farmers for the goods they produce are mostly influenced by the total amount of goods produced by all farmers, but they also heavily influence the choices made by the farmer as an individual company management.The farm company is the primary decision-making unit in this work, which is on production economics. The individual farm enterprise does not, however, function in a vacuum; rather, it is significantly impacted by what occurs collectively. Additionally, collectively, the actions made by various businesses, such as farms, may have a significant effect on the macroeconomic environment.

Statics Versus Dynamics

Economics may also be divided into static and dynamic categories. One or more still images of an economy's current state might be thought of as static economics. One way to conceptualise dynamic economics is as a shifting image of the economy.On what is referred to as comparative statics sometimes, economists depend substantially.Graphs are often used to depict economic

connections, such as one that shows a supply and demand curve. It is presummated that a demand- or supply-affecting event or shock will occur. Consider the scenario when consumer earnings rise. On the same graph, a second demand curve may be constructed to show what transpires as a consequence. Comparative statics refers to the quick comparison of the prices and quantities that would apply given the previous and current levels of consumer income.

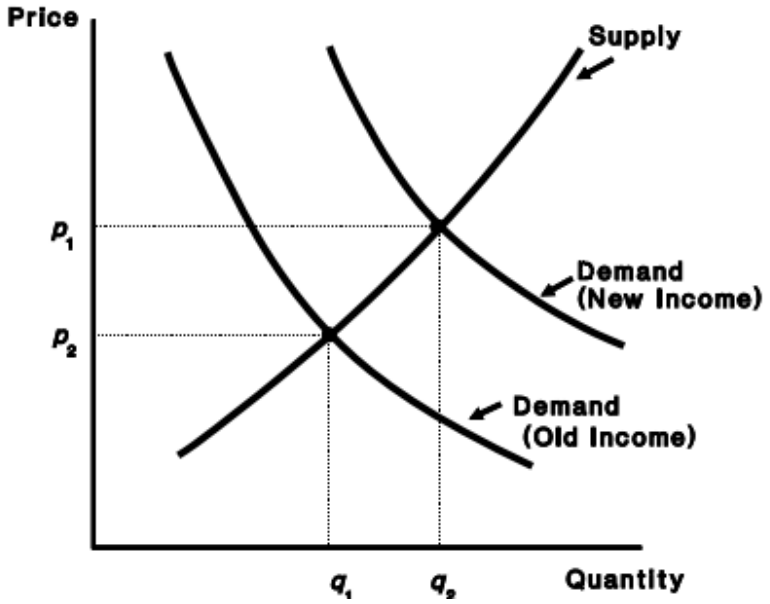

Figure 1: Represents the Supply and Demand.

No effort is made to identify the mechanisms that led to an increase in earnings in a comparative statics study, nor is the passage of time taken into consideration. This is frequently described as a timeless, motionless setting. When the effect of an economic shock is the main concern rather than the mechanisms by which the shock occurs, it is a valuable analytical tool. Also take note of the fact that comparative statics may be utilised to illuminate macroeconomic or microeconomic difficulties.Figure 1represents the Supply and Demand.

In contrast to statics, dynamics places a premium on time. Dynamic economics makes an effort to illustrate the procedures through which a single customer, business, or economy changes equilibrium. Consider the case when an item or commodity's cost drops. Dynamic economics would look for variations in the amount that would be removed from the market one hour from the time the first price fall occurred, and so on for an hour, a day, a week, and a month. The trajectory of a farmer's equipment investments over a 20-year period might be another issue in dynamics.

Economics Versus Agricultural Economics

Agricultural economics and its connection to economics have not received much attention up to this point. There is a justification for this. An agricultural economist is first and foremost an economist since they are well-versed in economic theory. An economist with a focus on

agriculture is known as an agricultural economist. Applying economic reasoning to issues that arise in agriculture is the main focus. A knowledge of agriculture is just as crucial as knowledge of economics for an agricultural economist. An agricultural economist must be aware of these interactions in order to appropriately represent them using a model of a particular agricultural sector component. Otherwise, the key or crucial aspects of the theory would be overlooked.

Agricultural Production Economics

Economic theory as it applies to the producers of agricultural commodities is the main focus of agricultural production economics. The following are some significant issues in agricultural production economics aims and goals for the farm manager. The goal of every farm manager, according to agricultural economics, is to maximise profits, which are measured as the difference between returns from the sale of crops and cattle minus the expenses of producing these commodities. However, each farmer has a different set of objectives. Owning the biggest farm in the county could pique the attention of one farmer more than another. Another person's objective can be to own the greatest possible collection of agricultural equipment. Another person can be motivated to reduce their financial obligations.The psychological composition of an individual has a significant impact on the aims and objectives of a farm manager, and the goals chosen by a specific person may have nothing to do with profit maximisation. Nevertheless, the majority of economic models used to simulate the behaviour of farm managers use the assumption that the manager is primarily interested in maximising profits, or at the very least is interested in maximising income subject to resource availability restrictions[9], [10].

selection of the outputs to be generated. When it comes to what to produce given the available land, labour, machinery, and equipment, a farm manager has a wide range of possibilities. Not only must the management choose how much of each specific item will be produced, but also how the available resources will be distributed among competing goods. Although the farmer may want to maximise earnings, he or she may also have other objectives. Frequently, new restrictions arise. For instance, the government could only allow the farmer to plant a certain crop on a set amount of acres. The farmer could be particularly knowledgeable about or biassed towards a certain commodity. Certain kinds of animals or crops may do better on the farmland than others.

resource distribution among outputs. After choosing which product or commodities to produce, the farmer must select how to divide his or her available resources among the various outputs. Which field should be utilised to grow each crop is a straightforward topic to be addressed, but the problems soon get much more complicated. Each farm has a certain quantity of agricultural equipment and labour. Each crop and livestock operation must get a certain amount of labour and machinery time, in accordance with the farmer's overall goal. The majority of this work is dedicated to discussing the obstacles that farm managers have when dividing resources or inputs among several outputs or businesses.

danger and uncertainty are assumed. Production economics models usually presuppose that the manager is fully aware of the relevant production function (for instance, the yield that would be produced by a crop if a given quantity of fertiliser were applied) and the pricing for the inputs

and products that will be bought and sold. The assumption of knowledge with regard to the production function is, however, seldom ever met in agriculture.

Of course, the main factor is the weather, but there are additional difficulties brought on by nature. Insects and illness harm crops, and cattle get diseases and pass away. The majority of farmers would laugh at economic theory that presumes a production function is known for sure.Despite the fact that farmers may be completely aware of the prices they must pay for inputs like gasoline, fertiliser, and seed at the time each input is acquired, they virtually never are at the start of the production season aware of the prices that will apply when outputs are sold. The biological lag that practically every agricultural commodity producer must contend with leads to price uncertainty, and agricultural production takes time.

The instantaneous nature of production is a common simplification used by economists.that inputs are instantly and magically turned into outputs after purchase. In agricultural output, the change does not happen instantly. The majority of crops need many months to produce. From the moment a calf is conceived until the fattened steer is put on the market, the amount of time may be expressed in years. As a result, farmers must make production choices with a less-than-perfect understanding of the price at which the product will actually sell when it is put on the market.The agricultural firm's operating environment, which is a competitive economic one. The closest real-world illustration of the conventional paradigm of pure competition, according to economists, is farming. But the kind of product produced has a big impact on the competitive environment a farmer must work in.

CONCLUSION

Various economic theories provide contrasting viewpoints on how economies operate and how they may be improved. Classical economics emphasises the importance of supply and demand in setting prices and allocating resources, with a focus on market forces. In addition to extending classical economics, neoclassical economics also examines individual decision-making and adds mathematical models. The necessity of government action in reducing economic volatility and fostering stability is emphasised by Keynesian economics. The study of behavioural economics focuses on the psychological and social aspects that affect financial choices.The creation and application of macroeconomic and microeconomic policies show the influence of economic theory on policymaking. Policymakers may better comprehend the possible impacts of their decisions and create policies that try to accomplish desired economic outcomes by using economic theories of fiscal and monetary policy, market dynamics, and resource allocation. These ideas aid in tackling problems including managing inflation, fostering economic development, and maintaining stability during economic downturns.

REFERENCES

[1] J. Börner *et al.*, ‘The Effectiveness of Payments for Environmental Services’, *World Dev.*, 2017, doi: 10.1016/j.worlddev.2017.03.020.

[2] P. K. Thornton *et al.*, ‘Responding to global change: A theory of change approach to making agricultural research for development outcome-based’, *Agric. Syst.*, 2017, doi: 10.1016/j.agsy.2017.01.005.

[3] A. B. Onakoya, O. I. Afintinni, and G. O. Ogundajo, 'Taxation revenue and economic growth in Africa', *J. Account. Tax.*, 2017, doi: 10.5897/jat2016.0236.

[4] B. Fine and A. Saad-Filho, 'Thirteen Things You Need to Know About Neoliberalism', *Crit. Sociol.*, 2017, doi: 10.1177/0896920516655387.

[5] S. T. Landis, B. Rezaeedaryakenari, Y. Zhang, C. G. Thies, and R. Maciejewski, 'Fording differences? Conditions mitigating water insecurity in the Niger River Basin', *Polit. Geogr.*, 2017, doi: 10.1016/j.polgeo.2016.10.002.

[6] J. Qin, X. Liu, and W. Pedrycz, 'An extended TODIM multi-criteria group decision making method for green supplier selection in interval type-2 fuzzy environment', *Eur. J. Oper. Res.*, 2017, doi: 10.1016/j.ejor.2016.09.059.

[7] T. Kromydas, 'Rethinking higher education and its relationship with social inequalities: Past knowledge, present state and future potential', *Palgrave Commun.*, 2017, doi: 10.1057/s41599-017-0001-8.

[8] O. Masood, B. Aktan, S. Turen, K. Javaria, and M. S. A. ElSeoud, 'Which resources matter the most to firm performance? An experimental study on Malaysian listed firms', *Probl. Perspect. Manag.*, 2017, doi: 10.21511/ppm.15(2).2017.07.

[9] S. Nandi and M. L. Nandi, 'Revisiting activity theory: A useful framework for improving post-acquisition integration effectiveness', *XIMB J. Manag.*, 2017.

[10] D. Stokes and K. Waterman, 'Security leverage, structural power and US strategy in east Asia', *Int. Aff.*, 2017, doi: 10.1093/ia/iix100.

CHAPTER 3

A BRIEF STUDY ON ASSUMPTIONS OF PURE COMPETITION

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ABSTRACT:

A theoretical market structure called pure competition makes certain presumptions about the world. This essay examines the tenets of pure competition and how they affect market results. It talks about the idea of ideal competition, which includes elements like a large number of customers and sellers, uniform goods, perfect knowledge, simplicity of entrance and departure, and absence of market dominance. The effectiveness of the market, how prices are set, and how resources are distributed are all examined in the article.An economics concept known as "pure competition" depicts a market system with many buyers and sellers, uniform goods, perfect knowledge, unfettered entrance and exit, and no one market player having the power to affect market pricing. Economists and decision-makers may assess actual market arrangements and their consequences for competition and economic wellbeing by comprehending the assumptions of pure competition.

KEYWORDS:

Pure Competition, Perfect Competition, Assumptions, Market Structure, Buyers, Sellers.

INTRODUCTION

The notion of pure competition is a common starting point for economists when attempting to understand how businesses behave within an industry. Now is a good time to go through the basic premises of the traditional economic theory of pure competition and see how much of them could apply to American agriculture. The following is an assumption made by the pure competition model[1], [2].There are many buyers and sellers on the market. Few people would argue that there are many buyers in farming. In 1980, the United States Department of Agriculture (USDA) estimated that there were approximately 2.4 million farms in the country, however for certain agricultural commodities, the number of farms is much lower. For example, just a few farms provide all of the country with the parsley it requires[3], [4].A small cattle auction market or a major grain exchange in Minneapolis or Chicago may partially meet the assumption of a high number of buyers, but many agricultural items are traded in marketplaces where there are very few buyers. The only customers the tobacco producer may have are from the three or four largest cigarette makers, and prices are set in a sparsely competitive market. Only a few significant producers have dominated broiler production in the livestock industry in recent years.

In the United States, the production of pigs and cattle is often closer to a situation of pure competition, where a large number of farm businesses accept prices determined by the total

supply and demand for hogs and cattle. The notion of pure competition does not, however, strictly apply to the markets for pigs and cattle due to the relatively limited number of consumers for these products.No one company is big enough to have an impact on the price of the produced product, thus the company is free to sell as much as it wishes at the current market rate. The farmer may sell as much as desired at the market price for numerous agricultural products.

When it comes to the production of commodities like wheat, maize, meat and pigs, farmers accept rather than determine the prices. However, the scarcity of farms for certain commodities implies that the producers may have some influence on the price achieved.The final result is uniform. According to the homogeneity assumption, every company in the sector produces the same kind of product. As a consequence, advertising is unnecessary since there is no way to distinguish one company's product from another. This presumption is often accurate when it comes to farming. There are few characteristics that set one producer's number 2 maize apart from another's. There have been some unsuccessful efforts at product differentiation for a few commodities.Think of the growers' cooperative's Sunkist oranges or the individual grill producer's branded chicken.

Free entrance and exit allow for the free movement of resources (also known as inputs or elements of production) both within and outside of agriculture. In agriculture today, the free-mobility assumption is seldom satisfied. A farmer may have formerly been able to start out with very little money and a lot of enthusiasm. Nowadays, a typical farm may very well be a million dollar venture. In a sector where a single business may need $1 million in initial capital, it is hard to see how free entrance and departure may exist[5], [6].

The initial capital needs for farming have significantly grown over the last ten years, which has had an influence on the mobility of resources.Resources may move freely when there are no artificial restrictions, such government intervention. In farming, there are several artificial constraints. Nearly every major agricultural commodity, as well as many smaller ones, are subject to production choices that are influenced by the federal government, and this involvement continues. Producing commodities like milk and oranges has been significantly impacted by agricultural cooperatives.

The existence of government programmes often has a significant impact on grain output in the United States. Major examples are the wheat and feed grain programmes. In terms of milk output, the government has virtually set the rates that dairy producers will be paid.The government is extensively engaged in the economic environment for numerous commodities with low output, in addition to key agricultural commodities.The federal government, for instance, heavily influences who will produce and how much each farmer will produce. Take, for instance, the producers of hops in Washington state or burley tobacco in central Kentucky. Nothing about this is competitive.

The producer and customer have complete knowledge of all relevant factors.Some economists see a distinction between perfect and pure competition. These economists contend that even when a producer and a customer don't have complete knowledge of all the factors, pure competition may still exist. Perfect competition will only exist, however, if the producer is aware

of both the pricing of the inputs and the prices at which the products will be sold. Additionally, in a market with perfect competition, consumers are fully informed about pricing.

The producer is presumptively fully aware of the production process or function that converts inputs or resources into outputs or commodities in a perfect competitive environment. It is considered that nature doesn't change from year to year. Obviously, agriculture violates this presumption. Almost everything a farmer does is impacted by the whims of nature, which also affects the number of inputs required and output levels.

Retain the Purely Competitive Model

As has been mentioned, farming in the United States does not nearly match the assumptions of the strictly competitive model. The reasonable follow-up question is: Why keep it? This query has an easy solution. Despite its flaws, the strictly competitive model better captures agricultural behaviour than any other all-encompassing model of economic behaviour. If a monopoly is regarded of as a model in which a single business constitutes the industry, it is evident that a single farm is not a monopoly. Farmers also do not represent an oligopoly for the majority of commodities, if by oligopoly is meant a model in which only a few businesses operate in a competitive environment where one firm's pricing and production choices are significantly influenced by the price and output decisions of other firms. Additionally, farming often fails to uphold the fundamental tenet of monopolistic competition, which holds that small price variations between items may be maintained over time as long as individual producers are able to distinguish their goods just enough from those produced by competitors[7], [8].

In conclusion, the purely competitive model has been kept as the fundamental model for application in agricultural production economics to farming since it is the closest model of competitive behaviour to the real world. This does not imply that alternative competitive behaviour theories are not significant in the remaining material. Instead, we'll base a large portion of our research on the simply competitive model, making adjustments as necessary to account for the specifics of the issue.

DISCUSSION

Production WithOne Variable Input

The factor-product model is constructed using the idea of a production function as a foundation. Graphical and tabular methods are used to depict a function for agricultural productivity. Simple production functions with a single input and output are constructed using algebraic examples. The main components of the classical production function are described. It introduces the idea of marginal and average physical products. The idea of the elasticity of production is provided, along with an illustration of how the first, second, and third derivatives are used to determine the form of the underlying total, marginal, and average product.

Law of Diminishing Returns

Every aspect of production economics is based on the law of diminishing returns. The statute has the wrong name. Since the law deals with what happens to the incremental or marginal product

when units of input or resource are added, it should be known as the law of declining marginal returns. According to the rule of decreasing marginal returns, each new unit of a variable input creates less and less extra output when it is added to units of one or more constant inputs beyond a certain point. The proportions between fixed and variable inputs vary when units of the variable input are multiplied by units of the fixed inputs. The law of varying proportions is another name for the law of decreasing returns.

For instance, beyond a certain point, each incremental unit of nitrogen fertiliser put to maize will result in a decreasing amount of new maize being produced. If it weren't for the law of diminishing returns, one farmer could grow all the maize needed for the planet by just buying all the nitrogen fertiliser that is available and using it on their land.Additional is the essential term in the law of diminishing returns. The rule of diminishing returns does not imply that when more units of a variable input are added, the total output would decrease with each additional unit of input. If it did, the rule of diminishing returns would be valid only if a production function had a downward slope. The rate of change in the production function's slope is what is meant by the law of diminishing returns. This is frequently referred to as the production function's curvature.

The initial productivity of the input likewise rises. The function first climbs at an increasing pace before turning upward. Then the so-called inflection moment happens. This is the point at which the function transitions from an increasing rate of growth to a decreasing rate of growth. The function is convex to the horizontal axis before the inflection point and concave to the horizontal axis after the inflection point, to put it another way. The inflection point denotes the transition between falling marginal returns and growing marginal returns. The function finally reaches its maximum and starts to shift downward. Beyond the limit, increases in the variable input x1's use lead to a reduction in total production (TPP). This would happen if a farmer applied so much fertiliser that it had a negative impact on crop output.

MPP and APP for the Neoclassical Function

The MPP function changes when input x1 is used more often. The related MPP function must initially be growing as the productivity of input x1 rises along with it. The highest marginal product is at the inflection point. Here, the output of the incremental unit of the input x1 is most productive. The marginal product of x1 drops beyond the inflection point, therefore the MPP function must likewise be declining. At the output maximisation point and higher levels, the marginal product of x1 is 0 and negative, respectively. As a result, the MPP function is negative beyond the output maximisation point and zero before.

As consumption of x1 grows, average physical product (APP) similarly fluctuates, albeit APP is never negative. As previously stated, APP is the output to input ratio, in this example y/x1 or TPP/x1. As a result, the APP for a particular location on the production function may be shown by drawing a line (ray) from the graph's origin to the chosen point. The values of y and x1 for the production function correspond to the slope of this line, which is y/x1.

The 1 APP at x* is 1 y/x* if the point chosen on the function is for a value for x1 named x*. A moment after the inflection point but before the point at which output is maximised is when 1 APP achieves its peak. At that moment, the production function is tangent to the line with the

highest slope. It so also shows the slope of the production function at that particular moment. Only one line is tangent to and so also reflects the slope of the production function at that position, hence the slope of each line drawn from the origin to a point on the production function represents the APP for the function at that location. This is the point where APP must equal MPP, marginal product must equal average product, and y/x must equal dy/dx.

Name the location at which y/x = dy/dx as x1°. The slope of the production function is larger than the slope of the line traced from the origin to the point at any angle less than x1°.Hence Before x1°, APP must be lower than MPP. APP and the slope of the line formed from the origin both rise when the usage of x1 is increased towards x1°. The slope of the production function falls below the slope of the line traced from the origin to the point after an angle of x1°. Therefore, after x1°, MPP must be smaller than APP. The slope of the line drawn from the origin to the point decreases as the usage of x1 grows beyond x1°, hence APP must decrease beyond x1°. Both the slope of that line and APP never experience negative slopes.The MPP line, which symbolises MPP and has a negative slope beyond the point of output maximisation, is drawn tangent to the production function. APP is never negative, but MPP is after output maximisation has been reached.

Production and Costs

an individual producer's actions. Production is the procedure used to turn inputs into "output." Producers or businesses carry out production. A business purchases a variety of inputs, including manpower, machinery, land, raw materials, etc. It generates output using these inputs. Consumers or other businesses may utilise this output to continue producing goods. For instance, a tailor "produces" clothes using a sewing machine, fabric, thread, and his own work. To grow wheat, a farmer utilises his land, manpower, a tractor, seed, fertiliser, water, etc. A vehicle company makes automobiles by using land for a plant, equipment, manpower, and several other inputs (steel, aluminium, rubber, etc.). A rickshaw puller "produces" rickshaw trips using a rickshaw and his own work. 'Cleaning services' are created by a domestic worker using her efforts.

To begin with, we start with some simplifying presumptions. In our very simple model of production, there is no time lag between the combining of the inputs and the creation of the result. Additionally, we often and synonymously refer to production and supply as one and the same.A business must pay for inputs in order to get them.The cost of manufacturing is what we refer to as. After production is created, the company sells it in the market and makes money. The profit of the business is defined as the difference between revenue and costs. We presum that a company's goal is to generate the most possible profit.

Production Function

A firm's production function is the connection between the inputs it uses and the output it generates. The greatest amount of output that can be generated for different input values is shown. Think about the farmer we spoke about before. For the sake of simplicity, we'll suppose that the farmer simply utilises work and land as inputs for growing wheat. The greatest quantity of wheat he can produce using a certain piece of land and a specific number of work hours is specified by a production function. Let's say he works for 2 hours every day and utilises 1

hectare of land to grow no more than 2 tonnes of wheat. A function that explains this relationship is thus referred to as a production function.

This may, for instance, take the following form: q = K L,

Where q is the quantity of wheat produced, K is the hectare-sized area of the land, and L is the number of hours worked each day.

This method of describing a production function reveals the precise relationship between inputs and outputs. Q will grow if either K or L rises. There will only be one q for each L and any K. A production function solely addresses the effective utilisation of inputs since, by definition, we are taking the maximum output for whatever amount of inputs. Efficiency indicates that the same amount of inputs cannot produce any more output.There is a specified manufacturing function for a certain technology. The greatest amounts of output that may be generated utilising various combinations of inputs are determined by technical knowledge. The highest levels of output that can be produced from various input combinations rise as technology advances. The production function then changes.

Factors of production are the inputs that a corporation employs in the manufacturing process. A company may need any number of various inputs in order to create output. However, for the time being, we focus on a company that solely uses labour and capital as its two primary production elements. Thus, the greatest amount of output (q) that can be generated using various combinations of these two production factors labour (L) and capital (K)is provided by our production function.

