

# BASICS OF MANAGERIAL ECONOMICS

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Yelahanka Lokesh  
Aditya Kashyap



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# CONTENTS

<b>Chapter 1.</b> Exploring the Nature of Managerial Economics .....	1
— <i>Mr. Yelahanka Lokesh</i>	
<b>Chapter 2.</b> Moral Hazard: A Concept in Economics and Finance.....	12
— <i>Dr. Mounica Vallabhaneni</i>	
<b>Chapter 3.</b> Law of Demand: A Fundamental Principle in Economics .....	21
— <i>Mr. Yelahanka Lokesh</i>	
<b>Chapter 4.</b> An Analysis of Demand Forecasting.....	28
— <i>Dr. Mounica Vallabhaneni</i>	
<b>Chapter 5.</b> Fundamental Aspect of Managerial Economics: Cost and Production Analysis.....	35
— <i>Mr. Yelahanka Lokesh</i>	
<b>Chapter 6.</b> Managerial Decision Analysis Structure: A Systematic Framework .....	43
— <i>Dr. Mounica Vallabhaneni</i>	
<b>Chapter 7.</b> Managerial Economics: A Positive or Normative Science Structure .....	53
— <i>Mr. Yelahanka Lokesh</i>	
<b>Chapter 8.</b> Approaches To Managerial Decisions Structure.....	60
— <i>Dr. Mounica Vallabhaneni</i>	
<b>Chapter 9.</b> An Economic Demand Analysis .....	68
— <i>Mr. Yelahanka Lokesh</i>	
<b>Chapter 10.</b> An Overview on Market Demand Schedule.....	79
— <i>Mr. Yelahanka Lokesh</i>	
<b>Chapter 11.</b> Impact of Economic Slowdown: A Comprehensive Review.....	87
— <i>Dr. Mounica Vallabhaneni</i>	
<b>Chapter 12.</b> Techniques of Pricing Methods for Business Strategy .....	102
— <i>Mr. Yelahanka Lokesh</i>	
<b>Chapter 13.</b> Pricing over the Life Cycle of a Product .....	111
— <i>Dr. Mounica Vallabhaneni</i>	
<b>Chapter 14.</b> Factors Determining Distributor's Discounts: An Analysis .....	118
— <i>Mr. Yelahanka Lokesh</i>	
<b>Chapter 15.</b> An Overview of Lesson Profit Policy.....	126
— <i>Dr. Mounica Vallabhaneni</i>	
<b>Chapter 16.</b> An Explanation of Methods of Depreciation.....	135
— <i>Aditya Kashyap</i>	

<b>Chapter 17.</b> An Analysis of Product Development in Organization .....	144
— <i>Aditya Kashyap</i>	
<b>Chapter 18.</b> Exploring the Features of Knowledge Economy .....	151
— <i>Aditya Kashyap</i>	
<b>Chapter 19.</b> Exploring the Growth of Knowledge Economy .....	159
— <i>Aditya Kashyap</i>	
<b>Chapter 20.</b> Development Trajectories and Policy Agendas: A Review Study .....	167
— <i>Aditya Kashyap</i>	
<b>Chapter 21.</b> Exploration the Concept of National Income .....	177
— <i>Prof. Ameya Ambulkar</i>	
<b>Chapter 22.</b> An Economic Indicator: Net National Product.....	188
— <i>Prof. Ameya Ambulkar</i>	
<b>Chapter 23.</b> An Analysis of Value-Added Method.....	195
— <i>Nikita Nadkarni</i>	
<b>Chapter 24.</b> National Income Accounting: A Comprehensive Analysis .....	203
— <i>Meena Desai</i>	

## CHAPTER 1

### EXPLORING THE NATURE OF MANAGERIAL ECONOMICS

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#### ABSTRACT:

Managerial economics is a branch of economics that applies economic principles and concepts to solve managerial problems and aid decision-making within organizations. This abstract explores the nature of managerial economics, highlighting its key characteristics, objectives, and relevance in managerial decision-making. Managerial economics is concerned with the application of economic theory, tools, and techniques to analyze and address business challenges. The abstract discusses its interdisciplinary nature, drawing from economics, finance, statistics, and other related fields. It emphasizes the focus on practicality and applicability, as managerial economics aims to provide managers with a framework for making informed and rational decisions. Managers study management economics because it enables them to understand how an organization operates. Organizational efficiency will arise from the manager's reasonable use of the economic behavior principles. In science, every conclusion is reached through extensive testing. Policies are created in managerial economics following extensive testing and trailing. Even if the human factor in the economy is unpredictable, the policies put in place are flexible. Managerial economists make judgments based on their insightful historical observations and experience.

#### KEYWORDS:

Decision-Making, Demand Analysis, Efficiency, Elasticity, Marginal Analysis, Market Structure.

#### INTRODUCTION

Economic management is a science. An important academic area is managerial economics. It is comparable to science in that it satisfies the following requirements for becoming a science. Science is a corpus of systematic knowledge. It is founded on scientific observation. Managerial economics is a field of study that focuses on choosing between competing uses for finite resources. This branch of knowledge identifies or studies the internal and environmental environments that influence decision-making. The principles of science are universal. Similar to that, managerial economics policies may be applied generally, though not completely. Depending on the circumstance and how people react to it, the policies need to be adjusted from time to time. Although policies are generally applicable, changes are sometimes needed.

#### Management Economics Demands Creativity

A managerial economist must be skilled at using his abilities, knowledge, and understanding to accomplish the corporate goal. Managerial economists need to have a skill to put their theoretical understanding of the components of the economy into practice.



## Managerial Economics for Organizational Management

Management benefits from the use of managerial economics in decision-making. These choices are appropriate in the current economic climate since they are founded on economic reasoning.

The best resource allocation may be aided by managerial economics. Resources are limited and have other uses as well. Managers must make the best use of these few resources. The applications of each resource are many. The manager chooses the most effective use of the resource using his understanding of economics. Microeconomics is a component of managerial economics. Managers endeavor to ensure the efficient and long-term operation of the organization by studying and managing the internal environment of the company. This feature alludes to the study of microeconomics. The field of managerial economics focuses on the issues that each organization faces, including its primary goal, the demand for its products, the setting of the organization's prices and output, the availability of complementary and substitute goods, the supply of inputs and raw materials, and the target or potential customers for its goods.

Macroeconomics is a part of economics. All members of the organization collaborate. They are impacted by the external environment in which the economy operates, including governmental policies, the general level of prices, economic income and employment levels, the stage of the business cycle in which the economy is operating, the exchange rate, the balance of payments, general spending, consumer saving and investment habits, and market conditions, among others. These elements have a connection to macroeconomics. The nature of managerial economics is dynamic. Managerial Economics is concerned with people. Each person's personality and attitude are unique. Therefore, to keep up with dynamism and vigor, managerial economics evolves with time.

## Importance of Managerial Economics

The significance or importance of business/managerial economics can be discussed as, Traditional economic concepts that are important for actual company decision-making are the focus of business economics. To help the management make better judgments, they are altered or changed. Building a sui toolkit from classical economics is therefore achieved by business economics. It also combines helpful concepts from several other fields, like sociology, psychology, etc. if they are deemed important for making decisions. Actually, in order to best allocate resources under a variety of explicit and implicit limitations, business economics consults with other disciplines that have an impact on business choices [1], [2].

In a complex setting, business economics aids in a range of business choices. A manager becomes a more skilled model creator after studying business economics. It enables him to see the significance of the bond. describing a specific circumstance at the organizational level. Business economics acts as an integrating agent when an organization's operations are carried out via well-known focus functional areas, such as finance, marketing, people, and production, by coordinating the actions in these many areas. Business economics recognizes the relationship between a corporation and society and carries out the essential function of an agent in accomplishing the firm's objectives for social and economic benefit. It has become clear that businesses also have social responsibility in addition to their duties to their shareholders. These social duties are the main focus of business economics since they serve as limits on how businesses make choices. Through corporate actions that are socially conscious, it acts as a tool to improve the economic well-being of society [3].

## Portion of Management Economics

The field of managerial economics is still evolving. The field of study for management economics is referred to as its scope. Economic theory is where managerial economics got its start. The scope of management economics is broader due to its empirical orientation. Management may utilize the strategic planning tools provided by managerial economics to get a comprehensive understanding of how the corporate world operates and what can be done to preserve profitability in a constantly changing environment. Managerial economics refers to those facets of economic theory and application that have a direct bearing on management practice and the enterprise's decision-making process. The macroeconomic theory and the economics of public policy, which are likewise of interest to managers, are not included in its purview.

## DISCUSSION

### Managerial Economics' Purpose

Managerial Economics is concerned with distributing the limited resources in a way that reduces the cost. Microeconomics and macroeconomics are not the same as managerial economics. The focus of management economics is really on applying microeconomics to address managerial problems. By posing three essential issues, For whom to produce managerial economics assures that managers make effective and efficient choices about consumers, suppliers, rivals, as well as inside an organization exposed to finite resources.

A company applies the management economics concepts to these inquiries. What products and services, and in what quantity(es), should be produced? is the initial question. For making this decision, the managers turn to demand theory. The second question refers to how products and services are created. The company now needs to decide between many alternative manufacturing strategies. For making these important choices, managers may utilize a variety of management economics techniques, such as production and cost analysis, project assessment methodologies, etc. Who should use and make claims for the company's products and services is the third issue. The company must thoroughly analyze the structure of the market before deciding on prices and production levels for different markets.

Briefly stated, management economics places a focus on the company, individual corporate actions, and the environment in which the organization functions. An excellent analytical and logical instrument is managerial economics. Managerial Economics is relevant to non-profit institutions like hospitals, schools, government agencies, etc. in addition to for-profit businesses. Operations research, statistics, mathematics, and the theory of decision-making are all closely related to managerial economics. Additionally, managerial economics links and integrates concepts from other functional areas of management, such as project management, finance & accounting, marketing, and production. To comprehend and analyze real-world managing issues, a management economist must combine concepts and methodologies from all of these disciplines and functional areas. Therefore, management economics' focus is on the following factors:

### Managerial Economics' Nature

Managers research management economics because it enables them to understand how an organization operates. The management of the organization will run smoothly if they use the rules of economic behavior in a reasonable manner. Economic management is a science. Managerial Economics is comparable to science in that it meets the following requirements for becoming a science. Science is a corpus of systematic knowledge. This

branch of knowledge identifies or studies the internal and environmental environments that influence decision-making. In science, every conclusion is reached through extensive testing. Managerial economists make judgments based on their insightful historical observations and experience. The principles of science are universal. Similar to that, managerial economics policies may be applied generally, though not completely.

### **Management Economics Demands Creativity**

A managerial economist must be skilled at using his aptitude, expertise, and understanding to accomplish the corporate goal. Managerial economists need to have a skill to put their theoretical understanding of the components of the economy into practice. Managerial Economics for organizational management. Management benefits from the use of managerial economics in decision-making. These choices are appropriate in the current economic climate since they are founded on economic reasoning. The best resource allocation may be aided by managerial economics. Resources are limited and have other uses as well. Managers must make the best use of these few resources. The applications of each resource are many. The manager chooses the most effective use of the resource using his understanding of economics. Microeconomics is a component of managerial economics. Managerial economics is a narrower notion than microeconomics. Managerial economics is built on the principles of microeconomics. Nearly all managerial economics topics are interpretations of microeconomics principles. Macroeconomics is a component of managerial economics.

Everyone in the company collaborates with one another. They are impacted by the external environment in which the economy operates, including governmental policies, the general level of prices, economic income and employment levels, the stage of the business cycle in which the economy is operating, the exchange rate, the balance of payments, general spending, consumer saving and investment habits, and market conditions, among others. These elements have a connection to macroeconomics [4]–[6]. The nature of managerial economics is dynamic. Managerial Economics has to do with people. Each person's personality and attitude are unique. Because of this, managerial economics evolves throughout time to keep up with dynamism and vitality.

### **Managerial Economics Principles**

The principles of managerial economics aid in a manager's development of clear thinking, logical reasoning, and strength. The following are some key ideas:

#### **Principle of Marginal and Incremental Change**

According to this concept, a choice is considered reasonable and sound if, given the company's goal of profit maximization, it results in a rise in profit, which is the case in either of two situations. If overall revenue growth outpaces overall expense growth. If overall cost decreases more than whole income. Analyzing margins entails determining how a unit change in one variable affects another. Small changes are often referred to be marginal. Changes in total revenue per unit of product sold are referred to as marginal revenue changes. The term "marginal cost" describes the variation in overall costs for each change in output generated. The effect or change in marginal revenue and marginal cost that results will determine whether a corporation decides to adjust the pricing. The company should implement the pricing modification if the marginal revenue is higher than the marginal cost.

Marginal analysis often results from a change in outputs or inputs, while incremental analysis analyzes the change in the firm's performance for a specific management action. The marginal idea is generalized by incremental analysis. It speaks about adjustments in cost and

income brought on by a change in policy. As an example, consider adding a new company, purchasing additional inputs, processing goods, etc. Incremental change is defined as a change in output brought on by modifications to a process, a product, or an investment. According to the incremental principle, a choice is appropriate if revenue grows more than costs, costs decline more than revenues, some revenues increase more than others decrease, and some expenses fall more than others increase [7].

### **Equi-marginal Theory**

The benefit gained by consuming an extra unit of a commodity is known as marginal utility. According to the rules of equal marginal utility, a consumer will attain equilibrium when the marginal utilities of the numerous goods he consumes are equal. Modern economists claim that this concept has been articulated as a proportionate marginal utility law. According to this, a customer will spend his or her income on a variety of things such that the marginal utility of each is inversely correlated with the price. i.e.,

### **The Opportunity Cost Rule**

The sacrifice of alternatives necessitated by a choice is referred to as the opportunity cost of that action. There is no cost if no sacrifices are made. The opportunity cost concept states that a company may only recruit a factor of production if and only if that element will get compensation in that vocation or job that is at least as high as its potential cost. Opportunity cost is the lowest price at which a factor-service would still be available for the intended purpose. It might also be described as the price of given up choices. For instance, a guy decides to launch his own company instead of keeping his lucrative work that pays him Rs. 50,000 per month. The opportunity cost of having his own company will be the missed chance.

### **Principle of Time Perspective**

This concept states that a manager or decision-maker should properly emphasize the short- and long-term effects of his judgments by appropriately weighing the various time periods before making a choice. In the short term, certain variables are fixed while others are subject to change. By increasing the number of variable parameters, the productivity may be boosted. While the long run is a time frame during which all production elements are susceptible to change. It is simple for selling enterprises to enter and depart. From the perspective of the consumer, the short-run is the time frame during which they react to price changes based on their tastes and preferences, while the long-run is the time frame during which they have ample time to react to price changes by changing their likes and preferences.

### **Discounting Theory**

This concept states that before a credible comparison of options can be made, all expenses and revenues that will be impacted by a choice in the long run must be discounted to current values. This is crucial because money now does not have the same value as money tomorrow. Money does have a temporal value. The act of converting future money into an equal amount of current money is known as discounting. For instance, if you invest \$1 now and get 10% interest, you will have \$1.10 in a year.

### **Managerial economist: What they do**

By applying his analytical abilities and highly refined approaches to the difficult problems of effective decision-making and long-term forward planning, a managerial economist aids

management. Processing information and making judgments are two of a management economist's most crucial responsibilities.

The role of managerial economist can be summarized as follows:

1. He examines macroeconomic trends and evaluates their relevance to the particular company he works for.
2. He must constantly assess the likelihood of converting a constantly shifting economic environment into viable business opportunities.
3. He helps a company with its business planning process.
4. He brings a cost-benefit analysis with him.
5. He helps the management make judgments on how a company runs inside.
6. A management economist must also assess changes in macroeconomic data and their potential impact on how the organization operates.
7. He also advises the management on commerce, foreign exchange, and public relations. He advises the company on the expected effects of monetary and fiscal policy changes on the operation of the enterprise.
8. He also does an economic study of the rival businesses. He has to gather economic data and go through all relevant facts on the setting in which the company works.
9. Conducting in-depth study on the industrial market is a management economist's most important task.
10. A management economist must undertake a complex statistical analysis in order to fulfill all of these responsibilities.
11. He has to be watchful and capable of handling pressure.
12. He also shares economic data with management, such as tax rates, rivals' prices and products, etc. They also provide government officials their insightful recommendations.
13. A managerial economist sometimes has to write presentations for senior management.

### **Worth of Management Economics**

Decision-making is a concern of management, and managerial economics aids in the process in the following ways:

1. Managerial Economics a collection of tools and methods that help a manager develop their model-building skills. The Manager may eliminate the comparatively less significant information by using these models to capture the key connections that accurately reflect the actual scenario.

The majority of the ideas required for the study of business issues are provided in I

2. Managerial Economics. A choice issue may be understood and solved with the use of concepts like demand elasticity, constant and variable costs, short- and long-run expenses, opportunity costs, net present value, etc.

## Key Economic Terms and Concepts

The macroeconomic environment consists of the magnitude and trend of economic variables such as total markets for goods and services, national income, employment levels, and governmental policies, among others.

1. Microeconomic analysis: Examines the actions of specific economic entities, such as investors, businesses, and consumers.
2. The normative approach is prescriptive in that it makes recommendations for what should be done.
3. Aspiration Level: Aspiration levels are the demands made by the many organization-coalition groupings that are vying for the firm's available resources.
4. Expense Preference: Certain discretionary expenses that provide managers pleasure, such as the freedom to spend in initiatives that may raise his prestige and regard.
5. Fixed costs are expenses that remain the same regardless of degree of output and are limited by available capacity.
6. Managerial Slack: Company funds that the manager is permitted to use for personal expenses such as entertainment costs, staff cars, and opulent offices.

Aspects that are not financial: Concern physical inputs and other variables. An ideal choice enables the decision-maker to get the closest to achieving their intended goal. A market with a lot of buyers but few sellers, where a few sellers control the market, is said to have an oligopolistic structure. Additionally, each company's actions under an oligopoly have an impact on the other sellers in the market, which prompts competitors to respond with price reductions, quality modifications, advertising, new product lines, etc. When a firm's purpose is to fulfill a goal rather than maximize, this is known as satisfying behavior.

1. Profits: Profits may be seen as a reward for creating innovations, a reward for taking on risks and ambiguity, and the outcome of flaws in the market system. H. Grayson
2. Profits are "the residual payment, what remains to the producer's income after all other payments have been made," according to one definition.
3. Similar to how income is defined, profits are defined as "the surplus of current income over past cost.
4. Dynamic condition: An economic situation in which a shift from the current condition is probable yet unforeseen.
5. Gross Profit is the difference between total revenues and total payments during a certain period of time.
6. Accounting for inflation: Measuring how changing prices affect a company's profitability and overall financial stability.
7. Innovation is any action an entrepreneur takes to lower costs or increase demand.
8. Net Profit: Revenue less any hidden expenses.
9. Normal Profit: The lowest anticipated return necessary to retain an entrepreneur in his current line of work.

**Monopoly Profit:** Profit that results from market imperfections and disequilibrium. An entrepreneur makes monopoly profits because of his level of monopolistic power in the product market, not because he engages in any entrepreneurial activity. His monopolistic earnings are inversely correlated with the size of his monopoly.

Profits that arise from changes in the market's overall price level are known as windfall profits. When manufacturers and dealers acquire their inputs and raw materials at cheap costs and sell their finished goods at suddenly higher prices as a consequence of unanticipated external causes, the gains arising from this are referred to as "windfall profits." These come

as a surprise; thus they cannot be seen as payment for any particular action taken by the entrepreneur.

**Opportunity Cost:** The advantages or income lost as a result of choosing one course of action over another. It is the expense associated with giving up the next best option.

**Marginal Productivity:** The output that is produced when a factor of production is used one more time, all other factors staying constant. The marginal product is the extra output that results from an additional input. It is sometimes referred to as marginal physical product since it is measured in physical units created.

The marginal cost is the extra expense spent while generating a second unit of product. The market's definitions A market is a group of people who engage in economic activity and where specific exchanges of products or services might occur. Any place where buyers and sellers interact often, either directly or via dealers, such that the price attained in one region of the market influences the prices paid in other areas, is referred to as a market.

1. **Equilibrium Price:** The price at which the amount of a good or service requested by customers and the quantity provided by suppliers of that good or service are equal.
2. **Free Entry:** The lack of restrictions on entering a market. Greater than average profit serves the purpose of luring new businesses into a sector in a free entry market.

Market structure is determined by the quantity and proportions of customers and sellers in a certain market, the kind of product, and the ease with which enterprises may enter the market. For instance, in perfect competition, several buyers and sellers compete with one another for the purchase and sale of a homogeneous item while free entrance and exit are allowed. A market structure known as a monopoly is one in which there is just one business present in the sector. Complete obstacles to entrance into the market are required for a corporation to maintain monopolistic dominance. Monopoly is a market structure that has piqued economists' interest throughout history. This term derives from the Greek word's monos and polein, which signify to sell by themselves. As a result, it suggests a market system with a single seller in literary terms. According to economic theory, a monopoly is defined as a single producer with high entry barriers and no close replacements for the product being sold. This one and only manufacturer has complete control over the market's supply. As a result, the supply curve for the company and the sector will be identical.

There is freedom of entry into and exit from the industry, no barriers to buyers' and sellers' activities, perfect knowledge and mobility, and perfect competition. Since each firm contributes only a small portion of the industry's overall output, perfect competition refers to a market structure in which firms accept the market price as given. This kind of idealistic market structure offers a benchmark or a reference point by which other, more practical market forms may be contrasted, assessed, and better understood.

1. **Price Takers:** Businesses have no power to change market prices. Firms operating in perfectly competitive marketplaces are meant.
2. **Price Distribution:** Charging varying rates to customers in various market niches for the same product.

Produce till marginal revenue is equal to marginal cost; at greater production levels, marginal revenue is lower than marginal cost. This is the Profit-Maximizing Rule. The time when a business must decide whether to cease producing since doing so will not change the company's short-term loss. This point is located at the lowest point on the firm's average variable cost curve in a completely competitive environment. The point at which total costs

and total revenues equal one other, showing neither a profit nor a loss. A collection of businesses that have banded together to negotiate prices and marketing tactics. An agreement to create a cartel or an alliance of businesses with similar interests is known as a cartel agreement. These contracts are created by businesses to regulate markets, prohibit excessive or unfair competition, trade intellectual rights, standardize goods, and share information gained through scientific and technological research. A collection of businesses or nations that work together to influence market pricing via the management of production and marketing. Both the United States and the European Union forbid it. There are very few significant cartels; the most notable example is OPEC, a cartel that is not illegal.

A duopoly is a market structure in which there are a lot of buyers but just two interdependent sellers. Two companies dominate the market with significant price control, non-price competition, and very high entry barriers. Real-world instances of a pure duopoly are very unusual; instead, it is more typical for two dominant enterprises to control the bulk of the market.

It explains the rigidity of the price. It is a visual illustration of a scenario in which competitors follow a firm's price cuts rather than its price increases. A demand curve of this kind is less elastic for prices below the going market price and more elastic for values above it. A market structure defined by the presence of several enterprises in the sector, where each seller tries to set his product apart from the competition in order to have some control over pricing. Monopolistic competition refers to a market condition when there are a lot of small manufacturers or suppliers providing comparable but different goods. A market structure known as monopolistic competition is characterized by a large number of companies providing comparable but distinct items, leading to rivalry on grounds other than price. Because the market structure is somewhere between pure monopoly and pure competition, monopolistic competition is also referred to as imperfect competition.

A market structure in which there are only a few powerful companies operating in a sector with high entry barriers. A market with an oligopoly has a small number of powerful providers in control. Market concentration is at a very high level. The Greek terms 'oligi' (which means few) and 'polein' (which means to sell) are the source of the word oligopoly. An oligopolistic market system has a small number of vendors of similar or differentiated goods. Due to the small number of sellers in the market and the fact that each seller both impacts and is impacted by the actions of other enterprises, oligopoly is often also referred to as "competition among the few." Interdependence among enterprises is a key oligopoly trait. This implies that while deciding on pricing and making investments, each company must consider the potential responses of other companies in the market. This leads to uncertainty in these marketplaces, which economists attempt to predict using game theory.

Price leadership is when one company in an oligopoly establishes a price that ultimately dictates what other companies in the sector will charge for their goods. A broad range of strategies used by competitive businesses to attract buyers to their goods by setting them apart from those of rivals, such as design modifications and advertising. A cost or benefit stemming from any activity or transaction that is imposed or conferred onto people outside the activity or transaction is known as an externality. Sometimes referred to as neighborhood impacts or spillover. In other words, an externality is a cost or benefit that comes from a third party but is not represented in the market price [8]–[10]. Genuine externality, Technological externality: market pricing does not reflect it. Financial externalities are reflected in market prices.



### Different Externality Types

MSB has a positive externality. Because it discloses an underproduction condition, it denotes inefficiency and leads to market failure. MSC is a bigger externality than MSB. Because it discloses an overproduction scenario, it denotes inefficiency and leads to market failure. The methods listed below may be used to address the issue of externalities.

1. Imposed by the government fees and subsidies
2. Negotiation and negotiating in private
3. Legal guidelines and practices
4. Selling or bidding off the authority to impose externalities
5. Direct control by the government.

### CONCLUSION

In conclusion, by using economic concepts to assess and resolve company issues, management economics plays a significant role in managerial decision-making. It is an essential tool for managers due to its multidisciplinary character, emphasis on pragmatism, and applicability in several management fields. Managers may make choices that contribute to the general performance and profitability of their firms by comprehending market dynamics, using economic models, and applying data analysis. The abstract also emphasizes how crucial it is for management economics to take into account both macroeconomic and microeconomic aspects. whereas macroeconomics considers aggregate economic indicators, governmental policies, and global economic trends, microeconomics focuses on individual choices and market behavior whereas macroeconomics offers a larger view. Managers must assess how macroeconomic conditions affect their company's operations and modify their strategy as necessary.

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## CHAPTER 2

### **MORAL HAZARD: A CONCEPT IN ECONOMICS AND FINANCE**

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#### **ABSTRACT:**

Moral hazard is a concept in economics and finance that refers to the behavior of individuals or entities changing when they are insulated from the consequences of their actions. This abstract explores the nature of moral hazard, its causes, implications, and strategies for mitigating its effects. The abstract discusses the principal-agent relationship, where one party (the principal) delegates decision-making authority to another party (the agent). Moral hazard arises when the agent has the opportunity to act in their own self-interest at the expense of the principal, knowing that they will not bear the full consequences of their actions. This can occur due to information asymmetry, inadequate monitoring, or when contracts do not align incentives appropriately. The insurance literature is where the phrase "moral hazard" first appeared. It refers to the negative consequences that insurance may have on an insured's behavior from the insurance company's perspective. A car owner could insure his vehicle against accidents and then purposely cause an accident to receive the insurance payout.

#### **KEYWORDS:**

Adverse Selection, Contractual Agreements, Economic Behavior, Financial Risk, Incentives, Insurance Industry, Moral Hazard.

#### **INTRODUCTION**

Arrow, K. When economic actors cannot be held entirely accountable for their actions, they may maximize their own utility at the cost of others. In other words, moral hazard is the post-contractual opportunism that develops when an individual chooses to pursue his or her own interests at the cost of others since the behaviors that have efficiency implications are not always publicly viewable. In team production, when it is difficult to track each agent's unique contribution, moral hazard may be a persistent issue [1]. Moral Hazard Causes Moral hazard is primarily caused by information asymmetry, risk aversion, high measurement and enforcement costs, and contracting barrier. Solutions for Moral Hazard include bonding, incentive contracts, and monitoring, among other things.

#### **Avoidable Selection**

Adverse selection may be caused by high measurement costs in the lack of complete information. Although this issue had long been acknowledged in the insurance literature, it wasn't until George Akerlof's "the market for lemons" that economists started to take it seriously. For instance: Admission of students: As opposed to other professional courses, which require performance in the +2 exam as well as an entrance test where other correlates are monitored, B.A. degree admission only requires passing marks on the +2 Exam, which means that the arts colleges will experience adverse selection as applicants who don't qualify for the other courses may swarm to the arts courses.

### **different Characteristics for the Development of Managerial Economic Skills**

According to the following factors, managerial economic talent has developed.

1. The movement of economic activity in circles.
2. The nature and purpose of the company,
3. The significance of profit both accounting and economic profit and
4. Principal-Agent issues, etc.

In a market economy, the relationships between businesses, customers, and resource owners are explained by the circular flow of economic activity. In the accompanying graphic, which represents a two sector and a four sector model, respectively, the circular movement of revenue, output, resources, and factor payment demonstrating their interdependency [2]–[4].

### **DISCUSSION**

Circular flow of income, output, resources & factor payment. By its very nature, a company organizes its resources to create products and services that satisfy both the needs of its customers and those of other businesses while also generating a profit. As a result, the theory of companies and the notion of firms are crucial to managerial economics. The company's goal is to maximize the current value of all future earnings while adhering to a number of restrictions, including ethical, legal, contractual, financial, and technical ones. Economists have often believed that a company's goal is to maximize profit. But when will there be a profit? this season? five years from now? Managers are often seen making choices that lower profitability in the present year in an attempt to boost profits in future years. R&D expenditure, the purchase of new capital equipment, and big marketing initiatives are a few examples of actions that initially result in lower earnings but considerably boost profits later on. It is considered that the objective is to maximize the present or discounted worth of all future earnings since both current and future profits are significant [5].

### **Principal Objectives of Businesses**

The five main objectives of a business enterprise are, in general, as follows:

1. **Profit Maximization Approach:** One of the key tenets of conventional neo-classical economic theory is that firms would always seek to maximize their profits. It is believed that an entrepreneur's aim to maximize profit constitutes reasonable behavior.
2. **Long-Term Survival:** Long-term survival is the primary goal of a company, according to Rothschild. Such businesses choose reduced earnings over the long term rather than higher profits in the near term.
3. **Prof. Baumol's Sale Maximization Objective:** As an alternative to profit maximization, Prof. Baumol has proposed the sale maximization objective. He provides various arguments for why the company should aim to maximize sales. A company's goal is limited maximization, which means that it must maximize overall revenue while adhering to minimal profit requirements. Prof. Baumol contends that it is a superior success indicator for the company than the conventional profit maximization approach.
4. **Marris's Managerial Enterprise Model:** The objective of the company in Marris' model is to maximize its balanced rate of growth, which includes both the rate of growth of the business's capital supply and the rate of growth of its product demand. The managers maximize both their personal utility and the utility of the owners by jointly maximizing the rate of growth of

demand and capital, in other words. The company is constrained in its pursuit of this optimum balanced growth rate by two factors: a skill restriction imposed by the management team's skill set and a money constraint imposed by the managers' desire to seek maximum job security.

5. The Model of Satisfying Behavior, developed by Prof. Simon in 1955, is implied by the Behavioural Theory of the Firm. Later, Cyert and March developed this notion. This theory is concerned with how a large multi-product corporation makes decisions in an unreliable market. The company is seen as an organizational coalition with several goals and multiple decisions rather than as a unit with a single objective and one choice. The company is seen as a coalition of many organizations that are involved in its operation in various ways. Partners in this alliance include management, employees, shareholders, clients, vendors, and lenders. Every group has a unique set of objectives. The many members of this alliance have competing objectives. The various organizations constantly haggle to accomplish their objectives. Cyert and March list the following five objectives as the firm's primary objectives:

The following goals must be met: production, inventory, sales volume, market share, and profit. According to this approach, the company strives to please rather than to maximize anything. In other words, the company intends to achieve an overall performance that meets the criteria established by the set of aspirational objectives. The company is a gratifying organization, not a maximizing organization, according to the behavioral theory. According to Cyert and March, corporations cannot operate with global rationality because of the unpredictability of the actual world, the scarcity of reliable information, the time constraints, and the restricted capacity of managers to comprehend information. Given these circumstances, businesses do not aim to maximize their revenues, sales, or any other factor. Instead, they behave in a pleasing manner. They seek adequate sales, earnings, and other outcomes.

### **The Reasons Behind the Company**

The pricing system facilitates the coordination and interaction of producers and consumers in a free-market economy. Governmental centralization is not required, and it is not seen preferable to have such control or planning. But inside the company, one or more managers often exercise central control over transactions and the arrangement of productive components. For instance, throughout the workday, employees nearly entirely submit to management. As a result, the way that production is organized in a market economy seems to be in conflict. While central planning and control often govern interactions inside corporations, the pricing system governs decentralized interactions between customers and businesses. This begs the issue of why price signals do not entirely control the industrial system. So, why do businesses exist in a market economy?

In essence, companies exist as organizations because it is less expensive to produce any level of output with a company than it would be without one. These prices are cheaper for a number of reasons. The cost of employing the pricing system to coordinate production is the first consideration. It would be exceedingly expensive to gather pricing data and to negotiate and complete individual contracts for each stage of the manufacturing process. Businesses often enter into long-term labor agreements that simply state that a pay rate per hour or day would be paid provided the employees comply with the employer's requests. This means that one basic contract covers what would often be a lot of transactions between the employers and employees. Every time the employee is given a new task, the two parties do not need to negotiate a new contract. Both management and labor willingly seek out such agreements

since it benefits both sides to avoid the transaction expenses involved in such conversations [6], [7]. The fact that some government meddling in the market affects transactions between businesses rather than inside organizations is a supplementary argument for the existence of firms. For instance, sales taxes often only apply to exchanges between businesses. A construction business may be required to pay sales tax in several states when purchasing cabinets from an independent cabinetmaker. This tax is avoided and the cost of producing the product is decreased by employing that worker. Because this is a secondary factor, the business would still exist in the absence of such interference, but it likely helps to the establishment of more and bigger companies by internalizing certain transactions that would otherwise be vulnerable to such interferences. Why won't this process continue until there is simply one enormous business, such as a massive General Motors or Exxon, that produces all the commodities and services for the whole economy, given that production costs are lowered by grouping production elements into firms? There are a minimum of two causes. First off, when a company becomes bigger, the cost of managing transactions inside the company tends to go up. According to logic, the company will internalize the lower-cost transaction first before moving on to the ones with greater costs. These internal transaction costs will eventually match the price of doing business on the open market. At that moment, the company will stop expanding.

For instance, all vehicle manufacturers in the world purchase tires from businesses that are dedicated to the creation of rubber goods. Ford and General Motors must have thought about constructing tire manufacturing facilities. It can be inferred that the expense of learning the new management skills necessary for such a different type of production, as well as the challenge of running an even bigger and more complex company, must have been greater than the expense of continuing to purchase tires from Goodyear, Michelin, or other manufacturers. Legal assistance is yet another instance. Although they are sometimes required, lawyers are often not a vital element of the production process. Having full-time lawyers whose services would not be continuously required would be too expensive for many companies. As a result, legal services are hired on an as-needed basis rather than being provided by a lawyer who works for the business full-time. For the majority of businesses, this structure is less expensive. Large companies, on the other hand, who often need legal services usually have a legal department on staff, but even they often hire outside law firms. A second element limiting business growth is the organizational capacity of an entrepreneur. If a business is too big for the management to effectively manage, resources may not be distributed across the many departments in an efficient manner. Many major companies are set up into groupings of divisions known as profit centers in order to solve this issue. The goal of each of these divisions' management is to maximize profit. The issue of limited power to govern the bigger corporation is at least somewhat solved by having a number of smaller companies, each of which is administered fairly autonomously.

These two justifications for limiting the company's growth come under the category of what economists refer to as "diminishing returns to management." In other words, due to poor management capacity, manufacturing costs per unit of output will often increase as businesses become bigger. It should be emphasized that some huge corporations are aware of the issue of excessive size and decentralize by creating several distinct divisions or profit centers that function as independent corporations. Accounting profit and economic profit. The difference between total income and total expenses, which include both explicit and implicit costs, is known as economic profit. Economic profit is less than accounting profit since it takes into account production's opportunity costs. Therefore, the amount of opportunity costs is what determines how much the economic profit and accounting profit vary from one another.

### **Statistical Profit**

Accounting profit is calculated using generally accepted accounting standards and is the difference between total monetary income and total monetary expenses. In other words, bookkeeping expenses and accounting profit are the same thing, and they both appear as credits and debits on a company's balance sheet. These are the direct expenses a company incurs to keep up production. The money that a business makes after selling its goods on the market is known as revenue. The temporal scope of accounting profit is likewise constrained; typically, accounting profit only takes into account the expenditures and revenues of a particular time period, such as a fiscal quarter or year. Accounting profit is calculated as Total Revenue less Total Costs, with Total Costs only including Explicit Costs.

### **Economics' Gain**

The difference between total monetary income and total expenses, which includes both explicit and implicit costs, is known as economic profit. Economic profit is lower than accounting profit since it takes into account production's opportunity costs. Additionally, economic profit covers a wider time period than accounting profit. If a company should join or depart a market, economists often take long-term economic profit into account. Economic gain equals Total Revenue minus. When a corporation must forgo something in order to employ elements that it neither buys nor hires, this is known as the implicit cost or opportunity cost.

### **Principal-Agent Complication**

A person hired by another, known as the principal, to operate on his behalf is known as an Agent. The activities of the agent are enforceable against the principal if they were taken within the limits of their power. When a principal assigns certain rights to an agent, who is obligated by contract to represent the principal's interests, an agency relationship is created. For instance: Landlords and tenants, employers and employees, voters and elected officials, etc. are examples of principal-agent relationships. Each person in hierarchies is a principle and an agent at the same time when rights are passed down an organizational ladder, with the exception of the top and bottom levels. However, the principals' and agents' interests diverge. Therefore, the agent's behaviors need to be properly limited. If not, agents could choose actions that are not in the principal's best interest.

In a Principal-Agent relationship, the agent is more likely to have information than the principal because he is more aware of his own actions, preferences, and capabilities, and it will be less expensive for him to learn about the specifics affecting the various tasks that the principal has given him. As a result, there is an asymmetric distribution of information between the two. Measuring the traits and performance of agents is expensive for the primary. Agents could then act smirkingly and opportunistically. "Hided actions" and "hidden information" are examples of informational advantages that an agent may possess. Others cannot precisely see or deduce hidden behaviors, as is the case, for instance, with employees' effort, which employers cannot assess for free. When the principle is unable to assess whether the acts of the agents, even if they could be cost-freely viewed, are in his best interest or not, as is the situation, for example, when a doctor orders a patient's scan, concealed information becomes an issue. Selection bias and moral hazard Principal-Agent Issues might occur under certain circumstances.

## Demand And Consumer Behaviour

A company's nature and levels of profit are determined by its expenses and revenues. Cost is the term used to describe the costs a producer incurs while producing a product or service. The term "revenue" refers to the amount of money that a business makes through the selling of its products. Total revenue, average revenue, and marginal revenue are the three most often used revenue concepts in economics.

### Total Income

Total revenue is the amount that a business makes by selling all of its goods and services at a certain price.  $TR = PQ$  in mathematics, where P stands for price and Q stands for quantity sold. If a business sells 100 of a product for Rs. 5, the total income will be  $100 \times \text{Rs. } 5 = \text{Rs. } 500$ .

### Average Income

The revenue per sold unit of the commodity is the average revenue. By dividing the total income by the quantity of units sold, it may be calculated. AR is calculated mathematically as  $TR/Q$ , where Q stands for quantity sold, TR stands for total revenue. In this case, the typical income is equal to  $500/100$ , or Rs. Average revenue thus equals price.

### Marginal Sales

Selling one additional unit of the good will result in an increase in marginal revenue, which is added to total revenue. Mathematically, marginal revenue (MR) equals total revenue (TR/Q), change in quantity sold (Q), and total revenue (TR/Q). Let's say a product sells 5 units for Rs. 50 in total sales revenue and 6 units for Rs. 60 in total sales revenue. The marginal income will be equal to  $\text{Rs. } 10 / 1 = 10/1$ .

### Relationship between AR and MR in a Perfect Competition Environment

It is expected that there will be a very large number of enterprises offering identical goods in a perfect competitive environment. Therefore, any change in production levels by a single company has no discernible impact on the overall supply or the market's pricing. The market price is determined by the combined forces of supply and demand, and one price often rules the roost for the whole sector. Each company is required to sell its amount at the prevailing market price and accept the market price as supplied. Since the company is a "price-taker," its demand curve is indefinitely elastic. As the company sells more and more products at the set price, its overall revenue will rise, but at a steady pace, indicating that  $AR = MR$ . For a company operating in perfect competition, the connection between AR and MR has been denoted by the numbers -1 and 1.

### AR and MR in the Context of Imperfect Competition

A company under imperfect competition, such as a monopoly, may only increase sales by decreasing its price, in contrast to perfect competition. Because of this, the marginal revenue curve that corresponds to the average revenue curve is below it. Under monopolistic competition, average and marginal revenue curves. Under monopolistic competition, the average revenue and marginal revenue curves both have a downward slope. It resembles that of AR & MR when they had a monopoly. As in imperfect competition, companies' price-mark, therefore AR and MR take the following forms. Under monopolistic competition, average and marginal revenue curves.



### Under Oligopoly, Revenue Curves

A market with oligopoly has a small number of vendors. A business operating in an oligopoly is not expected to have a smooth demand curve. The pricing strategy of the company is shown by a kink in the demand curve at point K. The firm's competitors won't follow suit if it increases the price over this amount, which was established at the point of kink, or K. His sales and profit will therefore decline. On the other hand, if it decreases the price, the other businesses will respond by doing the same. The company cannot profit more by cutting the price, therefore. The marginal revenue is discontinuous at the location of the kink when the average revenue curve kinks. The kind of elasticity on the higher and lower reaches of the kinked demand curve determines the marginal revenue gap [8]–[10].

### The Importance of the Revenue Concept

The ideas of MR and AR combined offer a potent analytical tool in economic analysis for establishing the nature of profit. Price per unit of production is referred to as average revenue. The following rule is used to determine if the company makes super normal earnings, simply regular profits, or losses.

1. If AR is tangent to AC at the time of equilibrium, there will be a normal profit.
2. If AR exceeds AC, earnings will be above average.
3. If AC, there will be a loss.
4. Supportive of decision-making

The idea is essential for figuring out how a corporation will balance as well. Every business seeks to maximize earnings.  $MC = MR$  is the profit maximization formula. If  $MR > MC$ , output growth will be professional. When  $MR < MC$  expansion results in loss. Equilibrium output will be reached if  $MC = MR$ . Price, production, and an organization's profit or loss are all determined by the equation  $MC = MR$ .

### Excess Capacity Theory

The entrepreneur may use this idea to determine if the company has extra capacity or not. Production will continue in a perfect competitive environment up to the LAC's lowest point. Therefore, there can be no surplus capacity. However, with little rivalry, the business may increase its profits by lowering its production. Therefore, manufacturing won't continue until it reaches the long-run average cost curve's minimal point. As a result, imperfect competition results in unused capacity. From the perspective of society, it is a waste.

### Factor-Pricing

AR and MR ideas are highly helpful in setting the pricing of factors in the factor markets. ARP and MRP are inverted "U" curves in factor pricing, where the average revenue curve becomes the average revenue productivity curve and the marginal revenue curve becomes the marginal revenue productivity curve. The equilibrium level of pricing, production, and profit for a business under varied cost circumstances is determined by the point of intersection of MFP and MFC. A commodity's demand is defined as the desire for the product supported by the willingness and capacity to pay for it. Demand thus comprises a person's willingness and ability to acquire the good or service, as well as their desire to do so. For instance, everyone could want to purchase a car, but only a select few may be able to afford it. Therefore, it cannot be argued that everyone has a desire for the automobile. Demand may come from the

market, households, and people. Individual demand is the desire for an item made by an individual. Household demand is the quantity of goods desired. Market demand is the entire amount of individual and family demand for a given item or service. The horizontal total of each individual demand is the market demand [11].

### Supply Function

The link between a commodity's amount required and the demand-influencing variables is represented by the demand function.  $D_x = f$

$D_x$  = Quantity of a Good or Service Demanded in the Equation Above  
 $P_x$  = The commodity's price

$P_y$  = The cost of comparable commodities

T stands for customer tastes and preferences Y for income level A for advertising and promotion activities Population is Pp.

$E_p$  = Consumers' anticipated pricing expectations

U = Particular aspects of a commodity's demand, such as seasonal variations, tax laws, the availability of financing, etc.

### CONCLUSION

In conclusion, in economic and financial situations, moral hazard is a serious worry, emphasizing the need to align incentives, increase transparency, and set up efficient monitoring methods. A mix of measures, including information sharing, monitoring, and proper contractual structures, are needed to mitigate moral hazard. Effective management of moral hazard requires weighing the advantages of action against any possible disadvantages. In addition, the abstract addresses how government action and regulation might help reduce moral hazard. For the purpose of enforcing responsibility, imposing sanctions, and preventing excessive risk-taking, regulatory frameworks may be constructed. Finding the correct balance is essential, however, since too much regulation may hinder innovation and progress.

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## CHAPTER 3

### LAW OF DEMAND: A FUNDAMENTAL PRINCIPLE IN ECONOMICS

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#### ABSTRACT:

The law of demand is a fundamental principle in economics that states there is an inverse relationship between the price of a good or service and the quantity demanded by consumers. This abstract explores the nature of the law of demand, its underlying factors, and its implications for consumer behavior and market dynamics. According to the law of demand, as the price of a good or service increases, the quantity demanded by consumers decreases, assuming all other factors remain constant. Conversely, as the price decreases, the quantity demanded increases. The abstract emphasizes that this relationship is based on the assumption of rational consumer behavior, where individuals seek to maximize their utility and make purchasing decisions based on price and perceived value. When a commodity's price decreases, it becomes comparably less expensive than comparable goods whose prices have not altered. As a result, consumers are more likely to purchase the good whose price has decreased rather than other goods that have not increased in price much.

#### KEYWORDS:

Complementary Goods, Consumer Behavior, Demand Curve, Elasticity, Income Effect, Law of Demand, Market Equilibrium.

#### INTRODUCTION

According to the law of demand, when all other conditions are held constant, the quantity requested of a commodity and its price have an inverse relationship. In other words, demand decreases when price increases and vice versa, all other factors being equal. A demand schedule is a table that shows how much of a product is requested at different prices. For instance, A, B, C, and D are the four apple customers at the market. Demand schedule is represented diagrammatically by the demand curve. It shows the link between price and quantity graphically. In other words, the demand curve slopes downward from left to right, indicating that as prices rise, demand declines and vice versa. The following explanations may be used to explain why the demand curve slopes downward.

#### Income Effect

When the cost of a product drops, consumers' buying power rises. As a result, he may buy the same quantity of the product for less money or more of the commodity for the same amount of money. Similar to this, when a commodity's price increases, the consumer's income decreases since he now needs to spend more money to purchase the same amount as before. The term "income effect" refers to this shift in buying power brought on by a price adjustment [1]. This law of demand's fundamental root cause. According to the law of diminishing marginal utility, the utility obtained from a good or service decreases as a person consumes more and more of it. An person makes purchases in such a way that the marginal

utility of the good is equal to the price of the good in order to achieve maximum pleasure. When a commodity's price declines, a rational buyer makes additional purchases to bring the price level and marginal utility into balance. Therefore, the price has to be reduced if a customer wishes to buy more.

### Exceptions to Law of Demand

The following situations do not fall within the law of demand

1. Some products, such as diamonds, air conditioners, luxury vehicles, antique artworks, etc., are bought primarily for their snob appeal. To demonstrate one's affluence, these items are utilized as status symbols. These products will become more valued as status symbols and more in demand as their price increases. As a result, these things are bought more often at higher costs and less frequently at lower ones. These products are referred to as conspicuous items [2]–[4].
2. Giffen products are not covered by the law of demand. Giffen goods are those subpar products whose revenue impact above their ability to be substituted. These are necessities for impoverished families to consume. As an example, consider potatoes, animal fat oil, poor rice, etc. The demand for such a thing rises as its price rises, and the desire for it falls when its price falls.
3. When there is speculation, or the anticipation that the price of the good will vary, the rule of demand does not apply. If consumers anticipate a decrease in the price of the product in the future, they are more likely to buy less or put off making a purchase. They also often make larger, more expensive purchases with the expectation that prices will rise in the future.

### Curve of Market Demand

Demand theory's foundation is individual consumer behavior with regard to product choice and purchase, but a good's producer is more concerned with the market's overall demand for that item. Market demand for an item at a certain price is the total amount of that good that purchasers buy or demand at that price during a specific period of time. The curve that predicts market demand for an item at any given price is sometimes referred to as the market demand curve. The concept of market demand makes it clear that the horizontal or lateral summation of each good's individual demand curves will result in the market demand curve for that product. Due to the rule of demand, the market demand curve for a product would likewise slope downward and to the right. With the aid of, the market demand curve may be found from the individual demand curves. Assume that there are only two purchasers of the commodity, and that their separate demand curves are labeled  $d_1$  and  $d_2$ , respectively, to simplify our study. Market demand has been in the specified above range for prices  $p_1$  and  $p_2$ . This makes it clear that the market demand curve for a commodity is the horizontal sum of each demand curve for that item.

### Curve of Demand Shift

When we make the reflex assumption that other things will remain constant, the demand curve will move to the right instead of left relative to the initial demand curve. The demand curve has changed as seen below.

### Changing Demand

1. Demand Elasticity
2. Price, income, and cross-elasticity of demand are three types of demand elasticity.
3. Demand has as many elasticities as there are factors that influence it.

4. The price elasticity, income elasticity, and cross-elasticity of demand are the three most significant elasticity factors.

### **Price Demand elasticity**

The price elasticity evaluates how responsively a commodity's quantity demand changes in response to price changes while other factors stay constant. The point elasticity of demand is used to gauge how responsive the market is when price changes are extremely tiny. The appropriate metric is the arc of demand elasticity when price changes are not minimal. The proportional change in quantity required as a consequence of a very tiny proportionate change in price is known as the point elasticity of demand.

### **Income Demand Elasticity:**

The proportional change in amount required brought on by a proportionate change in income is known as the income elasticity. For typical items, the income elasticity is favorable. Using income elasticity, some experts have divided products into "luxuries" and "necessities." If a commodity's income elasticity is larger than unity, it is regarded as a "luxury." If a commodity's income elasticity is lower than unity, it qualifies as a "necessity." The following factors heavily influence income elasticity:

1. As income rises, less money is spent on food relative to the kind of need that the product meets.
2. A nation's beginning level of revenue. A TV set, for instance, is a luxury in a developing, underprivileged nation but a 'necessity' in one with a high per capita wealth.
3. The time frame, as changes in income have a lag in how spending habits change.

Demand cross-elasticity aids in the division of goods into complements and alternatives. The proportional change in the amount required of  $x$  as a consequence of a proportionate change in the price of  $y$  is known as the cross-elasticity of demand.

### **Elasticity of Demand Caused by Advertising or Promotion**

The degree of change in demand caused by a change in advertising spend is measured by advertising elasticity of demand. It implies a unit change in advertising spending that results in a proportionate change in demand. Demand is somewhat elastic if AED is greater than 1. It implies that demand is more responsive to advertising budgets and gives back more than it takes in terms of demand growth.

### **Demand Is Relatively Elastic**

Demand is comparatively inelastic if AED  $< 1$ . In other words, a change in advertising spending results in a less-than-proportional change in demand.

### **Demand That Is Perfectly Inelastic**

It is Perfectly Inelastic Demand if AED = 0. In other words, a rise in advertising costs has no impact at all on demand.

### **AED Determinants**

1. Product kind, or whether it is a brand-new or established product
2. company name
3. Number of rivals and alternatives in the market
4. strategies used by rivals

5. frequency of commercials
6. Advertisement style
7. Timing of commercials
8. Other variables that affect demand include preferences, occupations, income, etc.

Aids in determining the effectiveness of an advertising campaign Aids businesses in determining their advertising budgets:

1. aids in selecting more efficient marketing channels
2. aids in discontinuing unsuccessful advertising campaigns
3. aids in strategic management to react to rivals' advertising strategies
4. helps to create brands
5. AED's limitations
6. Analysis of the impact of a particular product's promotion using AED value is not helpful.
7. Analyzing the efficacy of marketing tactics at a certain moment is challenging, particularly if the campaigns last for a long time.

Instead of only affecting demand size, a campaign's goal may be to build brands. The impact of other variables impacting demand is not taken into consideration by AED.

### **Analysis of Supply and Market Stability Principle of Supply**

The law of supply, like the law of demand, indicates the amounts that will be sold at a given price. Contrary to the rule of demand, the supply relationship, when all other factors are held constant, exhibits an upward slope and a direct correlation between the price and the amount of a good that is provided. This implies that the amount offered will increase as the price does. Because selling a larger amount at a higher price generates income, producers provide more at a higher price [5]–[7].

### **Changes In Supply**

When a good's quantity of supply varies but the price stays the same, the supply curve shifts. For example, if a commodity's price remained fixed at Rs. 2 but the amount provided fell from Q1 to Q2, the commodity's supply would move as shown. The shift in the supply curve suggests that the initial supply curve has shifted, indicating that a factor other than price affects the amount delivered.

### **Price Supply Elasticity**

The law of supply also describes the qualitative link between price and supply, just as the law of demand does. Relationships between quantities do not provide a comprehensive picture. For instance, understanding that price and amount offered fluctuate together only helps to a certain extent. This data is yet lacking. The size of this shift needs to be understood by economists and decision-makers. They developed the idea of price elasticity of supply for this reason. The seller's propensity to alter the amount delivered at various prices is the basis of supply elasticity. The following is the definition of price elasticity of supply. The ratio of a percentage change in quantity provided to a percentage change in price to calculate how much a change in a commodity's price affects the amount supplied of that product. The goal is to determine how many percentage points the supply changes by if the price increases by 1%, to put it another way. According to the rule of supply, it is anticipated that changes will always be made in the same direction; for example, if the price goes up, the quantity provided will follow suit, and vice versa. The price elasticity of supply examines the market from the supplier's vantage point. As a result, it is virtually always simply price-sensitive. It is

unaffected by things like the suppliers' salary levels. As a result, the idea of income elasticity of supply does not exist. Additionally, it is less probable that the availability of one product would affect how much of another is given. Cross supply elasticity is thus not really a factor. As a result, unlike elasticity of demand, which may take many various forms, elasticity of supply is mostly dependent on a single kind.

### Price Elasticity of Supply Factors

Price elasticity of supply is influenced by a variety of variables, including the following:

**Addition of Capacity:** The law of supply's theoretical model just presupposes that supply may fluctuate up and down in response to price variations. In doing so, the law of supply disregards the supply-related facts of life.

**Infrastructure Growth Related To:** Industry often consists of a networked supply chain. Growth will be uneven if one component of the supply chain expands while the other components stay static. This has an impact on supply elasticity as well.

**Perishable vs. Non-Perishable:** There are other problems than storage space. The provider must also think about whether the products they have are perishable or not. Buyers are aware of the short shelf life of perishable items.

**Production Time:** According to the law of supply, changes in price should result in an instantaneous change in the amount provided. Theoretically, this may be accurate. However, for many items, this is not really feasible.

**Marginal Cost of Production:** The law of supply also presupposes that the supplier's profitability is unaffected by the quantity of units sold. This is not true. We really have something known as scale economies and diseconomies of scale. The marginal cost of manufacturing is impacted by this.

**Near vs. Long Term:** In the near term, all product supplies are more or less inelastic. This is so that manufacturers can't immediately change a number of elements. On the other hand, over the long term, all the variables change, making the supply of every good entirely elastic. Therefore, businesses must exercise caution while making capital choices.

### Market Stability

The economy is considered to be in balance when supply and demand are equal. Since the quantity of items being provided and required are precisely equal at this time, the allocation of commodities is at its most effective. As a result, everyone is happy with the state of the economy. Consumers purchase all the things that they are  $P^*$  and  $Q^*$ , respectively, as in the, while providers sell all the items that they have made at the provided price.

### Disequilibrium

When the price or quantity are not equal to  $P^*$  or  $Q^*$ , disequilibrium arises. If the price is set excessively high, the economy will produce surplus supply and there will be inefficient allocation of resources.  $Q_2$  represents the amount of commodities that the manufacturers want to offer at price  $P_1$ . However, at  $P_1$ , the amount that customers wish to consume is at  $Q_1$ , which is much smaller than  $Q_2$ . Too much is being created and not enough is being consumed since  $Q_2$  is higher than  $Q_1$ . In an effort to enhance profits, the suppliers are striving to create more items, but consumers will find the products less appealing and make fewer purchases because of the high price.



## Ample Demand

When the price is set at the equilibrium price, excess demand is produced. Due to the cheap price, too many buyers desire the excellent, but there aren't enough manufacturers creating it. The number of items required by customers at price  $P_1$  in this instance is  $Q_2$ . In contrast,  $Q_1$  represents the volume of things that manufacturers are prepared to create at this cost. As a result, not enough items are being created to meet customer demand. The demand will raise the price, causing suppliers to want to provide more and pushing the price closer to equilibrium as customers compete with one another to purchase the item at this price [8]–[10].

## CONCLUSION

In conclusion, the inverse connection between the cost of a commodity or service and the amount required by customers is described by the law of demand, a fundamental idea in economics. Understanding this concept is essential for examining market dynamics, pricing tactics, and customer behavior. The law of demand offers insightful explanations for how changes in price and other variables affect consumer choices and market outcomes. The abstract also emphasizes how crucial it is for economists, businesspeople, and politicians to comprehend the rule of demand. The rule of demand may be used by businesses to guide their price decisions, product development, and marketing initiatives. When establishing price restrictions or taxation measures, policymakers might take the law of demand into account. As a key premise for assessing market behavior and predicting economic developments, economists depend on the rule of demand.