The Short Run And The Long Run

Two concepts the short run and the long run need to be discussed before we go on to any further examination.At least one of the factors, such as labour or capital, cannot be changed in the near term and stays fixed. The company can change just the other element in order to change the production level. The variable component is the one that the company may change, while the fixed element is the one that stays constant.Then, the accompanying column displays the various output levels that the company may create in the near term employing various workforce inputs. All production variables may be altered over time. In order to achieve varied output levels over the long term, a corporation may concurrently change both inputs. Therefore, there is no fixed factor over the long term.The term "long run" often refers to a period of time that is longer than the "short run" for any given industrial process. The extended run times for various industrial processes may vary. Definitions of the short run and long run in terms of, say, days, months, or years, are not recommended. Simply by examining whether or not all the inputs can be altered, we may determine if a period is long run or short run.

CONCLUSION

Pure competition is a hypothetical market system that depends on certain premises in order to function. A vast number of customers and sellers, homogenous goods, complete knowledge, ease of entrance and departure, and a lack of market power are among the fundamental presumptions of pure competition. These presumptions have a big impact on how the market works. Because

there are so many buyers and sellers in a situation of pure competition,In order to achieve varied output levels over the long term, a corporation may concurrently change both inputs. Therefore, there is no fixed factor over the long term.The term "long run" often refers to a period of time that is longer than the "short run" for any given industrial process. The extended run times for various industrial processes may vary. Definitions of the short run and long run in terms of, say, days, months, or years, are not recommended. Simply by examining whether or not all the inputs can be altered, we may determine if a period is long run or short run. it is impossible for any one participant to have an impact on market pricing. When customers see all products or services as being the same, there is little potential for product difference. All market players would presumably have access to comprehensive and accurate information regarding costs, standards, and other pertinent elements. Easy entrance and departure guarantee that new businesses may easily join the market and that current businesses can leave without encountering many obstacles.

REFERENCES

[1] G. Oya and H. Ohtsuki, 'Stable polymorphism of cooperators and punishers in a public goods game', *J. Theor. Biol.*, 2017, doi: 10.1016/j.jtbi.2016.11.012.

[2] Y. Chang, J. T. Lloyd, R. Becker, and D. M. Kochmann, 'Modeling microstructure evolution in magnesium: Comparison of detailed and reduced-order kinematic models', *Mech. Mater.*, 2017, doi: 10.1016/j.mechmat.2017.02.007.

[3] S. Maity and T. N. Sahu, 'Pre-Merger Performance Measures of State Bank of India and Its Associate Banks Using Data Envelopment Analysis', *Bus. Spectr.*, 2017.

[4] Maity Sudarshan and Sahu Tarak Nath, 'Pre-Merger Performance Measures Of State Bank Of India And Its Associate Banks Using Data Envelopment Analysis', *Bus. Spectr.*, 2017.

[5] G. Hong, ' A Review of Explanation in Causal Inference: Methods for Mediation and Interaction ', *J. Educ. Behav. Stat.*, 2017, doi: 10.3102/1076998617698112.

[6] R. Harder and V. Vaze, 'Two-Stage Game Theoretic Modelling of Airline Frequency and Fare Competition', *ACM SIGMETRICS Perform. Eval. Rev.*, 2017, doi: 10.1145/3040230.3040235.

[7] G. Mulgan, 'Anticipatory regulation: How can regulators keep up with fast-changing industries?', *NESTA Blog*, 2017.

[8] S. Linstead, 'Postmodern Organizations', in *The Blackwell Encyclopedia of Sociology*, 2017. doi: 10.1002/9781405165518.wbeosp068.pub2.

CHAPTER 4

A BRIEF STUDY ON DEMAND AND SUPPLY ANALYSIS

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ABSTRACT:

The link between the amount of an item or service that is wanted and provided in a market is explored through demand and supply analysis, a basic framework in economics. The main ideas, factors, and consequences of demand and supply analysis are examined in this paper's overview. It talks about the laws of supply and demand and highlights variables that affect both consumer demand and producer supply. The intersection of supply and demand at equilibrium, as well as how changes in supply and demand impact market outcomes, are also discussed in the article. Economists and politicians may decide wisely about price, output, and resource allocation by knowing demand and supply analyses.The amount of an item or service that consumers are willing and able to buy at different prices during a certain time period is referred to as demand. Price, customer preferences, income, the cost of related items, and population all have an impact on demand. According to the law of demand, price and quantity required have an inverse relationship, meaning that as price lowers, quantity demanded rises and vice versa. A demand curve with a descending slope is often used to depict demand.

KEYWORDS:

Demand, supply, demand and supply analysis, law of demand, law of supply.

INTRODUCTION

In its broadest meaning, economics is the study of production, distribution, and consumption. Macroeconomics and microeconomics are its two main subfields of study. The study of macroeconomics focuses on overall economic measures such national production and income. Microeconomics, which examines markets and individual economic units, such as consumers and firms, and their decision-making processes, is where macroeconomics first emerged. The study of economics should logically begin with microeconomics[1], [2].Demand and supply analysis, a cornerstone of microeconomics, is the topic of this reading. The study of how buyers and sellers interact to establish transaction prices and quantities is known as demand and supply analysis. We will see that prices represent the cost to the seller of the unit as well as the value to the buyer of the subsequent (or marginal) unit. The most fundamental set of microeconomic techniques may be found in demand and supply analysis in private company market economies, which are the main focus of investment analysts.

Consumers (or households) and enterprises are the two categories into which private economic entities are traditionally divided in microeconomics. These two groups are responsible for the development of the theories of the corporation and the customer, respectively. The theory of

consumption focuses on consumption (the need for goods and services) by utility-maximizing people, or people who choose their actions to maximise their pleasure from both their current and future consumption. The theory of the company focuses on the provision of products and services by businesses that aim to maximise profits. Because they enable us to comprehend the underlying principles of demand and supply, the consumer theory and the business theory are crucial. The theory of the corporation and the theory of the customer will be the main topics of subsequent readings[3], [4].

To determine a company's profitability and business risk (risk related to operational profits), investment analysts, in particular equity and credit analysts, must continuously examine goods and services, their costs, pricing, potential replacements, and complements. Furthermore, the analyst cannot forecast how outside factors, such as a change in consumer preferences, adjustments to taxes and subsidies, or other market interventions, will affect a firm's revenue, earnings, and cash flows without a solid understanding of the demand and supply model of markets.

Types Of Markets

Because all businesses purchase and sell in markets, analysts need to comprehend the demand and supply model of markets. The demand and supply model, which offers a framework for analysing such markets, must at the very least be understood by investment analysts.Markets may be categorised roughly as factor markets or goods markets. Factor markets are marketplaces for buying and selling production-related inputs. Households own the elements of production (land, labour, physical capital, and raw materials utilised in production) under capitalist private company economies. marketplaces for goods are marketplaces for production's output. From an economics viewpoint, businesses that purchase the services of those components are known as companies. These businesses are ultimately controlled by people, either individually or as part of a corporate structure. Once transformed into intermediate or final commodities and services, businesses provide such services. (Final goods and services are those that are purchased by households; intermediate goods and services are those bought to be used as inputs to manufacture other goods and services.) In factor markets and goods markets, respectively, these two sorts of interactions between the household sector and the company sector those connected to products and those related to services take place[5], [6].

Households are the sellers and businesses are the purchasers on the labour factor market. companies sell on goods marketplaces, while households and companies both purchases. For instance, businesses purchase capital (like equipment) and intermediate products, while families purchase a range of durable and non-durable commodities. Market contacts are mostly voluntary. Companies put their goods up for sale when they think the price will be higher than what it costs to produce them. When the value a household expects to gain from an item or service outweighs the cost to obtain it, that household is willing to pay for it. A prospective trade may occur if the perceived worth of an item exceeds the anticipated cost to create it. Although this truth may seem simple, it is essential to our understanding of markets. If a buyer values something more than a seller does, not only is a trade possible, but the transaction will benefit both parties.

When the money families hope to get outweighs the value of the free time they must give up, they offer to sell their labour services in labour markets, one sort of factor market. Contrarily, businesses only employ people when they believe that the value of their output outweighs the expense of doing so. Compensation received in return for labour services is a significant source of income for households and a significant expense for businesses.

Furthermore, families generally decide to spend less on consumption than they do on labour income. Saving is a behaviour that enables families to build up financial resources, the returns on which may provide additional sources of household income including interest, dividends, and capital gains. Families have the option of lending their savings (in return for interest) or investing them in ownership stakes in businesses (in the hopes of earning dividends and capital gains). When projected future returns are seen to be more desirable today than the current consumption that households must forgo in order to save, consumers choose to make these savings decisions[7], [8].

In fact, facilitating the conversion of these savings into capital investments is one of the main goals of financial institutions and markets. In order to obtain money to invest in productive assets like plant and equipment, businesses utilise capital markets (markets for long-term financial capital, that is, markets for long-term claims on companies' assets and cash flows) to sell debt (in bond markets) or stock (in equity markets). When they determine that their investments will raise the firm's worth by more than the expense of obtaining those money from households, they make these investment decisions. Businesses also employ financial intermediaries like banks and insurance firms to obtain capital; this money is normally in the form of debt financing that ultimately derives from household savings as households are typically net accumulators of capital.Microeconomics, although being largely concerned with commodities and factor markets, may help us comprehend a variety of markets, such as the markets for financial assets.

DISCUSSION

Basic Principles and Concepts

a home behaviour model that generates the consumer demand curve in this reading. The capacity and desire of customers to buy a certain quantity of an item or service at a specific price is known as demand in economics. Supply refers to a seller's readiness to supply a certain amount of an item or service for a specific price. Later research into firm theory will produce the supply curve.

The demand and supply model is helpful in describing how the values of those variables are affected by external factors and how price and quantity sold are decided.The demand function and its graphical analogue, the demand curve, both describe how consumers behave. This curve displays the maximum price that customers will pay for each quantity as well as the largest amount that they are willing and able to buy.at every cost. The supply function and its graphical analogue, the supply curve, both describe how sellers behave. The lowest price vendors are shown concurrently on this curve. Bare prepared to accept for each quantity, as well as the largest quantity that vendors will take for each pricing.

We say the market has attained its equilibrium amount if, for a particular quantity, the greatest price that buyers are ready to pay is equal to the lowest price that sellers are willing to accept. Instead, we say the market has found the equilibrium price when the amount that buyers are ready and able to buy at a particular price is precisely equal to the quantity that sellers are willing to offer at the same price. Thus, equilibrium quantity and price are simultaneously reached, and as long as neither the supply curve nor the demand curve changes, neither quantity nor price is likely to deviate from its equilibrium value**.**

The Demand Function and the Demand Curve

Customers' willingness to purchase in what amount is dependent on a variety of things. The item's own price is perhaps the most significant of these factors. In general, economists believe that as a good's price increases, consumers will decide to purchase less of it, and as its price decreases, they will choose to buy more.The rule of demand has been given to this observation because it is so commonplace, although as we will show, it need not apply in every situation.

Although a good's own price plays a significant role in determining customers' desire to buy it, other factors, like as consumers' incomes, tastes, and preferences, as well as the costs of replacement or complementary items, also play a role. All of these factors are attempted to be accounted for by economists in a relationship known as the demand function. A function, in general, is a connection that determines a certain value for a dependent variable for any given set of values for a collection of independent variables.

$$Q_x^d = f(P_x, I, P_y, \ldots)$$

In order to proceed with our example, let's assume that the cost of petrol (Px) is $3 per gallon, the typical family income (I) is $50,000, and the cost of a car is $20,000 on average (Py). Then, according to this function, the average weekly demand for petrol per family would be 10 gallons: 8.4 0.4(3) + 0.06(50) 0.01(20) = 8.4 1.2 + 3 0.2 = 10, keeping in mind that income and car costs are expressed in thousands. Due to the fact that the own-price variable has a negative sign, when petrol prices rise, the weekly consumption per home would fall by 0.4 gallons for every dollar of increased petrol prices. Economists use the term "own-price" to emphasise that the price being discussed is the price of the product being discussed, not the price of some other commodity.

Three independent variables and one dependent variable make up the demand function in our case. The value of the requested quantity varies if any one of the independent variables changes. At certain levels of the independent variables kept constant, it is often preferable to focus on the connection between the dependent variable and only one of the independent factors at a time. This enables us to depict the relationship between those two variables in a two-dimensional graph. We may simply maintain the other two independent variables constant at their current values and rework the equation to achieve this purpose. The Latin expression ceteris paribus (literally, "all other things being equal" in the meaning of "unchanged") is usually used in economic literature to describe this "holding constant" of the values of all variables save those under discussion. We shall adopt the expression "holding all other things constant" in this reading as an easily understandable replacement for the Latin phrase ceteris paribus.

The Supply Function and the Supply Curve

Supply is the readiness and capacity to provide an item or service for sale. Producers will often accept a price as long as it is at least equal to the cost of producing an extra unit of the product they are selling. As a result, the supply function, also known as the desire to provide, is dependent on both the price at which the item may be sold and the cost of producing an extra unit of the commodity.

The bigger the gap between the two values, the more inclined the producers are to provide the item.We will go more deeply into the cost of manufacturing in a subsequent reading. We simply need to comprehend the fundamentals of cost at this time. Production of an item, at its most basic level, involves converting inputs, or elements of production (such land, labour, capital, and materials), into completed commodities and services. The "rules" governing this transition are referred to by economists as the production technology.

The cost of production is influenced by both technology and the cost of the inputs since companies must buy them in factor markets. It is obvious that willingness to provide depends on both the price of a producer's product as well as the prices (i.e., costs) of the inputs required to make that output. For the sake of simplicity, let's suppose that the only input required for manufacturing is labour, which must be acquired via the labour market. The wage rate, abbreviated W, is the cost of an hour of labour. We may thus conclude that the willingness to offer a thing relies on its price and wage rate (for any given degree of technology). The equation that follows, which depicts the supply function of a single vendor, captures this idea:

$$Q_x^s = f(P_x, W, \ldots)$$

Market Equilibrium

Market equilibrium, which is defined as the situation in which the quantity voluntarily requested by buyers at a given price is just equal to the amount cheerfully offered for sale by sellers at the same price, is a key idea in the market model. It is said that the market has found its equilibrium price when that criteria is satisfied. When the greatest price a buyer is ready to pay and the lowest price a seller is willing to take for the same amount are just equal, an alternate and analogous state of equilibrium is reached.

The demand curve demonstrates an unlimited variety of price and quantity combinations that fulfil the demand function (for given amounts of income, other prices, etc.), as we learned in the prior sections. Similar to this, the supply curve displays an unlimited number of price and quantity combinations that fulfil the supply function (for given values of input prices, etc.). When the price and quantity satisfy both the market supply function and the market demand function at the same time, equilibrium is reached and e freely provided by purchasers. By putting the demand function equal to the supply function and solving for the price algebraically, we may get the equilibrium price. Remember that the supply function was provided by Q f x P W s = () x, and the demand function was given by Q f x P I P d = () x y, in our hypothetical example of a local petrol market. Because they represent the behaviour of buyers and sellers, respectively, such expressions are known as behavioural equations.

Outside of the market's demand and supply paradigm, variables other than own price and quantity are decided. They are known as exogenous variables as a result. However, price and quantity are endogenous variables since they are controlled by the model for this specific market. Three exogenous variables (I, Py, and W) and three endogenous variables (Px, Qx d, and Qx s) are present in our simple case. Consequently, there are two equations in our system and three unknowns. To solve this system, additional equation is required.

Keeping with our hypothetical instances, we may suppose that the annual income is $50 (thousand), the cost of a car is $20 (thousand), and the hourly rate is $15. In this case, Equation 14 can be changed to equal Equation 17 to represent our equilibrium condition: 11,200 - 400Px = 5,000 + 5,000Px and equilibrium, Px = 3. Alternatively, we could have changed Equation 15 to equal Equation 18 to represent the inverse supply function: 28 - 0.0025Qx = 1 + 0.0002Qx and equilibrium, Qx = 10,000. In other words, with the specified values of I and W, the specific ratio of petrol price to quantity that yields equilibrium is (3, 10,000).

Note that in order to identify a specific equilibrium combination of price and quantity, our system of equations needs precise values for the exogenous variables. The price and quantity of petrol are conceptually decided in the petrol market, as opposed to the values of the exogenous variables, which are conceptually determined in other markets, such as the markets for labour, cars, and so on. Partial equilibrium analysis refers to the process of focusing on a single market while supposing values for external variables. In many instances, we may get enough understanding of a target market without taking into account the feedback effects to and from all the other markets that are incidentally connected to this one. However, there are other occasions when we must explicitly account for every feedback mechanism operating concurrently across all markets. This is known as general equilibrium analysis, and that is what we are doing when we conduct it. For instance, we acknowledge that the cost of vehicles, a complementary good, affects the demand for petrol in our hypothetical model of the local petrol market. In the event that car prices increased, consumers would probably purchase fewer vehicles overall as well as less petrol. But the price of petrol also likely has an influence on the demand for cars, which may have an impact on the market for petrol. It is generally safe to disregard all the feedback effects since we are positing a fairly local petrol market, but if we were modelling the national markets for petrol and autos, a general equilibrium model could be necessary.The method below should be taken into account in our fictitious market.

Imagine suppose an impartial representative or referee displayed a price for everyone to see. We would next ask each prospective customer to indicate on a piece of paper how much they would be willing and able to spend at the listed price. Each prospective seller would simultaneously list the amount they would be willing to sell at that price. The referee would then compute the total amount requested and the total quantity delivered at that price after receiving those pieces of paper. If the two amounts are the same, the slips of paper would effectively turn into contracts that would be carried out, and buyers and sellers would truly trade at that price to end the session. The referee's duty would be to toss the earlier slips of paper and show a lesser price if there was an excess supply, however. Alternately, the referee might toss the slips of paper and publish a higher price if there was an excess demand at the first set price. This cycle would

repeat itself until the market achieved an equilibrium price where the amount readily offered for sale and the amount happily acquired were about equal. The market could incline to move in the direction of balance in this manner.2

A market doesn't really need to have this kind of referee in order to function as if it did. Experimental economists have created fictitious marketplaces in which participants—typically college students—are given the "order" to buy or sell a certain quantity of a good at a cost that is either no higher (for buyers) or no lower (for sellers) than a predetermined dollar amount. These restrictions, which are shared by market players, show a supply curve that is positively sloped and a demand curve that is negatively sloped. The objective for buyers is to purchase at a price that is as far below their limit as is feasible, while the objective for sellers is to sell at a price that is as high as is feasible. After that, the participants are free to converse in a mock trading pit by signalling their intentions to purchase or sell.

A recorder that shows the specifics of the contract receives a trade report when two parties reach agreement on a price. Traders are therefore free to keep an eye on current pricing as they look for a buyer or sale. The open outcry buying and selling mechanism historically one of the earliest methods of trading securities has repeatedly been demonstrated in experiments to quickly converge to the theoretical equilibrium price and quantity inherent in the underlying demand and supply curves used to determine the respective sellers' and buyers' limit prices.The supply curve is positively sloped while the demand curve is negatively sloped in our fictitious example of the petrol market. In such instance, anytime pricing was unintentionally "bumped" away from equilibrium, the market mechanism would typically return to it. Since the price tends to converge back to the equilibrium anytime it is disrupted, we refer to such an equilibrium as being stable.3 However, it's feasible that this market process will lead to an unstable equilibrium.

Assume that the supply curve also comprises a section that is negatively sloping, in addition to the demand curve. For instance, at a certain salary level, a wage rise can lead employees to put in fewer hours of labour if the utility ("utility") of an additional hour of leisure outweighs the usefulness of an additional hour of work.two price and quantity combinations that would equalise the amount requested and supplied, and hence two equilibria. With a positively sloping supply curve and a negatively sloped demand curve, the lower-priced equilibrium is stable.

The higher-priced equilibrium is unsteady, however, since surplus demand would arise at a price above that of equilibrium, pushing prices further higher. There would be an excess supply at a price below that equilibrium, which would cause the price to fall even more towards the lower-priced equilibrium, which is a stable equilibrium[9], [10].

According To Observation, Most Markets Exhibit Stable Equilibria

Prices don't often spiral out of control or decelerate to zero. Price bubbles do, however, sometimes emerge in the real estate, securities, and other sectors.It seems possible for pricing to act in ways that are not long-term, sustainable in the end. If they do not represent real values, they may initially soar, but if the bubble bursts, there will be a "correction" to a new equilibrium.Consider the situation where buyers and sellers base their expectations of future prices on the pace of change of existing prices: if price increases, they see it as a sign that price

will climb even more. This is a straightforward way to explain bubbles. In these conditions, if consumers see a price rise today, they may actually cause the demand curve to skew to the right, wanting to purchase more at each price point today because they anticipate having to pay more in the future. Alternately, if sellers believe that a price increase today is a sign that the price will rise even more tomorrow, they may be unwilling to sell now because they are holding out for a future price increase, which would cause the supply curve to move to the left. The process restarts with a rightward movement in supply and a leftward shift in demand, which confirms buyers' and sellers' assumptions about pricing. This situation may lead to a bubble that would grow until a decision was made that such high prices couldn't continue. As the bubble bursts, prices plummet.

CONCLUSION

A strong foundation for comprehending market behaviour and making economic choices is demand and supply analysis. Economists and decision-makers may learn more about pricing, output, and resource allocation by researching the link between supply and demand and their drivers. While demand and supply analysis may serve as a good starting point, it is crucial to take into account behavioural aspects and the intricacies of the actual world to achieve a thorough grasp of market dynamics.The amount of an item or service that producers are willing and able to create and make available for sale at various prices throughout the course of a certain time period is referred to as supply. Production costs, technology, input costs, government rules, and the quantity of producers in the market are some of the variables that affect supply. According to the law of supply, price and amount provided are positively correlated, meaning that as price rises, so does quantity supplied. A supply curve with an increasing slope is often used to depict supply.

REFERENCES

[1] H. Azuma, S. Fukutome, S. Minotsu, S. Nonaka, K. Ogimoto, and K. Kataoka, ‘Demand-supply analysis model with energy and balancing capacity exchange through interconnection’, *IEEJ Trans. Power Energy*, 2017, doi: 10.1541/ieejpes.137.83.

[2] A. Wijayanti, J. Damanik, C. Fandeli, and Sudarmadji, ‘Analysis of supply and demand to enhance educational tourism experience in the smart park of Yogyakarta, Indonesia’, *Economies*, 2017, doi: 10.3390/economies5040042.

[3] L. Huang and L. Yin, ‘Supply and demand analysis of water resources based on system dynamics model’, *J. Eng. Technol. Sci.*, 2017, doi: 10.5614/j.eng.technol.sci.2017.49.6.1.

[4] Y. Motoyama and E. Malizia, ‘Demand pull or supply push? Metro-level analysis of start-ups in the United States’, *Reg. Stud. Reg. Sci.*, 2017, doi: 10.1080/21681376.2017.1379885.

[5] P. Jittrapirom, V. Caiati, A. M. Feneri, S. Ebrahimigharehbaghi, M. J. Alonso-González, and J. Narayan, ‘Mobility as a service: A critical review of definitions, assessments of schemes, and key challenges’, *Urban Plan.*, 2017, doi: 10.17645/up.v2i2.931.