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## CHAPTER 4

### AN ANALYSIS OF DEMAND FORECASTING

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#### ABSTRACT:

Demand forecasting is a critical process in business and supply chain management that involves estimating future consumer demand for products or services. This abstract explores the nature of demand forecasting, its objectives, methods, and the importance of accurate forecasts for decision-making and operational efficiency. Demand forecasting serves as a foundation for various business activities, including production planning, inventory management, pricing strategies, and resource allocation. The abstract emphasizes the significance of accurate demand forecasts in reducing costs, optimizing operations, and meeting customer expectations. Forecasts are estimates or predictions about future events. It is a neutral evaluation of the best course of action moving forward. No prognosis can be 100 percent accurate since the future is unpredictable. Forecasts might be of a financial or physical character. Decisions can be made more effectively for tomorrow with more accurate projections.

#### KEYWORDS:

Demand Forecasting, Forecasting Techniques, Market Research, Predictive Modeling, Sales Forecasting, Statistical Analysis.

#### INTRODUCTION

Forecasting is becoming into the corporate language and a sign of survival. Every necessity of the business sector requires the skill of precise and useful future reading. As a result, forecasts are a crucial component of corporate survival. Making a variety of choices in management involves anticipating data. Demand forecasting, which is linked to a suggested marketing strategy and assumes a certain set of unpredictable and competitive factors, is an estimate of sales for a given future time. Therefore, depending on a selected marketing strategy and external factors, demand forecasting is an estimate of the company's anticipated level of sales [1], [2].

#### Forecasting Types

Passive forecasting and active forecasting are two basic categories for forecasting. Under a passive forecast, future predictions are predicated on the presumption that the company won't alter the direction of its actions. Active forecasting involves making predictions while assuming that the businesses' activities will probably alter in the future.

#### Demand Projections

Seasonal trends have a significant role in short-term forecasts. It might be for three months, six months, or a whole year. It is one that offers data for strategic choices. Depending on the kind of company, a certain time is selected. Such a projection is useful when creating a sales strategy. Forecasts for the long future are useful in sui capital planning. It is one that offers data for important strategic choices. It assists in reducing material, labor, machine, and

capacity waste. An examination of the prospective long-term demand for the company's goods must come first in the planning process for a new unit. Internal or corporate group forecasts, as well as forecasts from external or national groups.

Trends in business generally are covered by external forecast. Usually, a company's research department or outside consultants will create it. All parties involved in the management of a certain firm, such as the sales group, manufacturing group, and finance group, are included in the internal forecast. Internal forecasts are structured to incorporate yearly sales forecasts, product cost forecasts, operational profit forecasts, taxable income forecasts, cash resource forecasts, staff forecasts, etc. Forecasting may be divided into macro-level forecasting, industry-level forecasting, firm-level forecasting, and product-line forecasting at various levels. There are several predictions for various product categories, such as forecasting demand for capital goods, forecasting demand for new products, forecasting demand for nondurable consumer goods, and forecasting demand for durable consumer goods.

## DISCUSSION

### Forecasting Techniques

Demand forecasting is a challenging task. It is a Herculean undertaking to make projections for the future in light of the changing environment. The most unpredictable behavior is that of consumers since several factors inspire and have an impact on it. The manager cannot foresee the future using an easy approach or a straightforward calculation. Numerous techniques for anticipating demand have been developed by statisticians and economists. Each of these approaches has its relative benefits and drawbacks. The correct approach must be used in order for demand forecasting to be accurate. Demand forecasting requires a skillful blending of statistical knowledge and logical judgment. We review the main popular techniques for demand forecasting: A chart, like the one in used to summarize the different demand forecasting techniques.

### Opinion Research Technique

With this approach, the opinions of customers, salespeople, and specialists might be collected to identify the market's rising trend. There are three types of demand forecasting opinion polling techniques:

#### Consumer Survey Technique or Buyer Intentions Survey

With this strategy, customers are directly asked about their upcoming purchasing intentions. This is accomplished by conducting interviews with all customers or a chosen subset of consumers from the relevant demographic. This is the most accurate way to predict demand in the near future. Here, the buyer is given the responsibility for anticipating. The company may request a full enumeration or a sampling survey. The industries that use the commodity as an end product are surveyed if it is an intermediary product [3], [4].

#### Complete Enumeration Survey

To conduct a Complete Enumeration Survey, the company must contact every family in the region and conduct a door-to-door survey for the predicted period. This approach provides the benefit of first-hand, impartial knowledge, but it also has certain drawbacks. This method's main drawback is that it takes a lot of materials, labor, and time. Customers could be hesitant to disclose their purchasing intentions using this strategy out of respect for their privacy or business confidentiality. Additionally, customers may fail to articulate their opinions clearly or purposefully lead investigators astray.

### **Survey and Test Marketing Examples**

With this methodology, random samples of certain typical families are chosen, and their opinions are considered as the generalized view. The foundational tenet of this approach is that the sample accurately reflects the population. There probably won't be a noticeable variation in the survey's findings if the sample is really representative. In addition, this approach is less time-consuming and expensive. Test marketing is a variation of the sample survey approach. In essence, product testing is exposing the product to a variety of consumers for a certain amount of time. After some time, their responses to the product are observed, and the information is used to predict the anticipated demand. These are appropriate for brand-new items or previously existing products that have undergone significant modification. Due to the encouragement of a nationwide launch in a narrowly specified geographic region, it is a more scientific approach of evaluating anticipated demand.

### **Input-Output or End Use Method**

For businesses that focus primarily on producing items, this strategy is highly helpful. In this method, the demand for the final product is determined by the end user demand of the intermediate product used in the production of this final product, which is projected as the basis for a demand survey of the industries using this product as an intermediate product. Numerous final good sectors that utilize an intermediate product both domestically and internationally may be included in the calculation of end user demand. We can better grasp inter-industry ties thanks to it. The transaction matrix and the input co-efficient matrix are two matrices that are utilized in input-output accounting. This type's primary labor-intensive tasks are not in its functioning but rather in the data collecting and display. Collective opinion technique is another name for the sales force opinion approach. In this approach, salesmen's opinions are solicited rather than those of customers. The "grass roots approach" is a bottom-up strategy that calls for each salesperson in the organization to provide a unique forecast for his or her own sales region. The sales manager and I go through and agree on each person's prediction. The organization's sales prediction is then created by adding together all of the forecasts. This approach has the benefits of being simple and affordable. There are no complex statistical analyses involved. The salesmen's cumulative experience is this method's key asset. The forecasting of sales for new items is better served by this strategy [5]–[7]. The "Delphi Technique" of research is another name for this procedure, according to experts. The Delphi approach calls for a group of experts who are questioned using a series of questions, each of which is created from the answers to the previous one. As a result, any information that some experts have access to but not others are shared, giving all experts access to all the data needed for predicting. The technique is used to predict probable long-term sales of new items. This approach assumes two things: First and foremost, the panelists must be highly qualified, knowledgeable, and experienced. Second, its drivers are impartial in their work. The method's unique benefits include time and resource savings.

### **Statistical Approach**

In terms of demand forecasting, statistical approaches have shown to be quite helpful. The statistical approaches are employed to preserve impartiality, which is achieved by taking into account all ramifications and examining the issue from a distance [8], [9]. The crucial statistical techniques are:

## Method for Projecting Trends

A company that has been around for a while will have its own records of prior sales. 'Time series' is the term used to describe the results of placing such data in chronological order. Time series displays previous sales together with the actual demand for a certain product under typical circumstances. For further study, such data might be presented in a tabular or visual format. This approach is the most often used by commercial enterprises, in part because it is straightforward and affordable and in part because time series data frequently show a steady growth tendency. Secular Trend, Secular Variation, Cyclical Element, and an Irregular or Random Variation are the four kinds of components seen in time series. The formula  $O = TSCI$  describes these components. The term "secular trend" describes the long-term changes that come from general tendency. Seasonal fluctuations are changes in the social norms or the short-term weather pattern. Cyclical variations describe the adjustments made to the industry throughout periods of depression and boom. Wars, strikes, floods, famines, and other commonly observable events are examples of random variation. Leading Series, Coincident or Concurrent Series, and Lagging Series are the three series that forecasters often use to associate a company's sales with.

### The Primetime Series

The leading series is made up of variables that change before a recession or recovery begins. They often anticipate upcoming market shifts. Due to the correlation between baby powder sales and children under the age of five and the fact that baby powder sales today are correlated with birth rates from five years ago, this method is known as lagged correlation. Another example is the forecasting of baby powder sales by looking at the pattern of birth rates five years earlier. So, we may conclude that births result in sales of baby soap.

### Parallel or Coincident Series

The series that rise or fall concurrently with the state of the economy are said to be coincident or contemporaneous. They are used to support or disprove the reliability of the leading indicator that is employed a few months later. The GNP itself, industrial output, trade, and the retail industry are frequent instances of coincident indicators.

### The Series Lagging

The lagging series are those that follow the economic cycle with a certain amount of lag. Labor cost per unit of manufactured output, loans outstanding, leading rate of short-term loans, etc. are some examples of lagging series. Regression analysis is a technique for analyzing the connection between at least two variables with the goal of predicting the value of the dependent variable from a certain independent variable value. This forecast often relies on past data. This approach assumes that there is a fundamental link between the two variables. The existing mathematical link is developed using an interactive statistical analysis computer software.

## Economical Models

The regression approach, which involves solving a set of independent regression equations, is extended to include econometric models. Three areas need to be addressed for the econometric model to be successfully used in forecasting: variables, equations, and data. Model creation is the suitable process for predicting using econometric techniques. In order to evaluate the effects of one economic variable on another and make predictions about the future, econometrics aims to describe economic theories in mathematical terms that can be supported by statistical techniques.

## Usefulness of Forecasting

The risk associated with business fluctuations, which often have negative consequences on businesses, increase unemployment, encourage speculation, discourage capital creation, and diminish profit margins, is reduced through forecasting. Forecasting is essential and plays a significant role in deciding on different strategies. Forecasting has been placed on a scientific foundation in modern times, greatly reducing the dangers and increasing the likelihood of accuracy.

## Predictions for India

There are specialized agencies in the majority of the sophisticated nations. Businessmen in India have little interest in making scientific predictions. They rely more on astrology, luck, and chance. Since they have a strong superstition, their predictions are inaccurate. There aren't enough data available to make accurate predictions. However, statistics by themselves cannot predict future events. To do good analysis and interpretation and come to sound findings, judgment, experience, and understanding of the specific trade are also required. Decision, prediction, and control are the three components that make up decision support systems. Of course, marketing forecasting is concerned with prediction. Sales forecasting may be thought of as a system with inputs and an output. This oversimplified perspective is a good benchmark for evaluating the real value of sales forecasting as a management tool. Despite this, no one has a 100% accurate forecast for future economic activity. Forecasts are guesses that no one can be certain.

## Criteria of a Good Forecasting Method:

A successful forecasting approach must meet a number of economic requirements that are more generally applicable. They are: precision, plausibility, toughness, adaptability, accessibility, affordability, simplicity, and consistency. There is no special way to predict how much any commodity will sell. Depending on his purpose, the availability of data, the urgency with which predictions are required, the resources he plans to dedicate to this job, and the sort of commodity whose demand he wants to anticipate, the forecaster may attempt either technique. Understanding whether managerial economics is positive or normative is important when evaluating its breadth.

## Positive vs Normative Economics

The majority of management economists believe that managerial economics is, at its core, a normative and prescriptive discipline. What choices need to be taken is what it is concerned with. Because management economics is constantly focused on achieving objectives or optimizing aims, its application cannot be separated from consideration of values or standards. In management economics, we are more concerned with what ought to occur than what actually occurs. We describe what a business should do in order to make its choice effective, as opposed to what it is now doing. 'What is' is the focus of a positive science like positive economics. According to Robbins, economics is a pure study of the real world, unaffected by moral or ethical issues. Economics is unbiased toward all goals. The economist is not qualified to judge whether a goal is wise or foolish. He is only focused on the issue of resources in connection to the intended goals. Even while the production and sale of alcohol and cigarettes may be ethically wrong since they are bad for your health, an economist has no business opining on them because they both fulfill economic needs and human desires.

## **Normative Economics**

Normative economics focuses on defining what should be the case in various situations. Therefore, prescriptive economics is another name for it. Normative economics covers topics including how much a product should cost, what wages should be paid, how money should be allocated, and more.

The use of value judgements in normative economics should be acknowledged. The majority of the top management economists believe that managerial economics is basically a normative and prescriptive discipline. It generally pertains to what should and shouldn't be objective regarding the ends. Because managing economics is constantly focused on achieving objectives or optimizing goals, it is impossible to apply managerial economics without taking values or norms into account.

Furthermore, management economics is focused in what ought to occur rather than what really occurs. We describe what a business should do in order to make its choice effective, as opposed to what it is now doing. Managerial economists are often concerned with finding the best distribution of limited resources among conflicting goals in order to maximize benefit in accordance with specified criteria. They aim to implement policies rather than assuming things will remain as they are in order to accomplish these goals. The attempt to establish a cause-and-effect link via factual analysis and logical reasoning is a crucial component of management economics. Because of how broad its application is, management economics covers practically all issues that affect managers and businesses.

## **Topics in Marginal Economics**

### **Forecasting and Analysis of Demand**

A business is a kind of economic organization that converts inputs into finished goods that are then sold on the open market. The key to making wise decisions at the company level is accurate demand assessment, which is achieved by examining the dynamics influencing consumer demand for the firm's products. Accurate demand projections are a key component of management decision-making. When estimating demand, the management does not only examine the existing demand; they also project demand for the future. Demand forecasting is supposed to signify this. The management may use this prediction as a guidance to preserve or increase market position while increasing profit. The many elements affecting a firm's product's demand may be identified with the use of demand analysis, which then offers instructions on how to manipulate demand. Demand Determinants, Demand Distinctions, and Demand Forecasting are the key subjects discussed [10].

## **CONCLUSION**

In conclusion, for organizations looking to satisfy consumer requests, manage operations, and gain a competitive edge, demand forecasting is a critical activity. Businesses can coordinate their resources, make educated choices, and react to market changes more successfully with the help of accurate projections. Businesses may increase the precision and effectiveness of demand forecasting with the use of cutting-edge methodologies and data analytics, improving their overall performance and success in the market. Businesses may gain a lot from accurate demand projections, such as increased customer satisfaction, optimum inventory levels, fewer stockouts or overstocks, and better supply chain coordination. The abstract emphasizes the beneficial effects of accurate projections on decision-making processes, allowing firms to decide on pricing, production quantities, advertising campaigns, and resource allocation in accordance with their best interests.



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## CHAPTER 5

### FUNDAMENTAL ASPECT OF MANAGERIAL ECONOMICS: COST AND PRODUCTION ANALYSIS

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#### ABSTRACT:

Cost and production analysis is a fundamental aspect of managerial economics that involves studying the relationship between input costs, production levels, and output in order to make informed business decisions. This abstract explores the nature of cost and production analysis, its key components, and its significance in managerial decision-making. Cost and production analysis is aimed at understanding the costs incurred in the production process and how changes in input levels, technology, and production techniques impact overall costs and output. It emphasizes the importance of cost analysis in determining the profitability and efficiency of a business. Another role of management economics is cost analysis. Cost estimations are crucial while making decisions. If management wants to arrive at cost estimates that are important for planning purposes, the elements contributing to cost fluctuation must be acknowledged and taken into account.

#### KEYWORDS:

Average Cost, Cost Analysis, Cost Functions, Economies of Scale, Marginal Cost, Production Analysis.

#### INTRODUCTION

A corporation must pay close attention to the factors that determine cost estimation, the link between cost and production, and the prediction of cost and profit. Because not all of the elements driving costs are constantly known or under control, there is some degree of cost uncertainty. These features of cost analysis are discussed in managerial economics as a useful skill whose application is essential to a company's success [1]–[3]. Production analysis typically moves forward in terms of physicality. A crucial aspect of production economics is inputs. The inputs, also known as the elements of production, may be placed together in a certain manner to produce the most output. Alternately, when input costs skyrocket, a company is compelled to determine which components should be combined to provide the least expensive combination. Production function, least expensive factor input combinations, factor productiveness, returns to scale, cost ideas and categorization, cost-output relationships, and linear programming are the key subjects addressed by cost and production analysis.

#### Inventory Control

A firm's supply of raw materials is referred to as an inventory. How much of the inventory is the optimal stock is now the issue. If it is high, capital is being held inactive. Production will be impacted by low inventory levels. In order to reduce the cost of inventory, management economics will use techniques like the Economic Order Quantity approach and

ABC analysis. It also delves further into topics like the reasons for keeping inventory, the expense of keeping inventory, inventory control, and the primary techniques for managing and controlling inventory.

### **Advertising**

Producing a product is one thing, but marketing it is quite another. However, the buyer should hear about the goods before considering purchasing it. As a result, advertising plays a crucial role in making decisions and developing plans for the future. Selling costs are what economists refer to as spending on advertising and associated sorts of promotional activity [4]–[6]. There are many ways to determine an advertising budget: Approaches such as "Percentage of Sales," "All You Can Afford," "Competitive Parity," "Objective and Task Approach," and "Return on Investment Approach."

## **DISCUSSION**

### **Pricing Decision, Policies and Practices**

The study of pricing is a crucial component of management economics. Production and pricing are both control tasks in an organization. The cost of manufacturing must be considered when determining how much to charge for a commodity. Market structure, both as it now exists and as it has changed due to the nature of market competition, has a significant impact on business choices. Pricing is really determined by taking into account cost plan pricing and public business rules. It is also crucial to understand how a product is priced in an oligopoly environment. The pricing system directs the management in making ethical decisions.

### **Profit Control**

A company with a profit-making goal is referred to as a business firm. Profits are a key indicator of a company's success. We must first comprehend how profit is generated before we can evaluate a business. The idea of profit maximization is highly helpful in narrowing down the options when choosing a course of action at the corporate level. Profit forecasting is a critical management task. It refers to the forecast of future profits and includes the examination of corporate behavior both real and anticipated as well as sales volume, pricing, and rival tactics, among other things. The nature and measurement of profit, as well as profit policies that are especially important to management decision-making, are the key topics discussed in this subject.

By using factual research and logical reasoning, managerial economics seeks to identify the cause-and-effect link. A significant portion of economic study of this deductive thesis, such as the claim that profits are at their highest when marginal revenue equals marginal cost, aims to draw precise recommendations for how things should be done [7]–[9]. The reasoning behind linear programming is deductive in nature. In conclusion, managerial economics is a subfield of normative economics that borrows from both descriptive economics and logical deductive patterns that are well-established.

### **Capital Administration**

The fundamental executive role is the planning and management of capital expenditures. From an economic perspective, the management issue of capital planning and control is looked at. Various sectors have various capital budgeting procedures. The equi-marginal principle is involved. When the management returns are lower than in other applications, money must not be used in order to ensure the most efficient use of funds. Cost of capital,

rate of return, and project selection are the primary issues covered. So, we can see that a corporation must deal with uncertainty. We may thus draw the conclusion that the focus of management economics is on applying economic ideas and principles to managing the firm's uncertainty. Integration of management economics and operation research has become more popular recently. As a result, management economics has developed to include approaches like linear programming, inventory models, waiting line models, bidding models, theory of games, etc.

### **Relation to Other Knowledge Areas**

An effective way to shed insight on the nature and application of management economics is to look at how it interacts with other fields of study. To categorize an area of study's range is to talk about how it relates to other topics. Our research would be useless if we looked at the topic in isolation. There are several academic subjects and disciplines that managerial economics is closely related to. The discipline has benefited from interactions with mathematics, statistics, and economics and has included ideas from management theory and accounting. The management economics blends ideas and approaches from different fields, applying them to managerial issues.

### **Economics and Managerial Economics**

Economic theory used in decision-making is known as managerial economics. It may be researched as a subfield of economics, spanning the divide between purely theoretical economics and management application. Microeconomics and macroeconomics are the two primary subfields of economics.

#### **Microeconomics**

"Micro" denotes a tiny scale. It examines both the behavior of such units in isolation as well as in small groupings. It is a study of specific companies, specific families, specific pricing, salaries, and incomes, as well as specific sectors and commodities. Thus, a microscopic picture of the economy is provided by microeconomics. Three levels of microeconomic analysis are possible: individual consumer and producer equality, single market equality, and simultaneous equilibrium of all markets. The main issue in microeconomics is the issue of scarcity and the best or optimum distribution of resources. Microeconomic theory is where management economics got its start. The ideas of supply and demand, demand elasticity, marginal cost and marginal income, the short and long runs, and theories of market structure are the sources of microeconomics that managerial economics draws upon in pricing theory. It also uses well-known pricing theory models as the monopoly price model, the kinked demand theory, and the price discrimination model.

**Macroeconomics:** "Macro" refers to a big scale. It discusses how the economy's major aggregates behave. Total saving, total consumption, total income, total employment, general price level, wage level, cost structure, etc. are examples of huge aggregates. Macroeconomics is hence aggregative economics. It looks at the relationships between the different aggregates and the reasons why they fluctuate. The main issues in macroeconomics are how to determine total income, total employment, and the overall price level.

#### **Managerial Economics and Macroeconomics**

Business choices are influenced by the environment in which a company works, changes in the amount of business activity, changes in fiscal and monetary policies, and variations in the national income. The management economist finds that having a grasp of how the economy functions as a whole helps him formulate his policies. Forecasting is where macroeconomics

has the most to offer. Forecasting general business circumstances directly depends on the post-Keynesian aggregative theory. Since an individual organization's prospects often depend heavily on business as a whole, individual firm projections rely on general business forecasts, which employ models developed from theory. The gross national product model is the one that is most often employed in contemporary forecasting.

### **Managerial Economics and Decision-Making Theory**

An area of study that is relatively new yet has relevance for management economics is the theory of decision making. Making decisions is always crucial to the management process as well as to each of the management functions including organizing, leading, and regulating. Making decisions is really a crucial aspect of modern corporate management. A manager must deal with a variety of issues related to his or her firm, including those related to production, inventories, costs, marketing, pricing, investments, and staff. Economists are naturally interested in business decision problems because they are concerned with the effective use of limited resources. They also apply economics to the management of business issues. Therefore, management economics is the application of economics to decision-making. "Managerial economics is the integration of economic theory with business practice for the purpose of facilitating decision making up and forward planning by management," claim M.H. Spencer and L. Siegelman. Managerial economics is a core academic discipline that aims to comprehend and analyze the issues with business decision-making [10], [11].

In the actual world of management, there are many different objectives and there is always some degree of ambiguity. The idea of a single optimal solution is replaced by the theory of decision making, which holds that the goal is to find a solution that "satisfies" rather than maximizes. It delves into an examination of motivation, the relationship between incentives and aspirational levels, and the distribution of power. The theories of economics and decision-making seem to be at odds with one another since they each make distinct assumptions. The assumption of a single goal—the maximization of utility for the person or of profit for the firm—forms the foundation of most of economic theory.

Operations research and managerial economics: Mathematicians, statisticians, engineers, and others collaborated to build models and analytical tools that have now matured into a specialized field called operation research. The approach's main goal is to create a scientific model of the system that can be used to inform policy decisions. Linear programming, dynamic programming, input-output analysis, inventory theory, information theory, probability theory, queuing theory, game theory, decision theory, and symbolic logic all played major roles in their development. When there is a linear connection between the variables in a programming issue, linear programming is used to solve it. The management economist may utilize it to split purchases among several supply and site depots and cut down on transportation expenses. When the goal is to maximize profit, production, or efficiency, it is used.

Certain forms of sequential choice problems may be solved with the aid of dynamic programming. A sequential decision issue is one in which a series of choices must be taken, each of which will influence subsequent choices. It has been used in situations including equipment replacement, targeted marketing, inventory and production management, maintenance and repair, and financial portfolio balance. A method for analyzing inter-industry relationships is input-output analysis. Prof. W.W. Leontief divides the economy into many sectors in an effort to create links across industries. The input-output approach is employed in this model to establish the levels of activity in the different economic sectors while treating the ultimate demand as exogenously determined. Businesses may utilize it for resource

mobilization, planning, and coordination. A specific application of statistical decision theory is queuing. It is used to find the best solution. The idea may be used to solve issues like determining the best cost-effective way to satisfy a demand or how to reduce waiting or idle time. The study of games offers a potential solution to several oligopolistic interminacy issues. The following factors need to be taken into account when using game theory. The two businesses are the participants; they compete in the market; their tactics are their decisions on pricing or output; and the payoffs or rewards are their earnings. The pay-off matrix is represented by the numbers in the array. The most crucial tool in game theory is this matrix.

### **Management Statistics and Economics**

The study of management economics benefits from statistics. It serves as the foundation for evaluating theories empirically. Statistics are crucial for giving any company measurements of the proper functional relationships involved in decision-making. Because businesses depend on estimations and probabilities, statistics is a science that business leaders may employ to their advantage. Managerial economics may use several methods from statistics. Let's say predicting is necessary. Trend predictions are used for this reason. Multiple regression approach is used similarly. Measures of central tendency including the mean, median, and mode as well as measures of dispersion, correlation, regression, and least squares estimators are often employed in management economics. Managerial economists are often forced to choose between models that explicitly take probability theory into account and those that ignore uncertainty. Managerial challenges are often solved using statistical methods. For instance, sampling is a great tool for gathering data. Correlation and multiple regression are tools used in managerial economics to solve business challenges requiring some kind of cause-and-effect connection.

### **Managerial Economics and Accounting:**

Accounting and managerial economics go hand in hand. It is focused with keeping track of a commercial firm's financial operations. Profit is the primary motivation for starting a company. When money is invested, it is used to finance the purchase of real estate, including buildings and furnishings, as well as to pay for ongoing company expenditures. Both cash and credit are used to buy and sell goods. Credit vendors get cash payments. It comes from credit purchasers. Both income and expenses are covered. This is part of the company's regular everyday operations. Business transactions include acts like purchasing, selling, receiving, and paying for commodities and services. The commercial dealings are many and diverse. They are too many to remember all of them. Due to this, it is now essential to record company transactions in books. To make it easier to properly analyze the findings, they are organized into a series of volumes. The success of the company depends heavily on the accounting processes since profit maximization is the main goal of the company.

### **Mathematics and managerial economics:**

Another crucial discipline that is strongly connected to management economics is mathematics. We need a set of mathematical tools in order to derive and explain economic analysis. Economic theories have benefited from mathematics, and as a result, mathematical economics has grown to be a crucial area of study within economics. Economic ideas become clearer and more rational when they are approached mathematically. The mathematical technique is highly beneficial for the estimate and forecast of economic elements for decision-making and forward planning. Geometry, algebra, and calculus are the three major fields of mathematics that a management economist often uses. Input-output tables, vectors, determinants, and logarithms are some of the mathematical ideas employed by management

economics. Operations research, a branch of management economics, has a mathematical foundation.

### **Management Economics' Impact on Business Decisions**

Making decisions is a crucial component of modern corporate management. One of the most challenging responsibilities for a competent manager is making a choice. In order to run a firm, a manager must make a number of choices. A manager's day is spent making choices that affect other decisions. A decision is the end result of a process called decision making. Information flow serves as the foundation for managerial choices. Making decisions is a management task as well as an organizational procedure. Making decisions is how managers do their duties.

Planning and decision-making both aim to focus behavior and effort of people on a future goal or target. It is organizational in that many decisions are made by groups, teams, committees, etc. rather than by a single management. Once a choice is made, it is carried out with the least amount of effort and expense possible. Managers will be better equipped to see business challenges from a different angle and improve their problem-solving skills as a result of studying the principles of business choices. Business-related choices that are made by executives include those involving production, inventories, costs, marketing, pricing, investments, and staff. Application of corporate decision-making concepts will provide good results over the long term. A good choice is one that is grounded in logic, takes into account all relevant information and viable options, and employs the quantitative method.

The executive takes organizational choices while acting in his individual position as a manager. They consist of approving plans, adopting strategies, and defining goals. So that choices could be carried out with their backing, these decisions may be delegated to the organizational members. These choices are made with the organization's best interests in mind. The fundamental choices are the ones that matter the most; they need long-term commitment and significant financial outlay. They are given a great deal of weight. The company's survival will be threatened by a significant error. The choice of a site, choice of a product line, and choice of how to run the firm are all fundamental choices. They are seen as fundamental because they have an impact on the whole organization.

### **Important Business Decision Types**

**Production choices:** Production is a kind of economic activity that involves putting products on the market to fulfill customer demand and maximize profit. The corporate executive is required to allocate his resources in a sensible manner. He could run into issues like how to employ various machine hours for the most productive benefit or the optimum mix of components to maximize profit, among other things. The number of commodities, raw materials, or other resources possessed by the company at any particular moment that are idle are referred to as inventory. For a business, it's crucial to decide whether to keep inventory on hand to satisfy demand. In certain cases, the quantity of inventory also acts as a production planning guide, making it a strategic management variable. Blocking of capital is caused by large inventories of raw materials, intermediary products, and final items.

### **Cost-Related Decisions**

A company's ability to compete relies on its capacity to create a product or service for the least amount of money. Cost structure, cost reduction, and cost management now play a significant role in company choices. Without cost management, profitability would decline because costs would rise. Future business choices demand the businessmen to choose from a

range of options, and in order to do so, they must be aware of the associated expenses. For corporate decision-making, cost knowledge regarding the resources is particularly important.

### **Marketing Choices:**

The marketing executive must make choices about the target market, market positioning, product creation, price, channels of distribution, physical distribution, communication, and promotion as part of the market planning process. In marketing, a businessman must make primarily two distinct but connected choices. They are the choices for both purchases and sells. The choice of how much to manufacture and sell in order to maximize profit is a sales decision. The goal of the purchasing choice is to get these resources at the lowest cost feasible in order to maximize profit. Here, the core competency of the CEO is to shape the volume, timing, and makeup of demand for a product or service, company, location, individual, or notion.

**Investment choice:** Risk issues and imprecise foresight play a major role in the choice to invest. There are very few investments in real-world business situations that are risk-free. Investment choices include decisions on the amount of money to be invested in capital projects, the source of funding for these investments, and the distribution of these investments across various projects over time. These choices are quite important for assuring the steady expansion of an organization. Therefore, the executive must make investment selections with the greatest prudence and attention.

**Personnel Decision:** A significant number of employees are needed by the organization. These individuals have a variety of jobs. To accomplish organizational goals, each job inside the organization plays a specialized role. Manpower planning, hiring, vetting, training, development, performance reviews, promotions, transfers, and other areas are covered by personnel choices. Executives in the business world should consider personnel choices to be crucial. The merger of economic theory and business practice is referred to as managerial economics. Managerial economics uses the tools that are provided by economics to manage businesses. Managerial economics is simply the application of economic theory to management issues. Managerial economics may be thought of as economics that has been applied to firm-level problem solving.

The corporate leader may make assumptions and conduct analyses thanks to it. Even though economics emphasizes profit maximization, every company aims to achieve a reasonable level of profit. As a result, it becomes necessary to adapt economic concepts to the real world. The discipline of management economics performs this duty. Because management economics is a new field of study, its boundaries are not yet fully defined. Even so, it may be claimed that the following areas typically belong within managerial economics:

1. Forecasting and Demand Analysis
2. Analysis of Cost and Production
3. Pricing Principles, Practices, and Decisions
4. Management of Profit
5. Investment Management

Business economics can be useful by adopting its toolkit from economic theory, incorporating pertinent concepts from other fields to make better business decisions, acting as a catalyst for decision-making by various functional departments at the firm level, and ultimately achieving a social goal by directing business decisions toward social obligations.



## CONCLUSION

In conclusion, for management decision-making, cost and production analysis is an essential tool. Managers may optimize production levels, boost efficiency, and achieve profitability by having a thorough awareness of cost structures, production connections, and the effects of different variables on costs and output. The accuracy and efficacy of cost and production analyses are further improved via the use of cutting-edge technology and data analysis, allowing firms to maintain their competitiveness in a changing market. The abstract also emphasizes how technology and data analysis play a part in cost and production analyses. Managers may gather and evaluate production data, compute expenses, and find possibilities to reduce costs and boost efficiency thanks to sophisticated software and analytical tools. Data-driven insights are used to improve decision-making and enable more precise cost and production analyses.

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## CHAPTER 6

### MANAGERIAL DECISION ANALYSIS STRUCTURE: A SYSTEMATIC FRAMEWORK

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#### ABSTRACT:

Managerial decision analysis structure is a systematic framework that assists managers in making informed and effective decisions within organizations. This abstract explores the nature of managerial decision analysis structure, its components, and its significance in guiding decision-making processes. The abstract highlights that managerial decision analysis structure provides a structured approach to decision-making, considering multiple alternatives, evaluating risks, and weighing potential outcomes. It emphasizes the importance of rational decision-making based on objective analysis, rather than relying on intuition or personal biases. The application of economic theory and methods to business is known as business economics, often known as managerial economics. Making decisions is a part of business. The process of choosing one course of action from two or more alternatives is known as decision-making. The issue of choice occurs because there are a finite number of fundamental resources, including capital, land, labor, and management, which may also be used for other purposes. Thus, choosing options and making judgments that will give the most effective method of achieving a desired aim, like profit maximization, becomes the decision-making function.

#### KEYWORDS:

Decision Analysis, Decision-Making Process, Forecasting, Goal Setting, Managerial Decision-Making, Problem Identification.

#### INTRODUCTION

Business choices are made by managerial economics' use of microeconomic techniques. It involves a business. Managerial Economics is not only used by for-profit businesses and organizations. However, it may also be utilized to support nonprofit organizations' decision-making processes. It allows for the best possible use of limited resources in these organizations and aids in reaching objectives in the most effective way. Analysis of prices, output, capital expenditures, risk, and demand may all be greatly aided by managerial economics. For logical management decision-making, managerial economics applies both economic theory and econometrics. By empirically determining the link between economic variables, econometrics is defined as the application of statistical methods to evaluate economic theories. For the purpose of solving economic issues, it employs factual data. The economic theory known as the "Theory of Firm" is related to managerial economics. According to the theory of the company, maximizing wealth is the main goal of the organization. In management economics, making decisions often entails establishing the firm's goals, identifying the challenges to achieving those goals, developing potential solutions, choosing the best one, and then putting the choice into action [1]–[3].

## Managerial Theory and Economic Theory

Economic theory is a network of connections. In terms of theoretical perspectives, economics is the most developed of the social sciences. In economics, there are well established theoretical frameworks. The postulation AI or axiomatic approach of theory development is one of the most hotly debated frameworks. It maintains that the foundation for economic analysis and reasoning is a logical core of theory made up of postulates and their predictions. It is difficult to separate the logical foundation of a theory from its empirical component. A logically sound framework of reasoning underpins economics. The fundamental foundation of the theory of competitive equilibrium is the axiomatic approach. The interrelationships are the guiding principle in both deductive reasoning and inductive generalizations. The elements of economic theory and application that have a direct bearing on management practice and the decision-making process are referred to as managerial theory. The management philosophy is practical. It is focused on those analytical tools that may help make better decisions. The managerial theory gives the conceptual tools that are important for the manager to make informed judgments. The management theory offers a company manager the most support for his decision-making and business planning. The fundamental ideas and methods of management theory apply to all branches of managing theory.

The corpus of principles is the subject of economic theory. However, management theory is concerned with using specific concepts to address a firm's issue. Both microeconomics and macroeconomics are included in economic theory. But the micro features of management theory are limited. Economic theory studies both individual consumers and particular firms. But only individual firms are studied by management theory. Rent, wage, interest, and profit distribution theories are studied in economic theory. But the study of management theory is limited to theories of profit. The foundation of economic theory is a set of presumptions. However, because of real-world circumstances, these assumptions vanish in management theory. Unlike management theory, which is primarily normative in nature, economic theory is both positive and normative in nature. While management theory examines both economic and non-economic sides of the issue, economic theory exclusively addresses the economic aspect.

## DISCUSSION

### Need To Know Economics

The accomplishment of management tasks and obligations depends greatly on economics. Economics contributes to the management profession in the same way that biology contributes to the medical field and physics to engineering. When all other professional requirements are equal, managers who have a good understanding of economics are better able to carry out their duties than those who don't. The primary responsibility of a business organization's management is to use the limited resources at their disposal to the greatest degree feasible in order to accomplish the organization's goal. Here, the focus is on making the most of the available resources while maximizing the goal. If resources had been boundless, the issue of resource management or resource recognition would not have existed. However, a firm's access to resources whether they be financial, human, or material is by no means unlimited. Therefore, the management's primary duty is to maximize their utilization [4]–[6].

As previously noted, economics is primarily the study of logic, tools, and tactics for using the resources at hand as effectively as possible to attain the stated aims. Thus, economics provides managers with the analytical tools and methods they need to further the objectives of the organization they are in charge of. Therefore, managers need to have a practical

understanding of economics, not necessarily a formal education. Therefore, managers are basically economists in practice. In order to carry out their duties, managers must make a variety of choices that are consistent with the company's objectives. Many business choices are made in an environment of risk and ambiguity. These are primarily caused by the market forces' erratic behavior, the shifting business environment, the emergence of competitors with fiercely competitive products, government policy, foreign factors that have an impact on the domestic market as a result of the country's growing globalization, and social and political changes. Corporate decision-making is made more difficult by the complexity of the current corporate environment. But if market circumstances can be reliably foreseen, the degree of uncertainty and risk may be significantly decreased. Economics provides tools, strategies, and models to forecast changes in market dynamics and commercial opportunities.

It is insufficient to just anticipate how the business environment will develop in the future. Making the right business choices and developing a business plan that is in line with the objectives of the company are equally vital. A thorough awareness of the technological and environmental factors affecting the business problems for which choices are made is necessary for rational decision-making. Rational decision-making is greatly aided by the use of economic theories to describe and analyze technological circumstances and the business environment. As a result, a broad variety of applications for economic theories in the examination of real-world business issues have emerged. The effectiveness of economic theory as an analytical tool and its contribution to the process of decision-making has been generally acknowledged given the increasing complexity of the corporate world.

### **Make Decisions**

A manager's conceptual and technical skill set is meant to be enhanced through managerial economics. It is focused on the firm's economic behavior. It focuses on the firm-level decision model, decision process, and decision factors. It involves using economic analysis to assess company choices. Making decisions and preparing forward in an unpredictable corporate environment is a manager's key responsibility. Production, inventory, cost, marketing, financial, personnel, and other choices related to finances and people are only a few of the crucial management decisions. The capacity for rapid decision-making is one of the traits of a successful executive. He must have a clear understanding of his objectives, make use of all available information, consider the advantages and drawbacks, and act quickly.

The choices are made in order to accomplish certain goals. The driving forces behind decision-making are goals. A number of actions are taken to achieve the goals, and quantitative methods are also utilized in decision-making. However, it should be highlighted that actions and quantitative methods alone won't result in satisfactory outcomes. It's critical to keep in mind that a variety of other elements, including technical pressures, environmental factors, human and behavioral factors, and technology considerations, affect the choices and decisions made by managers.

### **Managerial Economics' Impact on Business Decision Making**

Construction and estimation of decision models that are helpful in identifying the ideal behavior of a corporation are done using mathematical economics and econometrics. While the latter uses statistical methods and data from the actual world to economic issues, the former aids in the expression of economic theory in the form of equations. Similar to how probability theory is used to forecasting, regression is utilized to risk analysis. Additionally, economists analyze a firm's behavior using a variety of optimization approaches, including linear programming. Additionally, they have discovered that using the calculus's symbols and

logic to represent their models of business and consumer behavior is most effective. Managerial Economics hence focuses on the economic ideas and ideas that make up "Theory of the Firm." The topic is a blend of quantitative management decision-making methods and economic theory. It has a microeconomic nature. Additionally, it is normative since it makes value judgements and specifies the objectives a corporation ought to follow. summarizes the key connections between economics and administrative decision-making that we discussed. The administration of non-business entities including governmental bodies, hospitals, and educational institutions also heavily relies on managerial economics. A mind schooled in economic logic is capable of making rational administrative judgments whether one oversees the ABC hospital, Eastman Kodak, or the College of Fine Arts.

### **Analysis of Managemental Decisions**

Managerial Economics is concerned with distributing the limited resources in a way that reduces the cost. Managerial Economics is distinct from microeconomics and macroeconomics, as we have previously covered. The focus of management economics is really on applying microeconomics to address managerial problems. Managerial economics assures that managers make effective and efficient judgments regarding consumers, suppliers, rivals, as well as inside an organization, wherever there are limited resources. The fact that resources are scarce raises three crucial considerations.

What products and services should be produced, and in what quantity(es)? is the initial question. For making this decision, the managers turn to demand theory. Demand theory looks at how consumers behave in terms of the types of purchases they would like to make now and, in the future, the factors that influence the purchase and consumption of a specific good or service, the effects of changes in these factors on the demand for that particular good or service, and the goods or services that consumers might not purchase and consume in the future. The managers employ techniques of demand forecasting to determine the quantity of products and services to be produced.

The second question refers to how products and services are created. The company now needs to decide between many alternative manufacturing strategies. It must decide on the procurement of raw materials, expensive equipment, labor, etc. For making these important choices, the managers may utilize a variety of management economics techniques, such as production and cost analysis, project evaluation methodologies, etc. Who should use and make claims for the products and services supplied by the company is the third issue. For instance, the business must choose if its specialized market is local or international. The market needs to be divided. It must thoroughly examine market structure before making judgments about prices and production that are appropriate for the kind of market.

Decision-making is aided by managerial economics since it requires logical reasoning. Additionally, managers can cope with increasingly complicated and real-world issues by studying simple models. Additionally, a broad strategy is used. Managerial Economics examines a business from a broader perspective, addressing issues like what constitutes a firm, what the firm's goals are, and what factors drive the organization toward and away from profit. Overall, management economics places a focus on the company, individual corporate choices, and the environment in which the organization functions. It addresses important topics including why certain professions pay well while others don't, why certain market circumstances encourage the establishment and departure of businesses, etc. An excellent analytical and logical instrument is managerial economics. Managerial Economics is relevant to non-profit institutions like hospitals, schools, government agencies, etc. in addition to for-profit businesses.

## **Managerial Economics Principles**

Economic principles support clear thinking and logical deliberation. They increase the managerial strength and logical ability. The following are some important management economics principles.

### **Marginal and Incremental Principle**

This principle asserts that a choice is considered reasonable and sound if it results in a gain in profit, which is the case in either of two situations given the firm's goal of profit maximization. If overall revenue growth outpaces overall cost growth. If the overall cost decreases more than the whole income. Analyzing margins entails determining how a unit change in one variable affects another. Small changes are often referred to be marginal. Changes in total revenue per unit of product sold are referred to as marginal revenue changes. The term "marginal cost" describes the variation in overall costs for each change in output generated. The effect of change in marginal revenue and marginal cost that results will determine whether a corporation decides to adjust the pricing.

The company should implement the pricing modification if the marginal revenue is higher than the marginal cost. Marginal analysis often results from a change in outputs or inputs, while incremental analysis analyzes the change in the firm's performance for a specific management action. The marginal idea is generalized by incremental analysis. It speaks about adjustments in cost and income brought on by a change in policy. For instance, starting a new company, purchasing new materials, processing goods, etc. Incremental change is defined as a change in output brought on by modifications to a process, a product, or an investment. According to the incremental principle, a choice is appropriate if revenue grows more than costs, costs decline more than revenues, some revenues increase more than others decrease, and some expenses fall more than others increase.

### **Equi-marginal Principle**

The benefit gained by consuming an extra unit of a commodity is known as marginal utility. According to current economists, this concept has been expressed in the form of the law of proportionate marginal utility. It asserts that a consumer would reach the stage of equilibrium when the marginal utilities of the numerous commodities he consumes are equal. It asserts that the customer will spend his or her income on various commodities in a manner that makes each good's marginal utility proportionate to its cost.

### **Opportunity Cost Principle**

The sacrifice of alternatives necessitated by a choice is referred to as the opportunity cost of that action. There is no cost if no sacrifices are made. The opportunity cost concept states that a company may only recruit a factor of production if and only if that element will get compensation in that vocation or job that is at least as high as its potential cost. Opportunity cost is the lowest price at which a particular service would still be available for the intended purpose. It might also be described as the price of given up choices. For instance, a guy decides to launch his own company instead of keeping his lucrative work that pays him Rs. 50,000 per month. The opportunity cost of having his own company will be the missed chance.

## Time Perspective

Principle states that before making any choices, a manager or decision-maker should give appropriate weight to the short- and long-term effects of such actions by appropriately weighing the various time periods. In the short term, certain variables are fixed while others are subject to change. By increasing the number of variable parameters, the productivity may be boosted. While the long run is a time frame during which all production elements are susceptible to change. It is simple for selling enterprises to enter and depart. From the perspective of the consumer, the short-run refers to a time frame during which they react to price changes based on their tastes and preferences, while the long-run refers to a time frame during which they have ample time to react to price changes by changing their likes and preferences [7]–[9]. The discounting principle states that in order to properly compare options, all costs and revenues that will be impacted by a choice in the long run must first be discounted to present value. This is crucial because money now does not have the same value as money tomorrow. Money does have a temporal value. The act of converting future money into an equal amount of current money is known as discounting.

## Use Economics in Business Choices

How economics may influence company decision-making has been covered above. Making a choice in business generally involves choosing the best option from a range of options available to the company. There are four key stages to the decision-making process:

- a) Identifying and defining the goal to be accomplished;
- b) Gathering and analyzing information about the corporate world, as well as the economic, social, political, and technical environments, in order to anticipate the need for and occasion for decision-making;
- c) Creating, analyzing, and creating potential courses of action; and
- d) Choosing a specific plan of action among the available options.

However, this decision-making process is not as straightforward as it first seems to be. Steps and are essential while making business decisions. By doing these actions, managers may evaluate choices in the contemporary corporate environment to see whether they are acceptable and legitimate. Due to the rapid change, intense competition, and complexity of today's business environment, using one's common sense, intuition, and experience alone may not be adequate to make sound business judgments.

## Additional Economic Principles That Affect Management Decisions

Other important economic ideas that bear on management choices include:

### Separation of Labor

Adam Smith did believe that the division of labor is the primary factor enhancing living standards, which is why I placed it first. The idea of the division of labor receives little attention in contemporary economics, but two notions that are closely linked are crucial:

### Returns on Scale

Returns on scale might be rising, staying the same, or falling. Division of labor is one of the factors that increases returns to scale, which is the scenario that produces unusual outcomes.

### **Virtuous Circles in Economic Expansion**

According to Smith, the division of labor and the ensuing rise in productivity had as one of its principal effects a "virtuous circle" of sustained expansion. Although there are other aspects of modern "virtuous circle" theories, they include the division of labor and growing returns to scale.

### **Market Stability**

The concepts of supply, demand, amount provided and required, and equilibrium might all be separated down into individual principles that make up the market equilibrium model, although doing so would not be very profitable.

There are several applications, however, including at least four significant auxiliary principles:

1. knowledge how market changes impact society requires a knowledge of the concepts of elasticity and revenue.
2. According to the entry principle, when entrance into an area of endeavor is free, profits will be wiped out by rising competition. Depending on whether or not there is "perfect" competition, or monopolistic competition, this has a somewhat different meaning.
3. Cobweb Adjustment: This may provide an explanation for why the market overshoots rather than moving smoothly to equilibrium.
4. Why economists favor competition over monopolies and despise them in the case of monopolies.

### **Decreasing Profits**

The Long Run/Short Run dichotomy is an important subsidiary concept because the concept of Diminishing Returns, perhaps the most well-known main economic principle, is significantly more trustworthy in short-run applications than in long-run ones. Nowadays, economists often conceive about declining returns in marginal terms, which is why the equimarginal principle and marginal analysis are closely related.

### **Equilibrium In a Game**

1. The tale may have strategy thanks to game theory. As a consequence, we must make room for
2. There are several equilibriums.
3. Cooperation-free equilibrium
4. equilibrium of the prisoner's dilemma
5. Nash balance,
6. Oligopoly in a cooperative equilibrium

### **Measurement Tenets**

The complexity of economics makes it difficult to measure things like output, earnings, and price levels. Some of the issues may be more or less completely resolved. Value Added and Double Counting: The issue of double counting has a very full answer, which is to employ value added. Real Values and Index Numbers: Since output and related quantities are measured in terms of dollars, inflation must be taken into account. However, there are several issues and drawbacks using index numbers as a feasible option. Measurement of Inequality: Because no one's income is typical and is distributed unevenly, there is also the concern that



the term "average income" may not imply very much. Even if we are unable to account for it, we may still estimate the relative inequality and determine its direction.

### **The Means of Exchange**

Whatever is accepted as a means of commerce is referred to be money. This implies that a bank or other comparable entity may essentially produce money if enough individuals accept the bank's paper as a form of payment. This amazing truth might be referred to as the Fiduciary Principle.

### **Income-Expenditure Equilibrium**

This model brings together a number of ancillary concepts that support one another and together make up the "Keynesian" theory of aggregate demand, much like the market equilibrium principle but much more so. The name "Keynesian" is more contentious than the applications of this theory, whose implications are less problematic.

The following are some of the supporting ideas:

1. Coordination Failure
2. The link between income and consumption
3. The Booster
4. Unanticipated inventory expenditure
5. Financial Policy
6. Investment Marginal Efficiency
7. How money affects interest
8. Balances in Real Money
9. Financial Policy
8. The Surprising Principle

When presented with the same stimuli, people react to them differently than they would if they are not unexpected. Similar to how "Income Expenditure Equilibrium" affects aggregate demand, this new economic concept has a major impact on aggregate supply.

### **Reasonable Anticipations**

No one wants a lot of bad shocks. They won't often be astonished in the same manner if they effectively utilize the facts at their disposal. This may result in:

1. Ineffectiveness of policy
2. Permanence

### **Path Continuity**

The study of managerial economics is used in decision-making. It fills the gap between management practice and abstract theory. It focuses more on the reasoning process. Managerial economics may be defined as "Economics used in decision making." Making decisions and long-term planning are the management executive's main responsibilities in a corporate organization. Making decisions and preparing for the future go hand in hand. The act of choosing one course of action from two or more alternatives is known as decision-

making. Forward planning is the process of creating future plans to implement a decision. Resources available to a business unit are limited, and the company must make the best use of them. This presents a dilemma of choice. The decision-making role belongs to the company executive; he makes the choice that will guarantee the most effective way to achieve a desired goal, such profit maximization.

After deciding on a certain output, preparations are made for price, capital, raw materials, and electricity, among other things. Thus, decision-making and forward planning take place simultaneously. The ambiguity surrounding company decision-making makes the job of a business management challenging. Nobody can foresee how business circumstances would develop in the future. He makes the best preparations he can for the future based on previous performance and the forecast for the future, but in order to minimize failure, he must continually revise his plans in light of new information. As a result, managers are faced with the general challenge of adapting to uncertainty as they participate in a continual process of decision-making through an uncertain future [10], [11].

### CONCLUSION

In conclusion, a systematic and organized approach to decision-making is provided by the management decision analysis framework, which improves the efficacy and efficiency of managerial choices. Managers may make well-informed decisions that support corporate goals and provide better results by adhering to a disciplined process that involves issue identification, creating alternatives, assessing data, evaluating risks, and executing decisions. The rigor and objectivity of the decision-making process are further increased through the use of decision criteria, models, and data analysis tools. The significance of monitoring and planning for implementation. Creating an implementation strategy and delegating tasks guarantee that decisions are carried out successfully. Managers may learn from previous mistakes and make required modifications by tracking and assessing the results of choices.

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## CHAPTER 7

### MANAGERIAL ECONOMICS: A POSITIVE OR NORMATIVE SCIENCE STRUCTURE

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#### ABSTRACT:

Managerial economics is a field that combines economic principles and decision-making techniques to analyze and solve business problems. This abstract explores the nature of managerial economics as a positive or normative science, discussing its characteristics, applications, and the role of value judgments in decision-making. The abstract begins by explaining the distinction between positive and normative science. Positive science focuses on describing and explaining economic phenomena as they are, using empirical evidence and economic theories. Normative science, on the other hand, involves value judgments and seeks to prescribe how economic outcomes should be. Managerial economics is primarily considered a positive science, as it aims to provide managers with a framework to understand and analyze economic behavior and make decisions based on objective analysis. It applies economic theories and principles, such as supply and demand, cost analysis, and market structures, to analyze business situations and predict the likely outcomes of different decisions.

#### KEYWORDS:

Economic Analysis, Managerial Economics, Normative Science, Positive Science, Prescriptive Analysis.

#### INTRODUCTION

We see that various stakeholders or categories of individuals utilize economics in various ways. To make any recommendation or critical analysis, for instance, a practicing economist or policy practitioner employs economic techniques and facts. Typically, these individuals use economic theories and instruments to properly comprehend and make precise predictions about economic factors. It's because economic sciences are often used to make sound decisions and provide accurate economic forecasts. Positive remarks thus refer to actual facts. They lay forth the facts as they are. To be more precise, economics is only concerned with positive propositions and has a rigorous positivist outlook. Given that positive claims are based on facts, the only way to appropriately manage any dispute over a positive statement or analysis is to utilize the facts and their interpretation. Positive economics is thus one that works with facts, data, or real-world circumstances. Any conclusions are drawn and debated only on the basis of these facts and analysis.

The normative assertions form the foundation of normative economics. Normative statements focus on what ought to be. In this situation, economics is more concerned with how things should function than it is with actual life experiences. The normative economics, in contrast

to the positive economics, cannot be refuted on the basis of any fact. For instance, if a political leader says during an election that his party believes the unemployment rate should be reduced to 2.0%, this remark is not supported by any study or data, but rather by the party's norm or want. Now, the policy maker must adjust the system to achieve this goal if the political party gains power. Even though positive economics and normative economics disagree, economics is a discipline that encompasses both positive and normative features. Because economics is a social science, this is especially true [1]–[3].

Economic policy-making, which they define as "conscious intervention in economic activity with the intent to alter the course that it will take," is primarily normative in nature, according to Ross D. Eckert and Richard H. Leftwich. However, competent positive economic analysis must certainly form the foundation of economic policymaking if it is to be successful in enhancing economic well-being. The whole spectrum of effects of the policies that are suggested by policymakers should be understood. Positive and normative economics may be construed as follows, claim Samuelson and Nordhaus. "Positive economics addresses issues like why physicians make more money than janitors. Do most Americans' incomes rise or fall as a result of free trade? ... These are challenging problems, but they can all be answered by using analysis and empirical data. They now fall under the category of sound economics. "Normative economics incorporates moral principles and fairness standards. Should those in need of government aid be compelled to work in order to get it? Should unemployment be increased to prevent excessive price inflation? These inquiries concern ethics and values rather than facts, therefore there is no right or wrong response. They can only be addressed via political discussion and action, not only through economic research.

## DISCUSSION

Economics is also like a science but it is a social science. It deals mainly with the human behaviour. Therefore, many economists argue that economics cannot be as precise a science as the natural sciences like physics, chemistry etc. The latter can be studied in the laboratory conditions where variables can be easily controlled during experiments. However, social sciences like economics cannot be easily controlled. Still over a period of time economic sciences have gained maturity to develop its methodology which is proving now to be quite efficient and such methodologies can be used for efficient analysis of the economic relationships and predictions can be made with sufficient accuracy that generate a sense of confidence and faith. There are two broad methods used in the economic sciences.

1. The deductive method

2. The inductive method

1. The deductive method: This method involves going from general to particular. Certain hypotheses or postulates regarding human behaviour are taken to be true and then with the help of logical reasoning and examination, Nature and Scope of Economics. Here in this lesson, we try to out the cause-and-effect relationship between the factors under consideration. The following steps are involved in the deductive method.

I. Firstly, a problem needs to be identified and then it should be properly specified for the study. In the assumptions required in the study should be clear. Appropriate assumptions are crucial in economic analysis. In stating the assumptions, hypotheses should be clearly framed. The hypothesis formulation requires likely relationship among the different economic variables. In the last phase, hypotheses should be tested through different tools like mathematical economics and econometrics. Based on the above analysis proper inference needs to be derived for specific economic decision making.

2. The inductive method: Although deductive method has strong points of merit to depend upon, this methodology seems to suffer from certain weaknesses. Therefore, economists belonging to the historical school and many other economists have favored the inductive or empirical method. The method of induction involves going from particular to general. Here the appeal is to facts, rather than reasoning and an attempt is made to arrive at conclusions from the known facts of actual life. The inductive method required the following steps:

### **Economic Goals**

Any science moves with certain goals to be achieved. Economics has become now a crucial branch of knowledge. Being a social science, it keeps on revising its goals from time to time. The list might be quite large, but we would like to focus only on certain major goals of economics as given under:

1. A low rate of unemployment: People willing to work should be able to find jobs reasonably quickly. Widespread unemployment is demoralizing and it represents an economic waste. Society forgoes the goods and services that the unemployed could have produced.
2. Price stability: It is desirable to avoid rapid increases-or decreases- in the average level of price.
3. Efficiency: When we work, we want to get as much as we reasonably can take out of our productive efforts. For this, efficient technology becomes quite useful.
4. An equi-distribution of income: When many live in affluence, no group of citizens should suffer stark poverty. Given this, developing countries are strategizing goals like participatory growth and inclusive growth.
5. Growth: Continuing growth, which would make possible an even higher standard of living in the future, is generally considered an important objective.
6. Economic freedom and choice: Any economy should grow and develop in such a manner that people should get more choices and there should not be any outside pressure on their choices.
7. Economic welfare: Economic policies should be pursued in such a manner that welfare of the people or the social benefits get maximized.
8. Sustainable development: It has become a major challenge for economists to carry on the process of economic growth in such a manner that the resources are optimally utilized not only for intergenerational equity but also for sustainable development in quite long run.