[6] I. Syssoyeva-Masson and J. S. Andrade, ‘Are PIIGS so different? An empirical analysis of demand and supply shocks’, *Panoeconomicus*, 2017, doi: 10.2298/PAN1702189S.

[7] A. V. Anas, D. A. Suriamihardja, M. S. Pallu, and U. R. Irfan, 'Sensitivity analysis of supply-demand model of Jeneberang River construction materials, South Sulawesi', *ARPN J. Eng. Appl. Sci.*, 2017.

[8] N. Tran *et al.*, 'Indonesian aquaculture futures: An analysis of fish supply and demand in Indonesia to 2030 and role of aquaculture using the AsiaFish model', *Mar. Policy*, 2017, doi: 10.1016/j.marpol.2017.02.002.

[9] S. Banerjee and D. Y. Golhar, 'Economic analysis of demand uncertainty and delayed information sharing in a third-party managed supply chain', *Prod. Plan. Control*, 2017, doi: 10.1080/09537287.2017.1341650.

[10] D. Ivanov, 'Simulation-based single vs. dual sourcing analysis in the supply chain with consideration of capacity disruptions, big data and demand patterns', *Int. J. Integr. Supply Manag.*, 2017, doi: 10.1504/IJISM.2017.083005.

CHAPTER 5

MARKETS MAXIMIZE SOCIETY'S TOTAL SURPLUS

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ABSTRACT:

The idea of overall surplus and how it relates to market effectiveness. The adage "Markets maximise society's total surplus" implies that the maximum level of societal benefit is produced by markets that are operating efficiently and are driven by supply and demand. The study examines the elements of total surplus, including consumer surplus and producer surplus, and examines how the maximisation of total surplus results from the efficient market outcomes. It also emphasises the need of government interventions in fixing market inefficiencies and recognises the existence of market failures that may prevent the attainment of the highest total surplus. Understanding how markets and total surplus interact might help us better understand the potential and constraints of market mechanisms in advancing overall wellbeing.A basic assumption in economics, particularly under the paradigm of welfare economics, is that markets maximise society's overall surplus. Total surplus is the term used to describe the total well-being or financial prosperity that results from the creation and consumption of products and services in a market.

KEYWORDS:

Total surplus, Market Efficiency, Consumer Surplus, Producer Surplus, Supply And Demand, Market Failures.

INTRODUCTION

Recall that the willingness of customers to pay for each more unit of an item may be interpreted as the market demand curve. Therefore, the marginal value curve for that good in society. If there are no positive or negative externalities, the market supply curve also depicts the marginal cost to society of producing each extra unit of that commodity[1], [2]. (An externality is when the production costs or consumption benefits of a good or service are shared with those who are not producing or consuming the good or service; a spillover cost is referred to as a negative externality (for example, pollution), whereas a spillover benefit is referred to as a positive externality (for example, literacy programmes.

The marginal cost of that unit of the item is the greatest price that someone is prepared to pay at equilibrium, where the demand and supply curves cross, and the lowest price that a seller is ready to take. This equilibrium quantity is Q1 in Exhibit 14. Now imagine that a market factor led to the trading of, say, just Q′ units rather than all of the Q1 units. Keep in mind that the marginal value of the Q′ th unit is greater than the marginal cost to society to create it. Fundamentally speaking, we may argue that society should make and consume it, along with the

subsequent ones, and so on, up to Q1. Or imagine if a factor led to the production of, say, Q″ units rather than only Q1 units. So what do we say now? Society spent more on all units up to and including Q″ than the value it gained from eating them[3], [4].One can argue that society shouldn't have generated and consumed those extra units. Because they used more resources than they contributed to society when they were consumed, the total surplus was decreased by those extra units. There is evidence to assume that markets often tend towards equilibrium and that this state is also ideal in terms of welfare. Consider two customers, Helen Smith and Tom Warren, who have access to a market for some item, such as petrol or shoes or any other consumption good, to go a bit further[5].We may illustrate their circumstances by juxtaposing each individual demand curve on a graph showing the overall market equilibrium, as in Exhibit 15, which shows each individual demand for a specific commodity combined with the market demand and supply for that same good. (The pricing axes are the same, but the horizontal axes are scaled differently since the market amount is so much more than each consumer's quantity.) Smith decides to buy QH at the market price of Px *, and Warren decides to buy QT since at that price, each consumer's marginal value is exactly equal to the price they must pay per unit. Imagine someone took one of the goods from Smith and gave it to Warren. The dotted trapezoid in Exhibit 15 Panel A represents the value loss Smith suffered, while the crosshatched trapezoid in Exhibit 15 Panel B represents the value gain Warren received. Take note that Smith's value loss must be greater than the gain in Warren's worth. Keep in mind that consumer surplus equals value less expense.Conversely, when all consumers confront the same price, they will buy quantities that equalise their marginal values across all customers. Consumption quantities that do not give equal marginal value to each consumer diminish total consumer surplus. That action, which is significant, maximises overall consumer surplus.

1. produce quantities such that their marginal costs are equated across all firms, total
2. producer surplus is maximized. The result of this analysis is that when all consumers
3. face the same market equilibrium price and are allowed to buy all they desire at that
4. price, and when all firms face that same price and are allowed to sell as much as they
5. want at that price, the total of consumer and producer surplus (total surplus) is maximized from that market. This result is the beauty of free markets: They maximize

society’s net benefit from production and consumption of goods and services.A very similar case may be presented to demonstrate that total producer surplus is maximised when all producers produce in such amounts that their marginal costs are equalised across all companies. According to the findings of this analysis, the market's total surplus is maximised when all consumers are given the same equilibrium price and are free to purchase anything they want at that price, and when all firms are given the same price and are free to sell as much as they want at that price. This outcome exemplifies the virtue of free markets: They maximise the net benefit to society through the creation and use of products and services[6], [7].

Market Interference: The Negative Impact on Total Surplus

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4. price, and when all firms face that same price and are allowed to sell as much as they

want at that price, the total of consumer and producer surplus (total surplus) is maximized from that market. This result is the beauty of free markets: They maximizesociety's net benefit from production and consumption of goods and services.Legislators may utilise their authority to set a price cap below the market equilibrium price if they believe that a market price is "too high" for consumers to pay. Rent restrictions (which put a cap on rent hikes), drug price caps, and laws against "price gouging" after hurricanes are a few instances of ceilings. Price gouging refers to charging opportunistically high rates for items like bottled water or plywood. Price caps undoubtedly help everyone who was paying the previous, higher price and may still purchase as much as they want at the new, reduced ceiling price.

DISCUSSION

Demand Elasticities

produce quantities such that their marginal costs are equated across all firms, totalproducer surplus is maximized. The result of this analysis is that when all consumersface the same market equilibrium price and are allowed to buy all they desire at thatprice, and when all firms face that same price and are allowed to sell as much as theywant at that price, the total of consumer and producer surplus (total surplus) is maximized from that market. This result is the beauty of free markets: They maximizesociety's net benefit from production and consumption of goods and services.

Understanding the direction of price and quantity changes brought on by variations in either the supply or demand curves may be greatly helped by the general model of demand and supply. But on a more quantitative level, we often need to gauge how responsive the amount required or provided is to variations in the underlying independent variables. This is where the idea of demand and supply elasticity is vital in microeconomics. We will look at a variety of demand elasticities, but it is important to note that they are all, at their core, measured as ratios of percentage changes.

Own-Price Elasticity of Demand

Recall that when we first introduced the idea of a demand function with Equation 1 earlier, all we were doing was speculating about how the amount desired of a particular commodity, like petrol, is influenced by a number of other factors, one of which is the price of petrol. itself. We made reference to the law of demand, which just asserts that the amount sought and the price are inversely proportional. Despite the fact that this observation is insightful, we need go a bit further and consider how responsive the amount requested is to variations in the price of petrol. Is it very sensitive, resulting in a large reduction in quantity when the price goes up by a little, or is it simply barely responsive? We could find it useful if we had a simple way to quantify this sensitivity[8], [9].

We included a fictitious home demand function for petrol in Equation 3 by making the assumption that the family's income and the cost of another commodity (automobiles) would remain constant. It purportedly outlined how a family would shop for petrol given their needs.

The function in question was denoted by the straightforward linear formula Q P x d = x 11. 2 0 4. One reasonable response to the question of how sensitive quantity is to price changes in that expression is to simply acknowledge that, in accordance with that demand function, if price changes by one unit, quantity changes by 0.4 units in the opposite direction. Accordingly, the quantity would decrease by 0.4 gallons per week if the price were to increase by $1, making the coefficient on the price variable (0.4) the potential indicator of sensitivity that we are looking for.However, such metric has a fundamental flaw attached to it. Take note that the -0.4 is expressed as litres of petrol for every dollar of cost. The units in which we measured Q and P were very important. The exact same family behaviour would be represented by the alternative equation Q P x d = x 11. 2 0 004 if we had measured the cost of petrol in cents per gallon rather than dollars per gallon.

Therefore, even though we might choose the coefficient on price as our sensitivity metric, if we wished to characterise the sensitivity of petrol demand, we would always need to remember the units in which Q and P were measured. That could be difficult.Because of this flaw, economists prefer to use a sensitivity metric that is independent of units of measurement. The ratio of percentage changes is the definition of the statistic known as elasticity. It is a measure of the overall sensitivity of one variable to any other variable[10].In our specific example, where the price is $3 a gallon, demand is not highly sensitive to price changes since a 1 percent increase in price would only result in a 0.12 percent decrease in quantity requested. Actually, such estimates of the real demand elasticity for petrol in the US are not all that dissimilar from empirical estimations. Demand is said to be inelastic when it is not highly responsive to price. To be exact, demand is said to be inelastic when the magnitude (ignoring algebraic sign) of the own-price elasticity coefficient is less than one. Demand is said to be elastic when that magnitude is bigger than one. Demand is said to be unitary elastic or having an elasticity coefficient of one when it is negative. A increase in price will be connected with a decrease in quantity required, hence own-price elasticity of demand will always be negative if the law of demand is true. However, it may be either elastic or inelastic. In our hypothetical scenario, let's pretend that petrol was very expensive say, $15 per gallon. The elasticity coefficient in this situation would be 1.154. We would then claim that demand is elastic at that price since the elasticity coefficient's magnitude is larger than one.

Equation 24 should help us understand that the location of the calculation affects the elasticity for a linear demand curve. Because it is essentially the inverse of the demand curve's slope, it should be noted that the first component, Q/P, will not change along the whole demand curve. But it's obvious that the second word, P/Q, varies depending on where we look. P/Q is relatively tiny at very low prices, hence demand is inelastic. However, at extremely high prices, Q is low and P is high, resulting in a very high P/Q ratio and elastic demand. A trait shared by all negatively sloping linear demand curves is seen in exhibit. Demand is elastic above the midpoint of the curve, inelastic below the midway, and unit elastic at the midpoint.

Sometimes, we may just have two price and quantity data rather than the whole demand function or demand curve. Because we truly cannot claim that the demand curve is even a linear function in this situation, we do not know the slope of the demand curve at a certain moment. For

instance, let's say we are aware that the amount requested at price levels of 5 and 6 is 9,200 and 8,800 respectively, but we are unaware of any more information on the demand function. In these situations, economists use a concept known as arc elasticity. The percentage change in quantity requested divided by the percentage change in price remains the definition of arc elasticity of demand. However, economists have opted to use the average quantity and average price as the foundation for computing the percentage changes since the choice of base for the calculation has an impact on the computation. (Let's imagine, for example, that your salary is €10 and your supervisor tells you, "I'll raise your salary by 10%. Then, you get €11. However, if your employer later that day lowers your pay by 10%, your new hourly rate is €9.90. You are thus worse off as a result of first earning a 10% rise and subsequently a 10% salary reduction.

Vertical demand curves and horizontal demand curves are two exceptions where linear demand curves have the same elasticity throughout. Think about a horizontal demand curve as in Panel B of Exhibit 21 and a vertical demand curve like in Panel A of the same exhibit. In the first scenario, demand remains constant regardless of price. No demand curve could possibly be completely vertical at all conceivable prices, but for some range of values, it is realistic to assume that the same amount would be bought at either a little higher or lower price. Perhaps a person's need for, say, mustard, might conform to this description. Demand is fully inelastic in that price range since the amount requested is obviously not at all responsive to price in that range.

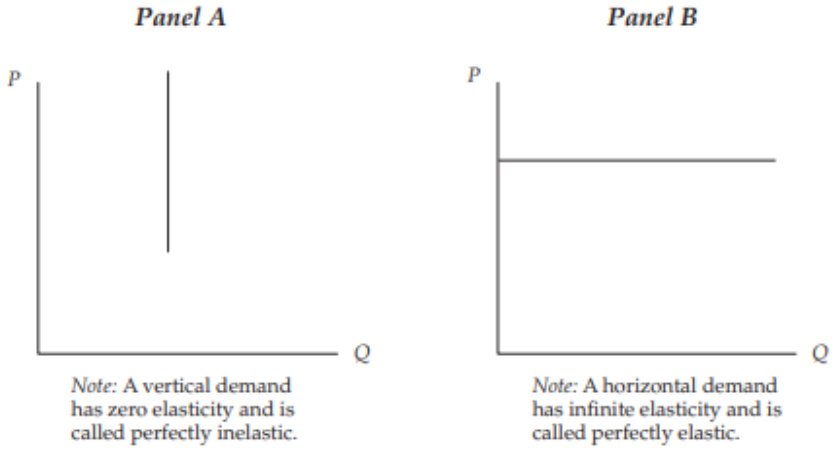

Figure 1: Represents the Extremes of Price Elasticity.

The demand is horizontal at a certain price in the second scenario. For a single customer, it is obvious that this condition is impossible since it indicates that at even infinitesimally higher prices, the consumer would not purchase anything, yet at that specific price, the consumer would purchase an unknowable quantity. This scenario does not at all represent the demand curve that a lone seller would encounter in a completely competitive market, such as the wheat market. An individual farmer could sell whatever she has at the going rate for wheat. However, it is plausible to assume that she would be unable to sell any wheat at all if she held out for a price beyond market value since all other farmers' wheat may be used in its place, and no one would be prepared to purchase any of hers at a higher price. When a seller is facing a fully competitive

market, we would argue that the demand curve is perfectly elastic.Figure 1 represents the Extremes of Price Elasticity. Own-price What aspects of an item or its market can be instructive in assessing whether demand is extremely elastic or not? Demand elasticity is our measure of how sensitive the quantity required is to changes in the price of a commodity or service. Whether there are suitable alternatives for the product in issue may be the most crucial attribute. If there exist near replacements for the product, then a buyer would typically buy significantly less of this good and move to the substitute, which is now substantially less expensive, if its price were to increase even little. But the demand is probably considerably less elastic if there are just no alternatives. Consider a consumer's need for a widely defined good, like bread, to better comprehend this. The category of bread, which covers all varieties from French bread to pita bread to tortillas and more, actually has no comparable equivalents. Therefore, if bread's price were to increase overall, a customer may buy a bit less of it each week, but certainly not much less. But now, think of the consumer's preference for a certain baker's speciality bread as opposed to the word "bread" as a whole. There are undoubtedly better alternatives to bread in general than Baker Bob's Whole Wheat Bread with Sesame Seeds. So, it stands to reason that Baker Bob's unique loaf would be in much more demand than the whole bread category. Because there are considerably closer replacements for a wheat farmer's wheat than there are for wheat generally, her demand is much more elastic than the demand for wheat as a whole.

The issue of whether the demand for common stock is completely elastic occurs in finance. In other words, are there ideal alternatives to a company's ordinary shares? In such case, the share demand curve should be precisely horizontal. If not, one would anticipate a demand for shares that is adversely skewed. If demand is horizontal, then the share price would not rise in response to an increase in demand (due to any factor other than fresh, favourable information about the firm's prospects). A merely "mechanical" rise in demand, on the other hand, would be anticipated to raise the price if the demand were negatively sloped. In one research, data from equities that had their weights on the Toronto Stock Exchange 300 Index modified for fully predicted technical reasons only—reasons that didn't seem to be related to new knowledge about those companies were examined.12 Consequently, the demand for those shares changed to the right.

The authors discovered a statistically significant excess return of 2.3 percent tied to such shares, which is in line with a demand curve for common stock that is negatively sloped.Other variables have a tendency to be generally predictive of a good's elasticity of demand in addition to the degree of substitutability.

These include the percentage of the average budget allocated to the product, the length of time given to react to a price change, the degree to which the commodity is seen as mandatory or optional, and more. In general, demand is less elastic for an item when customers prefer to spend a relatively small fraction of their income on it compared to when they spend a very high share. It actually doesn't matter if the price increases by 10% or not because the majority of consumers only spend a little amount on items like toothpaste each month. They would presumably continue to make the same number of purchases. However, if housing costs were to drastically increase, most families would look for a method to cut down on how much they purchase, at least over the long term.

This illustration brings up a further aspect of pricing elasticity. The long-term demand is often significantly more elastic than the short-term demand for the majority of products and services. The reason is that we probably wouldn't be able to react fast with a considerable decrease in the amount we consume if the price of, example, petrol were to alter. We often get fixed in our home, work, and transportation options in the short term. The degree to which a family could adapt to the change in price, however, increased with the length of the adjustment period. As a result, for the majority of items, long-run demand elasticity is higher than short-run elasticity.

However, durable items often act in the opposite manner. People could respond swiftly if washing machine prices dropped since they already own an outdated machine that would eventually need to be replaced. Therefore, if the price drops, they could opt to buy the item. However, it is improbable that a typical customer would purchase many additional washing machines over the course of a lifetime if the price of these appliances were to remain low indefinitely.Undoubtedly, the perception of the item or service's discretion or non-discretion would influence how sensitive it is to a price adjustment. Consumers are far more likely to forego their Friday night restaurant dinner than they are to drastically reduce their purchases of pantry goods when faced with a price rise of the same amount.

goods that have numerous close alternatives, take up a significant amount of the overall budget, are seen as optional instead than obligatory, and have longer adjustment periods are likely to have higher own-price elasticity of demand (i.e., to be more sensitive). Since not all of these factors influence all types of commodities in the same way, elasticity is likely to be a complicated mix of these and other factors.In the end, it turns out that the true demand elasticity for a given commodity is an empirical truth that can only be discovered by diligent observation and often, advanced statistical analysis.

Own-Price Elasticity of Demand: Impact on TotalExpenditure

The law of demand states that a rise in price corresponds to a fall in the quantity of an item or service that is sought after. What can we say about the overall cost of that item, though? What happens to price times quantity when price decreases, in other words? Remember that the relationship between the percentage change in quantity required and the percentage change in price is known as elasticity. Therefore, if demand is elastic, a drop in price corresponds to a greater percentage increase in quantity desired.

The percentage change in quantity requested would be twice as great as the percentage change in price, for instance, if elasticity were equal to negative two. It follows that a price decrease of 10% would result in an increase in quantity of a bigger magnitude, in this example a 20% increase. In spite of the fact that the price of the commodity is lower per unit, when demand is elastic, total spending (price times quantity) would increase as the price fell.However, if demand is inelastic, a 10% drop in price results in a supply increase that is less than 10% in size. As a result, when demand is inelastic, a decrease in price results in a decrease in overall spending. The percentage fall in price is simply countered by an equal and opposite percentage increase in quantity required, hence total spending does not change at all if elasticity were equal to negative one (unitary elasticity).

In conclusion, pricing and total spending move in the opposite way when demand is elastic. Price and overall spending move in the same direction when demand is inelastic. Price adjustments result in no change in total spending when demand is unitary elastic. If the demand curve is linear, it is simple to see this connection. Recall from Exhibit 20 that demand is elastic above the midpoint and inelastic below the middle. Total spending (P Q) is shown in Exhibit 22's top portion as the size of a rectangle with a base of Q and a height of P. The inscribed rectangles enlarge initially as the price declines, but they reach their maximum size near the middle of the demand curve. After that, as the price keeps dropping, the total spend eventually approaches $0. Exhibit 22's bottom portion shows the total cost for each amount bought. The quantity that determines the midpoint, or unit-elastic, point on the demand curve is where it achieves its maximum.

CONCLUSION

The maxim "Markets maximise society's total surplus" highlights the role of market efficiency in advancing social wellbeing. Total surplus, which includes both consumer and producer surplus, is a measure of the total well-being brought about by market activity. Resource allocation that is in line with consumer desires and producer values is ensured by efficient markets,The law of demand states that a rise in price corresponds to a fall in the quantity of an item or service that is sought after. What can we say about the overall cost of that item, though? What happens to price times quantity when price decreases, in other words? Remember that the relationship between the percentage change in quantity required and the percentage change in price is known as elasticity. which are characterised by competitive forces of supply and demand, hence maximising overall surplus.The benefits of efficient market results for society are many. By harnessing the benefits of trade and enabling consumers to purchase products and services at prices below their maximum willingness to pay, while producers make profits, they first provide the highest total wellbeing. Second, market efficiency makes sure that resources are allocated to the most worthwhile uses, which promotes productivity and economic progress. Finally, competitive, innovative, and responsive marketplaces help businesses adapt to shifting customer expectations.

REFERENCES

[1] P. O'Keeffe, 'Who wouldn't want more efficiency? Analysing the construction of efficiency as a "truth" within policy discourses', *J. Sociol.*, 2018, doi: 10.1177/1440783318759087.

[2] L. Glosten and G. Rauterberg, '2. The Social Function of Stock Markets', in *The New Stock Market*, 2018. doi: 10.7312/fox-18196-004.

[3] D. Bruce Johnsen, 'A coasean approach to cost-benefit analysis', *Harvard Journal of Law and Public Policy*. 2019. doi: 10.2139/ssrn.3287320.

[4] K. Kulikauskienė, 'Socialiai įtraukios bibliotekos samprata besikeičiančioje visuomenėje.', *Concept Soc. Incl. Libr. Chang. Soc.*, 2019.

[5] K. Kulikauskienė, 'The Concept of Socially Inclusive Library in Changing Society', *Soc. Tyrim.*, 2019, doi: 10.21277/st.v42i1.265.

[6] S. Mohapatra and A. K. Mishra, 'The Evolving Financial Landscape in Emerging Markets and Developing Economies', in *Accounting, Finance, Sustainability, Governance and Fraud*, 2020. doi: 10.1007/978-3-030-60008-2_1.

[7] C. Niu, Z. Zheng, F. Wu, S. Tang, and G. Chen, 'Online pricing with reserve price constraint for personal data markets', in *Proceedings - International Conference on Data Engineering*, 2020. doi: 10.1109/ICDE48307.2020.00218.

[8] B. Ngqulunga and D. Walwyn, 'Avoiding value destruction due to R&D portfolio changes', in *26th International Association for Management of Technology Conference, IAMOT 2017*, 2020.

[9] K. Zhang, Z. Liu, Y. Wang, and X. Dong, 'Usability oriented new baren product design and test practice', in *Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*, 2020. doi: 10.1007/978-3-030-49713-2_33.

[10] A. Kaim, B. Bartkowski, N. Lienhoop, C. Schröter-Schlaack, M. Volk, and M. Strauch, 'Combining biophysical optimization with economic preference analysis for agricultural land-use allocation', *Ecol. Soc.*, 2021, doi: 10.5751/ES-12116-260109.

CHAPTER 6

INCOME ELASTICITY OF DEMAND

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ABSTRACT:

The degree to which demand for a certain commodity or service responds to variations in income levels is quantified by the term "income elasticity of demand." This idea is crucial for understanding how consumer spending and the demand for diverse products and services relate to one another. In this essay, we examine the idea of income elasticity of demand, its importance in economic analysis, and its usefulness to firms and decision-makers.Economics' idea of "income elasticity of demand" assesses how responsively consumers' demand for a commodity or service is to changes in their income. It is a helpful tool for figuring out how changes in consumer demand are influenced by income changes and offers information about how sensitive certain items or services are to variations in income.The percentage change in the amount required divided by the percentage change in income is used to determine the income elasticity of demand. Different sorts of items in relation to income might be indicated by their positive, negative, or zero value.

KEYWORDS:

Income Elasticity of Demand, Responsiveness, Consumer Income, Goods, Services, Economic Analysis.

INTRODUCTION

the worth of a different variable. A good's demand is dependent on both consumer income and the good's own price. The quantity requested may alter in response to changes in income, therefore the analyst must be aware of both price and income sensitivity[1], [2].When all other factors are held constant, the income elasticity of demand is calculated as the ratio of the percentage change in quantity requested to the percentage change in income (I).

$$E_I^d = \frac{\%\Delta Q_x^d}{\%\Delta I} = \frac{\frac{\Delta Q_x^a}{Q_x^d}}{\frac{\Delta I}{I}} = \left(\frac{\Delta Q_x^d}{\Delta I}\right)\left(\frac{I}{Q_x^d}\right)$$

Since every elasticity metric we'll look at has the same basic form, you've practically seen them all by now.The independent variable of interest is the only thing that changes. The amount wanted at each price would increase by 0.8 percent if income increased by one percent, for instance, if the income elasticity of demand for some commodity was equal to 0.8.

Income elasticity may be negative, positive, or zero, but own-price elasticity of demand will nearly always be negative according to the law of demand. Positive income elasticity just indicates that, as is typical of most consumer commodities, amount requested increases as income grows. A good with a positive income elasticity is what we refer to as a normal good. Perhaps regrettably, economists often provide conflicting meanings to perfectly fine English terms. When an economist refers to a "normal good," what he is really stating is that demand for that specific product grows with rising income and declines with falling income. Therefore, eating out is considered to be a typical good if we discover that individuals purchase more meals at restaurants as income increases.

Demand volume and consumer income have an inverse relationship for certain items. In other words, consumers purchase much less of particular products when their income increases, whereas they buy more when their income decreases. As a result, the demand for such commodities has a negative income elasticity. Products having a negative income elasticity are categorically referred to as inferior products. Again, the phrase inferior simply indicates that demand for that commodity is shown to be negatively income elastic. It doesn't necessarily mean anything about how excellent that good is[3], [4].Rice, potatoes, or cheaper cuts of meat are typical examples of subpar products. According to one research, income elasticity of demand for wine is substantially higher than income elasticity of demand for beer. Thus, according to an economist, wine is typical and beer is inferior.

It is just a question of empirical statistical analysis to determine if a thing is inferior or normal.Additionally, a product may be average for one income group while being below average for another. (A BMW 3-series car may very well be standard for a set of buyers with intermediate incomes but subpar for those with high incomes. The middle group may buy more BMWs as their income levels increased, but the upper-income group would buy less 3-series if they switched up to a 5- or 7-series.) It is obvious that consumer income may not have any impact on buying decisions for specific commodities or income levels. Therefore, the income elasticity of demand for such commodities is zero.

Recall that when we drew the link between price and quantity wanted, we did so under the premise of "holding all other things constant" from our discussion of the demand curve. Consumer income was one of the factors we kept constant. It goes without saying that the whole curve would alter if income were to change. For everyday products, an increase in income would cause the whole demand curve to move higher and to the right, increasing demand. But if the product were inferior, an increase in income would cause the whole demand curve to move to the left and downward.

Cross-price Elasticity of Demand: Substitutes and Complements

Any variable on the right side of the demand function may act as the foundation for its own elasticity, as should be obvious at this point. We should be able to establish an elasticity with regard to the other pricing as the cost of another item or service may very well affect the demand for a particular good or service. The difference is that the subscript on P is now y, denoting the price of some other item, Y, instead of the own-price, X. This elasticity is known as the cross-

price elasticity of demand and has the same structure. When all other factors remain constant, this cross-price elasticity of demand assesses how sensitive the demand for good X is to changes in the price of some other item, Y.

When the cost of good Y increases, demand for certain pairs of items, X and Y, increases. That is, demand has a positive cross-price elasticity. These products are regarded as replacements. The definition of substitutes is empirical.Whether or not someone would classify two items as "similar," if their cross-price elasticity is positive, they are replacements.If you consider two products that are seen to be near equivalents, such as two types of beer, this notion becomes apparent. What would you do if the cost of one of your favourite beer brands increased? It is likely that you would purchase less of that brand and more of a less expensive brand, resulting in a positive cross-price elasticity of demand.

As an alternative, two items are regarded as complements if their cross-price elasticity of demand is negative. As with petrol and vehicles or homes and furnishings, these products are often consumed in pairs. When car costs drop, we may anticipate a spike in demand for more cars, which might lead to an increase in petrol consumption. But ultimately, the determination of whether two products are complementary or substitutive can only be made empirically by observation and statistical analysis. If demand for the other product increases along with the price of one, then the two are replacements. They complement each other if the demand for the other product declines.

Additionally, the outcome may not instantly make intuitive sense. For instance, grocery shops sometimes offer discounts on items like coffee in the hopes that consumers would stop in for coffee and then wind up spending all of their weekly shopping there. In that situation, even while we don't often conceive of eating coffee and cabbage together as a pair (i.e., that the price of coffee has a connection to the sales of cabbage), coffee and, say, cabbage might very well empirically turn out to be complements[5], [6].If the price of one product rose, the demand curve for the other good would have shifted higher and to the right. For complements, however, the effect is the opposite: as one commodity's price increases, the amount requested of the other good swings left and lower.

DISCUSSION

Demand and Supply Analysis:Consumer Demand

It should be obvious at this point that economists develop models. One of their most essential theories, the demand and supply model, was covered in the reading that came before it. As we have seen, models start with simplifying assumptions and subsequently uncover implications that may be tested for usefulness by comparing them to actual data. We made the assumption that a demand curve and a supply curve existed, together with their respective negative and positive slopes, in the demand and supply model. Even if the consequences of that straightforward model for how markets operate are rather significant, we may go even farther to investigate the underlying principles of supply and demand. To understand where consumer demand curves come from, we will look at the theory of the consumer in this reading. In a later reading, the theory of the company is presented while looking for the sources of the supply curve.

Consumer Theory: From Preferences to Demand Functions

The preceding reading's introduction to demand and supply analysis mostly made the assumption that there is a demand function and concentrated on comprehending its many traits and expressions. We discuss the theoretical underpinnings of demand and supply analysis in this reading, as well as the origins of consumer demand, using what is known as consumer choice theory. The area of microeconomics known as consumer choice theory is responsible for connecting consumer demand curves to customer preferences. A foundational model of how customer preferences and tastes could be expressed forms the basis of consumer choice theory.It investigates how ready customers are to compromise between two commodities (or two baskets of goods) that they regard to be advantageous. The theory of consumer choice thus acknowledges that consumers must buy a certain set of products and services at a specific market price and with a specific amount of money in order to consume them. In essence, consumer choice theory looks at what the customer would want to consume first before looking at what the consumer can afford to purchase. Finally, we create a model of what the customer would do in different scenarios by superimposing what the consumer wants to do on what the consumer can do. The model then creates customer demand as a logical extension of consumer choice theory by altering prices and income[7], [8].

Consumer choice theory makes an effort to simulate customers' preferences or tastes, but it doesn't really address the reasons behind these preferences or preferences. It still makes assumptions, but they are more basic now.Instead of supposing the existence of a demand curve, it infers one from assumptions made about consumer preferences. It should be noted that economists are not aiming to forecast the actions of any specific consumer in any specific situation. Instead, they are seeking to create a market demand curve as a consistent description of overall market behaviour.After modelling the consumer's preferences, we can then see that the consumer's budget limitation (the capacity to buy different combinations of products and services given his or her money) also plays a role in determining the consumer's consumption. The demand curve we want is produced by combining the budget constraint with preference theory.

Utility theory:

The underlying premise of consumer behaviour theory is that consumers are aware of their own preferences and tend to make rational decisions that favour a more desired consumption "bundle" over a less preferred bundle. We must start with a few preferences-based assumptions in order to construct a coherent model of consumer choice.

Axioms of the Theory of Consumer Choice

Let's start by being very clear about the purchasing options over which the customer is presumptively averse. A particular mix of the products and services that the customer would want to consume is what we refer to as a consumption bundle or consumption basket. We might almost literally see a basket full of items that a customer could enjoy buying, such as shoes, pizza, food for their health, tickets to a play, piano lessons, and other items. A non-negative amount of all the potential commodities and services may be used to represent each of those items in a specific basket. One or more of the items might be absent entirely from any particular

basket. The same items would be present in a radically different consumption bundle, but in different amounts, once again allowing for the potential of zero quantities of one or more of the goods. For instance, bundle A may have the same quantity of all items and services as bundle B, with the exception of one, but a different quantity of that one[9], [10].

A and B would be regarded as two separate bundles.Given this comprehension of consumption bundles, our first presumption about a specific consumer's preferences is simply that she is able to compare any two potential bundles. In other words, given bundles A and B, she must be able to indicate whether she prefers A to B, B to A, or is indifferent to both. This is the axiom of completeness, commonly referred to as the assumption of full preferences. It does not seem to be a very strong assumption, yet it is also not a simple assumption. It eliminates the chance that she may just state, "I recognise that the two bundles are different, but in fact, they are so different that I simply cannot compare them at all." That is something a loving parent may very easily say about his two kids. In actuality, the father does not favour one over the other and is not at all ambivalent about either. Such a reaction cannot be accommodated by the premise of full preferences.

Second, we postulate that if A is preferred over B and B is also preferred over C when comparing any three unique bundles, A, B, and C, then it must be true that A is preferred over C. This presumption, known as the assumption of transitive preferences, is taken to apply to both indifference and stringent preference. Because it is basically a rationality assumption, this one is a little stronger. We would suggest that a customer is behaving irrationally if he chooses a skiing vacation over a diving vacation, a diving vacation over a backpacking vacation, and a backpacking vacation over a skiing vacation. Such contradiction cannot exist because of transitivity. However, if you have ever studied psychology, you will have seen research that demonstrate participants defying this assumption, particularly when given a wide range of difficult alternatives.

When we declare these axioms, we are not claiming that we believe them to be true in every situation; rather, we are assuming them in order to construct a model. A model is a simplified version of the phenomenon in the actual world that we are attempting to comprehend.Axioms must by necessity be imperfect and imprecise descriptions of the things we are attempting to depict. In the absence of such, the "model" would not be a simplification; rather, it would be a reflection of the intricate system we are seeking to describe, which would not much advance our comprehension.

Finally, we often believe that the customer could never have enough of at least one of the items to reject any more, even if it were free. This presumption is also known as the non-satiation assumption or the "more is better" assumption. For certain things, like air pollution or waste, obviously more is bad.We can often recast our model to account for the non-satiation assumption since in such situations, the good is the elimination of that bad. In instance, we will see that, all else being equal, for many people, greater risk is worse than less risk when we later consider the idea of risk for an investor. We will represent the investor's propensity to trade off between higher investment returns and more certainty, which is the lack of risk, in that study.

Representing the Preference of a Consumer: The Utility Function

With the assumptions of completeness, transitivity, and non-satiation in hand, we inquire as to whether it's possible for a certain consumer to consistently express his own preferences. Consider offering him every conceivable package of every possible commodity and service he would be interested in. Now imagine we give him paper and a pencil and ask him to give each of the bundles a number. (The presumption of completion guarantees that he could really achieve it.) Simply write a number on paper and place it on each of the packages is all that is required of him. The following are the only limitations:

If he likes one bundle over another when comparing any two bundles, he must give the preferred bundle a higher rating. And if he cannot decide between them, he must give them both the same number. In all other respects, he is free to start with whatever number he chooses for the first bundle he thinks of. He is only arranging the packages in this manner to suit his tastes.

Of course, there is a definite amount of each commodity and service in each of these conceivable bundles. Therefore, there are two sets of numbers. The papers he has placed atop the bundles make up one set. The second is a list of the specific items' numerical amounts that are included in each bundle. It is feasible to devise a formula that converts the amounts of items in each basket into the number that our customer has allocated to each basket under "reasonable assumptions" (the definition of which is not required for us to go into at this level). The utility function of that specific consumer is what is referred to as that "assignment rule". That utility function's only responsibility is to convert each basket of goods and services into a number that, in accordance with the preferences of the specific consumer, ranks orders the baskets. The actual amount is known as the utility of that basket and is expressed in utils, which are simply amounts of pleasure, well-being, or whatever else comes to mind such that more of it is preferable than less of it.

the sum of the quantity of bread pieces and the number of ounces of wine.A bundle of 4 ounces of wine and 2 slices of bread would be worth 8 utils, which is less useful than a bundle of 3 ounces of wine and 3 pieces of bread, which would be worth 9 utils.It is crucial to keep in mind that the utility function is nothing more than a rating of product bundles. All those pieces of paper could be swapped out for new ones that kept the same ranking, and the new set of numbers would serve the same purpose in representing the preferences of our customers. As opposed to a cardinal ranking, this feature of utility functions is referred to as an ordinal ranking. Ordinal ranking metrics are less reliable than cardinal ranking methods.

Indifference Curves: The Graphical Portrayal of the Utility Function

We can more easily describe the preferences of our customers visually rather than merely quantitatively. In order to do this, we offer the idea of an indifference curve, which depicts all the pairings of two commodities in which the customer has no preference whatsoever. How can we create such a curve? As follows: Consider bundles with just two products so that we may visualise them using a two-dimensional graph. For example, in Exhibit 1, a specific bundle with Wa ounces of wine and Ba slices of bread is shown as a single point, a. The presumption of non-satiation dictates that bundle a must always be chosen above any bundle that is immediately

above, directly to the right of, or both above and to the right (more wine and more bread) of point a. The "preferred-tobundle-a" set refers to that collection of bundles. The set known as the "dominated-by-bundle-a" set would consist of all the bundles that are immediately underneath, to the left of, and both below and to the left of bundle a. These bundles must consequently produce less utility.

Consider presenting an option between bundle a and some bundle a′, which includes more bread but less wine than a, in order to ascertain our consumer's preferences. In this situation, nonsatiation is not beneficial, thus we must find out which the customer likes. If he firmly chooses option a′, we would take a little piece of bread away and re-ask. If he strictly favours a, we would add some bread and continue in this manner. After making many tweaks, we were able to finally establish the ideal ratio of bread to wine such that the new bundle a′ would delight our customer just as much as bundle a. In other words, our customer wouldn't care if they consumed bundle an or bundle a′.Then, after once again adjusting the products, we would choose a bundle, let's call it bundle a", that includes more wine and less bread than bundle a. This would leave the buyer unconcerned about either bundle. It would be able to discover all feasible bundles such that the customer is only undecided between any of them and bundle A by continuing to choose bundles and make alterations. The indifference curve across points an in Exhibit 2 serves as a representation for such a group of bundles. Observe how the group of bundles that are located above and to the right of the indifference curve have been added to the "preferred-to-bundle-a" collection. As a result, any bundles that are located below and to the left of the indifference curve are now included in the "dominated-by-bundle-a" set.

CONCLUSION

A key economic idea that offers important insights into consumer behaviour and market dynamics is the income elasticity of demand. Our study shows that the demand for products and services is significantly impacted by changes in consumer income. Businesses may decide on price policies, product development, and market segmentation by assessing the income elasticity of demand for certain items. This idea may also be used by policymakers to determine how income changes affect the broader economy and create the best possible policies to advance welfare and economic progress. The link between income and consumer demand may be understood using the income elasticity of demand, which gives stakeholders the knowledge they need to act wisely in a variety of economic situations.Businesses, decision-makers, and economists may benefit from knowledge provided by the income elasticity of demand. It enables businesses to better understand how shifts in consumer spending impact demand for their goods and services, enabling them to modify their marketing plans and service portfolios as necessary. Income elasticity of demand may help policymakers make choices about income distribution, taxes, and social welfare initiatives. Income elasticity is a tool used by economists to research consumer behaviour, income inequality, and broader economic trends.

REFERENCES

[1] J. Brzezicka and K. Kobylińska, ‘An Analysis of the Income and Price Elasticity of Demand for Housing in View of Price Dynamics on the Residential Property Market’, *Real Estate Manag. Valuat.*, 2021, doi: 10.2478/remav-2021-0032.

[2] H. Ghoddusi, A. Rodivilov, and M. Roy, 'Income elasticity of demand versus consumption: Implications for energy policy analysis', *Energy Econ.*, 2021, doi: 10.1016/j.eneco.2020.105009.

[3] J. M. Martín Álvarez, A. A. Golpe, J. Iglesias, and R. Ingelmo, 'Price and income elasticities of demand for cigarette consumption: what is the association of price and economic activity with cigarette consumption in Spain from 1957 to 2016?', *Public Health*, 2020, doi: 10.1016/j.puhe.2020.05.059.

[4] Z. Csereklyei, 'Price and income elasticities of residential and industrial electricity demand in the European Union', *Energy Policy*, 2020, doi: 10.1016/j.enpol.2019.111079.

[5] Y. Oswald, A. Owen, and J. K. Steinberger, 'Large inequality in international and intranational energy footprints between income groups and across consumption categories', *Nat. Energy*, 2020, doi: 10.1038/s41560-020-0579-8.

[6] J. I. Mikayilov, S. Mukhtarov, and J. Mammadov, 'Gasoline demand elasticities at the backdrop of lower oil prices: Fuel-subsidizing country case', *Energies*, 2020, doi: 10.3390/en13246752.

[7] K. A. Tumanyants, 'Income residential demand elasticities for electricity: Do we need to differentiate the tariff?', *Ekon. Polit.*, 2020, doi: 10.18288/1994-5124-2020-4-110-137.

[8] A. Z. Aklilu, 'Gasoline and diesel demand in the EU: Implications for the 2030 emission goal', *Renew. Sustain. Energy Rev.*, 2020, doi: 10.1016/j.rser.2019.109530.

[9] N. Khoiriyah, R. Anindita, N. Hanani, and A. W. Muhaimin, 'Animal food demand in Indonesia: A quadratic almost ideal demand system approach', *Agris On-line Pap. Econ. Informatics*, 2020, doi: 10.7160/aol.2020.120208.

[10] Q. D. Truong, H. Q. Nguyen, and D. K. Tran, 'Elasticity Of Market Demand Between Modes Of Transport In Vietnam By Price And Income', *J. Econ. Dev.*, 2020.

CHAPTER 7

AN INTRODUCTION TO PPI METHODOLOGY

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ABSTRACT:

The average change in prices domestic producers receive over time for their products and services is tracked by the Producer Price Index (PPI), a critical economic indicator. It describes the main elements of the PPI technique, such as data gathering, price aggregation, weighting, and index computation. The study also analyses the use of PPI in analysing inflation, projecting the economy, and formulating policy, emphasising how it may be used to track pricing movements and evaluate industry competitiveness.An economic statistic called the Producer Price Index (PPI) tracks the average changes in the prices domestic producers get paid for their goods. It is used to keep tabs on producer-level pricing changes and inflationary tendencies. The PPI offers insightful information about the cost constraints that firms must contend with and may assist in guiding monetary policy choices, economic forecasting, and business planning.

KEYWORDS:

PPI, Producer Price Index, Methodology, Economic Indicator, Prices, Data Collection.

INTRODUCTION

The proportional or percentage variations in a collection of prices over time are measured by a price index. PPIs track changes in the costs of products and services produced domestically. Such measurements must differentiate between changes in the nominal value of such adjustments and changes in the amount of domestic output. A price index can only represent the average movement of prices since they do not all vary at the same pace for various commodities and services. A price index normally takes a base period value of unity, or 100. The index values for subsequent time periods reflect the typical proportional or percentage change in prices from the base period. Price indices may also be used to compare price levels in many cities, regions, or nations at the same time[1], [2].

The answer to the first query greatly relies on the objectives of the index's intended usage. For various flows of products and services, including home production, government production, investment, or international trade flows, separate price indices may be created. This Manual's main focus is on output PPIs, which track changes in the costs of products and services generated by enterprises. However, not every company sells the same kinds of products and services[3], [4].As a result, depending on the exact group of products and services chosen, there may be more than one output PPI. This Manual will also take into account the issues with creating input PPIs, which are used to deflate the value of intermediate inputs utilised in manufacturing, in addition

to the issues with measuring output prices. An input that is utilised by one facility or manufacturing unit but is the output of another is known as an intermediate input.

The Uses and Origins of PPIs

The PPI, CPI, and export and import price indices are well-known and carefully followed measures of macroeconomic performance in the field of economic statistics. They are clear indications of how much money can buy in many kinds of exchanges and other movements involving products and services. In order to offer measurements of quantities, they are also employed to deflate nominal estimates of commodities and services produced, consumed, and exchanged. As a result, these indicators are crucial instruments in the development and execution of the government's monetary and fiscal policies, but they are also very helpful in guiding economic choices made by the private sector. They don't, or shouldn't, just be a collection of unconnected price indicators; instead, they provide a comprehensive and consistent picture of price changes linked to production, consumption, and cross-border trade in products and services[5], [6].

1.10 PPIs are useful for a variety of things in the system of price statistics. The specifics of their definition and construction might vary greatly depending on who will use them and how. The average change in price of products and services as they leave the site of production or as they start the manufacturing process is what PPIs are meant to measure. Monitoring of short-term price inflation for various kinds or at various phases of manufacturing is made possible by a monthly or quarterly PPI with specific product and industry data.

PPIs serve as a crucial deflator of nominal output or intermediate consumption for the compilation of production volumes as well as for the deflation of nominal capital expenditure and inventory data for use in the preparation of national accounts, despite the fact that PPIs are an important economic indicator in and of themselves. Some PPI frameworks provide insight into the relationships between various price measures in addition to their usage as deflators or inflationary indicators. Aggregation of stage-of-processing indices is one such approach. This idea categorises products and services into three categories: main products, intermediate products, and completed products, depending on where they are in the manufacturing chain. Analysts can monitor price inflation throughout the economy using this technique. For instance, price changes in the first stages of manufacturing may ripple through to the later stages, hence the approach provides a predictor of future inflation farther down the production chain.Even though a product's manufacturing process may include many stages, each one is assigned to a single stage[7], [8].