### **Managerial Economics- A Positive or Normative Science**

Most of the managerial economists are of the opinion that managerial economics is fundamentally normative and prescriptive in nature. It is concerned with what decisions ought to be made. The application of managerial economics is inseparable from consideration of values or norms, for it is always concerned with the achievement of objectives or the optimization of goals. In managerial economics, we are interested in what should happen rather than what does happen. Instead of explaining what a firm is doing, we explain what it should do to make its decision effective [4]–[6].

### **Positive Economics**

A positive science is concerned with 'what is. Robbins regards economics as a pure science of what is, which is not concerned with moral or ethical questions. Economics is neutral between ends. The economist has no right to pass judgment on the wisdom or folly of the ends itself. He is simply concerned with the problem of resources in relation to the ends desired. The manufacture and sale of cigarettes and wine may be injurious to health and therefore morally unjustifiable, but the economist has no right to pass judgment on these since both satisfy human wants and involve economic activity.

### **Normative Economics:**

Normative economics is concerned with describing what should be the things. It is, therefore, also called prescriptive economics. What price for a product should be fixed, what wage should be paid, how income should be distributed and so on, fall within the purview of normative economics? It should be noted that normative economics involves value judgments. Almost all the leading managerial economists are of the opinion that managerial economics is fundamentally normative and prescriptive in nature.

It refers mostly to what ought to be and cannot be neutral about the ends. The application of managerial economics is inseparable from consideration of values, or norms for it is always concerned with the achievement of objectives or the optimization of goals. Managerial economists are generally preoccupied with the optimum allocation of scarce resources among competing ends with a view to obtaining the maximum benefit according to predetermined criteria. To achieve these objectives, they do not assume *ceteris paribus*, but try to introduce policies. The very important aspect of managerial economics is that it tries to find out the cause-and-effect relationship by factual study and logical reasoning. The scope of managerial economics is so wide that it embraces almost all the problems and areas of the manager and the firm.

### **Importance Of Economics in Our Life**

Economics is the study of how finite resources are consumed by demand, according to the costs imposed by their supply in relation to that demand. In other words, economics tells us that a freeze in Florida that damages the orange crop will cause the price of orange juice to change and how the price will modify demand over time. Modern economic theory is said to have originated in "The Wealth of Nations," a book written by Scottish scholar Adam Smith in 1776. The theory holds that rational self-interest pursued by individuals and businesses in a free-market society leads to optimal economic conditions.

The study of economics helps formulate an understanding of the effects of financial actions and reactions by individuals and institutions. This understanding allows the projection of future economic conditions based on current indications. An understanding of economics assists governments in managing macroeconomic conditions such as limiting a recession by inducing recovery. However, economic theory is not foolproof because it is a social science based on the interplay between culture and money. Economic effects change as cultural customs change.

### **Central Problems of An Economy**

Every economy faces some problems. These problems are associated with growth, business cycles, unemployment and inflation. The macroeconomic theory is designed to explain how supply and demand in the aggregate interact to concern with these four problems. Economists these very important national problems as macroeconomic problems that is, as problems that

could not be understood or solved without an understanding of the workings of the economic system as a whole. The four distinctively macroeconomic problems are:

1. Recession
2. Unemployment
3. Inflation
4. Economic Growth or Stagnation

### **A. Recessions, Depressions and Economic Fluctuations**

The event that created modern macroeconomics was called “the Great Depression,” but the general term for decreasing national production, in modern economics, is a recession. It is not self-evident that a drop in production is a bad thing. For example, it might be that people want to enjoy more leisure, and spend less time producing goods and services. If production dropped for that reason, we would have no reason to think of it as an economic problem. But, in some periods of recession, we have evidence that this was not what happened. In many recession periods, businesses that announced they were hiring had long lines of people who wanted to apply, with many more people than they could hire. This suggests that the people standing in line for a job had more leisure than they wanted, and would have preferred jobs and income to buy more goods and services. In the 1930’s, some people sold apples or pencils in the street to get a little income, typically much less than they would have had in their old jobs. Again, this suggests that people had too much leisure and would have preferred more work and income. If this is so, then it seems that something was going wrong. In different terms, it seemed that the recession had caused unemployment. Another possibility is that production might drop because a war or disaster had destroyed factories and other capital goods. But, in 1933, it seems very unlikely that the productive capacity of the economy could have dropped by 30%. There had been no war. And in fact, factories had been closed that could have been reopened and put to work, at the same time as many people were looking for work. Perhaps these circumstances show why the recession is regarded as a major economic problem [7], [8].

### **Unemployment**

Our second macroeconomic problem is unemployment. This problem is highly correlated with recession, but is distinct, and we need to look at it in its own terms. Unemployment occurs when a person is available to work and currently seeking work, but the person is without work. The prevalence of unemployment is usually measured using the unemployment rate, which is defined as the percentage of those in the Labour force who are unemployed.

Economists distinguish between various types of unemployment. For example, cyclical, frictional, structural and classical, seasonal, hardcore and hidden. Real-world unemployment may combine different types. The magnitude of each of these is difficult to measure, partly because they overlap. Unemployment is a status in which individuals are without job and are seeking a job. It is one of the most pressing problems of any economy especially the underdeveloped ones. This has macroeconomic implications too some of which are discussed: Reduction in the Output: The unemployed workforce could be utilized for the production of goods and services. Since they are not doing so, the economy is losing out on its output.



**Reduction in Tax Revenue:** Since income tax is an important part of the revenue for the government. The unemployed are unable to earn, the government loses out on the income tax revenue.**Rise in the Government Expenditure:** The government has to give unemployment insurance benefits to the claimants. Hence the government will lose from both sides in terms of unemployment benefits and loss of tax revenue.

### **Inflation**

In economics, inflation is a rise in the general level of prices of goods and services in an economy over a period of time. A rising price level – inflation- has the following disadvantages:

- 1.It creates uncertainty, in that people do not know what the money they earn today will buy tomorrow.
- 2.Uncertainty, in turn, discourages productive activity, saving and investing.
- 3.Inflation reduces the competitiveness of the country in international trade. If this is not offset by a devaluation of the national currency against other currencies, it makes the country's exports less attractive, and makes imports into the country more attractive, which in turn tends to create unbalance in trade.
- 4.Inflation is a hidden tax on “nominal balances.” That is, people who hold bonds and bank accounts in dollars lose the value of those accounts when the price level rises, just as if their money had been taxed away.
- 5.The inflation tax is capricious-some lose by it and some do not without any good economic reason.
- 6.As the purchasing power of the monetary unit becomes less predict, people resort to other means to carry out their business, means which use up resources and are inefficient.

### **Economic Growth or Stagnation**

Stagnation is a period of many years of slow growth of gross domestic product, in which the growth is, on the average, slower than the potential growth in the economy.

### **Causes of Stagnation**

- 1.Population growth might high.
- 2.Fewer people might choose to work.
- 3.The growth of labour productivity might slow.

Stagnation is economic growth that, while positive, is less than the potential growth of the economy. Some economists believe that stagnation is a serious problem and a cause of other problems, but since identification of stagnation depends on one's idea of the potential, it remains controversial whether the slowing we see is stagnation or a reduction of the potential.Traditional economic theory has developed along two lines; viz., normative and positive. Normative focuses on prescriptive statements, and help establish rules aimed at attaining the specified goals of business. Positive, on the other hand, focuses on description it aims at describing the manner in which the economic system operates without staffing how they should operate. The emphasis in business economics also known as managerial economics is on normative theory. Business economics seeks to establish rules which help business firms attain their goals, which indeed is also the essence of the word normative.

However, if the firms are to establish valid decision rules, they must thoroughly understand their environment. This requires the study of positive or descriptive theory. Thus, managerial economics combines the essentials of the normative and positive economic theory, the emphasis being more on the former than the latter [9]–[11].

## CONCLUSION

In conclusion, Management decision-making is influenced by management economics, which is essentially a positive science that uses economic analysis and concepts. While offering a framework for unbiased analysis and fact-based decision-making, it nevertheless recognizes the role normative judgements might play in certain circumstances. Positive analysis and value judgements must coexist successfully in management economics applications for managers to be able to make choices that are in line with organizational goals and optimize results. The abstract also addresses how crucial it is for managers to be aware of the constraints and inherent biases connected with normative judgements. It highlights the need for managers to be conscious of their own prejudices, take into account other viewpoints, and seek out unbiased facts and analysis to support decision-making.

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## CHAPTER 8

### APPROACHES TO MANAGERIAL DECISIONS STRUCTURE

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#### ABSTRACT:

Managerial decisions are crucial for the success of organizations, and different approaches exist to guide decision-making processes. This abstract explores various approaches to managerial decision-making structure, discussing their characteristics, advantages, and limitations in helping managers make informed and effective decisions. The abstract begins by highlighting the importance of managerial decision-making and the complexity of the business environment. It emphasizes the need for structured approaches to ensure that decisions are based on rational analysis, considering multiple factors and potential outcomes. Making decisions is a crucial component of planning. All managerial functions include making decisions and addressing problems, albeit these processes are often seen as being a part of the planning stage. One on modeling, the five-step management science method, and the process of addressing engineering problems follows a review of the history of management science.

#### KEYWORDS:

Behavioral Approach, Cost-Benefit Analysis, Decision-Making Models, Economic Approach, Ethical Approach, Managerial Decisions.

#### INTRODUCTION

Making a deliberate selection between two or more reasonable options in order to choose the one that will result in the most desired outcomes compared to unfavorable outcomes is known as managerial decision making. There is nothing to choose if there is just one option. In this session, we'll look at the process of creating and assessing alternatives before choosing the best one. We'll also examine briefly some of the management science techniques that may be used to aid in this assessment and selection. Making decisions is a crucial component of planning if it is to be understood as "deciding in advance what to do, how to do it, when to do it, and who is to do it." An organization's design and staffing, the creation of subordinate motivation strategies, and the identification of corrective measures in the control process all need decision-making. It is mentioned here because it is often researched as a component of the planning function [1]–[3].

#### A Management Economist's Role

The managerial economists have assumed a significant role in contemporary business with the arrival of the management revolution and the shift from the owner-manager to the professional executive. Companies don't function deterministically in the actual world. They work to accomplish a variety of goals. The underlying presumption of economic theory is that every firm's primary goal is to maximize profits. Pure economic theory is seldom directly applicable to executive choices. Current business issues need a unique kind of understanding since their solutions are either too evident or just theoretical. A management economist who

is well-versed in theory and analytical techniques can solve business difficulties. Large corporations use managerial economists to support management in developed nations.

Organizationally, a management economist is positioned closer to the policy maker for the simple reason that his primary responsibility is to raise the standard of policymaking as it pertains to both short- and long-term planning. He has a big part to play in helping the management of a company make decisions and plan ahead utilizing his specialized knowledge and methods.

## DISCUSSION

The factors which influence the business over a period are:

### **External and Internal.**

The 'Business Environment' is made up of external elements that are beyond of the company's control. The internal elements are referred to as "Business Operations" and are included in a firm's scope and operation.

#### **1. Outside influences**

A managerial economist's main responsibility is to thoroughly research the business environment and external factors that affect the firm's interests, such as the level and growth of national income, the impact of the global economy on the domestic economy, the trade cycle, volume of trade, and the makeup of financial markets, among other things. They are incredibly important since they have an impact on every corporate organization. The answers to these and comparable questions will provide further information on the firm in issue, and also highlight some of the areas in which a management economist may significantly improve outcomes via sound judgment. He adds impartiality, a big picture viewpoint, and the idea of alternatives to the decision-making process.

His attention to long-term trends maximizes profitability and secures the firm's long-term prosperity. The management economist's job is to analyze, draw conclusions, and provide recommendations rather of making judgments. His primary responsibility is to provide decision-makers a quantitative foundation. He need to focus on the economic elements of issues. He ought to possess a special intuitive sense of perception [4]–[6].

#### **Internal Elements**

The managerial economist may assist management in making decisions on a firm's internal operations with regard to issues like cost structure, demand, pricing, and investment forecasts, among others. In addition to the research mentioned above, the managerial economist must carry out a number of particular tasks. He contributes to the organization of the firm's production, investment, pricing, sales, and inventory schedules. The essential task that takes up the majority of a management economist's work is forecasting.

The sales forecast is closely tied to overall economic activity and serves as a bridge between internal and externally uncontrolled elements. In order to create a framework for the growth of sales and profit, the management economist is often tasked with creating short term general economic and specialized market projections. He must assist the company in formulating plans for new product policy, pricing, and sales promotion. The management economist often requires specialized research on unique issues and possibilities. He needs to engage in market research, a product preference test, an analysis of the efficiency of his advertising, and marketing research. To better comprehend a marketing issue, marketing research is conducted.

The management economist is required to do an economic study of rival companies. He should also do a feasibility study, project review, and investment appraisal. The managerial economist has a responsibility to provide the appropriate information. To sum up, a managerial economist plays a crucial function in society. The management should maintain its faith in him. A managerial economist can best support management if he never loses sight of his company's primary goal, which is to turn a profit.

### **Requirements Of a Management Economist**

By helping management use the increasingly specialized skills and sophisticated approaches needed to address the many challenges of good decision-making and forward planning, the managerial economist may play a crucial role. The analysis and interpretation of economic data in the context of managerial issues may be roughly characterized as the duties of a managerial economist. The managerial economist should be able to devote more time and attention to economic issues than the firm's management. Numerous mundane tasks that are intimately related to the day-to-day operations of the company may be part of his employment.

The management economist's main role at work is that of a general advisor. The advice service alludes to the possibilities available to managerial economists as a result of the expanding influence of government in commercial life. He is in charge of overseeing how the whole company operates. One of a management economist's most crucial responsibilities is that his goal must align with the company's. Profit maximization has always been seen as the primary goal of business. He has to go above and beyond standard management in order to make money since he is a managerial economist. He cannot hope to succeed in his role as a manager unless he has a strong belief that aids him in improving the firm's capabilities. Making as precise of a prediction as feasible is the management economist's other primary duty. The management economist must foresee both the numerous elements of the internal business picture of the organization as well as the various stages of company activity.

The management economist should be aware of his obligations to provide accurate forecasts. The management may monitor the progress of company planning more closely by providing the finest projections feasible. Creating a synthesis of policies relating to production, investment, inventories, pricing, and cost is yet another duty of the management economist. An organized process of converting inputs into output is called production. The act of manufacturing increases the worth or quantity of utilities. The cost of production consists of the financial outlays spent throughout the manufacturing process. The foundation for price is set by the cost of manufacturing. It offers a foundation for management choice.

The management economist has focused on a number of topics, including increasing profit, lowering inventories, predicting sales, etc. Production is hampered by a relatively low inventory level. Because a significant amount of capital is unprofitably invested in inventory, a management economist's first duty is to minimize his stock. Only until the management economist is a full part of the company team will his contribution be sufficient. The management economist should utilize his knowledge and information while determining the course of action.

He has to be prepared to take on special duties seriously. Even the most complex concepts may be explained simply and without using difficult technical words by a management economist. Additionally, it is the managerial economist's duty to inform management as soon as feasible if he detects a forecasting inaccuracy. He can help the management make the necessary adjustments to policies and programs in this manner. He has to be aware of recent political and economic changes in order to assess how they could affect his company's

operations. The managerial economist should develop and retain several relationships and data sources that the other members of management would not immediately have access to. He should become a member of and actively participate in professional and trade organizations for this reason.

A management economist should, therefore, widen the range of certainty. He has to be aware of his commitments and responsibilities in order to properly perform his position. There is no denying that the management economist's realistic outlook greatly adds to the company's revenue growth.

### **Items Or Approaches for Making Managerial Decisions**

The following are the top six techniques used by management economics to identify and address firm-specific business issues:

#### **Technique Scientific**

The scientific method is a field of study that is concerned with methodically classifying observable facts and contains reliable methods for the discovery of truths. It describes a method or methodology of inquiry used to gain systematic, scientific information. Science has many vital aspects, but its technique of investigation may be its most important quality. Confidence in the reliability of findings can only be gained via the scientific approach. It focuses on controlled studies and examines how preconceived pieces behave in a much-reduced setting. The experimental technique may be used to management behavior characteristics that need precise and logical reasoning. Managerial economics can to a limited extent employ experimental approaches. A managerial economist cannot use experimental techniques in the physical sciences in the same manner or to the same degree as a physicist.

In any examination of management behavior, we often use both an inductive and a deductive approach. The deductive approach starts with random postulates and assumptions. For the rationalists, a collection of self-evident premises sits at the top of the system, and it is from these that further assertions are deduced via the process of reasoning. Inductionists, on the other hand, believe that science must develop its axioms from the same evidence and, more specifically, by progressively and continuously climbing until it eventually reaches the most comprehensive axioms. What scientific method deduction or induction is used is a frequently questioned question. Both are the appropriate responses to this. Both approaches play a crucial role in any scientific investigation and are interconnected.

#### **The statistical approach**

A mechanical technique known as statistical methods was created specifically to make it easier to condense and analyze a huge quantity of quantitative data. The objective of the statistical approach is to make comparison easier, investigate correlations between the two occurrences, and interpret the complex data for analysis. The differences between the changes and the outcomes that follow from shifts in time, frequency of occurrence, and a variety of other variables must often be compared. For this kind of comparison between past, current, and future estimations, statistical techniques are applied.

Extrapolation is one technique that may be used, for instance, to estimate future patterns in, say, supply and demand for a given product. The process of making inferences using statistics is mathematical in nature. It attempts to create a mathematical relationship between the two variables in addition to establishing a causal link between them. A quantitative micro-approach is the statistical approach. With the use of statistics, some significant correlations and associations between qualities may be discovered. The study of management, economics,

etc. may benefit from it, and bankers, governments, planners, speculators, researchers, etc. can all benefit greatly from it.

Although statistical techniques are the servant of management economics, caution should be taken when using them. The statistical approach's most notable feature is that it enables us to look for patterns or regularities in economic data and allows us to draw generalizations that are impossible to draw using any other method.

### **Intellectual Experimentation Method**

Finding out the nature of any connection between several factors, such as cost, pricing, and production, is the central challenge in management economics. Additionally, the actual world is always complicated. Many elements, including those that are physical, social, temperamental, and psychological, have an impact on it. In such a disorganized and intricate structure, it is impossible to find any order, sequence, or rule. Model creation is crucial for the management economist in this situation. Models are sometimes used to analyze behavior. An abstraction from reality is what a model is. A model may be expressed as a graphic, a description in words, or a description in mathematics. It may be divided into three groups: symbolic, analogous, and iconic.

Managerial economics may be thought of as economics that has been applied to firm-level problem solving. Managers constantly deal with issues related to resource allocation and choice. Managerial economics is more situational and tangible and focuses mostly on the allocation process that is carefully controlled. An abstract model of the company may and will be used for this purpose by the management economist. Models are illustrative depictions of reality. Through approximation, they assist us in comprehending the underlying dynamics of the intricate world of reality. Building models is more helpful in managerial economics since it enables us to understand the real socio-economic dynamics at play in an organization. Companies only have a certain amount of resources at their disposal, which they must use to turn a profit. The management of these businesses must make decisions about how to allocate their resources and choose which conflicting demands on them to give priority to. Models may help company leaders forecast potential outcomes.

### **A Model for Simulation**

It is a development of the thought experiment. With the introduction of electronic computers, calculators, and other related technology, this technique has become more and more prevalent. Internet services are also. Using this technique, we may program a complicated network of relationships. Computers may also be utilized for various corporate applications, document generating, and graphical solutions in addition to scientific and mathematical applications. A computer is a quick electronic calculator that can quickly take in information, process it, integrate it, relate it, and provide the output as a consequence. In managing a firm, a manager must make several choices that may be trivial or significant, straightforward or difficult. Once a choice has been made, they must make sure that it is carried out as quickly and inexpensively as possible. The manager will be better equipped to tackle the business difficulties he faces thanks to the technological devices, which will also help him grasp them from a different angle.

### **Historic Model**

It is believed that prior knowledge is necessary for current knowledge. The major justification for using the historical approach in modern management economics is this. The strategy takes on a more general character in an effort to identify a foundation for commercial

activities. This method's major goal is to apply mind to a variety of business challenges by identifying historical trends in facts, events, and attitudes as well as the boundaries between thinking and action. We can better grasp the present economic issues if we have a sense of the historical occurrences. A given economic policy's soundness is an inevitable byproduct of its history [7]–[9].

Experience in data collection, relational analysis, and context analysis are all necessary for using the historical approach. In order to have complete control over the facts and the synthesis perspective of the facts, the managerial economist must adopt the analytical viewpoint. He needs to be able to discern the connections between happenings and one another as well as between events and their surroundings. Finding facts and evaluating them both require taking an impartial stance. However, the strategy must be founded on pertinent, sufficient, and accurate facts in order to be objective. The management economist should be clear about his own purpose and knowledgeable with the broad area of his issue before adopting the historical technique. Applying the historical approach requires a lot of creativity.

### **Detailed Method**

The descriptive technique is straightforward and readily adaptable to a variety of business issues, especially in developing nations. Through a cross-sectional analysis of the current situation, it is a fact-finding methodology primarily focused on the present and abstract generalizations. The gathering of data is the method's major focus. The descriptive technique also addresses data interpretation to some degree. Applying the descriptive technique requires precise, objective, and, if at all feasible, quantitative data. The descriptive technique must compare one circumstance with another and various features of the same situation in order to link the causation of the data that were gathered. As a result, situational comparability is a key component of this approach.

Economic theory and management practice are combined in the study of managerial economics. Managerial Economics fills the gap between the logical issues that fascinate economist theorists and the policy issues that trouble real-world managers. Managerial economics improves analytical abilities, aids in the logical organization of problems, and offers acceptable answers to economic issues. Its study aids management decision-making in all areas, enabling successful and efficient corporate operation. Management economics uses economic theories and methods from decision science to address management issues. It offers ideal answers to problems with management decision-making. Business organizations are made up of a mix of human, financial, and physical resources that support management decision-making. Production and consumption are the two basic categories into which societies may be divided. Consumers are on the consumption side, while firms, which are the economic units, are on the production side. An economic model is used to analyze how well businesses function. The theory of the company is the name given to an organization's economic model. Business decisions encompass a variety of crucial choices, such as whether to introduce a new product, engage in research and development, etc. The managers' business choices have a big impact on whether a company succeeds or fails. The complexity of the business world is always increasing, which makes it increasingly difficult to be a manager or decision-maker in an organization. The complexity of the business environment is greatly influenced by the effects of product manufacturing, marketing, and technical advancements [10], [11].

### **CONCLUSION**

In summary, Different frameworks, such as rational decision-making, constrained rationality, intuition, and decision-making under uncertainty, may be used to approach management



decision-making. The choice of strategy is based on the particular decision environment and information that is available, and each approach has benefits and limits. These strategies enable managers to make well-informed choices that support corporate objectives and optimize results. The context, complexity, and urgency of the decision all affect the decision-making strategy that is used. Managers must be familiar with these many strategies in order to choose the best one for the given circumstances, given the knowledge and resources at their disposal, and other factors. This approach is used to explain the structure, operation, and policies that are important to the economy. The management economist often uses it to analyze how the organizational structure affects how commercial organizations operate. The finest descriptive studies are those that are based on observation. This approach offers a rational and scientific foundation for making judgments and learning new things. The managerial economists might therefore characterize a phenomenon or phenomena under examination or offer a picture of them.

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## CHAPTER 9

### AN ECONOMIC DEMAND ANALYSIS

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#### ABSTRACT:

Demand analysis is a fundamental concept in economics that involves studying the relationship between price, quantity, and consumer behavior to understand the factors influencing the demand for a product or service. This abstract explores the nature of demand analysis, its key components, and its significance in determining market dynamics and informing business decisions. The abstract highlights that demand analysis aims to identify and quantify the factors that affect the demand for a product or service. It involves examining how changes in price, income, consumer preferences, and other variables impact the quantity demanded. By understanding these factors, businesses can predict and respond to changes in market demand, optimize pricing strategies, and allocate resources effectively. The ideas of supply and demand are helpful in describing what is taking place in the market. Every market transaction entails an exchange, and many exchanges take place every day. We may purchase and sell products and services in a market.

#### KEYWORDS:

Complementary Goods, Consumer Behavior, Cross Elasticity of Demand, Demand Analysis, Demand Curve, Income Elasticity of Demand.

#### INTRODUCTION

The market is a place where buyers may purchase goods and services, and sellers can sell their products there. explains how demand, the engine of a market economy, works. The term "demand" is used in economics to describe the link between the pricing of a good and the quantities of that good that customers wish to buy at those prices. One of the factor's affecting pricing is demand. The consumption of a consumer, or a consumer's economic activity, is connected to the theory of demand. Demand is the mechanism through which a customer is able to buy the products and services he wants to use. One of the most important management variables is demand since it helps managers foresee changes in output and input prices. Regarding the kind of product to be produced, the amount, the cost of the product, and its selling price, the manager may make better selections. Let's examine the idea of demand and how crucial it is to making decisions [1]–[3].

A concept in economics that explains a consumer's desire and readiness to pay a price for a particular commodity or service. A product or service's price rises when demand rises, and vice versa, all other things being equal. Demand is the capacity and desire to purchase a specified amount of a good at the going rate for a predetermined amount of time. Therefore, the desire, willingness, and capacity to pay for an item are implied by the term "demand". Prof. Hibdon explains that "demand means the various quantities of goods that would be purchased per time period at different prices in a given market." As a result, three elements

are required for demand to exist: the price of a good or service, the quantity of that good or service that a customer (or consumers) is willing to purchase in a particular period of time. Similar to this, Benham noted that "the amount of anything at a given price that will be purchased per unit of time at that price is the demand for it.

### Types of Demand

There are eight demand states and they include the following data:

1. Negative Demand: Consumers don't normally like the product. The customer does not want the product, even if it could be beneficial.

As an example, there is less demand for things like plane travel and other services like dental care.

2. Lack of demand: The potential customer base for the goods might be misinformed and uninterested. For instance, farmers may not be enthusiastic about novel farming methods. College students may not find taking foreign language lessons interesting.

3. Latent demand: Customers could have a critical need that no present product can satisfy. A safer neighborhood, a safer cigarette, and a gasoline-efficient automobile are a few examples.

4. Reducing demand: When there is a decline in the demand for a product or service. For instance, applications have decreased for private colleges.

Demand changes hourly, daily, and seasonally. 5. A variable demand. For instance, throughout the week, museums are more crowded and less often visited.

6. When a firm is satisfied with the volume of business it is getting, it is in full demand. A situation where supply and demand are equal would be ideal.

7. Demand that exceeds what the business can and wants to handle is referred to as excessive demand. For instance, national parks get heavy traffic throughout the summer.

Demands that society rejects are those that are unwholesome. For example, alcohol, hard liquor, and smokes.

### Variables Of Demand

a) The difference between desire and demand. Demand is the amount of a product or service that people want and can afford to buy. Demand and need are not synonymous. Demand is a sign that a consumer has the money to purchase it and the need for it.

b) The relationship between demand and pricing. Demand always comes at a price. In the absence of a price, the amount requested has no significance. In order to make requests, the consumer must be knowledgeable of the price and availability of the goods.

At a certain time, demand. The amount must be specified in terms of a time period, such as 10 quintals of wheat per year, 6 shirts each year, or 5 kilograms of sugar every month. In addition, a specific date must be associated with both the price and the quantity needed.

### Authorities Of Demand

The demand for a product is affected by a number of factors. Any study would fall short of taking into account all conceivable demand drivers. As a consequence, it is easy to pinpoint a few factors that influence demand for the vast majority of the products. These consist of the cost of the item, the cost of related commodities, the cost of buyers' wages, advertising, and

sales promotion. These factors are shown to significantly affect a commodity's sales. They may be expressed and quantified using a variety of techniques. In demand studies, they operate as the controlling variables. The weight of each determinant varies with the product. As a consequence, after determining the importance of each element, it is just required to examine the demand for a certain product. Some of these factors are within the control of the firm, while others may not be. For instance, a business could change the price, promotional expenditure, product quality, and sales conditions for the commodity. Let's briefly review each of these elements:

i. **Commodity Price:** The amount sought is greatly influenced by the price of the desired commodity. Price demand is a more accurate term for the demand for a product at a certain price. The link between price and demand is described by the Law of Demand. Both the present price and the projected price rises have an effect on demand.

ii. In fact, by holding the price and other variables constant, we may establish a link between consumer income and demand at different income levels. The demand for a typical commodity rises with growing income and falls with diminishing income. With Giffen commodities, the relationship is completely the opposite.

iii. **Costs of related commodities.** The demand for a commodity is also impacted by changes in connected goods' prices. There are two types of comparable products:

Tea and coffee are two options that may be used interchangeably. Price changes have the same effect on a commodity's demand as they do on the cost of a replacement. As coffee costs rise, more people will drink tea, and complementing goods like ink and pencils are those that are also in demand. Certain circumstances have an antagonistic relationship between the cost of one product and the amount demanded for another. As pen costs increase, fewer people buy pens, which results in a decline in the demand for ink. Price and demand have a negative relationship. Cross demand is the term used to describe how price changes affect how much demand there is for related quantities of items [4]–[6].