The Circular Flow

The family and the company, the two economic decision-making units, are related in the circular flow diagram. These two concepts, consumption (home) and production (firm), respectively, are represented by these two entities. Businesses purchase materials and manpower in the resource market. The company subsequently transforms into products and services that are sold in the market. In reality, homeowners own all of the production elements that businesses buy from them. 'Materials' are purchased by businesses from other businesses as well.

the business utilises cash to buy labour, land, and capital from the resource market (top arrow). This is shown from the standpoint of the producer. After then, the company produces the products and services that are later offered on the market using these factors of production. Households get factor payments from businesses (wages, interest, and rent) in exchange for supplying the market with the factors of production. The company then sells its products to increase its bottom line so that it may make more money, which can subsequently be reinvested to buy additional manufacturing inputs. Figure 1 shown the Producer Perspective.

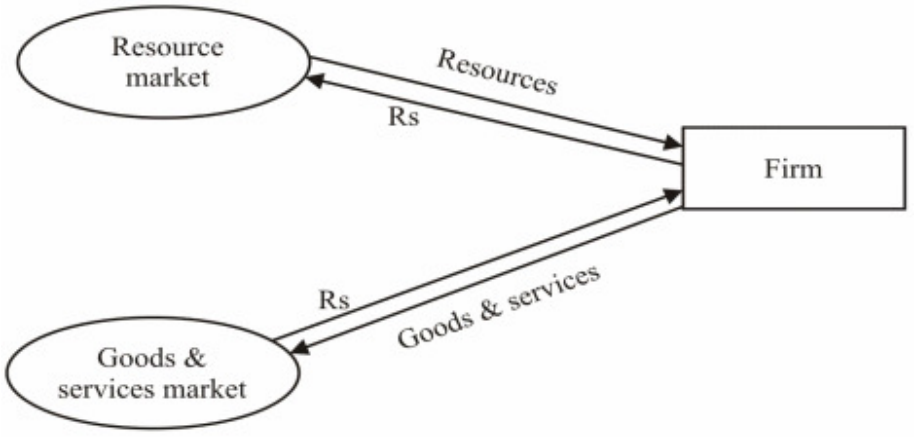

Figure 1: Represents the Producer Perspective.

The home gives resources to the businesses in the form of labour and purchases the products and services offered by the businesses in the upper half. The household in this image trades work for money on the resource market.In exchange for money, households buy the commodities and services they need from the market. Businesses buy resources from the resource market in the upper-right quadrant, including labour and other elements of production. They manufacture products and services using these resources. Businesses who offer these things in the market for goods and services may be seen in the bottom right quadrant.

DISCUSSION

Measurement of total output of an Economy

All intermediary items and services would not be included in the total production of goods and services. For instance, a textile maker could offer a piece of fabric without knowing if it would be used for a couch cover, a fashion show, a basic outfit, or anything else. He does not know if this is a final or intermediate sale at this stage in the transaction. 'Value added' is a phrase used by economists to refer to the difference between a firm's output value and its intermediate consumption value.

From this "value added," the company pays for the production elements that it acquires. The production that a company produces over the course of an accounting year is known as value of output. If the whole production is sold during the year, sales become the value of the output. A company buys intermediate items from other businesses to utilise in the production of final goods. The value added is obtained by deducting the value of the intermediate items used in

manufacturing from the value of the final product.The whole end production of an economy is calculated as the sum of all values contributed. Gross value added is the name given to this indicator of total production. It is a measurement of total final output generated by every economically productive activities.

Three-Sector Model

There are three sectors in the circular flow model: households, businesses, and government. It is presummated to be a closed economy where the foreign sector has no impact on revenue flow. The government has a variety of effects on the economy in a three-sector economy. The same as homes and businesses, the government makes purchases of products and services. First, take into account how much money is spent and earned by families and the government. Government spending may take many different forms, including factor payments (which operate as salaries for labour services), expenditures for infrastructure and education, among others[9], [10].

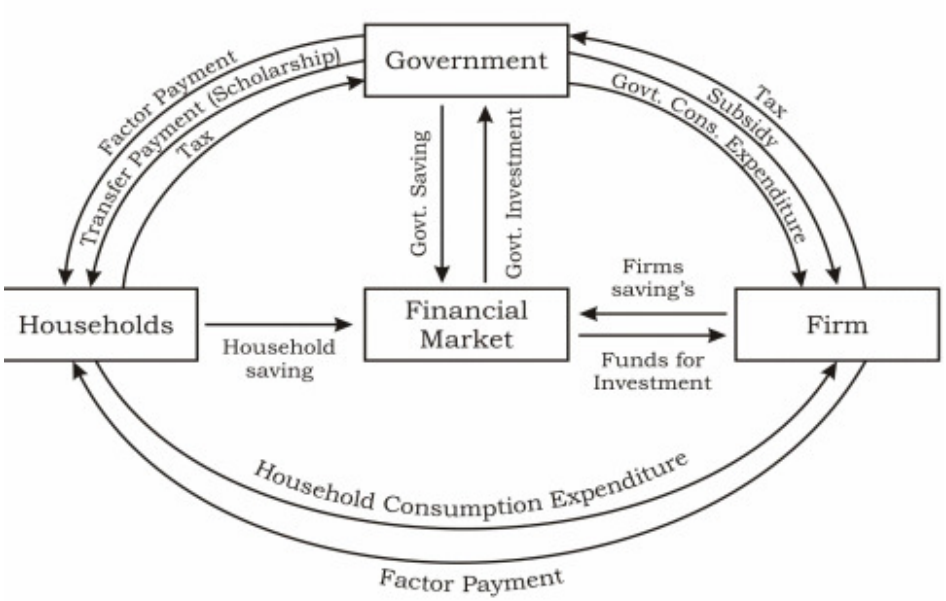

Figure 2: Represents the three-sector model.

Families contribute a portion of their income to the government in the form of taxes including property and income taxes. In contrast, the government also provides transfer payments to families in a variety of forms, including pensions, scholarships, medical assistance, unemployment benefits, etc. Borrowing from the financial market, which is a market where traders buy and sell assets like stocks, bonds, and derivatives, is another way for the government to pay for expenditures, either to cover existing costs or to invest in new projects. Government utilises the financial market to save and deposit its revenue. Government and business share comparable revenue and expense patterns; business taxes are paid to the government in the form of corporation tax and sales tax. On the other hand, government pays for the products & services it purchases from the businesses and gives subsidies (a kind of money provided by government and other public bodies to assist an industry or company maintain the price of commodities low).

Similar to how there is a link between the government and the financial market, there is one between a corporation and the financial market. In Figure 2 shown the three-sector model.

Balance in the Economy

Prices and employment will remain steady when the economy is in balance. This condition will occur when total production, or the amount of products generated in the economy andconsumed by individuals, equals total aggregate demand.Some products won't be sold if businesses create more than what is needed. The company will produce less the next time to meet the level of demand in the market. This implies that when resources become jobless and revenue declines, less land, labour, and capital will be engaged. As the level of production, employment, and income begins to change, the economy is said to be in a state of disequilibrium.A flip situation, when aggregate demand exceeds the value of national production, is also possible. In such instance, businesses will wish to boost their output of products and services, which will also result in a rise in employment and revenue.

Injections and Leakages

(There is an issue when'money' and 'income' are used interchangeably. 'Leakages' and 'injections' are notions that are best presented after the concept of 'equilibrium' has been sufficiently addressed. Leakages are those instances when revenue is used in a way that reduces circular flow. Because they are not seen as payments for the products and services generated in the economy, taxes, savings, and imports are referred to as leakages or withdrawals. Savings by families are sometimes referred to as leakages since they take their income (as it is saved). Additionally, it limits their ability to spend money on products and services. The cycle of income might also include the addition of money.Investments, government spending on health and education, and export payments are all examples of injections into an economy's revolving stream of money.

Consumer Behaviours

Any family or individual's ability to stay within their means is mostly influenced by the cost of the item and their level of income. They are free to divide their money among the needs of their family and their preferences. The mix of products and services that the customer can purchase may be determined using information about the buyer's income and the product's pricing. The budget restriction is therefore determined by income and pricing.

The Economic Approach

The economic approach departs significantly from the earlier methods in that quantities are no longer considered to be independent of prices. For instance, if it is considered that businesses operate as revenue maximizers, it follows that they will create more goods with above-average price increases in, let's say, period 1 compared to period 0 in that case. As a consequence, such goods' revenue shares and weights in period 1 will both grow. This behavioural assumption about the company's behaviour when it transitions production to items with higher prices enables us to make some conclusions about what "true" indices should be and the applicability of various index number formulae. For instance, the Laspeyres index excludes the shift of production

towards goods with bigger relative price movements in period 1 and instead utilises fixed period 0 revenue shares to weight its price relatives. As a result, it will underestimate overall price movements and be biassed against the genuine index downward. The initial revenue shares in period 0 are not taken into account by the Paasche index, which employs preset period 1 weights. As a result, it will overestimate overall price movements and be biassed higher than the genuine index.

Since the economic technique has discovered a form of bias in Laspeyres and Paasche indices that is not visible from other approaches substitution bias it may be said that it is extremely effective. The Laspeyres and Paasche indexes do not take into account the weights changing when manufacturers shift their output to goods with above-average price rises. However, the bias's existence results from the belief that producers act in a way that maximises income. Consider a different premise: that producers react to changes in demand brought on by consumers purchasing fewer things with relatively large price increases. For instance, products whose price rises are above average will see a decline in demand and a corresponding decline in output. The fixed period 0 weighted Laspeyres will overestimate aggregate price changes in this situation because the revenue shares or weights of goods with above-average price increases will decline in period 1. This contrasts with the Paasche index, which will be negatively biassed and understate aggregate price movements. it is shown that Laspeyres and Paasche indices may, in certain cases, serve as boundaries on a more broadly applicable "true" economic theoretic index. Even at this early point of the debate, the economic method seemed to give further support. The axiomatic approach in Section C resulted in an index number formula that employed an average of the Laspeyres and Paasche indices.

The traditional Laspeyres index is applicable in certain situations, which are also identified by the economic method. This would needthat, at least in the short time of the price index comparisons, the company does not alter its production configuration in response to comparable price changes. According to economic theory, the Laspeyres index may be useful for sectors where it is well known that quantities do not react to changes in relative prices during the course of price comparisons. But as this is more likely to be the exception than the rule, the theory suggests the need for a more broadly applicable index number formula.The PPI indices under consideration here comprise output, input, and value-added price indices (deflators), and several presumptions derived from economic theory are used in their derivation. In the output instance, it is presumpted that businesses operate to maximise profits from a certain input base. Businesses switch to items with comparatively large price rises. The goal of the input price index is to keep the price of acquired intermediate items as low as possible. With reasonably large price rises, businesses switch away from input items. Unusual usage of the value-added deflator.

Consequently, the method from economic theory is to first create theoretical index number formulae based on what are thought to be realistic producer economic behaviour models. Compared to the other strategies we've thought about, this one is really unique. It is necessary to mathematically depict the production activity, in which labour and capital combine to convert intermediate inputs into outputs. In order to establish a theoretical index that is "true" under these circumstances, it is also necessary to make additional assumptions, such as the assumption of

optimising behaviour (cost reduction or revenue maximisation). The economic method then investigates how "true" formulae defined under various assumptions compare with practical index number formulas like Laspeyres, Fisher, and Törnqvist. We'll look at three theoretical formulations, each of which, in theory, makes a different assumption about the firm's optimising behaviour. For reasons that will be given, none can be realistically computed. The idea of the fixed-input output price index is the first attempt to a producer price index in economic theory. This index is a ratio of potential revenues for the revenue-maximizing establishment across the two comparison periods, let's say periods 0 and 1, if the technology and inputs were set to be the same for both of them.

An institution effectively doubles its pricing if, for instance, it doubles its income utilising fixed inputs and technologies. Since the theoretical index is a ratio of revenues, it takes substitution effects into account since enterprises that switch to more expensive items generate more revenue. The theoretical index aspires to have period 1 values that reflect the outcomes of the company altering its production mix in response to changes in relative prices. The problem is that because only price changes should be reported, measuring pure price changes would be impossible if quantities were allowed to fluctuate in this manner. Therefore, the theoretical index determines the quantity that can be generated by maintaining a certain level of input and technical technology. The mix of the company's outputs may be altered, but inputs and technology must remain stable. Be aware that there are a variety of theoretical price indices available depending on which reference technology and primary inputs are kept constant during the reference time period: fixed period 0 technology and primary inputs, fixed period 1 technology and primary inputs, or any combination of the two.

Theoretical output price indices

The ratio of the highest revenues that the establishment may achieve under period 0 and period 1 pricing utilising a fixed, given technology and a fixed set of inputs is known as the theoretical output price index between periods 0 and 1. Consider a theoretical index that is the Laspeyres index's equivalent and holds period 0 inputs and technology constant. It is necessary to determine the period 1 quantities for the numerator of the ratio while maintaining the production process and inputs from period 0 following the change in relative pricing from period 0 technology and inputs. This calls for a system to produce these fictitious period 1 values from the set period 0 technologies and inputs. The technology of a company or industry is characterised in terms of a production (possibility) function in the economic approach. This function informs us the greatest quantity of output(s) that can be created from a certain set of inputs. The production function, which is a mathematical description of the technology that transforms inputs into outputs, would be able to produce all permutations of outputs of goods from the technology if the values of all the inputs to a business or industry were supplied.

The quantity of each product produced would depend on the current relative pricing. The economic theory of the PPI is predicated on the idea that producers in price-taking, competitive marketplaces behave optimally in order to adjust to changes in relative prices. While both eras' real prices are taken into account in this method, the amounts in each time may not be the ones that were actually observed. They are created using the production function (with fixed

technology) and input level for a certain time, together with maximising behaviour assumptions and maybe earlier period-specific relative pricing. This is an effective analytical framework because it enables us to think about, at least theoretically, how quantities might react to various pricing regimes (like period 1 prices) under constant reference technologies and inputs (like period 0). They are mathematically created hypothetical quantities that cannot be seen, but whose formulation may be contrasted with actual index number formulae based on observable prices and quantities.

CONCLUSION

For this economic indicator to be successfully interpreted and used, it is crucial to understand the PPI's methodology. It makes it easier to assess price changes accurately, improves the accuracy of economic forecasts, and encourages the use of data to guide decisions in both the public and private sectors. In summary, the PPI approach is a pillar of economic research, offering perceptions into pricing movements and sector competitiveness. The PPI provides useful data for policymakers, academics, and companies by adhering to strict data collecting, aggregation, and computation protocols, assisting in the understanding of inflation patterns and supporting informed decision-making process. The quantity of each product produced would depend on the current relative pricing. The economic theory of the PPI is predicated on the idea that producers in price-taking, competitive marketplaces behave optimally in order to adjust to changes in relative prices. While both eras' real prices are taken into account in this method, the amounts in each time may not be the ones that were actually observed.

REFERENCES

[1] J. Cheng and X. Yin, ‘How Much is the Consumption Potential of Citizenized Migrants? - Based on the Estimation of Migrants’ Income Elasticity of Demand in the New Era of China’, *Chinese J. Urban Environ. Stud.*, 2020, doi: 10.1142/S2345748120500098.

[2] G. S. Pérez, L. A. Higuera Cárdenas, and J. S. Castro, ‘Balance of Payments Constraint on Industrial Growth in Colombia 1975-2015’, *Revista Finanzas y Politica Economica*. 2020. doi: 10.14718/REVFINANZPOLITECON.V12.N1.2020.3220.

[3] J. M. Martín Álvarez, A. A. Golpe, J. Iglesias, and R. Ingelmo, ‘Price and income elasticities of demand for cigarette consumption: what is the association of price and economic activity with cigarette consumption in Spain from 1957 to 2016?’, *Public Health*, 2020, doi: 10.1016/j.puhe.2020.05.059.

[4] Z. Csereklyei, ‘Price and income elasticities of residential and industrial electricity demand in the European Union’, *Energy Policy*, 2020, doi: 10.1016/j.enpol.2019.111079.

[5] V. Cicaloni, A. Trezza, F. Pettini, and O. Spiga, ‘Applications of in Silico Methods for Design and Development of Drugs Targeting Protein-Protein Interactions’, *Curr. Top. Med. Chem.*, 2019, doi: 10.2174/1568026619666190304153901.

[6] N. Suhonen, T. Tammi, J. Saastamoinen, J. Pesu, M. Turtiainen, and L. Okkonen, ‘Incentives and risk-sharing in public procurement of innovations’, *J. Public Procure.*, 2019, doi: 10.1108/jopp-06-2019-029.

[7] C. Buhler, V. Winkler, S. Runge-Ranzinger, R. Boyce, and O. Horstick, 'Environmental methods for dengue vector control – A systematic review and meta-analysis', *PLoS Neglected Tropical Diseases*. 2019. doi: 10.1371/journal.pntd.0007420.

[8] N. Kurokawa, T. Kishimoto, K. Tanaka, J. Kondo, N. Takahashi, and Y. Miura, 'New approach to evaluating the effects of a drug on protein complexes with quantitative proteomics, using the SILAC method and bioinformatic approach', *Biosci. Biotechnol. Biochem.*, 2019, doi: 10.1080/09168451.2019.1637244.

[9] R. Choiniere, P. O. Richard, M. Morin, L. M. Tu, G. H. Guyatt, and P. D. Violette, 'Evaluation of benefits and harms of surgical treatments for post-radical prostatectomy urinary incontinence: A systematic review and meta-analysis protocol', *F1000Research*, 2019, doi: 10.12688/f1000research.19484.1.

[10] G. Singh, V. Singh, and V. Singh, 'Construction and analysis of an interologous protein–protein interaction network of Camellia sinensis leaf (TeaLIPIN) from RNA–Seq data sets', *Plant Cell Rep.*, 2019, doi: 10.1007/s00299-019-02440-y.

CHAPTER 8

RANDOM SAMPLING AND PURPOSIVE SAMPLING

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ABSTRACT:

Random sampling and purposeful sampling are two frequently used sampling methods. Purposive sampling is the purposeful selection of certain persons or components in accordance with specified criteria, as opposed to random sampling, which includes the selection of individuals or items from a population in a purely random way. The qualities, benefits, and drawbacks of each sampling technique are examined in this essay, with an emphasis on how they might be used in diverse research situations. Purposive sampling and random sampling have different purposes, and researchers may choose the best sampling approach for their study by knowing the distinctions between the two.Selecting participants or units intentionally based on predetermined criteria and conscious judgement is known as purposeful sampling, also known as judgmental sampling or selective sampling. When researchers want to include people or units that have particular qualities, they often employ this technique.

KEYWORDS:

Random sampling, Purposive Sampling, Sampling Techniques, Population, Individuals, Elements.

INTRODUCTION

Prices for goods are gathered from businesses in certain industry. Multiple phases of selection are involved in the sampling procedure. The four-digit industries that will be included may be chosen after the PPI's purpose and scope have been established (for example, which single-digit industrial activities will be included).Following the selection of the industries, establishments within those sectors must be identified and sampled, and then specific (representative) items must be chosen or sampled. The next step is to choose specific transactions that reflect the sampled goods in each sample business. The methods utilised to choose the sample at each step are crucial.

Due consideration should be given to standard statistical criteria when building the sample for price collecting purposes to guarantee that the sample estimates produced are not only cost-effective but also objective and efficient in a statistical sense. Reference may be made to the extensive literature on sample survey methodologies, which need not be summarised here. In theory, it would be preferable to group businesses and goods according to factors that distinguish them based on relative price changes, and then randomly choose businesses and items using sampling techniques with established selection probabilities. This makes sure that the sample of items chosen is not skewed by subjective variables and makes it possible to compute sampling

errors. However, since random sampling may be too challenging and expensive, many nations still depend significantly on the deliberate selection of businesses and goods. Purposive selection is thought to be more economical, particularly when the available sample frames are insufficient and unsuitable for PPI purposes[1], [2].

Comprehensive and current sample frames are needed for representative sampling of businesses and goods. For PPI purposes, two different frames are often required, one listing the universe of businesses and the other listing the universe of items. Business registers, establishment censuses, and administrative records from the national or local governments are a few examples of potential sample frames for businesses. By choosing samples of businesses based on probabilities proportional to the size of some important economic characteristic, such as the total output value or sales, when the sampling frames contain the necessary data, it may be possible to improve the efficacy of the sample estimate. The majority of the time, establishment or company censuses provide sampling frames for items, which may then be complemented with calls or in-person price survey visits.

Resampling

Resampling, or reselecting, the whole range of items to be priced at regular intervals is one way to cope with the always changing product universe. For instance, a fresh group of items may be chosen each January using a monthly index. Prices for each group of goods would be in effect until the following January. Each January, two sets must be priced in order to create a connection between each set of 12 monthly modifications.

Re-sampling annuallyIn each of the historical periods being compared, a collection of products and services are offered.would be in line with a plan to update the revenue weights annually[3], [4].

Resampling may be better than keeping a constant sample or selection, although it is seldom done in practise. Resampling the complete range of items systematically every year would be expensive to organise and execute. Furthermore, it falls short of offering a comprehensive answer to the issue of the shifting product universe since it misses price adjustments that take place when new goods or characteristics are initially presented.

When things are initially launched, many makers purposefully adjust the price significantly. Rotating the product sample gradually by removing some items and adding new ones is a more practical strategy to keep it up to date. Products may be discontinued for one of two reasons:

1. The responder or central office believes the product is no longer representative.
2. The product may simply stop being sold; it seems to account for a progressively declining portion of overall sales within the relevant product category or sector. For instance, among other reasons, it can have lost relevance owing to evolving technology or grown outmoded due to shifting fashion trends.

New items or improved versions of already existing products arrive on the market at the same time.They eventually need to be listed with the prices of the other goods. This brings up the larger issue of how new items and changes in quality should be handled.

Equilibrium

According to formal definitions, equilibrium is a condition of balance or rest brought on by the equal activity of opposing forces. Supply and demand are these factors in economics. We will see that when there is an imbalance between supply and demand, economic forces will operate until the equilibrium is restored. The hot dog market as a competitive one, with total supply and total demand represented by yellow and blue, respectively. Hot dog demand decreases as price increases, but supply increases. Equilibrium quantity (QE) comes first. QE occurs when the amount provided and the quantity required are equal. Understanding this value and the process that gets us there is crucial. Equilibrium pricing (PE) is the only price that can be said to correspond to equilibrium quantity. The issue of how to achieve balance still remains.

DISCUSSION

Economics of Growth and Development

A new area of economics known as the "Economics of Development" has emerged in recent years. It alludes to issues with impoverished or poor nations' economic growth. Top level economists including Nurkse, Dobb, Staley, Buchanan, Rostow, and Ellis have made some novel contributions to the Economics of Development in addition to the enlightening publications from the U.N.O. on the topic. The primary factor driving the rise in popularity of "Economics of Development" as a distinct field of economic theory is the rising propensity of newly independent nations in Asia and Africa to use developmental planning to end their long-standing poverty and raise living standards.