#### **IV. Customer Preferences**

The amount desired depends on the client's tastes as well. Examples of preferences include tradition, fashion, and other factors. Consumer preferences are impacted by advertising as well. Even at the same price, there will be more demand for a product if its appeal rises. This has led to a rise in demand. The opposite of demand growth is demand decrease.

**Wealth:** The amount of a commodity that is desired depends on both the overall amount of wealth and how it is distributed. Common commodities are in more demand as income levels grow. If wealth is distributed more equally, there will be a larger demand for essentials and comforts. On the other hand, when most people are poor and a small number of people are affluent, the demand for luxury is often greater.

**Population:** The need for basic essentials rises along with the population. Demographic makeup also has an impact on demand. The population's composition includes the proportion of men to women, as well as the number of young, old, and children. Changes in population mix have an influence on how particular items are demanded.

**Taxes** are one way that government policy affects consumer demand for products. A product's price increases and its demand decreases when it is taxed. Similar to this, government funding reduces the cost of an item while increasing demand for it.

## Curve of Excessive Demand

If, despite an increase in the item's price, people keep buying more because of things like scarcity worries or the possibility that the item may be really important, the demand curve slopes upward from left to right. The law of demand does not apply in all situations and circumstances. Legal exceptions are the circumstances when the law of demand no longer holds true. These are some of the key exclusions.

### 1. Products by Giffen

Products made by Giffen are some special examples of inferior goods. This category consists of more affordable veggies like potatoes and millets like bajra. Sir Robert Giffen of Ireland was the first to observe that consumers used to spend more of their money on subpar goods like potatoes and less on meat. They ran out of potatoes after purchasing them for their primary meal and were unable to afford to buy meat. The price rise on potatoes led to an increase in potato demand as a consequence. The demand laws are broken in this situation. The Giffen paradox is a common name for it.

### 2. Conspicuous consumption and the Veblen Effect

This deviance from the demand rule is related to the Thorsten Veblen hypothesis. Only a small segment of society's rich and affluent people purchases luxury goods like diamonds. Due to their outrageous prices, these things are beyond of the ordinary person's grasp. A diamond's prestige worth rises in proportion to its cost. Customers thus think that these items' prestige value has declined as their prices have fallen. As a result, demand for these items increases as their price drops. In this case, the law of demand does not apply.

### 3. Externally Visible Needs:

The necessities of modern life include a number of things. So, despite their astronomical price, we must purchase them. the acceptance of TV. Despite price increases, there is still a market for things like refrigerators, vehicles, and TVs. Status symbols have developed around these things. As a result, people still purchase them despite their higher price.

### 4. Ignorance:

Another factor that sometimes motivates a consumer to purchase more things at a higher cost is ignorance. This is especially true if the customer believes that a high-end, branded product is of greater quality than a cheaper alternative.

### 5. Emergencies:

Families behave oddly in times of crisis, such as war or starvation.

Households make more purchases, even at greater costs, in order to create scarcities and push up prices because they worry that they may not be available. However, a decrease in pricing during a downturn does not ensure that consumers would want more if required.

### 6. Future Price Variations

Families also indulge in conjecture. When a product's price is rising, households often purchase large quantities of the item out of anxiety that the price will continue to grow. They hold off until prices are expected to drop even more in order to buy things later on at even lower costs. As a result, demand declines as prices go down.

## 7. Small Changes

A commodity's market is impacted by changes in fashion and taste. No matter how much the price of a classic manual camera is decreased, stock clearing is difficult when a digital camera replaces it. On the other hand, the demand for digital cameras will expand despite possible price hikes. Demand-side legislation is futile.

## 8. Theory-based Impact

It makes reference to the tendency of low-income groups to imitate the spending patterns of high-income groups. They will nevertheless buy a product to imitate their neighbors' consumption even if they lack the resources to do so.

## 9. Snob Effect

Some shoppers want to buy unusual or unique things to set themselves apart from the competition. In this scenario, the demand for the item will grow even if the price does too.

## 10. Speculative, Out-Of-Date, And Seasonal Products

The rule of supply and demand does not apply to shares and other speculative goods. Dealers boost their purchases every time prices go up because they expect further price hikes. Products that become no longer useful due to advancements in the underlying technology are considered obsolete. The demand for these items has not increased despite price decreases.

### Items with Limited Supply

Goods with a limited quantity or whose future availability is uncertain also defy the law of demand.

### Weaker Demand Than Typical

In economics, elasticity describes a change in one variable that is equivalent to a change in another. The quantity needed of a product is affected by variations in its price, the pricing of rival commodities, income fluctuations, and other factors. The degree to which a change in price or income will affect the quantity wanted is referred to as elasticity. Elasticity of demand is the term used in economics to describe how much customer demand for a commodity or service reacts to a reduction in its price. Demand increases as prices go down, and vice versa.

Demand is one of the elements that affects price. The notion of demand is associated with a consumer's consumption or economic activity. Demand is the process that enables a client to purchase the goods and services he desires. In economics, "demand" refers to the relationship between an item's price and the quantities of that good that buyers are willing to purchase at that price. Demand for a product is influenced by a number of factors, such as price, income, the cost of comparable goods, tastes, preferences, population, etc. The quantity needed and the cost of a product are inversely connected. Economics refers to this relationship as the Law of Demand. The demand curve has a negative slope due to the law of falling marginal utility, substitution effect, diversity of uses for the item, and income impact.

The demand curve typically slopes downward from left to right, but there are a few rare exceptions when it slopes upward, such as when there are inferior or counterfeit goods, when consumers are erroneously expecting a rise or drop in the price of goods in the future, etc. Understanding how a good or bad crop might affect a farmer's financial status, determining a product's price, the finance minister's budget, and planning for specific commodities and enterprises all depend on the law of demand.

## Market Demand Analysis Structure

the demand across the board for a certain product or service. The level at which manufacturing production for a good or service should be set is determined by calculating market demand, which also assists in determining the ideal pricing levels to optimize sales revenues.

## Demand Market Curve

a chart that shows the amount of a product or service that clients purchase on the X axis and various pricing levels on the Y axis. One may combine the market demand curve and market supply curve for a product or service given by a company in order to get the product's equilibrium price, which is located where the two curves cross.

## Knowing the difference between Want and Demand

Demand and want are often confused and used interchangeably. They are really two separate terms. Demand is a desire that is enabled by the ability to purchase. This suggests that someone could demand anything if they really want it and have the means to pay for it. Anyone may want any good or service. One cannot just want something and then expect to get it for nothing. The right to demand the product belonged to the individual only once they had paid the price for it. Remember the last illustration? Varsha's request for mangoes is "Varsha bought 2 kg of mangoes at Rs. 50 per kg last week." If Varsha had wanted to buy mangoes but was unable to do so, her desire rather than demand for mangoes would have been made clear.

## Resolving Market Demand Factors

The law of demand and demand schedule, which assumes "other things remaining the same," states the relationship between price and quantity demanded. The whole demand schedule or demand curve changes when one of these other parameters changes. In other words, these extra variables affect where and how steep the demand curve is. If these extra components or the demand determinants change, the whole demand schedule or the demand curve will shift. Changes in these factors will cause a demand curve to rise or fall as appropriate.

The following variables affect the market's demand for goods:

## Consumer Preferences and Tastes

One of the most important factors in determining demand for anything is the tastes and preferences of the consumers. Customers have greater tastes and preferences for a product whose demand is high and whose demand curve is positioned at a higher level. The variety of people's tastes and preferences for various things has an impact on the demand for such products. The demand for various commodities varies as a result of changes in fashion as well as marketing pressure from manufacturers and sellers of different items.

## DISCUSSION

For instance, when Coca-Cola launched its factory in New Delhi a few years ago, demand for the beverage was quite modest. However, as a result of widespread exposure and promotion, Coca-Cola has altered peoples' preferences and is now seen favorably. As a result, demand for Coca-Cola has significantly increased. We contend that the Coca-Cola demand curve has shifted upward in terms of economics. However, when a product is no longer in demand or when people's tastes and preferences no longer favor it, demand decreases. Economics predicts a drop in the demand curve for these goods.



### **Changes in the Prices of the Related Goods:**

Prices of other items, particularly those that are connected to a given good as alternatives or complements, have an impact on demand for that good as well. We assume that the prices of the associated items will stay constant when calculating the demand schedule or demand curve for a good. Therefore, the whole demand curve would vary its position, shifting higher or downward depending on the situation, as the prices of the connected items, replacements, or complements changed. Demand for a product will decrease when the price of a replacement for it decreases, and will increase when the price of the alternative for it increases [7], [8].

For instance, customers would purchase less tea than usual if the price of tea and people's earnings remained the same but coffee's price decreased. Tea and coffee are fairly near alternatives, thus as coffee gets more affordable, customers start choosing coffee instead of tea, which lowers the demand for tea. If the price of one of the complimentary commodities changes, it will have an impact on the demand for the other. For instance, the demand for sugar would be impacted if the price of milk decreased. The need for sugar will rise as people consume more milk or make more khoya, burfi, and rasgullas with milk. Similar to how falling automobile prices would stimulate demand for them, rising gasoline consumption will follow. Petrol and automobiles work well together.

### **How many consumers are there in the market?**

The market demand for a product is calculated by aggregating the individual desires of both current and potential consumers or purchasers of an item at different feasible prices, as we have previously described. The market demand for a product increase with the number of customers. The issue now is what elements determine how many people buy a product. The number of consumers of the item that has been replaced by the other will decrease, while the number of consumers of the good that has been utilized in its stead will grow. This happens when customers substitute one good for another.

Additionally, when the market for an item grows as a consequence of the seller's success in discovering new markets, there will be more people buying that good. The growing population is a significant factor in the rise in consumer numbers. For instance, since the population of the nation and the number of customers for these items has grown, there is a greater demand for several vital goods, particularly food grains, in India.

**Changes in Consumption Propensity:** Consumption propensity influences demand for goods and services. If a person's tendency to consume increases while their income remains constant, they will spend a larger portion of their available income, which will lead to an increase in the demand for commodities.

On the other side, if people's tendency to save rises, or if their propensity to consume drops, then consumers would spend less of their income on products, which would lead to a reduction in the demand for those commodities. It follows that, even if income remains constant, changes in people's propensities to spend will result in changes in the demand for commodities. Similar to this, when customers believe that they will have a good income in the future, they will spend a larger portion of their money now, increasing their need for products now.

**Income Distribution:** A society's income distribution has an impact on how much people want its products. When wealth is distributed more evenly, society as a whole will have a higher tendency to spend, which increases demand for commodities. On the other hand, if income

distribution is more uneven, society's tendency to spend will be substantially lower since affluent individuals tend to consume less than poor people.

As a result, there will be a relative decrease in demand for consumer products as income inequality increases. This is the impact of income distribution on consumer behavior and the desire for products. However, the demand for different items would be impacted differently depending on how the income distribution in the community changed. The distribution of income would become more equal if progressive taxes were imposed on the wealthy and the funds raised were used to create jobs for the unemployed. As a result, there would be a transfer of buying power from the wealthy to the unemployed.

Because the purchasing power of the poor has increased as a result, the demand for those goods that are typically purchased by the poor will rise. On the other hand, the demand for those goods that are typically consumed by the rich who are subject to progressive taxes will decline.

### **Investment in Advertising:**

A major element influencing demand for a product, particularly for the product of the business that provides marketing, is the amount of money spent on advertising by a company to promote the sales of its product. The goal of advertising is to persuade people to buy a product. Media outlets such as newspapers, radio, and television all run advertisements. Products are repeatedly advertised in order to persuade buyers of their better quality. When commercials are effective, the product's demand rises as a result.

### **Effective Factors on Market Demand**

Understanding that there is a connection between individual and market demand is crucial when looking at demand drivers, particularly for enterprises. Despite their modest differences, these two have the same root causes and are similarly influenced by macroeconomic and microeconomic factors, although to a lesser extent. When the price fluctuates and all other influencing variables remain constant, the demand varies. The position or level of a commodity's demand curve is determined by these additional elements. It should be observed that the whole curve swings rightward or leftward depending on the change in these non-price elements. The following elements affect a commodity's market demand.

#### **Amount Of Good**

The cost of the commodity or service being given has an impact on both consumer and market demand. The inverse link between price and demand is shown by the law of demand. A rise in one will result in a fall in the other. Both at the individual and market levels, this is valid.

#### **Complimentary Goods' Value**

One good is utilized in conjunction with another when it is complementary. For instance, you must purchase cooking gas or electricity when you buy a cooker. A vehicle and gas would be another illustration. You cannot utilize one thing without the other, thus you must purchase both. All other conditions being unchanged, the demand for a complementary item reduces as its price rises, and vice versa. A rise in automobile prices will result in a decrease in petrol purchases.

### **Value of Replacement Goods**

The products that compete for consumption are known as substitutes. When you choose one, the other is replaced. You either eat one or the other. This is possible as long as the substitution is thought to be of an equal or higher caliber. When the price of replacement items changes, it has an impact on demand for both individual and market goods.

### **Income**

Income has a significant impact on consumer and market demand. Demand for commodities rises in response to rising income. This is as a result of more money being available to spend on the good. A "normal" good or service is one that goes through this. With a rise in income, however, demand for certain products declines. These fall under the category of "inferior goods". People buy these products because they are affordable and are thus inexpensive. However, when their money rises, people start to choose products and services of higher quality. For instance, some individuals consider public transportation to be a subpar product.

### **Future Perspectives**

When people acquire future knowledge, they try to put themselves in a better position. For instance, if they anticipate a shortfall of a necessary commodity, they would sharply raise demand today to avoid the shortage. Every year, you prepare for winter by purchasing clothes before it arrives.

### **Likes And Dislikes**

Beyond the intellectual justifications, individuals buy things because they enjoy them. They are sometimes inspired by vogue trends. Other times, people buy something because they like it or because a famous person recommended it. This is perhaps the most difficult to anticipate of all the variables driving consumer and market demand. This is due to the fact that it is impacted by psychological elements, which are difficult to classify and compile.

### **Distinction Between Personal and Market Demand**

The total amount that all consumers of a commodity are willing and able to purchase at a given price per time unit, given their money incomes, their tastes, and other prices of commodities, such as substitutes and complements, is referred to as the aggregate demand for the commodity. Individual demand for a commodity refers to the quantity of a good that an individual is willing and able to buy at a given price during a specific time period. Considering the overall demand for a company's goods is essential when making business decisions. Market demand, or the size of the market at a given point in time at various prices, determines the overall scope of business, provides opportunities for growth, and is essential for determining future production plans, raw material inventories, marketing strategies, and the placement of sales outlets. Therefore, knowledge about the size of the product's demand in the present and the future is crucial. An understanding of these issues may be gained via theory of demand. Business leaders may learn the following from an examination of market demand:

### **The elements that influence the level of demand**

Demand elasticity, or how responsive or susceptible the demand is to changes in its drivers, Possibility of pricing manipulation to increase sales, responsiveness of demand to advertising spending, and optimum levels of sales, inventories, and advertising expenses, among other factors. A company unit's decision-making and long-term planning heavily depend on the law of demand. A firm's production planning is mostly based on a precise

demand analysis. Both theoretical and practical benefits may be derived from the rule of demand. These include; Price calculation: A monopolist sets the price of his product using the law of demand. He may choose the amount of production that will be the most professional for him.

Government benefit: The finance minister uses this statute to measure the impact of his tax changes and other initiatives. The only goods that should be taxed are those with somewhat stable demand. beneficial to farmers the farmer may predict how much a good or poor harvest will impact their financial situation using the law of demand. The price will undoubtedly decrease if a good crop is produced and the demand for it stays the same. A good harvest will not directly help the farmer, but it will benefit the rest of society. When it comes to planning: When planning for certain commodities and sectors, the demand calendar is crucial. In these situations, it is important to understand if a certain adjustment in the commodity price would have the intended impact on the demand for the commodity both domestically and internationally. This is known thanks to research on the kind of the commodity's demand schedule [9]–[11].

### CONCLUSION

In conclusion, understanding customer behavior, forecasting market demand, and making business choices all rely heavily on demand analysis. Businesses may improve their strategies, efficiently satisfy customer wants, and get a competitive edge in the market by looking at the link between pricing, quantity, and consumer characteristics. The accuracy and efficacy of demand analysis are further improved by the incorporation of cutting-edge tools and analytics, allowing firms to make well-informed choices that are in line with market dynamics and optimize their performance. the function of data analytics and technology in demand analysis. Businesses are now able to examine huge databases, see trends, and more precisely forecast future demand thanks to advanced analytical tools and processes. Predictive modeling and machine learning techniques are used to improve the accuracy of demand analysis and enable data-driven decision-making.

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## CHAPTER 10

### AN OVERVIEW ON MARKET DEMAND SCHEDULE

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#### ABSTRACT:

A market demand schedule is a fundamental tool in economics used to quantify the relationship between the price of a product or service and the corresponding quantity demanded by consumers in a given market. This abstract explores the nature of a market demand schedule, its components, and its significance in understanding market dynamics and making informed business decisions. The abstract highlights that a market demand schedule depicts the various quantities of a product or service that consumers are willing and able to purchase at different price levels. It serves as a graphical representation of the demand curve, which shows the inverse relationship between price and quantity demanded, assuming other factors remain constant. By analyzing the market demand schedule, businesses can gain insights into consumer behavior, price sensitivity, and market trends.

#### KEYWORDS:

Consumer Preferences, Demand Curve, Demand Schedule, Elasticity of Demand, Income Effect, Market Demand.

#### INTRODUCTION

The household demand curve, which is frequently referred to as the individual demand curve and is based on a person's preference among various commodities. We demonstrate how to construct the market demand curve from each of these separate demand curves in this session. The whole demand curve shifts when demand changes as a result of factors other than price. In addition to price, factors affecting demand for a commodity include consumer income, tastes and preferences, and the costs of comparable commodities. As a result, the demand curve will alter if any of these element's change. For instance, if consumer incomes rise, either as a result of an increase in their earnings and salaries or the granting of a dearness allowance, they may want more of an item, such as cloth, at each price.

The demand curve will move to the right as a result of this. Similar to this, as consumer preferences for a goodlet's say, color televisionincrease, consumers will want more of that good at every price point, which will cause the demand curve to move to the right. Expectations about future pricing are another major element that might drive demand for an item. When consumers anticipate that the price of a thing will rise in the future, they will want to buy it now, particularly if it is durable, which will increase demand for the product right now and cause the demand curve to move to the right. As was said before, the costs of comparable goods like complements and replacements may alter demand for a given good. For instance, if the price of coffee increases while all other variables stay the same, the demand for tea, a beverage that may replace coffee, would increase and its demand curve will move to the right [1]–[3].

A shift in the demand curve will result from a fall in demand brought on by unfavorable changes in the variables affecting demand. For instance, if agricultural output falls in a year as a result of insufficient rainfall, this would result in a drop in farmers' revenues. Due to the farmers' declining wages, there would be less demand for industrial goods like cloth, which will lead the demand curve to move to the left. Similar to this, shifting preferences for certain commodities may have an impact on demand. For instance, the demand for color TVs increased when they were introduced to India due to the larger desire of the population. However, this led to a decline in the demand for black and white TVs, which caused a change in the demand curve to the left for these black and white TVs. The shift in other demand-determining factors, not the price increase, is what causes the decline in demand. Reduced demand for a commodity may result from lower pricing for its alternatives, higher prices for its complements, or consumer expectations that the price of the product will decline in the future.

## DISCUSSION

### Demand Schedule

The nature of a product is the most significant of several elements that influence the link between the price of a commodity and the volume required. The demand schedule is the quantity required in response to variations in a commodity's price. It provides a summary of the data on pricing and quantity requests.

### Demand Types and Timetable

The Individual Demand Schedule, which relates to the prices and quantities desired of the item by an individual, is one kind of demand schedule. The Market Demand Schedule is the primary focus of Price Theory. A market is made up of all the people who desire to buy a certain product. The quantities of a particular item that all customers will purchase at all potential prices at a given period are therefore known as the "market demand schedule." It should be obvious that the Market Demand Schedule is created by adding the Individual Demand Schedules. The Market Demand Schedule, when there are only two buyers, and the Individual Demand Schedules of buyers A and B.

### Various Market Demands

1. Demand usually comes in three flavors. The first is Price Demand.
2. Cross Demand, Income Demand, and
3. Demand and Price

It relates to the different amounts of the item that customers will buy at a certain moment and at a set of fictitious costs, supposing that other circumstances stay the same. Generally, we simply care about pricing and demand. Only price demand was covered in depth in the foregoing discussion of the law of demand.

### Financial Need

The varied amounts of a product that a customer will purchase at a given moment at various income levels are referred to as income demand. In general, demand rises as income does, and vice versa.

### Cross Request

Cross demand refers to the situation when the prices of two commodities are connected in terms of demand. The good might be an alternative or complement. Those items that may be

used in place of one another are known as substitute goods. Coca-Cola and Pepsi, for instance, as well as tea and coffee. Demand and price are therefore positively correlated. This implies that as one's price rises, so does the demand for another, and vice versa. Products that are utilized in tandem to fulfill a need are referred to as complementary items. Alternatively said, complementary products are those that are lacking without the other. These are complementary items that are often used together. Pen and ink, for instance. cameras, film, tennis rackets, and tennis balls, among other things. Price and demand for these commodities have a negative relationship. This implies that when one commodity's price rises, the demand for the other decreases. cameras, film, tennis rackets, and tennis balls, among other things. Price and demand for these commodities have a negative relationship. This implies that when one commodity's price rises, the demand for the other decreases.

### **Additional Forms of Demand**

#### **Mutual Demand**

when a number of commodities are required to fulfill a certain need or for a shared aim. This involves a joint demand. To brew tea, you'll need milk, sugar, and tea powder all at once. For writing, we may want paper, a pen, and ink. Joint demand refers to the collective desire for such things. Demand for land, labor, capital, and organizational resources is also an example of combined demand for creating goods.

#### **Aggregate Demand**

A composite demand exists for a commodity that has a variety of applications. In this situation, a single item is required for a variety of purposes. For instance, electricity is required for fans, lights, heating, and engine operation. Coal is similarly used in industry, in the kitchen, etc.

#### **Demand, Both Direct and Derived**

Direct demand, also known as demand for the ultimate goal, is the desire for a good or service that is intended for immediate use, such as food, clothing, etc. Autonomous demand is the term for direct demand. The procurement of certain key items is not related to the demand in this case. It is referred to as derived demand or induced demand when the demand for the commodity results from the need for a different good or service. For instance, the demand for tires is generated from the need for automobiles or scooters, and the demand for cement is derived from the demand for building construction, etc.

#### **Curve of Market Demand**

The connection between individual purchasers' demand curves and the market demand curve. For the purpose of argument, let's assume there are just two purchasers in the market, Individuals A and B. Every one of these people will decide to buy a certain amount at every price. We may calculate the entire market demand at each price by adding the amounts that the two buyers at that price wanted. As observed from the above, the admission of new customers as the price decreases is a significant factor in the market demand curve's negative slope. Person B decides not to consume any of the goods with prices higher than P1. She joins the market as soon as the price drops to that level. In general, when prices drop, more buyers will come into the market, adding to the market's demand.

The demand curves for individual customers are adversely skewed for a number of significant reasons. People consume to fulfill several needs, including those for food, housing, entertainment, and self-image. In order to satisfy these needs, several commodities



might be substituted for one another. Beef may be substituted with chicken, fish, or goat, or a vegetarian diet can be adopted in their place. The proportional costs of different meats will determine what one does. Many people will decide to eat less beef and more fish, goat, or chicken if the price of beef increases significantly while all other items stay the same.

Additionally, broad categories of consumption might be used in place of one another. For instance, a significant increase in rent compared to the price of eating out, frequenting bars, and seeing movies can cause some customers to keep smaller, less expensive residences and use more of their free time in leisure activities. The substitution effect is the propensity to choose less expensive alternatives to items whose prices have increased. An increase in a good's price causes a decrease in the amount that is wanted, which is known as the substitution impact of a price adjustment.

From the above, it should be clear that demand for an item relies on both its own price as well as the pricing of replacement goods. Take the demand curve for chicken as an example. Holding all other prices constant, a decrease in the price of chicken will result in an increase in the amount demanded the price-quantity combination moves rightward and lower along the demand curve. A rise in the price of beef will likewise result in a rise in the amount of chicken requested at all chicken prices. This will cause a rightward shift in the demand. While changes in the pricing of alternative commodities cause the demand curve to shift, changes in the price of the commodity itself causes the demand curve to move. The demand curve for a commodity is often shifted to the right by a rise in the price of a replacement item because more of the commodity is needed at each price [4]–[6].

The amount requested of an item does not necessarily increase as the price of other commodities rises. Take the market for shoelaces, for instance. As individuals fix worn-out shoes and use them for extended periods of time, an increase in shoe prices will result in a decrease in the demand for shoes. Shoelace demand will decrease as well since there would be less desire for shoes. Since demand for shoelaces declines as shoe prices rise, the demand curve for shoelaces changes to the left. People swap their shoes and shoelaces for other items. Shoes and shoelaces are referred to be complementary items or complements in this situation. the impact of a price rise on a complementary good's demand in terms of quantity.

The amount of revenue has an impact on the amounts of items that are required. People are required to spend their whole money on something. The average amount spent by customers on items will inevitably increase as their income increases and more money becomes available to spend. If a product is a typical good, individuals will spend more of their money on it. At every price for that item, a greater amount will be requested. Not every product is typical. Take the consumption of rice in mainland China, for instance. People were likely to determine that they can now afford to add a little more meat to their diet and depend less largely on rice as the country's revenue increased with the entry of cash from the rest of the globe and the growth of new businesses.

The main objective of life is survival. Due to the high cost of meat, it could be essential to buy just rice to subsist on limited incomes. Higher revenues allow one to buy a lot more rice than would be required for subsistence. Then, it makes sense to add some meat to the rice to make your diet more delightful. Due to this, a rise in income may cause the demand curve for rice to move to the left. In this case, rice is a subpar good. This may be seen in the fourth, top-right panel. Demand curves for average items move to the right as income increases, whereas demand curves for subpar goods move to the left.

The substitution effect, which occurs when the price of a commodity increases and causes customers to switch to other goods whose prices have not increased, has led us to suggest that

the demand curve has a negative slope. However, a rise in a good's price also affects the amount that consumers are willing to pay for it. Let's say your monthly income is \$1,000 and you spend \$500 on rent. Let's say your rent increases from \$500 to \$600, or by 20%. You must reduce your consumption of anything by \$100, whether it is housing, other commodities, or both, given that the price of your previous consumption bundle has increased to \$1100. As a result, your actual income has decreased by 10%. You will allocate part of this decrease in total consumption to housing if it is a typical good. Due to the substitution impact, there will be a decrease in the amount of housing requested in addition to whatever substitutions you make for other items in place of housing. As seen in the left panel, this will cause the demand curve for housing to be flatter than it otherwise would have been.

Of course, it's possible that the item whose price has increased is a subpar product. The demand curve will get steeper in this scenario due to the income impact. For instance, a rise in the price of rice may have a negative impact on real income, forcing individuals to eat less meat and more rice. This is in panel five's right-hand side. The income and substitution effects for normal products operate in the same direction; for inferior items, they act in the other way. It turns out that the income impact is probably not going to matter all that much in real life. People only spend a small portion of their income on most items, thus changes in the cost of those items are likely to have a little impact on their actual earnings. The total amount bought by all customers at various fictitious prices is reflected in market demand. The total of all individual requests makes up this amount. It is created by summing the amounts that each buyer would purchase of the product at a certain price. The Market Demand Schedule is a list of all the amounts that customers would purchase of a given good in the market at various fictitious prices. The Market Demand Curve will be the resultant curve if the data are shown on a two-dimensional graph. The market demand curve illustrates the various amounts that the product's seller may sell at various prices from his perspective. The lateral combination of such curves to get the market demand curve will likewise produce a downward-sloping curve since the demand curve of an individual is downward-sloping.

### **Structure of the Economic Slowdown**

Over the last 20 years, the emerging market economies have shown tremendous development, significantly increasing their share of global economic production and international commerce. However, however, economic momentum has significantly slowed down in a large number of emerging market economies, and the growth advantage such economies formerly had over industrialized nations has shrunk. Many first believed that this was caused by cyclical factors, particularly the brief decline in demand in the industrialized nations. However, given how protracted the slowdown is, it is more likely that the expansion's fundamental trajectory has flattened. This "natural" slowing in the pace of growth might be attributed to the advanced stage of the convergence process. However, given the size of the downturn, it is probable that a number of other reasons are also at work in a number of developing market economies. The slower rate of development in China may likely be partially explained by the slowing of sectoral structural change and the diminished influence of economic impulses brought on by previous market reforms. The end of the commodities boom seems to be an important consideration for the developing market economies that specialize in the export of raw resources. The slower rate of development in eastern European developing market countries signals a return to more normal conditions, since the rapid expansion observed in the years just before the financial crisis has shown to be unsustainable. Economic development is also being hampered by lower investment levels and a disregard for the need to alter economic policy.

Given that the slowdown is mostly structural, it is likely that the collective growth rate of the group of emerging market nations will remain modest in the coming years. If circumstances worsen, growth can decline much further. This prognosis indicates that for the advanced nations, the underlying rate of their exports to the emerging market economies is expected to slow down in the near future. Germany would see the reverberations of a severe slump in the Chinese economy. The developing market countries' slowing aggregate growth rate is evidence that a quick and robust catch-up process cannot be taken for granted. For the medium term, the developing market economies need fresh reform impulses to return growth to a higher trend path [7]–[9].

### **Economic Slowdown**

When an economy's pace of economic growth slows, an economic downturn results. The GDP, which represents the entire value of goods and services generated in an economy over a certain time period, is the standard unit used by countries to quantify economic growth.

### **Measuring GDP changes**

Calculating the percentage change in GDP from one era to another allows one to determine the pace of economic growth or decrease. For instance, the GDP of a nation may have grown by 2% from the first quarter GDP to the second quarter this year. However, if GDP only increased by 1.5% between the second and third quarters, we may infer that the economy is slowing down as a result of the slower growth.

### **Economic Cycle**

The business cycle explains changes in the economy. The cycle begins with an economic peak, when growth has achieved its maximum point for that cycle. A drop in growth, or the economic slowdown, then follows. The economy enters a recession when growth declines for a certain amount of time. The economy may go into a depression if the negative growth persists for an extended period of time or is severe enough. When the economy eventually recovers from its low point, it will experience economic growth until it reaches a new high before the cycle again.

### **Causes Of the Reversal in Trend Growth**

The trend growth in emerging market economies has slowed, which shows that there has been a "natural" relaxation in the pace of development after the fast convergence process brought several nations closer to the very edge of their technical capacities. But there is still a sizable disparity. For instance, estimations show that in 2011, labor productivity in China and other significant emerging market countries each fell below one-tenth of the level in the United States. The United States continues to remain well ahead of China and other nations in terms of total factor productivity, which also takes capital input into account.<sup>12</sup> This suggests that a variety of other variables may have contributed to the rather abrupt decline in trend growth that was seen in recent years. In about two-thirds of the 135 economies studied as a whole, trend growth has slowed during 2006–07. One of them is the world's second-largest economy, China, whose trend growth fell from around 12% to 7%. Other nations that have seen a noticeable slowdown in overall economic activity include a startlingly high number of economies that are specialized in the export of commodities.

It is easier to understand China's macroeconomic slowdown when trend growth is broken down to highlight the contributions made by labor input and labor productivity. It demonstrates that labor input, as determined by the total number of people employed in the economy, has only ever made a little contribution to the rise in economic production because

of its weak upward trend. As opposed to the modest positive contributions attributable to labor input, which have stayed mostly steady, the key driver in this case is the increase in labor productivity, which has seen a sharp fall in recent years and is what is causing the slowdown in trend growth. Productivity growth in the economy as a whole is constrained by structural change that is flagging: The slower increase in labor productivity seems to be somewhat attributable to the slowing rate of structural change. The movement of rural agricultural labor to urban regions, where they find jobs in the much more productive industrial or service sectors, is one of the main factors influencing China's total productivity development.

Positive outcomes of previous structural changes wane: The reduction in productivity increases at the sectoral level, which is presumably the result of the diminishing beneficial benefits of earlier structural changes, is likely even more significant than the slowing rate of sectoral structural change. Lower investment efficiency is shown by: Extremely active investment activity supported by high levels of domestic saving was another element that helped explain the strong increase in intra-sectoral productivity. During the global financial and economic crisis, growth in gross fixed capital formation accelerated further, increasing its percentage of GDP from 38% in 2007 to 44% in 2009. This capital creation ratio, which is unquestionably high by worldwide standards, raises questions about [10], [11].

### CONCLUSION

In conclusion, the link between price and quantity sought in a market may be understood using a market demand schedule. Businesses may learn more about customer behavior, decide on prices, and modify their tactics to efficiently satisfy market needs by examining the market demand schedule. Businesses are kept sensitive to shifting market dynamics by regular updates and data analysis, which boosts their competitiveness and long-term performance. The creation and interpretation of market demand schedules also involves the use of market research and data analysis. Businesses may learn about customer preferences, pricing sensitivity, and purchase behavior via surveys, interviews, and data collecting. Modern data analytics and modeling methods enable companies to examine massive information, spot trends, and estimate demand with accuracy.

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## CHAPTER 11

### IMPACT OF ECONOMIC SLOWDOWN: A COMPREHENSIVE REVIEW

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#### ABSTRACT:

An economic slowdown refers to a period of decelerated economic growth characterized by reduced business activity, declining consumer spending, and sluggish overall economic performance. This abstract examines the impact of an economic slowdown on various sectors, businesses, and individuals, highlighting its implications and the strategies employed to mitigate its effects. The abstract acknowledges that an economic slowdown can have far-reaching consequences on both macro and micro levels. At the macro level, it can lead to reduced GDP growth, rising unemployment, declining investment, and constrained fiscal policies. These factors can create a ripple effect across sectors, affecting businesses of all sizes, from multinational corporations to small enterprises, and impacting individuals through job losses, reduced income, and financial uncertainty. Recession or economic slowdown decreased India's industrial production, employment prospects, and liquidity. Additionally, it lowers GDP and changes consumer habits and buying power. Recession's effects on Indian industrial production India's industrial sector, which is suffering from sluggish internal demand as a result of the delayed creation of jobs, is also suffering from the depressed demand situation in its export market.

#### KEYWORDS:

Bankruptcy, Consumer Confidence, Debt Crisis, Economic Contraction, Financial Crisis, Gross Domestic Product (GDP), Inflation.

#### INTRODUCTION

Middle classes in India are worried about the domestic demand as a result of the country's economic crisis. For at least two years after the global financial crisis of 2008, India's GDP grew by 9%, but more recently, the rupee has fallen, losing a sixth of its value versus the dollar. In addition to falling share prices and rising commodity costs, investment remained stagnant and growth was moderate. A few analysts referred to the situation as "a crisis," while others blamed Manmohan Singh's administration for failing to enact fundamental changes that would have boosted development. Notably, India buys much more than it sells, resulting in an unacceptably high current account deficit of 4.8% of GDP. There is virtually little chance of restoring investor trust in the economy unless it is destroyed. The trade imbalance has been skewed in large part due to gold. India's illogical preoccupation with gold still persists, even after economist John Maynard Keynes said that it was "ruinous to her economic development" in a letter written a century ago. India produces just 10 tonnes of gold annually, so it imported 860 tonnes last year, which it used to make jewelry or kept in family safes as coins and bars [1], [2].

Global Financial Crisis' Effect on the Indian Economy: The current global financial crisis has had a detrimental effect on the Indian economy. There is a limit to our capacity to withstand a

global recession that may turn into a big depression, even while the public sector in India, including nationalized banks, could shelter itself in some way from the harmful consequences of globalization since we are also a part of the globalization plan of neo liberalization. The crisis had a far different effect on the Indian economy than it did on the economies of the western industrialized countries. An exodus of foreign institutional investment from the equities market is the most noticeable direct impact of this global financial crisis on India. The rupee sharply declined as a result of the FIIs' pullout. Losses have been incurred by both banking and non-banking financial firms. India's exports of software and IT services have suffered as a result of the financial crisis that the USA and other developed nations experienced as a result of the recession. India's exports suffer as a result of the downturn in international markets. This is already apparent in certain sectors, such as the apparel industry, where the crisis-related employment losses have been severe. This, along with a strain on high-income service industries like finance, hospitality, and tourism, etc., caused a decline in consumer spending and total demand for goods and services within the domestic economy. A direct result of this was a decline in the number of new non-farm jobs created in the economy at the same time that informal employment was lost. The rupee's devaluation was unable to help India's export budget.

This downward trend has had a negative impact on industrial activity, particularly in the manufacturing, infrastructure, and service sectors, particularly in the commerce, hotels, and transportation and communication. As the crisis worsens and financial services companies, which were historically significant consumers of outsourcing services, were reorganized, service export growth was also projected to decline. As employment is lost in the formal sector, demand for services offered by the informal sector declines, working hours and real salaries are reduced, a financial crisis may result in a reduction in employees' incomes. Workers who lost their employment in the formal sector and moved into the unorganized sector placed further pressure on unorganized labor markets.

Industrial growth was similarly sluggish throughout the slump. India's industrial sector has been negatively impacted by both the weak demand circumstances in its export markets and the internal demand suppression brought on by the delayed job creation. The loss of institutional foreign investment from the equities market has been the most noticeable direct impact of that crisis on India. Foreign Institutional Investment has grown to be a significant seller in Indian markets since it has to retrench assets to compensate losses in its home country and was looking for safe havens in an unstable environment. Large corporations have undoubtedly been impacted by FIIs withdrawing their capital from the stock market, but exporters and small, marginal businesses that play a key role in job creation were expected to be the most hit.

The increasing cost of imported food hurts impoverished people and families that spend a large portion of their income on food, and the currency depreciation may also have an impact on consumer pricing. Quicker than anticipated decline in inflation. The decrease in inflation should boost consumer demand and lower business input costs. The worldwide decelerating process resulted in a reversal of capital flows, which put pressure on the foreign currency market. Reserves of foreign currency were dwindling. The country's exporting manufacturing sectors have suffered as a result of the global market's overall decline brought on by the crisis. Government stimulus was replaced on the demand side by significantly increased investments. Between February and May 2010, wholesale price inflation was approximately 10% after spending much of 2009 in the negative. On the other hand, food inflation decreased from 18 to 12 percent throughout that time. After the financial crisis, global commodity prices have recovered, but pricing pressures have stayed under check.

## DISCUSSION

### Change in consumer behaviour due to recession

The recession is now affecting economies not only in India but all throughout the globe. Many businesses lost contracts as a consequence of the economic downturn, which presumably had an impact on the workers' ability to earn enough money and retain employment. Therefore, it has an impact on several living issues in our everyday activities, making our way of life worse. However, if individuals are mentally equipped to handle this circumstance, he should cut his spending and adhere to the plan. His life will most likely be happy. The contemporary retail sector is seeing a change in consumer attitudes and behaviors as a result of the recession. Customers are now more devoted to the supermarkets that provide them the best value.

Although I am unsure of how the typical middle-class family's income has tracked this year, on average, families have witnessed a decrease in monthly expenditure. Consumer spending persists even amid tough economic times. Consumers postpone replacing functional items during a recession and put more emphasis on getting the most bang for their buck, looking for discounts, and cutting down on extravagances. As a result, shopper attitudes and behavior patterns change significantly. This insight looks at how customers prioritize their purchases during a recession and offers consequences and suggestions for how to proceed [3]–[5].

Impact of The Slowdown On India's Exports: A product's export growth is heavily influenced by global demand. The demand for common and luxury goods increases as global earnings grow, whereas the market for subpar goods may drop. For luxury items, income elasticity of demand is anticipated to be more than one, whereas for everyday goods, it is anticipated to be between zero and one. The kind of goods a nation sells, or the income elasticity of the product's demand, is a significant element that affects how a slowdown in exports would affect the nation.

In addition to income elasticity, price competitiveness may also have an influence. If the exported goods are less price sensitive, decreasing prices to keep market shares may not be an option in the event of a downturn. For exports from developing nations, the empirical evidence of low price elasticity and high income elasticity of demand is significant. First off, this shows that developed country economic performance has a significant impact on the development of developing country exports. Second, it suggests that the developing nations' ability to use price competition to retain or boost exports may be restricted.

A recession is a significant slowing or contraction of the economy. Trade and industrial activity are decreased during this transitory economic downturn, which is often shown by a dip in GDP across two or more consecutive quarters. Consumers often cut down on spending during recessions because they lose faith in the economy's expansion. As a result, there is a decline in the demand for products and services, which in turn results in lower output, job losses, and a dramatic increase in unemployment. Investors spend less because they anticipate a decline in stock value, which causes stock markets to decline due to bad sentiment. India's economy ranks third in the world by purchasing power parity and is the tenth-largest by nominal GDP. The nation belongs to the BRICS and is one of the G-20's main economies.

According to an IMF analysis, "on a per-capita-income basis, India ranked 141 by nominal GDP and 130 by GDP in 2012". India ranks as the world's 10th-largest importer and the 19th-largest exporter. The economy shrank to around 5.0% during the 2012–2013 fiscal year from 6.2% the year before. India has been impacted by the global financial crisis as a result of its quick and expanding integration into the world economy. An effective break from the



prevalent economic mindset of neo-liberalism is needed to counteract these consequences of the global crisis on the Indian economy and avert future collapse.

### **Price Standards**

Pricing is an important administrative choice. On a daily basis, it is not a significant issue for the majority of businesses. However, there are certain extra rules that must be followed when setting the price of the new product. Any company that markets a "new product" has challenges since new items lack historical data. In this case, the company is similarly unable to predict customer response. What exactly do we mean when we talk about a new product? For our purposes, new goods include unique products, enhanced products, changed products, and new brands that the company creates via its own R&D initiatives. Obviously, choosing the initial price is a significant choice. The success of the company's first price choice will have a significant impact on the rest of its operations. Particularly in a big, multi-divisional firm where all types of initiatives pop up as favorites of different managers, top management sets particular criteria for adoption of new product ideas since they are accountable for the new product's track record of success. There will always be rivals that want to create it as soon as possible. When one or more rivals modify their prices, goods, or both, the pricing choice takes a unique significance. Sometimes, rivals may launch a new product without changing the cost of an already-established product. The company in issue may need to reconsider its pricing strategy if the new brand is seen to more successfully compete with a certain brand.

From the perspective of the consumer, value is the only factor that justifies pricing. Customers sometimes have a poor knowledge of the costs associated with raw materials and other manufacturing processes. However, such buyers are able to comprehend the value that the product provides for them. Customers decide whether to buy a product based on this justification. Consumer demands are met through effective pricing, which also makes the exchange procedure easier. Marketers must comprehend that not all consumers want to pay the same price for things, just as not all consumers want the same product, the same distribution channels, or the same advertising campaigns. Therefore, markets must make distinctions between different market groups in order to efficiently price things. The same principles that govern successful product, distribution, and marketing strategies also govern successful price. If trades are to take place, marketers must comprehend consumers and price their items to meet their wants. However, it is important to remember that the price must be high enough to meet the organization's goals, including pleasing investors. For most firms, the price charged continues to be the principal source of income [6]–[8].

### **Price Estimated**

Even though choosing a price is often a marketing choice, choosing it right needs knowledge of both the customer's and society's perceptions of value. In some ways, a business's most crucial choice is how to establish its prices. A pricing that is set too low might lead to a lack of sales and the failure of the company. A price that is set excessively high might lead to poor client reaction and, ultimately, the failure of the company. Therefore, the effects of a bad price choice may be severe.

### **Customer Perceptions of Price**

The final user of the completed product or a company that buys components of the finished product are both examples of customers. The client is the one who attempts to fulfill a demand or set of requirements by purchasing a certain product or collection of items. As a result, the client employs a number of factors to decide how much they are prepared to spend

to fulfill their demands. The consumer would like to spend as little money as possible to fulfill these demands. As a result, the firm may either raise perceived benefits or decrease perceived costs to improve value. Both of these factors can be seen as components of pricing.

### **Price in Relation to Society**

Price has historically been seen as the best measure of worth, at least in terms of money. The monetary system in each community, which was derived from bartering, or trading commodities of equal worth, offers a more practical approach to buy products and build wealth. Price has evolved into another variable society uses to regulate the state of its economy. An included or exclusive price is possible. The majority of the people is prevented from purchasing goods like food, health care, housing, and vehicles in several nations, including Russia, China, and South Africa. In contrast, nations like Denmark, Germany, and the United Kingdom have low health care costs and hence make it accessible to everyone. Price may be seen from two perspectives: that of rational man and that of irrational man. The former, which is the main tenet of economic theory, contends that pricing manipulation has predictable outcomes.

### **The Marketer's Perspective on Cost**

Price is significant to marketers because it reflects their evaluation of the value consumers have on a product or service and are willing to pay for. The process through which marketers determine the prices for their goods and services has altered as a result of a variety of variables.

1. The pricing methods of American businesses have been under intense pressure from foreign competition. Numerous goods produced abroad are of a high caliber and compete in the American market by offering better value at a cheaper price.
2. Competitors often lower their prices in an effort to increase market share. By lowering the price, the company hopes to attract more clients who are thought to be price sensitive.
3. Compared to earlier times, new items are much more commonplace nowadays. Pricing a new product might be difficult since there is often no past data to use. The market will respond negatively if a new product is priced inappropriately, and the "wrong" pricing might permanently harm a product's prospects of becoming successful.
4. As a result of technology, current items now have shorter shelf life. Marketers are under pressure to price items to recoup expenses more rapidly since new products are released into the market more regularly, which shortens the "shelf life" of current ones. Early achievements, such as rapid sales growth, rapid market penetration, and rapid recovery of R&D expenses, must be priced accordingly.

### **Price-related goals**

Prices are crucial to businesses because they allow them to recover their production costs, cover their costs, and provide the profit incentive they need to stay in business. These elements may be seen as supporting an organization's ability to: endure, produce revenue, make a profit, hold onto a sufficient market share, and develop a favorable reputation.

1. Survival: It is clear that the majority of managers want to adopt methods that let their organizations run for a long time. Therefore, one main goal that the majority of CEOs seek is survival. A commercial business derives its income from the price the customer pays. The company cannot exist if sales and costs decline over an extended period of time.

2. Profit: Survival and profitability are strongly related. Pricing objectives for a company can include making a \$500,000 profit over the next year. Failure will result from anything less. All commercial companies need to generate long-term profits. Long-term success helps many organizations to satisfy their most essential stakeholders, the investors. Stock prices will drop if earnings are lower than anticipated or nonexistent, which might be terrible for the business.

3. Sales: Just as a company firm has to make a long-term profit to survive, profit depends on sales. The responsibility of marketing management is tied to controlling demand, as you will remember from previously in the book. To control exchanges or sales, demand must be regulated. Thus, the goal of marketing management is to change sales trends for the better.

4. Market Share: We define Safeway as having a 30% market share if its sales in the Dallas-Fort Worth metropolitan area account for 30% of total food sales in that region. All businesses, big and small, care about keeping a healthy market share so that their volume of sales will allow them to stay in business and grow. Once again, one of the instruments that is important in gaining and maintaining market share is price strategy. Prices must be established to attract a significant portion of the targeted market group.

5. Price: Price policies have a significant impact on how respected and regarded a company is in its neighborhood. Price is a communicator who is extremely noticeable. It must communicate to the neighborhood that the business provides excellent value, that it treats customers fairly, that it is a trustworthy establishment to patronize, and that it stands behind its goods and services.

### **Factors Running into Price Policy**

A product's price choices are influenced by both internal and external influences.

#### **Internal Elements**

##### 1. Cost

The cost required in creating a product should be taken into account by the company when setting pricing for that product. Both the variable and fixed expenses are included in this cost. Therefore, the company must be able to recoup both the variable and fixed expenses in setting the rates.

##### 2. The set goals.

The marketer should take the company's goals into account while setting the pricing of the product. For instance, a company may charge a higher price if its goal is to boost return on investment, and a lower price if its goal is to get a sizable part of the market.

##### 3. The firm's reputation

The firm's reputation in the market may also be used to decide the pricing of the product. For instance, because of their strong market reputations, HUL and Procter & Gamble may expect a greater premium for their brands.

##### 4. The cycle of a product

The price of a product is also influenced by where it is in its life cycle. For instance, a company may charge a lower price in the beginning to entice clients, then an increase in price throughout the growth period.

##### 5. Credit term provided

The company's credit term is another factor that influences the product's price. The price of the product may increase with a longer credit duration or decrease with a shorter credit period.

#### 6. Promotional endeavors

The pricing is also influenced by the marketing efforts the business makes. The price of the product must be maintained high if the company spends a lot on advertising and sales promotion in order to recoup the expense.

### **B. Outside influences:**

#### 1. Competition

The corporation must research the level of market competition before setting the product's pricing. In order to efficiently compete in a market with high levels of competition, prices may be maintained low, and vice versa in a market with low levels of competition.

#### 2. Consumers

When setting pricing, the marketer should take a variety of customer characteristics into account. The customer considerations that must be taken into account include the buyer's price sensitivity, buying power, and other aspects.

#### 3. Government oversight

While setting the rates, government laws and regulations must be taken into account. When setting pricing, the marketer must take into account any regulations that the government may issue for certain items, such as administered prices.

#### 4. Economic circumstances

When setting pricing, the marketer may also have to take the current economic situation into account. Customers may have less money to spend during a recession, thus the marketer may lower prices in an effort to influence customers' purchasing decisions.

#### 5. Channel middlemen

The marketer must take into account the expectations of various channel intermediates. The price of the commodities would increase the longer the network of middlemen.

Other elements that should be taken into account when determining a product's pricing include:

Segment the market into main and secondary markets. This aids in your understanding of the value of the product to customers. To optimize sales at the set price point, segments are crucial for marketing and merchandising the product.

Examine the product's accessibility and nearby alternatives. Both underpricing and overpricing are detrimental to your goods. Potential clients will assume something can't be that nice if the price is too cheap. This is especially true for premium, prestigious brands. One customer underpriced their subscription service, which resulted in a weaker reaction and reduced sales. The company undervalued the distinctiveness of its service, the availability of comparable alternatives, and the degree of attachment customers had to the brand. Because of this, the client could raise the price with little danger to its clientele. Actually, the original price rise led to an increase in customers since the higher cost was more in line with the product's perceived worth [9]–[11].

Look for competing and comparable items on the market. Take into account if new items, applications for current products, or technology may outperform or, worse still, compete with your offering. Examine all potential distribution channels for your goods. I've dealt with organizations who only consider direct rivals that use the same distribution channels. Don't restrict your analyses to internet outlets for dissemination. Your pricing range may be established by rivals. If customers believe your product and/or brand to be much superior, you may charge a higher price; if your product has better features, you can charge a parity premium; or you can charge a lower price if your product has features that are generally comparable to those of competing items. A premium product presented this circumstance to a customer of information. Its immediate rivals set the cost for a comparable product. Its options as the third participant in this market were price parity with an improved product or a lower price with comparable features.

Analyze economics and pricing in the market. For instance, a premium, ad-free website should make more money than a free, ad-supported one. Remember to factor in the cost of lost income while weighing this alternative, particularly because advertising find paying customers more alluring. Watch customers engaging with your product to better understand their relationship to it and to get further insights from this study. This may provide information on how to present and market the product, which may have an impact on its cost, features, and incentives. Determine the internal cost structure and comprehend the relationship between price and the offering.

A content client encourages people to sign up by promoting its free, advertising-supported e-zines. The customer didn't promote the e-zines because it thought they were worthless since the information was taken from another product. However, readers saw the reused information as having certain advantages. By undervaluing its offering, the client missed an opportunity to increase registrations and, hence, advertising revenues with a product that effectively had no development costs.

If you can, experiment with several pricing ranges. This is crucial whether you want to expand an existing business or break into an unexplored market. To determine price, MarketingExperiments.com tested three different price points for a book. It found the highest price yielded the greatest product revenue. Interestingly, the middle price yielded greater revenue over time, as it generated more customers to whom other related products could be marketed. Monitor the market and your competition continually to reassess pricing. Market dynamics and new products can influence and change consumer needs. Determine price based on a number of factors. Most important is what potential customers are willing to pay and their value to your company over time

### **Practical aspect Of Pricing Decision**

Practical aspect of pricing decision explained here with the help of a case study.

#### **Case Study: Pricing in the Package Holiday Market**

Now, the recession is having an impact on economies not only in India but all across the world. The economic slump caused many firms to lose contracts, which likely affected the capacity of the employees to make enough money and keep their jobs. As a result, it affects a number of living concerns in our daily activities and worsens our way of life. However, he should decrease his expenditures and stick to the plan if people are psychologically capable of handling this situation. Most likely, he'll have a happy life. The recession is causing a shift in customer attitudes and habits that is being seen in the modern retail industry.

More and more shoppers are sticking with the supermarkets that provide them the greatest value. The average middle-class household has seen a decline in monthly spending this year, even though I am uncertain of how their income has fared this year. Even in challenging economic times, consumer spending continues. During a recession, consumers place less focus on replacing useful products and more attention on obtaining the most value for their money, hunting for deals, and cutting down on extravagances. Customers' views and behavioral behaviors alter considerably as a consequence. This insight examines how consumers order their purchases during a recession and gives implications and advice on what to do.

### **Impact of The Slowdown on India's Exports**

Global demand has a significant impact on a product's export growth. As global wages rise, demand for both every day and luxury products rise, while the market for inferior goods may decline. Income elasticity of demand is predicted to be more than one for luxury products while being between zero and one for ordinary items. The kind of commodities a country sells or the income elasticity of the demand for the product are important factors that influence how a slowdown in exports might affect the country. Price competition may be a factor in addition to income elasticity. In the case of a downturn, lowering prices to maintain market shares may not be an option if the exported items are less price-sensitive. Empirical evidence of low-priceelasticity and high-income elasticity of demand for exports from emerging countries is substantial. First off, this demonstrates that the growth of exports from developing countries is significantly influenced by the economic success of wealthy countries. Second, it implies that the capacity of developing countries to exploit price competition to maintain or increase exports may be constrained.

An economy that has significantly slowed down or contracted is in a recession. During this temporary economic slowdown, trade and manufacturing activities decline, which is often reflected in a decline in GDP across two or more consecutive quarters. Because they no longer have confidence in the economy's growth, consumers often reduce their spending during recessions. As a consequence, there is a fall in the demand for goods and services, which has the knock-on effect of lowering production, eliminating jobs, and sharply raising unemployment. Investors spend less because they expect stock values to fall, which leads to a downturn in stock markets as a result of negative sentiment. India's economy is the tenth-largest in the world by nominal GDP and third in the world by purchasing power parity. The country is a member of the BRICS and has one of the largest economies in the G-20. In terms of nominal GDP and GDP in 2012, India ranked 141 and 130 respectively, according to an IMF report. India is the 10th-largest importer and the 19th-largest exporter in the world. During the 2012–2013 fiscal year, the economy dropped from 6.2% to around 5.0%. India's rapid and rising integration with the global economy has had an effect on the country as a consequence of the global financial crisis. To address these effects of the global crisis on the Indian economy and prevent further collapse, a convincing shift away from the dominant neo-liberal economic paradigm is required.

### **Pricing Indicates**

An major administrative decision is pricing. For the majority of firms, it is not a big problem on a daily basis. When determining the pricing of the new product, however, there are certain additional guidelines that must be adhered to. Any business that sells a "new product" has difficulties since such products lack previous data. In this instance, the business is also unable to forecast client reaction. What do we truly mean when we discuss a new product? For our purposes, new goods are items that the firm develops via its own R&D activities, including

new products, improved products, modified products, and new brands. Of course, selecting the beginning price is a crucial decision. The company's other activities will be significantly impacted by the outcome of its first pricing option. Since they are responsible for the new product's track record of success, top management establishes certain criteria for acceptance of new product ideas, particularly in a large, multi-divisional company where all sorts of projects tend to come up as favorites of various managers. Competitors that seek to establish it as quickly as feasible will always exist. The pricing decision has a distinctive relevance when one or more competitors change their prices, their products, or both. Sometimes competitors may introduce a new product while maintaining the price of an existing one. If the new brand is deemed to more effectively compete with a certain brand, the firm in question may need to reevaluate its price approach.

Value is the sole element that, in the eyes of the customer, justifies price. The prices of raw materials and other production processes are often poorly understood by consumers. These customers can understand the value the product offers them, nevertheless. Customers base their decision to purchase a product on this rationale. Effective pricing satisfies consumer wants while also simplifying the exchange process. Marketers need to understand that not every customer wants to pay the same price for products, just as not every consumer wants the same product, distribution methods, or advertising strategies. Therefore, in order for markets to price items effectively, they must draw differences between various market groups. effective pricing is governed by the same factors that guide effective product, distribution, and marketing strategies. Marketers must understand customers in order to understand how to price their products to satisfy their needs and facilitate commerce. It's crucial to keep in mind that the price ought to be high enough to satisfy investors as well as the organization's other objectives. The primary source of revenue for the majority of businesses remains to be the price charged.

### **Estimated Price**

Even though setting a price is often a marketing decision, doing it well requires understanding both consumer and societal ideas of value. The decision on how to set pricing is, in some ways, the most important one for a firm. Too-low pricing might result in a lack of sales and the demise of the business. An extremely high pricing might result in unfavorable customer feedback and, eventually, the demise of the business. As a result, choosing a poor price might have negative consequences.