Meaning of Economic Development

Real national income and per capita income of an economy rise steadily over time as a result of economic progress. Here, the process alludes to the influence of certain factors that work over a long time and represent changes in dynamic aspects. It includes adjustments to resource availability, capital formation rates, demographic makeup, technology, skill, and efficiency levels, as well as institutional and organisational structures. It also indicates that there will be corresponding changes in the structure of the demand for commodities, the amount and distribution of income, the population's size and makeup, consumption patterns, living standards, the structure of social connections, and religious doctrines, concepts, and organisations. A country's net national product will eventually increase as a result of a lengthy chain of interrelated adjustments to basic determinants of supply and demand. This process is known as economic development[5], [6].

Definitions of Economic Development

'Economic development' is often used interchangeably with other words like 'economic growth,' 'economic welfare,''secular change,''social justice,' and 'economic advancement. As a result, providing a specific and understandable definition of economic progress is difficult. A workable definition of the phrase, however, appears to be fairly necessary in light of its scientific research and popularity.

The modern definition of economic development encompasses the growth of agriculture, industry, commerce, transportation, irrigation systems, energy sources, etc. Thus, it suggests a development process. The process of development, which relates to economic progress, includes sectoral improvement. Economic development has generally been characterised in a variety of ways, making it challenging to find a single definition that might be considered wholly adequate.

Characteristics of an Developed Economy

A developed economy is characterised by an increase in capital resources, an increase in labour productivity, better production planning across the board, the development of transportation and communication infrastructure, the expansion of banks and other financial institutions, urbanisation and an increase in standard of living, an increase in educational standards and life expectancy, more leisure time and recreational opportunities, and a broadening of people's horizons. In other words, for economic growth to become self-sustaining, economic development must overcome the poverty barrier or the vicious cycle and create a self-generating economy.

The following are the primary characteristics of developed nations:

1. The value of the industrial sector.
2. High Capital Formation Rate.
3. Application of High Production Methods and Techniques.
4. Low Population Growth.

The discussion of these follows.

1. **The significance of the industrial sector:** The majority of the developed nations in the globe place a high value on the growth of the industrial sector. They have significant capacity to exploit all production resources, maximise national revenue, and provide the unemployed work. We are well recognised that the non-agricultural sectors, which include industry, commerce, transportation, and communication, account for the majority of these nations' national revenue. For instance, the industrial sector typically accounts for close to 50% of England's national revenue, followed by transport and commerce (21%), agricultural (4%), and other sectors (25%). The United States, Japan, and other West European nations have the same situation. However, in India and other emerging nations, agriculture makes up, about, 35 to 40% of their national GDP.
2. **High Rate of Capital Formation:** Developed nations are often highly wealthy because they sustain high levels of investment and saving, which results in enormous capital stocks.Twenty to twenty-five percent of the entire national revenue is made up of investment. These nations likewise have exceptionally high rates of capital generation.In addition, these economies have seen a strong rise in capital creation due to their well-developed capital markets, high levels of savings, larger business potential, and skilled entrepreneurship.
3. **Use of High Production Techniques and Skills:** In industrialised nations, the use of High Production Techniques and Skills has become crucial to the process of economic growth. The physical human resources have been exploited using the new ways. Thus, in order to advance and enhance innovation and manufacturing techniques, these nations

have prioritised scientific research. As a result, these nations are able to create products and services that are more equitable across the board at a lower cost. Although they have limited natural resources, nations like Japan, Germany, and Israel have been able to expand their economy relatively quickly because to the employment of high production methods and cutting-edge talents [7], [8].

4. **Low Population Growth:** The developed nations, like the United States, the United Kingdom, and other Western European nations, have low population growth due to their low levels of both birth and mortality rates. Good health, high levels of education, and high levels of consumption have kept population growth at a minimum, along with low levels of birth and mortality rates. Also quite high is the life expectancy in these nations. These nations have high levels of per capita income and prosperity as a consequence of the high rate of capital production on the one hand and the low rate of population increase on the other.

   As a result, the citizens of these nations have a better quality of living and cooperate closely to advance the countries' economic and industrial growth. In addition, it is discovered that the whole society, its values, and structure are devoted to the pursuit of quick economic and industrial progress. People are placed in society according to their abilities, not according to their birth, caste, or religion [9], [10]. The value of work is upheld. People are constantly motivated to contribute to the process of growth by economic considerations and a strong desire to live a better social life. Rapid economic growth's primary goal, especially in developed nations, is to reach a level of sluggish economic growth, which will allow for the maintenance of the current economic situation and control over the business cycle.

Distinction Between Developed and Underdeveloped Economies

We can now discern the following characteristics between an undeveloped economy and a developed one:

1. Based on per capita income, developing and underdeveloped economies are separated. Under-developed nations are those that, on average, have real per capita incomes that are less than one-fourth of the per capita income in the United States, or about less than 5000 dollars per year.
2. In contrast to an advanced economy, an undeveloped economy has less capital in comparison to its people and natural resources. In such an economy, the pace of growth of employment and investment is slower than the rate of population increase. Not only are the resources being used, but they are also being underused. In technical speak, a developing economy has a narrower gap between the potential and actual utilisation of resources than a poor nation, where the production possibility frontier is well ahead of the actual production curve.
3. The majority of economies in developing countries have high rates of population increase. Economic progress in developing nations is neutralised by population expansion. The situation is different in advanced economies. The slowing rate of population increase is one empirical indicator of secular stagnation in industrialised

nations, as Prof. Hansen notes. The inability of the people, the environment, and technology to advance at the same rate as capital accumulation is the root cause of the stagnation issue in a developed economy.

4. The predominance of mass poverty, which is both a cause of and a result of undeveloped countries' lack of growth, is the main issue. The major economic issues in these nations are shortage and scarcity, while the wealthy society of advanced countries have economic issues brought on by excess. Given that these economies are typified by low productivity, low income, and a low quality of living, the basic issue in an undeveloped economy is production, real income, or the standard of life. In a developing nation, the great majority of people lack proper clothing, nutrition, and housing. Using Rostow's definition, Rostow described the economics of developing nations as being akin to those of traditional societies, where modern science and technology are either unavailable or are not consistently and methodically used. On the other hand, mass consumerism is now prevalent in the majority of industrialised nations.In their economies, the real per capita income has increased to a point that many people can afford consumption beyond that of food, housing, and clothes.
5. In a poor society, a lack of capital is the primary driver of poverty, but in an advanced country, rich capital accumulation is the primary driver of stagnation.
6. Underemployment is a bigger issue than unemployment in developing economies, although cyclical unemployment may exist in rich economies. In a developing economy, unemployment is widespread. A low marginal willingness to spend and business volatility might sometimes cause unemployment in a sophisticated country. In contrast, a developing economy must deal with the issue of disguised unemployment since it may be solved even with the same agricultural practises without affecting productivity. Therefore, whereas unemployment in an impoverished country is a disguised variety, it signifies resource waste in a rich one.
7. Developed nations have sophisticated technology, whereas developing nations have inadequate technology. The use of advanced technology goes hand in hand with large capital resources, high attainments in the fields of scientific research, greater availability of entrepreneurial skill, and a good supply of effective skilled labour, and is actually a reliable indicator of the level of economic development. Therefore, although a rich society no longer prioritises technological advancement as its major goal, a backward economy still views it as its primary goal.

Economic Development and Economic Growth

When discussing "developed" economies, people typically refer to those that have an industrial (or, if there is such a thing, post-industrial) economy that leaves the majority of its citizens reasonably and steadily prosperous. These economies are not just based on resource extraction (i.e., oil) or remittances or rentierism. They are all more similar to one another than they are to the vast majority of "undeveloped", "under-developed", or (most optimistically) "developing" economies around the world, despite the fact that they do differ from one another — the United States is obviously not New Zealand, which is not Belgium, which is not Finland, which is not Japan. (Some people refer to the developed nations as "the North" and the developing nations as

"the South;" just by glancing at where China and Australia are on a map, this drives me crazy.) Economies in the first group often remain there, and regrettably, so do nations in the second. The branch of economics known as development economics aims to understand the barriers that prevent certain economies from achieving this ideal state and how to overcome them.Growth and development are often used interchangeably in economic textbooks, and this use is generally accepted. However, several economists have specifically separated the two concepts as follows:

1. According to some economists, economic growth is the expansion of advanced economies, while economic development refers to the process of growth of backward countries.
2. Schumpeter, on the other hand, defines "economic development" as a sudden, abrupt shift in the stationary condition that upsets the preexisting equilibrium state. Additionally, the phrase "economic growth" is used to describe a long-term, continuous shift that results from a general rise in the population and saving rate in a dynamic economy.
3. According to Prof. Kindleberger, "Growth may easily entail not just greater output but also more inputs and better efficiency, i.e., an increase in output per unit of input. Beyond this, development also entails modifications to the composition of outputs and the division of inputs among different sectors. By comparison, to emphasise development is to concentrate on the change in functional capability in physical coordination, while to emphasise growth requires concentrating on height and weight. Growth without development, such as increased production of steel in the Soviet Union or increased production of coffee in Brazil, is ineffective. Development without growth is essentially impossible since a change in function necessitates a change in size. A growing economy won't be able to devote some of its resources to other sorts of activity unless it can create a surplus over its food needs.
4. According to some, planning-related intentional and deliberate actions lead to economic progress. Contrarily, economic growth denotes an economy's advancement brought about by advantageous conditions, such as the development the UK experienced during the Industrial Revolution.
5. According to A. Maddison, "In rich countries, the rise in income levels is generally referred to as economic growth, while in poor ones, it is referred to as economic development." The problems of underdeveloped countries are related to the development of unused resources, despite the fact that their uses are well-known, while those of advanced countries are related to growth, with the majority of their resources already being known and developed to a consider. Mrs. Hicks has also expressed nearly identical views and stated that economic development refers to the problems of underdeveloped countries and economic growth to those of advanced countries.

Prof. Mehta, however, asserts that the concept of "growth" has quantitative importance. Growth alludes to a rise in something's amount or volume. Growth is shown throughout time by a rise in a nation's population, national income, per capita income, consumption, saving, investing, foreign commerce, etc. Growth, however, is precisely defined in economics as a rise in real income, gross income, and per capita income. On the other hand, development is a growth

process that satisfies the need for a rise in national revenue. The contrast between growth and development and their intersection are evident from the above.

Measuring of Growth and Production Possibilities

Economic growth is the gradual rise in the volume of products and services an economy produces. Traditionally, it has been calculated as the real gross domestic product, or real GDP, growth rate in percentage terms. In order to exclude the distorting influence of inflation on the price of the items produced, growth is often assessed in real terms, i.e. inflation-adjusted terms. In the field of economics, the terms "economic growth" and "economic growth theory" often refer to the expansion of the potential output, or "full employment" production.

Economic growth is often divided from development economics as a field of study. The former focuses mostly on how nations may develop their economies. The latter involves the analysis of the economic elements of the process of development in low-income nations. Likewise, see Economic development.Economic growth has both the benefits and disadvantages of GDP growth since it is calculated as the yearly percent change.

Economic Growth: Measurement

Economic growth is the steady rise in the standard of living in a country, region, or city, along with continual changes in the industrial structure, public health, literacy, and demographics, as well as the income distribution within that economy. In the long term, social, political, and cultural standards will change as a result of this economic transition. Societies undergo significant and multifaceted transformation as economic success increases.To quantify this improvement in wellbeing and give these significant economic and social changes a numerical value, one must assess economic growth. It is hard to carry out this measuring exercise given the variety of options without direction on what may be eliminated and what is vital from some perspective on the causes of development (see, for example, Economic development: Theory).This article outlines several important (measurement) facts about economic growth and examines whether or not they have changed over time. In doing so, the paper aims to demonstrate the historical interaction between two areas of study—economic growth measurement and theories each of which influences the other.

Gross Domestic Product By focusing on just one important economic indicator, income per capita, the foregoing picture of substantial social and economic changes may be greatly simplified. (We will return in Sect. 8 below to problems of greater structural shifts). The value of all commodities and services generated in an economy is expressed as a per-person income. A simple way to gauge the status of the economy is to divide the national income, as determined by the gross national product (GNP), gross domestic product (GDP), or its regional equivalent, by the population of the relevant country or area. Since total income and total output are equivalent, this measure may occasionally be usefully replaced by output per worker, labour productivity, or even output per workerhour, where the measure then accounts for the amount of time the labour force spends working. In some in-depth analyses, these options can offer various insightful perspectives into the economic performance of various nations that, at various points in time, had

labour forces that were noticeably different from their populations or that had workers who made various decisions regarding the length of their workday.

CONCLUSION

The benefit of random sampling is that it produces a representative sample, which reduces bias and enables generalisation of results to the population. When making statistical inferences in quantitative research, it is very helpful. Random sampling, however, may be time- and resource-intensive, particularly when working with huge populations.Purposive sampling, on the other hand, enables researchers to choose certain people or objects that satisfy preset criteria, simplifying the gathering of focused and in-depth data. This approach is often used in qualitative research, where the goal is to study certain occurrences and get deep insights.

Gross Domestic Product By focusing on just one important economic indicator, income per capita, the foregoing picture of substantial social and economic changes may be greatly simplified. (We will return in Sect. 8 below to problems of greater structural shifts). The value of all commodities and services generated in an economy is expressed as a per-person income. A simple way to gauge the status of the economy is to divide the national income, as determined by the gross national product (GNP), gross domestic product (GDP), or its regional equivalent, by the population of the relevant country or area.

REFERENCES

[1] B. Y. Dhea Dani, B. F. Wahidah, and A. Syaifudin, 'Etnobotani Tanaman Kelor (Moringa oleifera Lam.) di Desa Kedungbulus Gembong Pati', *Al-Hayat J. Biol. Appl. Biol.*, 2019, doi: 10.21580/ah.v2i2.4659.

[2] L. Lisnawati, R. Hurriyati, and A. W. Al Qorni, 'Website Quality and Risk Perception as The Influence of Purchase Intention in E-Commerce Website in Indonesia', *J. Pendidik. Manaj. Bisnis*, 2019.

[3] N. F. Astuti, E. Rekawati, and D. N. K. Wati, 'Decreased blood pressure among community dwelling older adults following progressive muscle relaxation and music therapy (RESIK)', *BMC Nurs.*, 2019, doi: 10.1186/s12912-019-0357-8.

[4] M. Mulawarman, F. N. Huda, S. Suharso, and M. Muslikah, 'Hubungan antara kecerdasan emosional dan prestasi belajar dengan penggunaan social media pada siswa SMA', *J. Konseling dan Pendidik.*, 2019, doi: 10.29210/130700.

[5] B. Setiawan and C. C. Rabuani, 'Pengaruh Iklan dan Endorser terhadap Brand Awareness Serta Dampaknya pada Keputusan Pembelian', *Riset*, 2019, doi: 10.35212/277621.

[6] U. Umayah, A. R. Hakim, and A. Nurrahmah, 'Pengaruh Metode Contextual Teaching and Learning terhadap Kemampuan Pemecahan Masalah Matematika', *JKPM (Jurnal Kaji. Pendidik. Mat.*, 2019, doi: 10.30998/jkpm.v5i1.5075.

[7] K. Deniati And Putri Yanti, 'Hubungan Gaya Kepemimpinan Kepala Ruangan Terhadap Kinerja Perawat Pelaksana Di Ruang Rawat Inap Rumah Sakit Umum Daerah Kota Bekasi', *Malahayati Nurs. J.*, 2019.

[8] D. Ramadhan, R. Hurriyati, And L. Lisnawati, 'Analisis Perilaku Adopsi Teknologi Mobile Wallet Menggunakan Model Unified Theory Of Acceptance And Use Of Technology3 (Utaut3) (Survei Pengguna Ovo Pada Generasi Milenial Di Indonesia)', *J. Bus. Manag. Educ.*, 2019, Doi: 10.17509/Jbme.V4i3.18659.

[9] S. Pudjarti, N. Nurchayati, And H. R. Dwi Putranti, 'Hubungan E-Service Quality Dan E-Loyalty Dengan E-Satisfaction Pada Konsumen Go-Jek Dan Grab Di Kota Semarang', *Sosiohumaniora*, 2019.

[10] S. Arafah, 'Pengaruh Terapi Rendam Kaki Air Hangat Terhadap Penurunan Tekanan Darah Pada Hipertensi Di Wilayah Kerja Puskesmas Pattallassang Kab. Takalar', *Media Keperawatan Politek. Kesehat. Makassar*, 2019, Doi: 10.32382/Jmk.V10i2.1336.

CHAPTER 9

OBSTACLES TO ECONOMIC DEVELOPMENT

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ABSTRACT:

The global barriers to economic growth that many nations and regions must overcome. It investigates the different barriers to economic development, including poor infrastructure, restricted access to healthcare and education, political unrest, corruption, and income disparity. This study examines these barriers in an effort to shed light on the problems that impede economic growth and to suggest possible solutions.Generally speaking, the characteristics of an underdeveloped economy provide challenges to and impede economic advancement. These characteristics result from institutional, economic, social, political, and religious influences. It would be incorrect to assume that a country's poverty or economic backwardness is only due to economic considerations. An economy's lack of progress may be attributed to both economic and non-economic reasons.Economic growth, which results from increasing production size and higher productivity (innovations in products and processes), is the ongoing development in the ability to meet demand for goods and services. For industrialised countries with mature sectors but confronting rising global competition and fast technological advancement, factors enhancing productivity are especially significant drivers of development.

KEYWORDS:

Obstacles, Economic Development, Infrastructure, Education, Healthcare, Political Instability, Corruption.

INTRODUCTION

Generally speaking, the characteristics of an underdeveloped economy provide challenges to and impede economic advancement. These characteristics result from institutional, economic, social, political, and religious influences. It would be incorrect to assume that a country's poverty or economic backwardness is only due to economic considerations. An economy's lack of progress may be attributed to both economic and non-economic reasons. Economic and noneconomic issues, which are listed below, might be categorised as factors preventing economic growth[1], [2].

Sources of Economic Growth

Economic growth, which results from increasing production size and higher productivity (innovations in products and processes), is the ongoing development in the ability to meet demand for goods and services. For industrialised countries with mature sectors but confronting

rising global competition and fast technological advancement, factors enhancing productivity are especially significant drivers of development.

In recent decades, consumption has significantly boosted UK demand, but the global financial crisis will continue to have a detrimental effect on consumer spending for some time. Business investment is probably going to have a bigger and bigger role in driving development. It's anticipated that the UK's net trade situation would improve. Future development is projected to be significantly influenced by specialised and knowledge-intensive service and manufacturing industries, building on the UK's substantial specialisation in finance, business services, communications, and computer and information services[3], [4].

Growth Accounting

Growth in production per capita is often the focus of policy since it is more directly tied to social welfare goals. Growth in the employment rate and production per worker (a productivity indicator) may be used to analyse changes in output per capita.

Drivers of Long Run Growth

Long-term employment rate increases are constrained in industrialised nations, therefore productivity is the main driver of long-term development. Although it isn't everything, productivity is essentially everything over the long term. It's Paul Krugman. Longer-term growth will be predominantly influenced by variables that affect productivity, followed by those that increase labour participation[5], [6].The elements that increase the output quality or the effectiveness with which inputs (such as capital, labour, and materials) are converted into outputs are the ones that promote productivity growth.Some of these components' contributions to output growth may be captured by the right input measurements, while the rest such as unmeasured inputs and technical advancements are placed into a residual known as Total Factor Productivity (TFP).

The primary inputs into manufacturing are manpower, materials, managerial services, and capital.According to the conventional Solow neoclassical growth model, technical advancement (as measured by TFP) provides a consistent contribution whereas a one-time increase in inputs to raise the scale of production only affects per capita output growth in the short term.

However, in subsequent endogenous development models, investment (especially in innovation) is what propels technological advancement and so affects growth in both the short and long terms[7], [8].

Associated Business Activities

Businesses spend funds to a variety of initiatives (such as innovation, marketing, and specialisation) that don't directly contribute to the production process but have an impact on the output quality or the effective use of resources.Long-term development is mostly driven by technical progress, which is created by innovative businesses taking advantage of scientific advancements.A key path to higher productivity is specialisation in goods and processes (sometimes including more commerce).

The commercial environment

The efficiency of the economy as a whole and the productivity of enterprises are both impacted by a variety of elements in the business environment, including infrastructure, market efficiency, market incentives, taxes, and regulation. Infrastructure investment has an impact on how much it costs businesses to access resources and markets, and market circumstances have an impact on the incentives for businesses to invest, be adventurous, and develop.

A composite statistic called the Human Development Index (HDI) is used to compare the levels of "human development" among nations, replacing older terms like "standard of living" and "quality of life," and identifying nations with "very high human development," "high human development," "medium human development," and "low human development." Mahbub ul Haq, an economist from Pakistan, and Amartya Sen, an economist from India, created and introduced HDI in 1990. The HDI is a comparative indicator of a nation's standards of living, literacy rates, and life expectancy. It is a common way to gauge wellbeing, particularly in relation to children's welfare. It is also used to determine if a nation is developed, developing, or underdeveloped, as well as to assess how economic policies affect people's quality of life. Additionally, there are HDI offered by regional businesses or organisations for states, cities, villages, etc.

DISCUSSION

Human Development Index and PQLI

The yearly Human Development Reports published by the United Nations Development Programme (UNDP) provide the history of the HDI. In 1990, Pakistani economist Mahbub ul Haq created and introduced these with the express goal of "moving the focus of development economics from national income accounting to people-centered policies." Mahbub ul Haq assembled a group of renowned development economists, including Paul Streeten, Frances Stewart, Gustav Ranis, Keith Gryphon, Sudhir Anand, and Meghnad Desai, to prepare the Human Development Reports. However, the intellectual underpinnings came from Nobel laureate Amartya Sen's work on capacities and functionings. In order to persuade the general public, scholars, and policy-makers that they can and should judge progress not just by economic accomplishments but also increases in human well-being, Haq was certain that a straightforward composite measure of human development was required. Sen originally disagreed with this notion, but he later assisted Haq in creating the Index.

Future HDI Projections

The yearly Development Reports of the United Nations Development Programme (UNDP) provide the HDI's historical roots. In 1990, Pakistani economist Mahbub ul Haq created and introduced these with the express goal of "moving the focus of development economics from national income accounting to people-centered policies." Mahbub ul Haq assembled a group of renowned development economists, including Paul Streeten, Frances Stewart, Gustav Ranis, Keith Gryphon, Sudhir Anand, and Meghnad Desai, to prepare the Human Development Reports. However, the intellectual underpinnings came from Nobel laureate Amartya Sen's work on capacities and functionings. In order to persuade the general public, scholars, and policy-makers

that they can and should judge progress not just by economic accomplishments but also increases in human well-being, Haq was certain that a straightforward composite measure of human development was required. Sen originally disagreed with this notion, but he later assisted Haq in creating the Index.Sen was concerned that it would be difficult to include the complete complexity of human capacities in a single index, but Haq convinced him that only a single number could convince policymakers to change their focus from economics to human well-being[9], [10].

The Human Development Report Office of the United Nations Development Programme (UNDP) released a list of nations in 2010 as part of its Human Development Research Paper Series, ranking by their projected Human Development Index (HDI) for the years 2010–2030. The Human Development Research Paper (HDRP) Series is a platform for disseminating current research that has been commissioned to support the worldwide Human Development Report, which is released yearly.

The HDRP Series is a rapidly distributing informal publication whose titles may later be edited for publishing as chapters in books or as articles in scholarly journals. Leading academics and professionals from all across the globe as well as researchers from the UNDP are among the writers. The authors' opinions alone, not those of UNDP or United Nations Member States, alone govern the results, interpretations, and conclusions.Additionally, the information may not agree with what is shown in Human Development Reports.

While the HDI projection employed projections of the components undertaken by agencies that supply the UNDP with data for the HDI, the writers of this Human Development Report Paper predicted the HDI for every nation that possessed a full data set for the next twenty years. The majority of the 81 nations on the HDI list are anticipated to have a "Very High" HDI by 2025.In its 2009 Human Development Report, the United Nations Development Programme announced its final country ranking by Human Development Index (HDI) for 2007.

The countries were divided into four groups, the first of which is the group of nations with a "Very High" HDI. The 2010-2030 HDI forecasts were released by the Human Development Report Office in April 2010 and were cited in the Human Development Research paper 2010/40 published in September 2010 by the United Nations Development Programme. To arrive at these forecasts, the HDI was recalculated using projections of the HDI's components made by the organisations that provide the UNDP with data for the HDI.

For the years 2010–2030, the HDI was forecast for all nations for whom a full data series was available. In the 2009 Human Development Report, the HDI was predicted for every "non-tiny" nation—that is, any country with a population of more than 800,000—that had a "Very High" HDI—that is, an HDI of 900 or above. The projection ignores both all "tiny" countries (among which seven had a "Very High" HDI in the 2009 Human Development Report: Andorra, Barbados, Brunei, Iceland, Liechtenstein, Luxembourg and Malta), countries that are not UN members (Hong Kong being an exception), and countries for which there was no complete data series for the 2010–2030 period. All non-"tiny" UN members for which no projection was made lacked a "Very High" HDI in the 2009 Human Development Report, but ten of them did

(Albania, Belarus, Bosnia Herzegovina, Lebanon, Macedonia, Mauritius, Oman, Panama, Trinidad and Tobago, Uruguay had a "High" HDI (i.e. 800 or higher).

Economic Growth Models-I: Harrod-Domar Growth Model

There are several hypotheses that have attempted to explain how the economy grows. Growth models are another name for these beliefs. Growth models provide a formal representation of the quantitative connection between the important variables. On the subject of what variables are most crucial in determining the pace of economic growth, many economists have varying views. As a result, every proponent has developed a unique development strategy.

Neo-Classical Growth Models

more interested in the microfoundations of their models, particularly the innate dynamics of investment and consumption choices. One reason for this is because the short-run AS-AD model has relatively little persistence in response to shocks under rational expectations and does not fully explain economic cycles. Microeconomic models of consumer dynamics and investment began to be included into the traditional macroeconomic framework as a result. I'll outline the fundamentals of these models in these notes, but I'll make an effort to keep things as simple as I can. However, additional characteristics (such as heterogeneity, borrowing limits, etc.) may and have been introduced to solve many of these problems. The cost of doing this may be a loss in the degree of realism.

Transitional Dynamics

It's critical to recognise a crucial contrast between capital and consumption in order to comprehend these processes. Although it may increase or decumulate over time, capital, kt is a state variable that is always predetermined by prior investments. Contrarily, consumption ct is a jump variable that may always be changed right away to reflect fresh knowledge about a household's future wealth (unlike kt). This means that it is not constrained to any specific value by actions taken in the past. Let's say we begin with some capital stock, k0. The starting amount, c0, is not determined by the Euler equation; rather, it informs us how consumption should develop in the best possible way over time. Therefore, whatever value for c0 should families pickWe haven't yet made the household subject to the intertemporal budget restriction (11). However, we are aware that this condition must be met, and it is this extra equation that establishes the starting value of c0. The household will consume more than its wealth if consumption levels are too high, while too low levels will result in underconsumption. In reality, there is only one value of c0 that meets the budget constraint and it is the one that puts the economy on a path towards the steady state given the Euler equation and the capital accumulation process.

Assume that households choose a starting consumption level similar to that at A given k0. The underlying dynamics would predict that from this point on, consumption would increase and capital would gradually accumulate. It would eventually become negative, and consumption would continue to rise forever. This is illogical. It means that the family's existing expenditure surpasses its wealth, which is incompatible with the budgetary restraint on the household.

Similar to this, starting from a location like B, the budget restriction is broken even if k would initially grow when we reach the same dynamic zone as A. On the other hand, let's say we begin with a relatively low amount of consumption, similar to that at C. As was shown, this economy eventually crosses the c = 0 locus and is pushed from the steady state by the associated dynamics. Even when the capital stock (and production) are positive, the economy would ultimately reach a point where there is no longer any consumption. This indicates that families are not operating at their best since they are well inside their financial constraints.

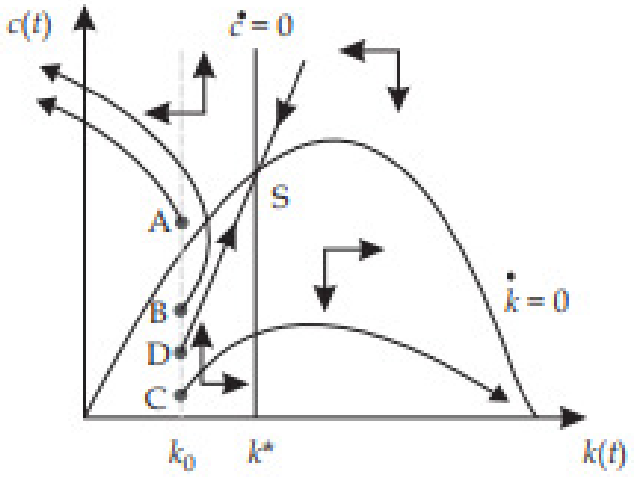

Figure 1: Represents the Transitional Dynamics.

But there is a certain consumption level that gives the economy a D. The suggested dynamics propel the economy in the direction of the steady state from this point on. Because it implies that consumption will eventually be precisely equal to production (minus depreciation), this is the only circumstance that is compatible with the budget constraint. Any other initial consumption level will indicate that the budget restriction has been violated. The economy must constantly be on the saddlepath trajectory, which is the only route to the steady state. Be aware that we may use comparable justifications to establish a similar saddlepath above and to the right of S beginning from a capital stock above k.Figure 1 represents the Transitional Dynamics.

This limitation is the same as that imposed by period-by-period balanced budgets on household spending. In other words, as long as the government's intertemporal budget constraint is met, the household's wealth is the same regardless of whether a particular route of government spending is funded by taxes or debt. In other words, as long as the debt is manageable (and the interest rate is the same as the rate on capital), the time of taxes is unimportant, and the amount of the debt is unimportant. The classical economist David Ricardo initially proposed this inference, which is known as Ricardian equivalence. Thus, the result of an increase in g is the same

It should be understood that pure Ricardian equivalence is fairly extreme and is predicated on a number of extremely solid premises, including the families' infinite planning horizons, the absence of uncertainty, ideal capital markets, and complete knowledge. The fundamental model may be extended to take some of these elements into consideration. Even yet, the fundamental

qualitative aspect of the result that debt-financed increases in spending may cut current consumption even if current disposable income is unchanged remains significant. This is because of the wealth consequences of the predicted future taxes.

Poverty Traps

Any self-reinforcing system that perpetuates poverty is referred to as a poverty trap. If efforts are not done to disrupt the cycle, the trap starts to strengthen itself if it continues from generation to generation. a system that makes it very difficult for individuals to overcome poverty. When an economic system makes it difficult to earn enough money to lift oneself out of poverty, it is said to be in a "poverty trap." When people lack this capital, it may be difficult for them to obtain it, which may lead to a vicious cycle of poverty.In the developing world, a number of factors, such as limited access to credit and capital markets, severe environmental degradation which reduces the potential for agricultural production, corrupt government, capital flight, subpar educational systems, disease ecology, a lack of public health care, war, and inadequate infrastructure, can lead to poverty.

In his book The End of Poverty, Jeffrey Sachs explores the poverty trap and offers a series of policy recommendations designed to break it. He suggests that assistance organisations act like venture capitalists who invest in start-up businesses. When choosing to invest in a business, venture capitalists don't contribute only half or a third of what they believe the venture needs to be lucrative; otherwise, their money would be squandered. If all goes according to plan, the business will ultimately produce a profit, and the venture investor will get a respectable rate of return on their investment. Similarly, Sachs contends that wealthy nations cannot hope to break the cycle of poverty in Africa by providing help that is just a small portion of what is required. Developing countries must unquestionably get the amount of help required (and pledged at the G-8 Summit in 2005) in order for them to start breaking out of the poverty trap. The issue is that in contrast to startups, which just fail if they do not obtain money, individuals in Africa continue to die at a high rate in large part owing to inadequate help.

According to Sachs, the very poor are lacking in six important types of capital: knowledge capital, business capital, human capital, infrastructure, and natural capital. The poverty trap is then described by him:The ratio of capital per person really decreases from generation to generation, which causes the poor to start with a very low amount of capital per person and eventually become impoverished. When the population is expanding more quickly than new capital is being created, the quantity of capital per person decreases. The net capital accumulation must be sufficient to keep pace with population growth in order for per capita income to increase.According to Sachs, "If the foreign assistance is substantial enough and lasts long enough, the capital stock rises sufficiently to lift households above subsistence" may compensate for a shortage of capital in developing nations.

According to Sachs, public investments in human capital (health, education, nutrition), infrastructure (roads, power, water and sanitation, environmental conservation), natural capital (conservation of biodiversity and ecosystems), public institutional capital a well-run public administration, judicial system, police force), and some knowledge capital scientific research for

health, energy, agriculture, climate, and ecology) should be prioritised. The private sector, according to Sachs, would invest in company capital more effectively and utilise the money to create the successful businesses required to maintain growth. In this sense, Sachs believes that public institutions may help provide the public goods required to launch the Rostovian take-off model, but he also believes that private industry can generate and distribute private goods more effectively. In neoclassical economics, this is a widely held belief.The literature also discusses other types of poverty traps, such as landlocked countries with unfriendly neighbours, a cycle of violent conflict, subsistence traps where farmers wait for middlemen to specialise before they do so, but middlemen wait for a region to specialise first, and working capital traps where petty sellers have inventory that is too sparse to make enough money to buy a bigger inventory.

CONCLUSION

The solution to these problems must be diverse. Investments in infrastructure should be prioritised by governments and politicians to guarantee that all people have access to high-quality healthcare and education. For the purpose of maintaining a supportive business climate and luring investment, efforts to enhance governance and fight corruption are essential. Reducing social inequities and promoting sustainable economic development may both be achieved by addressing income inequality via social safety nets and inclusive policies. In conclusion, encouraging sustainable and equitable growth depends on identifying and removing the barriers to economic progress. Countries may overcome these obstacles and foster an atmosphere that promotes economic development and prosperity by concentrating on improving infrastructure, education, healthcare, governance, and income inequality.

REFERENCES

[1] M. V. L. Badgett, K. Waaldijk, and Y. van der M. Rodgers, ‘The relationship between LGBT inclusion and economic development: Macro-level evidence’, *World Dev.*, 2019, doi: 10.1016/j.worlddev.2019.03.011.

[2] C. Diebolt and R. Hippe, ‘The long-run impact of human capital on innovation and economic development in the regions of Europe’, *Appl. Econ.*, 2019, doi: 10.1080/00036846.2018.1495820.

[3] M. Pasichnyi, T. Kaneva, M. Ruban, and A. Nepytaliuk, ‘The impact of fiscal decentralization on economic development’, *Investment Management and Financial Innovations*. 2019. doi: 10.21511/imfi.16(3).2019.04.

[4] L. Cabeza-García, E. B. Del Brio, and M. L. Oscanoa-Victorio, ‘Female financial inclusion and its impacts on inclusive economic development’, *Womens. Stud. Int. Forum*, 2019, doi: 10.1016/j.wsif.2019.102300.

[5] G. O. Igiebor, ‘Political Corruption in Nigeria: Implications for Economic Development in the Fourth Republic’, *J. Dev. Soc.*, 2019, doi: 10.1177/0169796X19890745.

[6] N. Luthuli and J. Houghton, ‘Towards regional economic development in South Africa: Conceptualising the “region” associated with economic development through the Durban Aerotropolis’, *Urbani Izziv*, 2019, doi: 10.5379/urbani-izziv-en-2019-30-supplement-013.

[7] H. Shi, J. Chen, S. Liu, and B. Sivakumar, 'The role of large dams in promoting economic development under the pressure of population growth', *Sustain.*, 2019, doi: 10.3390/su11102965.

[8] C. H. Knutsen *et al.*, 'Economic development and democracy: An electoral connection', *Eur. J. Polit. Res.*, 2019, doi: 10.1111/1475-6765.12282.

[9] M. M. Ihnatenko, L. O. Marmul, D. S. Ushakov, and S. P. Kuchyn, 'Transformation of approaches to determine influence factors in the economic development models', *Int. J. Econ. Bus. Adm.*, 2019, doi: 10.35808/ijeba/245.

[10] H. Azadi and E. Vanhaute, 'Mutual effects of land distribution and economic development: Evidence from Asia, Africa, and Latin America', *Land*. 2019. doi: 10.3390/LAND8060096.

CHAPTER 10

SOCIAL AND INSTITUTIONAL ASPECTS OF DEVELOPMENT

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ABSTRACT:

The role that social and institutional factors have in promoting inclusive and long-lasting growth. It examines how social elements including gender equality, education, health, and social cohesiveness might help to advance development objectives. It also examines how crucial institutional elements like accountability, rule of law, governance, and the existence of strong institutions are for promoting social and economic progress. Countries may establish an atmosphere that is favourable for long-term growth and increased well-being by comprehending and resolving these social and institutional factors.high rate of economic development, poverty persists when the advantages of progress are not properly distributed. This is seen in many economies across the globe where, despite relatively high per capita earnings, the bulk of the population struggles with poverty and a poor quality of life.

KEYWORDS:

Social aspects, Institutional Aspects, Development, Education, Health, Gender Equality, Social Cohesion, Governance.

INTRODUCTION

A high rate of economic development, poverty persists when the advantages of progress are not properly distributed. This is seen in many economies across the globe where, despite relatively high per capita earnings, the bulk of the population struggles with poverty and a poor quality of life. The dual issues of poverty and inequality have been attempted to be explained in this unit[1], [2].

Poverty and Inequality

Inequality and poverty are two issues that are connected. Inequality and poverty in the economy will increase, particularly in nations with lower levels of total production. Production possibility frontier may be used to illustrate this double dilemma.Figure 1 represents the PPC with cars on X-axis and food on Y-axis.

Food is a representation of essentials, whereas a car is a symbol of luxury. The production potential frontier, or Curve AE, illustrates different food and vehicle combinations that an economy might generate if its technological resources were all completely used. All of the economic and effective combinations A, B, C, D, and E are feasible.The economy will run at a position like D where it will generate more food and fewer vehicles if income distribution is generally equitable and the economy is relatively poor[3], [4].

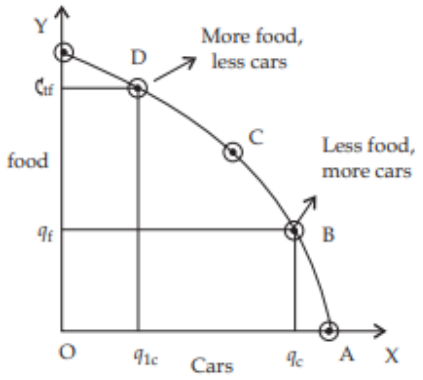

Figure 1: Represents the PPC with cars on X-axis and food on Y-axis.

Production will eventually reach a point around B where it is generating more vehicles and less food if revenue is not divided fairly.This is true because the distribution of national income has an impact on effective demand, which in turn has an impact on resource allocation.For a real-world illustration, consider the Indian market, where resources are being dedicated to the production of cosmetics while people are starving to death on the other. vDue to the extreme inequality, more resources are being used to produce luxury, while the poor are denied access to even the most basic necessities.

Inequalities of Income

India has a nominal per capita income of $1219, which ranks 142 globally, and a purchasing power parity (PPP) of US $3,608, which ranks 129 globally. India's per capita income is predicted to rise at an average pace of 13% between 2011 and 2020, reaching $4,200. India's nominal GDP per person is expected to be $3,650 in 2020, while its real GDP is expected to be $5 trillion. In 2020, India's purchasing power parity (PPP) per person will be $12,800. India's states exhibit significant inequalities. The stark and expanding regional differences between India's many states and territories in terms of per capita income, poverty, the availability of infrastructure, and socioeconomic development are one of the major issues the country's economy is confronting. Despite India's relatively low levels of income inequality (Gini coefficient: 32.5 in 1999–2000), the nominal Gini index increased to 36.8 in 2005, while the actual Gini after tax stayed almost unchanged at 32.6.

Despite tremendous economic growth, a quarter of Americans live in poverty, defined by the government as earning less than $0.40 per day. In 2004–2005, 27.5% of the population was considered to be poor. vCreating a secure foundation for natural resource investment that strikes a balance between commercial interests and social concerns, streamlining bureaucratic regulatory processes, enhancing rural connectivity, ensuring law and order, and providing rural financing all crucial.

Rural-urban gap

In India, there is a significant amount of rural-to-urban migration. The Partition of India was a significant factor in the widespread migration to urban areas. More over half of the Pakistani

immigrants landed in big cities like Delhi. By 2030, it is predicted that up to 590 million Indians, or 40% of the total population, would live in cities, a significant increase from the present 28%. Additionally, it is predicted that by 2030, more than half of the population in six statesWest Bengal, Tamil Nadu, Gujarat, Maharashtra, Karnataka, and Punjabwill reside in urbanregions.In India, urban regions have had a growth rate that is much greater than rural areas. Even though up to three-fourths of the population lives in rural regions, just one-third of the country's revenue comes from there. The fact that rural India is heavily reliant on agriculture is the major cause of its low performance in terms of income. Despite the 2008 Financial Crisis, the Indian economy expanded at a pace of 6.7% in 2008–09, whereas the agricultural sector only saw growth of 1.6%. The Indian economy's agricultural sector is growing at an incredibly sluggish pace, which has major effects on the income and GDP gaps between rural and urban areas. According to some estimates, a person's average income in an urban location may be up to four times greater than a person's typical income in a rural area. One of the main causes of India's growing economic inequality is the country's increasing rate of urbanisation. Nearly a quarter of Indian families spend more than they earn even if up to four out of every five save money[5], [6].

DISCUSSION

overcoming the urban-rural divide

The Indian government has made efforts to bridge the urban-rural divide. This includes the Ministry of Rural Development's creation of the Council for Advancement of People's Action and Rural Technology (CAPART). CAPART assists several organisations that support developmental activities by giving them with support. India's economic gap with urban areas is continually expanding, in addition to other social indicators. India urgently needs to improve its agricultural sector, change its labour regulations, and expand educational opportunities.

Income inequality among Indian states

India now ranks among the nations with the highest wealth thanks to the seven billionaires it attracted to the 2011 Forbes Top 100 Rich List. Unfortunately, approximately 300 million people in India, or close to 28% of the country's entire population, live in poverty. Over the years, as India's population has risen, so has inequality, and the gulf between the affluent and the poor has deepened. Sharp disparities may be seen when comparing the per capita earnings of Indian states to those of other economies. Goa has the greatest per capita GDP (1,35,129 Rs), while Bihar has the lowest (16177 Rs). Inequality in India is examined in this article using the Gini coefficient over the previous 30 years for 23 states.

The commonly used indicator of inequality is the Gini Coefficient. A score of 1 would represent complete inequality, with all money flowing to one state, while a score of 0 would represent perfect equality, with each state having an equal per capita income. Increasing Income inequality is Inclusionary growth is a challenge for India. An analysis of state GDP per capita data from 1981 to 2008, which allowed for the determination of the Gini coefficient, reveals that interstate inequality and the coefficient's trend higher are both ongoing. The average gini coefficient from 1981 to 1990 was 0.15, but from 1991 to 2000 it rose to 0.19. The average Gini coefficient for

the years 2001 to 2008 is estimated to be.24, an increase of more than 26% over the prior decade, which helps to explain India's alarmingly widening wealth gap.

It demonstrates how India's progress is exclusive rather than inclusive, with the poor increasing poorer while the affluent gain wealthier.The Inter-State Gini for 2008, 0.2608, is substantially lower than the Gini for India as a whole (0.36), according to the UNDP's Human Development Report, demonstrating that the social difference between the wealthiest and poorest citizens of the nation is far greater than the geographic discrepancy in income.In India, the development gap is located along an east-west axis rather than a North-South axis. The line separating the more developed west from the less developed east is probably the 82.5 parallel, which is used to determine Indian Standard Time (IST). This division may be seen by contrasting the states that are entirely west of this line with those that are partially or entirely east of this line.Eastern and western states' per capita income differences widened by an average of 11% in the 1980s, 19% in the 1990s, and 10% in the early 2000s.This shows that although eastern states are now becoming affluent at a slower rate than western ones, they continue to trail far behind. These states must prioritise economic growth in order to lower poverty levels, which will in turn lower income inequality and finally raise per capita income.

For the years 1991 to 2009, Easterners grew on average more slowly and Westerners more quickly than the national growth rates. In contrast to the national growth rate of 7.9%, the average growth rates of the eastern states from 2003 to 2009 were 7.5% and 8.5%, respectively. In the 2000s, certain low-income states, like as Bihar, had significant growth, while the four BIMARU states, Madhya Pradesh, Uttar Pradesh, and Rajasthan, experienced slower growth than the country as a whole. An additional development metric that takes into account this issue is the Human Development Index scores. The average HDI score for western states is 0.53, which is greater than the average HDI score for eastern states (0.46), indicating that these regions' slower economic growth has also had an impact on their social development[7], [8].

The Road Ahead and Strategy to reduce the income inequality

India has to take a comprehensive look at the state-by-state disparities that exist. The eastern states need extra help and attention to reduce their poverty and increase their capabilities. India has to create an integrated system so that, by sharing various economic activities, eastern states may benefit from the higher economic prosperity of the western states. It is now necessary to strike a balance between social development and economic progress, and greater emphasis should be placed on expanding the scope of government initiatives and distributing resources fairly. One potential answer is social entrepreneurship, which focuses on creating novel approaches to social issues with long-term income development. Instead of only funding CSR initiatives that may assist them grow their future revenue and wealth, the corporations need to generate shared value for all stakeholders.

Lorenz Curve

The Lorenz curve is a statistical instrument created by American statistician Prof. Max D Lorenz to assess income inequality. Population and income distribution data is converted to percentages and set up as a cumulative frequency distribution. 100 percent of the population and 100 percent

of the revenue are represented by a straight line connecting the two sources. The Line of Equal Distribution is the name of this curve. This line serves as a benchmark for comparison in order to determine the degree of inequality. This line displays complete income equality in the economy if it is parallel to the real distribution of income line. Economic inequality increases when the difference between the actual income distribution line and the line of equal distribution widens, and vice versa.

The following graphic helps to illustrate it. The proportion of population is taken along the X-axis, while the percentage of income is taken along the Y-axis. By joining both axes at 100%, we have ED. The line of equal distribution is known as ED. If the two Lorenz curves of the two economies are similar to those in the diagram, then economy A has larger income inequality than economy B.

Functional Distribution

the proportional proportion of profits, interest, wages, and rent in the national income using functional distribution. In our discussion, we will compare the proportion of money that goes to labour to the percentages that go to the other three production elements. An illustration is used to demonstrate the functional distribution of income. We may combine human and natural resources into one work force by combining capital, labour, and organisation. There are now two production factors: capital (fixed component) and labour (variable factor). The number of employees is shown on the X-axis, while the pay rate is shown on the Y-axis. The demand curve for work, or D1, is derived from marginal labour productivity. The supply curve for labour is S1. At point E, when ON workers are hired and get pay equivalent to OW, equilibrium is reached. The total output produced by all work used is called OWRN. OWEN is the labour component of it. As a result, capital receives a residual amount equal to the area WER.

Measurement and Indicators of Development

The living levels of individuals in various nations vary significantly. The reason for this is because various nations are at different levels of economic growth. What economic development is, how it differs from economic growth and welfare, and the numerous indices of economic wellbeing are the main topics of this subject. Economic development is a more comprehensive measure of economic wellbeing than economic growth. Numerous institutional and social changes that occur as a result of economic growth are taken into account when estimating economic development and wellbeing[9], [10].

Growth and Development

Economic development and growth were formerly considered to be synonymous terms. Economic growth is the persistent rise in a nation's actual per capita income over a period of years.

1. It's crucial to remember that economic growth is an ongoing, dynamic rise in per capita income. Dynamic suggests that growth is a process that happens through time, rather than all at once.

2. When economies of scale are large, an increase in overall production is significant. When determining how to raise the population's quality of life, per capita production is important.
3. The terms output and output capacity are not interchangeable. The majority of growth theories have focused on raising the economy's overall production capacity, while real growth relies on how well this production capacity is used.

The Present

Economic development and growth are not the same, according to contemporary economists.They contend that economic development and economic growth are not the same thing. A far larger concept than economic growth is economic development. As previously stated, economic growth is the steady expansion of a nation's real per capita income over a period of years. However, economic development is the process of raising living standards while also enhancing quality of life. Growth is a tool for achieving economic development's ultimate goal. It is extremely likely that a nation's real per capita income has risen, yet that country still shows signs of growth but not development due to extreme poverty, high rates of unemployment and crime, poor nutritional status, and other factors.

Actually, according to the old economists who believed in the trickle-down effect, economic development and growth were interchangeable terms. According to this, all facets of society will inevitably reap the rewards of progress. Therefore, economic progress meant a decrease in poverty, unemployment, and inequities.What has happened to poverty is the question to ask regarding a country's progress, according to Prof. Dudley Seers. What is the current state of unemployment? What is the current state of inequality? There has undoubtedly been a time of progress for the nation if all these have fallen from high levels.

Economic Growth

Increases in national or per capita income and output are referred to as economic growth. A nation has experienced economic growth if its output of goods and services grows by any means, and the average income rises along with it.Growth in the economy may be beneficial or bad. The phrase "negative growth" or "recession" may be used to describe negative growth. Negative growth is linked to both economic depression and recession.Contrarily, economic growth is a more constrained term than economic development. It is described as the rise in the value of the products and services generated by all economic sectors. It is often stated in terms of the nation's GDP, or gross domestic product.An rise in GDP is the definition of economic growth. Comparatively, economic development is a more ambiguous indicator of a nation's degree of progress since it often takes into account social indicators like life expectancy or literacy rates.

Due to their apparent similarity, economists often use the phrases "economic growth" and "economic development" interchangeably.An rise in GDP is the definition of economic growth. Comparatively, economic development is a more ambiguous indicator of a nation's degree of progress since it often takes into account social indicators like life expectancy or literacy rates.Economic growth is a quantitative indicator, but economic development is a qualitative one.

Economic Development Concept

Improvements in health, education, and other facets of human wellbeing are only a few of the additional implications of economic prosperity. Some crucial facets of progress are missed by nations that grow their income without simultaneously increasing life expectancy, lowering infant mortality, and raising literacy rates. The growth of a nation's economic prosperity is what is referred to as its economic development. Since people are the ultimate beneficiaries of their country's economic growth, economic development is focused on enhancing their general quality of life.

A country's population may raise their level of life over time via economic growth. It suggests a rise in each citizen's per capita income. Additionally, it results in the expansion of possibilities in the fields of employment, education, healthcare, and environmental preservation. Economic development is the process through which an economy's resource productivity rises, which increases the community's economic wellbeing by increasing the growth of national revenue.

Therefore, economic growth strives to concurrently achieve three goals.

i. Making basic necessities more accessible and making sure they are supplied fairly.
ii. Improving individual and societal self-esteem through increasing salaries, providing better healthcare and educational opportunities.
iii. Increasing the diversity available to people and countries both economically and socially. It must end ignorance and suffering among people.

CONCLUSION

Fostering enduring and equitable growth depends on acknowledging and addressing the social and institutional dimensions of development. Countries may create an environment that is favourable to long-term growth, increased well-being, and decreased inequality through investing in human capital, fostering social cohesion, and setting up efficient governance structures and institutions.country's population may raise their level of life over time via economic growth. It suggests a rise in each citizen's per capita income. Additionally, it results in the expansion of possibilities in the fields of employment, education, healthcare, and environmental preservation. Economic development is the process through which an economy's resource productivity rises, which increases the community's economic wellbeing by increasing the growth of national revenue.

REFERENCES

[1] R. Anggraini and S. Suyadi, ‘Supporting Six Aspects of Development of Children 3-6 Years Through Educational Educative Tools Smart Book’, *Indones. J. Early Child. Educ. Stud.*, 2019.

[2] W. Han and F. Fang, ‘Fundamental aspects and recent developments in electropolishing’, *International Journal of Machine Tools and Manufacture*. 2019. doi: 10.1016/j.ijmachtools.2019.01.001.

[3] I. Perevozova, N. Shmygol, D. Tereshchenko, K. Kandahura, and O. Katerna, 'Introduction of creative economy in international relations: Aspects of development security', *J. Secur. Sustain. Issues*, 2019, doi: 10.9770/jssi.2019.9.1(11).

[4] L. J. Abdo, A. Kemp, G. Coupland, and S. Griffin, 'Biodiversity Offsets Can Be a Valuable Tool in Achieving Sustainable Development Developing a Holistic Model for Biodiversity Offsets That Incorporates Environmental, Social and Economic Aspects of Sustainable Development', *J. Sustain. Dev.*, 2019, doi: 10.5539/jsd.v12n5p65.

[5] N. M. AH and A. Munip, 'Cultivating Entrepreneurial Values To Improve Several Aspects Of Early Childhood Development: The Case Study In Khalifah Kindergarten Yogyakarta', *Sunan Kalijaga Int. J. Islam. Educ. Res.*, 2019, doi: 10.14421/skijier.2018.2018.21.05.

[6] N. Arabadzhy and I. Korniienko, 'Retrospective And Modern Aspects Of The Development Of Charity', *Balt. J. Econ. Stud.*, 2019, doi: 10.30525/2256-0742/2018-4-5-256-265.

[7] V. M. Repnikova, O. N. Bykova, O. O. Skryabin, D. E. Morkovkin, and L. V. Novak, 'Strategic aspects of innovative development of entrepreneurial entities in modern conditions', *Int. J. Eng. Adv. Technol.*, 2019.

[8] M. L. Belonozhko, S. M. Kirichuk, and A. N. Silin, 'Socio-economic aspects of the development of energy companies in the Arctic region', *Int. J. Energy Econ. Policy*, 2019, doi: 10.32479/ijeep.7151.

[9] I. L. Beilin, V. V. Khomenko, and N. V. Kalenskaya, 'Institutional aspects of the cluster development of the regional economic system', *Humanit. Soc. Sci. Rev.*, 2019, doi: 10.18510/hssr.2019.7637.

[10] L. B. Zastavetska, T. B. Zastavetskyi, B. V. Zablotskyi, and K. D. Dudarchuk, 'Social and geographical aspects of development of urbanizational process in Ukraine', *J. Geol. Geogr. Geoecology*, 2019, doi: 10.15421/111877.

CHAPTER 11

A BRIEF STUDY ON POPULATION AND DEVELOPMENT

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ABSTRACT:

the interaction between population dynamics and socioeconomic advancement in the link between population and development. It looks at how population growth, distribution, and demographic trends affect a variety of development-related factors, such as economic expansion, the reduction of poverty, access to healthcare and education, and environmental sustainability. The significance of comprehensive population policies and sustainable development plans for obtaining favourable demographic and development outcomes is also covered in the study.Many theories of growth and development have taken into account how the population affects the pace of economic expansion, while others have treated it as an exogenous quantity. The intellectual prowess of human capital, which advances technology, boosts the economy's growth rate.

KEYWORDS:

Population, Development, Population Growth, Demographic Trends, Socioeconomic Progress, Economic Growth.

INTRODUCTION

Depending on how it is used, a big population may prove to be both an advantage and a problem for the economy. An advantage might be a huge population since it can produce more and, if invested in, higher-quality human resources. However, if they are not employed effectively, they may really harm the economy. Many theories of growth and development have taken into account how the population affects the pace of economic expansion, while others have treated it as an exogenous quantity. The intellectual prowess of human capital, which advances technology, boosts the economy's growth rate[1], [2].

Human Resources and Economic Development

A resource that uses other resources to generate products and services is a human resource. Neither human resources nor other resources can be used to become productive on their own. Human resources are thus the most important of all resources. The improvement of living circumstances for people is even the goal of economic development. Therefore, human resources play two distinct roles in the economy: (a) as suppliers of factor services; and (b) as consumers.

Factor Services Using Human Resources

i. **Minimum Scales of Production:** When we offer infrastructure, its fixed cost must be shared by a large number of people in order for it to be commercially feasible. With more

workers available, an economy like Australia can expand at a faster pace. These nations' lax immigration policies are a result of this.

ii. **Demographic Transition and Savings:** As the population grows, so does the age makeup of the populace. It expands the work force while reducing the proportion of dependent people. Savings thus rise as well.

iii. **Capital Formation in Agriculture:** Family labour is used in agriculture to labour on farms.The overall amount of work hours will rise as the size of the family grows. The human capital pool in agriculture will rise as a result. The "Boserup Sequence" refers to this connection. Ester Boserup asserts that when people grows, land and other natural resources become more limited, which encourages agriculture's expansion. Food costs increase as a result of relative price changes. Institutions like private property rights are created as a result of this. These new organisations support more labor-intensive agricultural practises. It improves the large-scale economics linked to the supply of infrastructure [1], [2].

iv. **Labour Force Participation:** As the number of dependent family members rises, more women are motivated to work, the retirement age is delayed, there are more children employed, and men work longer hours, all of which contribute to a higher labour force participation rate.

v. **Trade Specialisation:** A nation with an abundance of workers might specialise in labor-intensive sectors to boost exports. Therefore, increasing the labour supply would allow the nation to engage in greater commerce.

vi. **Technological Changes:** A larger population will be able to produce more genetic material, which will speed up the development of technology. Simon Kuznets said that a greater population may spur economic development under the following circumstances.

Multiple underutilised resources exist, labour is becoming more mobile, the division of work is easier, and technology is improving to allow for improved human resource utilisation.

Malthus and Other's Views

First to bring up the problem of overpopulation was the economist Thomas Malthus. Malthus said that there is a continual tendency for population to grow.

However, the development of food production in particular is vulnerable to decreasing returns.

Thus, there is an imbalance between the growth in population and the production of food, and this imbalance is progressively becoming bigger[3], [4]

Malthus predicted that this equilibrium would produce famine and malnutrition, which would result in high mortality and short life expectancy. In addition, there may be famines, epidemics, and other man-made or natural disasters.

These are what Malthus called "positive checks," which inevitably occur if people do not take preventative action. Malthus suggests that preventative measures like celibacy, delayed marriage, moral constraints, etc.

Optimum Theory of Population

Prof. Sidwick came up with the idea originally. The definition of optimal population is the population size that allows a nation to generate the maximum per capita income possible given its available resources, technology, and capital assets.

Dalton provided a formula that quantifies the amount that the actual population deviates from the ideal population.

1. M = A – O/O
2. M is for Misalignment
3. Actual Population is A.
4. The ideal population is O.

A nation is overpopulated if M is positive and underpopulated if M is negative.

Demographic Transition Theory: On the basis of the experiences of the emerging countries, Frank Notestein predicted three phases of the demographic transition.

Stage One: The problem involves a highly underdeveloped nation. Typically, it takes place in an agricultural economy.

Because of the high birth and mortality rates at this stage, the population growth rate is still quite low. The high birth rate is a result of factors including early marriages, religious convictions, lack of family planning schemes, and illiteracy. Since parents start working at a young age and do not invest in their education, children are not seen as a duty. The high mortality rate is also a result of poverty, poor nutrition, epidemics, inadequate or nonexistent medical services, and inadequate sanitary facilities.

Stage Two: Industrialization is well underway and resources are being used more effectively in stage two of a developing nation. Due to widespread illiteracy, the birth rate is still high. On the other side, fewer people die as a result of improved medical infrastructure. Population explosion results from it. This stage is harmful to economic progress because rising population eats away at its advantages while per capita standards are unaffected[5], [6].

Stage Three: In the third stage, both the birth and mortality rates decline, resulting in a steady population.The majority of industrialised nations are at this stage. Due to widespread use of contraception, higher levels of knowledge, and a freer society, the birth rate is declining. Better medical facilities cause a decrease in the death rate.

DISCUSSION

Nature of Population Problem in Developing Countries

The idea of demographic transition was applied to emerging nations in the present, although in a very different way.

(a) Because physical resources are more limited in most emerging nations due to overpopulation, neither emigration nor gentle moral persuasion to have fewer families is predicted to provide relief.

(b) The population growth rate now is far larger than it was in European nations when they passed through this developmental period. It may be calculated based on the fact that we add one Australia to India each year. The majority of Europe's industrialised countries did not remain in the second stage of the demographic transition for very long. However, several developing nations lowered their mortality rates to levels comparable to those in rich nations, but the birth rate did not decrease because socioeconomic transformation did not take place. India is an example. Since 1921, we have been in the second stage of the demographic transition, and we have yet to reach the third stage [7], [8].

(c) While population growth in today's developed countries has been spread out over a longer period of time and has been accompanied by economic development, death rates in today's developing countries have dropped sharply and suddenly, with little to no change in the socioeconomic environment, keeping birth rates high. It worsens their predicament for them.

In a word, emerging nations must be cautious while using the demographic transition paradigm. Each nation must recognise the unique causes of the issue in its own context before announcing a national strategy.

Additional Demographic Features of Developing Economic

The theory only addresses the quantitative side of population, but the qualitative aspect is just as important. Understanding some additional qualitative demographic characteristics and how they relate to economic growth would help define such a programme more effectively.

(a) **Life Expectancy:** This measures how long on average a newborn infant is predicted to live.The country's health system and average length of life may both be measured using this statistical method.High life expectancy is a sign of low mortality, and vice versa. The quality of life has increased as a result of an increase in life expectancy.

(b) **Infant Mortality Rate:** This statistic measures the number of infant deaths per 1,000 live births. Other pertinent indicators include (a) child mortality, which calculates the likelihood that a kid between the ages of one and five would pass away. (b) Under-five mortality: This statistic tracks the number of kids who pass away before turning five for every 1000 live births. If any of these indicators is high, it indicates underdeveloped and subpar health facilities. IMR is broken down into two categories: neonatal deaths (which happen during the first month of life) and post neonatal deaths (which happen after the first month but before the first year).

(c) **Age Composition:** The analysis of the population's distribution by age groups and the division of the population according to age are both referred to as age composition. It is important to understand the labour force and workforce that the economy has to offer. Trends in fertility and death influence the age and sex composition. Since minors under the age of 14 cannot work. The legal retirement age is 60. Therefore, those between the ages of

15 and 59 make up the labour force in the economy [9], [10].Knowing the proportion of persons who rely on the labour force is helpful. It is referred to as dependence ratio. The dependent ratio equals:Population in the Age Group 15–59 as a Percentage of the Total Population. The pace of economic development increases as the proportion of the population that is employed rises. Young people work and save money for their retirement, which boosts the rate of savings and, in turn, investment.Without any intentional effort, the population of East Asia developed in such a manner that the working population rose far more quickly than the dependant population.

(d) **Sex Composition:** The ratio of women to males is thus. The evaluation of social wellbeing is essential.The sex ratio is steadily declining in many emerging nations, including India. The following things seem to have made the tendency worse.

i. Infanticide is a common practise in many countries.
ii. Women have consistently been undercounted in comparison to males in census after census.
iii. Discrimination against women in access to adequate nutrition and medical services.
iv. There are societal traditions that give preference to male children more often. A rigorous population strategy requiring families to have two children may affect the sex ratio due to an increase in births that are sex selective. However, the ratio may be raised by elevating women's position in society.

(e) **Literacy and Levels of Development:** A substantial positive association between education and degree of economic development has been scientifically examined and shown. The belief that education is the solution to all socioeconomic issues has been shared by economists and sociologists.The importance of female literacy rates is much greater since they will increase the number of workers available in the economy. Contraceptive use will rise, child mortality will fall, and marriage age will be delayed as a result. A highly educated populace makes government more responsible and accountable, which also contributes to a greater rate of economic growth.

(f) **Rural-Urban Distribution:** If the majority of people reside in rural regions, this suggests that a significant component of the labour force is employed in agriculture. It's also conceivable that many of them are jobless but hiding it. Rural regions also have weak social development indices.

On the other hand, a growing proportion of urban residents suggests that a greater work force is employed in the secondary and territorial sector. It entails redistributing workers from low to high productivity sectors, increasing GDP and the pace of economic development as a result.

Population, Poverty and Environment

At both the micro and macro levels, the relationship between poverty and population is investigated. At the micro level, the relationship between the poverty line and fertility rate is examined. At the micro level, it has been shown, observed, and shown that impoverished people have greater fertility rates due to high rates of illiteracy and their attitude towards children as helping hands without feeling any need to invest in their education. Their high fertility rate is a

contributing factor in their poverty. Therefore, poverty has both a cause and an effect of high fertility rates. The environment can only support so much weight. Environmental deterioration occurs when population growth exceeds the environment's carrying capacity. Rich and poor people both contribute to the degradation of the environment. Resources are misused by the impoverished and overused by the rich. It raises demand for food given a fixed, fully inelastic supply of fertile land. As a result, an economy must work quickly just to maintain everyone's current quality of life.The rapid population growth has effects on sustainable development as well. The ecosystem would not be able to support an expanding population. Natural resources will be depleted and ecological imbalances will be caused.

Need for a Population Policy in a Developing Economy

Since the majority of developing nations struggling with population explosion are in the second stage of demographic transition, they need a strategy that targets birth rates. The best contraceptives are increased wealth, education, industrialisation, and social change. These may all lower fertility rates. According to G. S. Becker's demand theory, a decrease in fertility rate results from an increase in family wealth because parents now want to make better investments in each kid.As a result, there will be less need for many kids. Therefore, the fertility rate will decrease if money is redistributed and a higher quality of living is guaranteed. Leibenstein clarified his concept by considering kids to be durable consumer commodities. He listed six different services that parents get from their kids. Consumption utility, economic utility, risk-reduction utility, Old Age Security utility, long-term family status maintenance utility, and utility received from contributing to the whole family are only a few examples. However, there are distinctions between the current circumstances in emerging nations and those in western nations. It has already been explained.Population management is required for a nation like India to quicken the pace of economic growth. We must thus have a well thought out population strategy and ensure that it is carried out.

CONCLUSION

Countries may take advantage of the potential demographic dividend, safeguard the welfare **of** their citizens, and promote long-term socioeconomic growth by understanding the linkages between population and development. The creation and implementation of successful population and development programmes depend heavily on cooperation between governments, civic society, and international organisations.In conclusion, establishing successful policies and strategies that encourage sustainable and equitable growth requires a knowledge of the connection between population and development.

Countries may open doors for economic growth, poverty reduction, better healthcare and education, and environmental sustainability by addressing population dynamics, investing in human capital, and incorporating demographic considerations into development planning.Consumption utility, economic utility, risk-reduction utility, Old Age Security utility, long-term family status maintenance utility, and utility received from contributing to the whole family are only a few examples. However, there are distinctions between the current circumstances in emerging nations and those in western nations.

REFERENCES

[1] M. Bontje, 'Population and Development', in *International Encyclopedia of Human Geography, Second Edition*, 2019. doi: 10.1016/B978-0-08-102295-5.10338-5.

[2] V. Chandra-Mouli *et al.*, 'The Political, Research, Programmatic, and Social Responses to Adolescent Sexual and Reproductive Health and Rights in the 25 Years Since the International Conference on Population and Development', *Journal of Adolescent Health*. 2019. doi: 10.1016/j.jadohealth.2019.09.011.

[3] A. Lešková and A. Vaishar, 'Recent population development of very small municipalities in the Czech Republic', *Quaest. Geogr.*, 2019, doi: 10.2478/quageo-2019-0034.

[4] İ. Kasap and E. Özdamar, 'Population development of drosophila suzukii (matsumura) (diptera: Drosophilidae) in vineyards of çanakkale province', *Turkiye Entomoloji Derg.*, 2019, doi: 10.16970/entoted.499460.

[5] M. S. H. Mondal, 'The implications of population growth and climate change on sustainable development in Bangladesh', *Jamba J. Disaster Risk Stud.*, 2019, doi: 10.4102/JAMBA.V11I1.535.

[6] Y. Cao, H. Yang, J. Li, C. Wang, C. Li, and Y. Gao, 'Sublethal effects of imidacloprid on the population development of western flower thrips Frankliniella occidentalis (Thysanoptera: Thripidae)', *Insects*, 2019, doi: 10.3390/insects10010003.

[7] H. Shi, J. Chen, S. Liu, and B. Sivakumar, 'The role of large dams in promoting economic development under the pressure of population growth', *Sustain.*, 2019, doi: 10.3390/su11102965.

[8] Y. Zhang and H. Xie, 'Interactive relationship among urban expansion, economic development, and population growth since the reform and opening up in China: An analysis based on a vector error correction model', *Land*, 2019, doi: 10.3390/land8100153.

[9] P.-I. I. Gómez-Sánchez, 'Personal reflections 25 years after the International Conference on Population and Development in Cairo', *Rev. Colomb. Enfermería*, 2019, doi: 10.18270/rce.v18i3.2659.

[10] E. Kowalska-Olędzka, M. Czarnecka, and A. Baran, 'Epidemiology of atopic dermatitis in Europe', *J. Drug Assess.*, 2019, doi: 10.1080/21556660.2019.1619570.