### **Consumer Price Perceptions**

Customers include both the organization that purchases the finished product's components and the product's eventual consumer. The customer is the one who makes an effort to satisfy a need or set of needs by buying a specific product or group of goods. As a consequence, the customer considers a variety of criteria when determining how much they are willing to pay to satisfy their needs. To meet these needs, the customer would prefer to spend as little money as possible. As a consequence, to increase value, the company may either increase perceived advantages or lower perceived expenses. These two elements may be thought of as parts of price.

### **Price Compared to Society**

Price, at least in terms of money, has traditionally been considered the strongest indicator of value. Each community's monetary system, which was created via bartering or exchanging goods of similar value, provides a more practical way to purchase goods and amass riches. Another element that society now employs to control the status of its economy is price. It's

possible to have an exclusive or inclusive pricing. In several countries, like Russia, China, and South Africa, the majority of people are unable to purchase necessities like food, healthcare, housing, and automobiles. In contrast, countries with low health care expenses like Denmark, Germany, and the United Kingdom make it available to everyone. Price may be seen from both the logical and irrational views of man. According to the former, which is the fundamental premise of economic theory, price manipulation has predictable results.

### **Cost from the Marketer's Point of View**

Because it shows how much people value a product or service and are prepared to pay for it, price is important to marketers. A number of factors have changed the method by which marketers establish the rates for their products and services.

1. Foreign competition has put great pressure on American companies' pricing strategies. Many high-quality products made overseas compete in the American market by providing higher value at a lower price.
2. In an attempt to gain market share, rival companies often reduce their pricing. The corporation believes that decreasing the price would draw in more budget-sensitive customers.
3. Modern goods are far more prevalent than they were in the past. It may be challenging to price a new product since there is often no historical data available. If a new product is priced incorrectly, the market may react badly, and the "wrong" pricing may permanently undermine a product's chances of success.
4. Because of technology, goods nowadays have a shorter shelf life. Given that new goods are introduced into the market more often and that this reduces the "shelf life" of existing ones, marketers are under pressure to price products to recover costs more quickly. Early successes include quick market penetration, quick revenue growth, and quick R&D cost recovery must be valued appropriately.

### **Objectives Relating to Price**

Prices are essential to companies because they enable them to recoup their production costs, pay their expenses, and generate the profit they need to remain in operation. These components may be seen as supporting an organization's capacity to persevere, generate income, turn a profit, maintain a sizable market share, and establish a solid reputation.

1. Survival: It is obvious that most managers desire to implement strategies that will enable their firms to endure for a long period. Therefore, survival is a primary objective for the majority of CEOs. The price a consumer pays is how a commercial enterprise makes money. If expenses and revenues continue to rise over time, the firm will not survive.
2. Survival and profitability are closely connected concepts. A company's pricing goals may include turning a \$500,000 profit over the next year. Anything less will end in failure. All businesses need to produce long-term earnings. Many businesses are able to please their most important stakeholders, the investors, via long-term success. If profits are less than expected or nonexistent, stock prices would fall, which might be disastrous for the company.
3. Sales: Just as a business must turn a long-term profit to be in business, profit is dependent on sales. You may recall from earlier in the book that regulating demand is a job of marketing management. Demand must be managed in order to manage exchanges or sales. Therefore, the purpose of marketing management is to improve sales trends.



4. Market Share: If Safeway accounts for 30% of all food sales in the Dallas-Fort Worth metropolitan area via its operations, then it has a 30% market share. All companies, large and small, are concerned with maintaining a solid market share so that their volume of sales will enable them to continue operating and expand.

Price strategy is yet another tool that is crucial for winning and preserving market share. Prices must be set in order to draw in a sizeable share of the intended market segment.

5. Photo: A company's reputation and standing in the community are greatly influenced by its pricing practices. Price is a very visible communicator. It must convey to the community that the company offers great value, treats customers fairly, is a reputable organization to visit, and stands behind its products and services.

### **Aspects Impacting Price Policy**

Pricing decisions for a product are impacted by both internal and external factors.

#### **Interior Components**

##### **1. Cost**

When determining a product's price, the corporation should consider the costs involved in producing it. This cost consists of both variable and fixed costs. Therefore, while determining the rates, the business must be able to recover both the variable and fixed costs.

##### **2. Establish objectives**

When determining the price of the goods, the marketer should take the company's objectives into consideration. For instance, if a business wants to increase return on investment, it may charge a higher price; if it wants to capture a significant portion of the market, it might offer a lower price.

##### **3. The company's standing**

Pricing for the goods may also be based on the company's standing in the marketplace. For instance, HUL and Procter & Gamble may anticipate a higher premium for their brands due to their solid market reputations.

##### **4. a product's lifecycle**

The stage of a product's life cycle has an impact on its pricing as well. To attract customers, a business could, for instance, offer a cheaper price at first before raising it as it expands.

##### **5. credit period offered**

Another element that affects the pricing of the goods is the company's credit term. A longer credit term may result in a higher price for the goods, while a shorter credit period may result in a lower price.

##### **6. promotional activities**

The business's marketing initiatives have an impact on price as well. If a corporation invests a lot of money in sales promotion and advertising, the price of the product must remain high in order to cover the cost.

## B. external forces

### 1. Competition

Before deciding on a price for the goods, the company must do market research. Prices may be kept low in order to effectively compete in a market with high levels of competition, and vice versa in a market with low levels of competition.

### 2. Consumers

A number of client attributes should be considered by the marketer when choosing price. The client's price sensitivity, purchasing power, and other factors are among the consumer concerns that must be taken into account.

### 3. government regulation

Government rules and regulations must be considered while determining the rates. The marketer must take into consideration any guidelines the government may give for certain products, such as administered prices, when determining pricing.

### 4. economic situation

The marketer may also need to consider the state of the economy when determining price. During a recession, buyers would have less money to spend, thus the marketer may cut prices in an attempt to influence customers' buying choices.

### 5. Channel intermediaries

The expectations of different channel intermediaries must be considered by the marketer. The longer the network of intermediaries, the higher the price of the goods would be.

Other factors that have to be considered when figuring out a product's price include: Markets should be divided into primary and secondary markets. Your comprehension of the value of the product to clients is aided by this. Segments are essential for marketing and merchandising the goods in order to maximize sales at the predetermined price point.

Take a look at the product's accessibility and neighboring alternatives. Overpricing and underpricing can hurt your products. If the price is too low, potential customers will conclude that something can't be that wonderful. Particularly true for expensive, prominent brands. One client underpriced their subscription service, which had a negative impact on sales and weakened the response. The business underestimated the uniqueness of its offering, the presence of competing products, and the level of brand loyalty consumers exhibited. The customer might increase the price as a result with no risk to its clients. Since the higher price was more in accordance with the item's perceived value, the first price increase actually resulted in an increase in consumers.

Look for similar and rival products on the market. Consider if new goods, uses for existing products, or technology could perform better than your offering or, even worse, pose a threat to it. Examine all available routes for distributing your products. I've worked with businesses who only take into account direct competitors that utilize the same distribution channels. Don't limit the distribution of your analysis to online channels. It's possible that competitors may set your price range. You may demand a higher price if consumers think your product and/or brand is much better; a parity premium if your product has superior features; or a lower price if your product has characteristics that are usually equivalent to those of rival products. A client of information was provided with this situation via a premium product. Its direct competitors determine the price for a similar product. As the third player in this market,

its choices were price parity with a better product or a lower price with similar features. Examine market pricing and economics. A premium, ad-free website, for example, ought to generate more revenue than a free, ad-supported one. When assessing this option, keep in mind the cost of missed revenue, especially when advertising finds paying consumers more enticing.

Watch how consumers interact with your product to learn more about how they feel about it and to get further insights from this research. The product's price, features, and incentives may change depending on how this information is presented and marketed. Recognize the link between pricing and the offering and the internal cost structure. A content client advertises its free, advertising-supported e-zines to get users to join up. The client didn't advertise the e-zines since they were considered useless because the content was copied from another product. However, readers saw some benefits from the repurposed content. The customer lost out on a chance to boost registrations and, therefore, advertising income with a product that essentially had no development expenses by undervaluing its offering.

Try out different price points if you can. Whether you want to grow an already established firm or enter a previously untapped market, this is essential. MarketingExperiments.com examined three alternative pricing points for a book to decide its price. It was discovered that the highest pricing produced the maximum product income. It's interesting to note that the intermediate pricing eventually brought in more money since it attracted more clients who could be sold related items. To regularly evaluate price, keep an eye on the market and your rivals. Consumer requirements may be influenced and altered by market dynamics and new offerings. Based on a variety of parameters, determine the price. The most crucial factors are the prices that prospective clients are ready to pay and their long-term worth to your business [12], [13].

## CONCLUSION

In conclusion, A downturn in the economy may have a big impact on people, companies, and sectors. To lessen its impacts and adjust to the shifting economic environment, it needs proactive steps and smart planning. Businesses and people may get through an economic downturn and emerge robust in the face of economic adversity by putting cost-cutting measures into place, diversifying their markets, and using government help. the significance of risk management and financial readiness for people during a recession. It highlights the need for people to save emergency cash, pay off debt, and look into alternative revenue streams. Individuals may navigate the difficulties brought on by an economic downturn by modifying their spending patterns, concentrating on necessary costs, and keeping a long-term financial perspective.

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## CHAPTER 12

### TECHNIQUES OF PRICING METHODS FOR BUSINESS STRATEGY

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#### ABSTRACT:

Pricing is a critical element of business strategy and involves determining the optimal price for a product or service to maximize profitability while considering market conditions and customer perceptions. This abstract explores various pricing methods used by businesses, including cost-based pricing, value-based pricing, competition-based pricing, and dynamic pricing, highlighting their characteristics, advantages, and limitations. The abstract begins by discussing cost-based pricing, which involves setting prices based on the cost of production, including direct costs, overhead expenses, and desired profit margins. This method provides a straightforward approach and ensures that costs are covered, but it may not reflect market demand or customer willingness to pay. In this case, the company is similarly unable to predict customer response. What exactly do we mean when we talk about a new product? For our purposes, new goods include unique products, enhanced products, changed products, and new brands that the company creates via its own R&D initiatives.

#### KEYWORDS:

Cost-plus Pricing, Dynamic Pricing, Market-Based Pricing, Penetration Pricing, Pricing Methods.

#### INTRODUCTION

The part of the marketing mix that gets the least attention is pricing. The pricing goals of service companies provide recommendations about how to proceed. They include things like increasing sales, earnings, or market share, preventing pricing wars, or pursuing social objectives. While pricing techniques are clear stages or processes that businesses use to arrive at marketing judgments. They may be demand- or cost-driven, or based on competition.

#### Techniques for pricing

##### The Cost of a New Product

Pricing is an important administrative choice. On a daily basis, it is not a significant issue for the majority of businesses. However, there are certain extra rules that must be followed when setting the price of the new product. Any company that wants to advertise a new product has challenges since they lack historical data [1]–[3]. The choice is clearly crucial when setting the initial price. The success of the company's first price choice will have a significant impact on the rest of its operations. The success rate of the new product is attributable to top management. Particularly in a big, multi-divisional organization where all types of initiatives pop up as favorites of different managers, top management must create clear criteria for accepting new product ideas. There will always be rivals that want to create it as soon as possible. When one or more rivals modify their prices, goods, or both, the pricing choice takes a unique significance.

Sometimes, rivals may launch a new product without changing the cost of an already-established product. The company in issue may need to reconsider its pricing strategy if the new brand is seen to more successfully compete with a certain brand. The price set for the new product must: Produce strong profits for the company during the product's life; Beat rivals' prices and delivery times; Face escalating R&D, manufacturing, and marketing expenses; satisfy societal standards including consumer protection and environmental sustainability.

The company has two sorts of strategy options:

1. Pricing Skimming
2. Price Penetration

### **Skimming Costs:**

Skimming pricing is characterized by charging a high amount up front. A company may do this by charging a higher price for a new product at the prototyping stage. The market is split into divisions based on the varying degrees of elasticity of demand of various customers when demand is either uncertain or more inelastic at this point. This instrument for pricing has a brief lifespan. Early on, the market's demand for new items is probably less price elastic, meaning that the first high price helps to "Skim the Cream" of the market, which is comparatively price insensitive. In accordance with Rule 1, the manufacturer of a new product first sets the OP price and sells OQ quantities. As a result, he obtains KPMN's little profit. According to this approach, customers are identified by producers based on how strongly they demand a product or service. For instance, early pricing for computers, televisions, electronic calculators, etc. were quite costly, but they are now steadily falling. If the circumstances are right, a new product may be launched with a high initial price and significant promotional spending. There are these conditions listed:

1. Early on, demand is probably less price elastic than it will be later. Cross-elasticity demand need to be quite low.
2. A successful strategy for segmenting the market into groups with different levels of price elasticity of demand is the introduction of new products with high prices.
3. High starting prices act as a rejection price during the exploration stage when the demand elasticity is unclear.
4. High early costs aid in funding the product's flotation. Early on, manufacturing costs and distribution planning are both expensive. Investments in research and marketing must also be undertaken [4]–[6].

## **DISCUSSION**

### **Penetration Pricing**

The lowest price possible for the new product is referred to as the penetration price. This is done in an effort to increase sales quickly, take market share, use all available capacity and economies of scale in the production process, and keep rivals off the market. The following situations allow for the adoption of a penetration pricing policy:

1. Price elasticity of demand is quite strong.
2. The improved manufacturing method results in significant cost reductions.
3. The product is naturally acceptable to the majority of customers.
4. No robust patent protection exists.
5. Due of the immediate danger of future competition, a significant portion of the market must be immediately taken over.

A long-term pricing approach, penetration price should only be used sparingly. Even without an elite market, penetration pricing works. When a company uses a penetrating pricing strategy, there are few price changes made throughout the course of the product life cycle. This approach is often known as a "Stay-out" pricing policy since it limits competition [7], [8]. The explanation of penetration price uses the terms market price (OPo) and quantity requested (OQo). Currently, the manufacturer of a new product puts the price at OP1, which is below the market price, and sells OQ1 more units. It has a big potential market, as is obvious. A high skimming price strategy requires a significant and expensive advertising effort to support it, while a low penetration price would just have a little promotional budget.

**But the rule is inapplicable non certain situations.**

The market as a whole is anticipated to remain limited, and the new product requires capital recovery over an extended time.

**Multiple Product Pricing**

Although organizations often generate several products, the classic theory of price determination is based on the premise that the company produces a single homogenous product. When a company produces a variety of items, managers must take into account how those products interact. These goods might be combined as multi-products. Inputs that are shared throughout the production process result in joint output. The production of many items involves separate inputs but shared overhead costs. Multi-product or joint product pricing necessitates a little more attention and consideration. A multi-product company's changing pricing strategy should take into account the following fundamental factors when making decisions: the link between price and cost within a product line, the relationship between demand within a product line, and competitive disparities. These are described in detail below:

**Cost and Price Relationship:**

The fundamental factor in developing a pricing strategy for any product is the link between price and cost. Pricing is determined by cost factors. Cost predictions should be accurate because of this. Although a company must recoup its common expenses, it is not required that the pricing of each product be high enough to pay a part of the common costs that is assigned arbitrarily. Although prices must at least cover the additional cost of manufacturing each commodity, proper pricing is still necessary. Expenses that would not have been incurred if the product had not been created are known as incremental expenses. The corporation may improve overall profit by offering a product as long as its price is higher than its additional expenses. As a result, judgments need to be based on an assessment of additional costs. In general, a price that provides the greatest contribution above expenses is accepted, but in situations involving several products, incremental cost becomes more important when making such judgments.

The following list of alternative pricing policies should be taken into account:

1. Prices for many items might be based on their total cost. For all items, this pricing might result in an identical percentage profit margin. Pricing will be same if the total cost of all items is deemed to be equal.
2. Pricing for multi-product offerings could be based on additional cost.
3. Multi-product prices may be evaluated in relation to their contribution margin as a function of conversion cost.

4. Prices for many products may be set differently taking market segmentation into account.
5. Prices for several items may be set in accordance with the life cycle of each individual product.

### **Demand for many products and its relationship:**

Competition causes demand relationships to develop, in which case the products become complimentary or alternatives for one another. The sale of one product could have an impact on the selling of another. Different customers' varying demand elasticity may enable the company to implement price discrimination strategies in various market categories. Due to the high level of competition, two items with the same price may be replacements for one another with cross elasticity of demand. In this case, the pricing of the several items must be done in such a manner as to maximize return from each market group by selling the most products. In the event of many items, demand relationships make it evident that we should do a complete examination of the overall impact of the choice on the firm's revenues. Competitive Disparities: Evaluating the level of competition for a product line is yet another crucial factor to take into account when deciding on a pricing. This analysis will determine each product's market share. A product with a significant market share can withstand a high markup and help to absorb the losses. There is rivalry among a small number of sellers of a reasonably homogenous product that has enough cross elasticity of demand for each seller to be required to consider competitor reactions when determining prices. Actually, every manufacturer is aware of the devastating repercussions that a publicly declared decrease in his own price would have on the prices demanded by rivals. The business should examine whether or not the rivals have unrestricted access to the market.

### **Marginal Technique for Multi-Product Pricing:**

The rationale behind the marginal strategy for multi-product pricing is that when a company has extra capacity, untapped technological resources, and management and organizational skills and talents, it will produce a variety of different goods using the most profitable alternatives. Technical independence exists between the product and the manufacturing process. The company weighs marginal expenses while choosing various options, adopting ones that provide a better profit on cost via sales. The idea of profit maximization emphasizes that production should be stabilized at a point where MR simply covers MC since each extra unit produced implies an additional expense as well as creates an additional revenue stream. 'A decision's impact on expenses is more precisely reflected by marginal cost. Due to the prominence of multi-product enterprises, marginal pricing is more beneficial. When MR from sales of all of these items equals MC, a company must create the multi-product to that level. If MC exceeds MR, the company must discontinue making and marketing the product that provides MR that is less than MC.

### **Joint product pricing:**

Demand and production for different products may be connected. When items are jointly produced in set ratios, there is a certain form of production interdependency. A excellent illustration of a set percentage in production is the method used at a slaughterhouse to produce mutton and skins. There is a set quantity of mutton and skin in each corpse. The percentage of the two products cannot be changed by the slaughterhouse. When products are created in a set quantity, they should be considered a "product package." There is no conceptual foundation for dividing the total production costs between the two items since it is impossible to manufacture one component of this package without simultaneously



manufacturing the other component. Two distinct scenarios may be used to illustrate joint product pricing:

1. when the product percentage is constant.
2. when the proportion of items varies.
3. joint goods with a set proportion

There is no way to increase one at the cost of another in a joint product instance with a set percentage of quantity. The expenses are shared in this instance and cannot be raised at the expense of another. The expenses are shared in this instance and cannot be rationally distributed among the products. Despite the fact that the two products are created concurrently, their demand is separate. For both items, there is just one marginal cost curve, however. The cost of delivering an additional unit of the product package, or the marginal cost, is what indicates the fixed percentage of manufacturing. Pricing decisions should take into consideration the interdependency of items when they are jointly produced, as in the case of mutton and skins. how to choose quantities and pricing that maximize profits. For the combined items, PM and PH represent the most competitive costs. Because the output point for both products is the same while the demand and marginal income curves for each product's various marketplaces where it is sold carry the assumption that each product is produced in a constant proportion.

The marginal revenue curves for mutton and hides, respectively, are MRM and MRH. However, when an extra animal is slaughtered and processed, both the mutton and the hide are made available for sale. Therefore, the total of the marginal revenues is the marginal income related to the sale of a unit of the product package [9], [10]. The MRT line is used to symbolize this amount. MRM and MRT are added together at each rate of production to produce MRT. The marginal revenue curves for the two goods are added vertically to form the graph. The intersection of the MRT and MC curves at point E, together with the prices of mutton and hides, determines the production that maximizes profits.

### **Joint Products with Various Ratios:**

An interesting examination of price, cost, and production is provided by the pricing of joint goods that may be produced in a variety of proportions. The entire cost must be split across several items when a company may create a group of products in varying ratios since a marginal cost curve cannot exist demonstrates how to price a variety of goods with various proportions while keeping three key points in mind:

1. The poor adaptability of productive resources in creating items A and B is shown by the production possibility curve's concave origin. In other words, it shows how many of A and B can be made for the same overall cost. It is the isocost curve identified in the as TC.
2. The iso-revenue lines specify the prices the company obtains for the two items regardless of how their production is combined. In the they are as TR.
3. The ideal combinations for optimal production and maximizing sales revenues or profits are the points of tangency of isocost curves and iso-revenue lines.
4. The point where an iso-revenue line intersects an isocost curve, thus, is where the best output combination occurs. Given fixed product pricing, we may compare the profit level at each tangency point and choose the point with the greatest profit level to determine the ideal combination.

## **Pricing by Product Line**

For the majority of contemporary industrial firms, product line pricing is a significant practical issue. Product line pricing is an essential component of price strategy as practically every company produces a number of related items. Product line pricing is the process of determining the costs of the many items that make up an output package. From the management's perspective, a typical modern company creates a variety of models, styles, or sizes of output, each of which may be seen as a distinct product. Although the same economic principles used for single product pricing apply to product line pricing, the analysis is made more difficult by demand and production externalities that result from the goods' complementarity or substitutability on the demand or production side.

Finding the right connection between the prices of the members of a product group is the challenge of product line pricing. Use-differentials, seasonal differentials, and style cycle differentials may all be included into product line pricing. All of these stages of product line pricing are present. Our examination of product line pricing is broken down into two sections; the first presents a basic solution to the issue, and the second applies this solution to a few particular situations. **General Approach:** In this article, we cover the challenges of analyzing demand linkages and competitive differences, as well as the creation and use of cost estimates for product pricing.

### **Alternative Price Relationship Policies:**

Starting with an illustration of the many types of policies on the links between the prices of line-member products is a sensible way to approach product line pricing. Let's look at some organized patterns:

#### **Price Levels Relative to Full Cost:**

Prices that yield the same percentage net profit margin for all items and are equivalent to full cost. Cost plus pricing is used in this instance.

#### **Pricing in Relation to Incremental Costs**

Prices that create the same percentage contribution margin over incremental costs for all items, or prices that are proportionate to incremental costs. The increased cost of more units is known as incremental cost.

#### **Prices with Proportionate Profit Margins to Conversion Costs:**

Prices with profit margins that are proportionate to conversion costs, i.e., without taking the cost of acquired components into consideration. expenses spent to transform raw resources into finished goods are referred to as conversion expenses.

#### **Prices that generate contribution margins based on demand elasticity**

It is common practice to set bigger profit margins on items for the opulent class markets than for the gritty mass markets since consumers with high incomes are often less price sensitive than consumers who make up the mass market. Prices that are consistently correlated with the competitive development and market stage of certain members of the product line: Numerous goods have life cycles. It has much to gain from a product line pricing strategy that clearly acknowledges that a company's various products are at different phases in their life cycles and, as a result, confront variable levels of market acceptance and competition intensity. This

approach emphasizes that pricing should be maintained low for items in the maturity stage and high for those in the line that are in the pioneering stage.

### **Competitive Distinctions**

Because different competitive selling across items necessitates different profit margins or distribution margins, an examination of the competition is typically a crucial stage of product line pricing, despite the fact that the relevant feature of product competitiveness cannot be measured. Variations in the competitive environment rely on the firm's market share for each product. Here, the present and future forms of competition must be taken into account.

1. The number of competitors, the market share, and the degree of product similarity among the rivals are a few of the indirect indicators of existing rivalry.
2. Apart from other aspects of competition, the margins are often bigger the fewer vendors that are competing. Since it is assumed that a product with a dominating market share has a competitive advantage, it may tolerate a larger markup. Given how similar the competing product is, distinctive or unique items may command a greater price.
3. Indexes like those for competitive entry incentives, patent barriers, financial barriers, and technological hurdles may be used to measure potential competition.
4. The firm's current earnings serve as a barometer for the entrance of other businesses. Higher earnings will attract other businesses. The ability to start the industrial process affects patent obstacles to future competition. By estimating how much money would be needed to produce and market a competitive product, financial barriers may be measured. Similar to patent barriers, technical obstacles exist.

### **Cost Estimates:**

When deciding how prices relate to one another within a product line, the cost should be the primary, if not the only, factor taken into account. For an accurate study of practically every kind of price issue, cost estimations are essential. To anticipate approximately how alternative price structures would affect profitability, product line pricing needs cost estimates.

### **Specific Issues**

The following factors also need to be taken into account while determining the philosophy of product line pricing:

1. Pricing items with different sizes
2. Pricing goods with varying quality
3. Charm costs
4. the cost of unique designs
5. Price differences for the load factor
6. Cost of the restoration route
7. Costs for licenses and leases

They are described as follows:

### **Pricing product that is unique in Size:**

With size, competition intensity often fluctuates. The logical use of size as a price factor is as a gauge of the buyer's worth. Whether the usual customer has the ability to switch out one size of goods for another has a big impact on how the price and size are related. The finest illustration of size-differential pricing issues is provided in relation to newspaper fractional page advertising rates.

### **Pricing goods with varying quality**

Here, choosing a price mostly relies on the strategic goals of having items of varying quality. Sometimes the goal of premium products is to elevate the reputation of the whole range. To compete with the low-cost goods on the market, the company could likewise make items of poorer quality. To compete, poor-quality items are released at cheap costs.

### **Charm Costs:**

According to the charm price idea, prices with odd numbers at the end, like Rs. 4.95 and Rs. 9.95, have more of an impact on consumers than prices with odd or even numbers, like Rs. 5 and Rs. Although there is empirical study and debate on this issue, no definitive solution is possible. Prices with odd number endings predominate in newspaper advertising. Another theory is that odd numbers suggest a deal or discount.

### **Costing for Unique Designs:**

Estimating usual complete cost and then adding a predetermined percentage to that cost to reflect a fair or acceptable profit is a frequent method when pricing customized designs. The choice to charge more for a bespoke order basically comes down to whether or not to manufacture the product at all. Here, cost plays an odd role in the price of bespoke orders. Accurate future cost estimates of unproven items provide a crucial foundation for special order pricing.

**Load Factor Price Differentials:** Businesses that charge various rates for the same item or service at different times in order to increase their load factor offer significant profit potential for many manufacturers. Peak load pricing theory includes load factor price differences of this kind. Discounts on winter clothes during the summer and off-peak electric energy prices are a few examples of load factor pricing differences. It is not need to be for the same product at many times. Demand, cost, and competitive analysis should all be taken into account.

**Pricing Repair Parts:** The cost of repair or spare parts is a challenge for all manufacturers of durable products. For some businesses, sales of repair components actually generate more revenue than sales of new machinery. Pricing for spare components has a monopolistic quality. However, competition in different forms has always served to limit this monopolistic power. Spare component costs shouldn't be based on relative weight or relative average cost. The cost of easily accessible parts should be kept as low as possible. Prices for parts that the customer can make or repair themselves should be reasonable.

### **Costs for licenses and leases:**

Patent leasing and royalty licensing are examples of how market segmentation pricing is used. There cannot be a set price charged. The advantages the company obtains are directly correlated with the price paid for them. With this price strategy, the supplier benefits from a portion of the profits made by the most beneficial consumers. The reason for which equipment is purchased, the rate of use, the effectiveness of alternatives, and other factors all affect benefits. The development expenditures spent to create the equipment should not be taken into account for determining the royalty fee [11], [12].

## **CONCLUSION**

In conclusion, Pricing strategies are essential in deciding a business's success. Businesses may use the right pricing techniques to maximize profitability, capture value, and efficiently satisfy consumer expectations by carefully evaluating cost structures, customer perceptions, competitive landscapes, and market dynamics. The pricing plan chosen should be consistent

with the overall company strategy and take into account the distinctive qualities of the product, industry, and target market. Additionally, pricing strategies are crucial for attaining corporate goals like revenue growth, market share expansion, or profit maximization. Businesses that use efficient pricing techniques are better able to balance extracting value, meeting consumer requirements, and remaining competitive in the market.

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## CHAPTER 13

### PRICING OVER THE LIFE CYCLE OF A PRODUCT

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#### ABSTRACT:

Pricing is a dynamic and strategic process that evolves throughout the life cycle of a product. This abstract examines the various stages of a product's life cycle and the corresponding pricing strategies employed by businesses to maximize profitability and achieve marketing objectives. The abstract begins by outlining the different stages of a product's life cycle, including introduction, growth, maturity, and decline. Each stage presents distinct challenges and opportunities that require tailored pricing strategies. During the introduction stage, businesses often set prices higher to recoup development and marketing costs and establish a perception of premium value. Pricing strategies may focus on skimming, where high initial prices target early adopters, or penetration, where lower prices aim to capture market share. The goal is to create awareness, generate trial, and establish the product's value proposition.

#### KEYWORDS:

Life Cycle Pricing, Maturity Stage, Obsolescence, Pricing Strategies, Product life Cycle, Profitability, Sales Volume.

#### INTRODUCTION

The creation of the new product starts the cycle. The life cycle of a product is defined as the invention of a novel product and its degeneration into a common product. It is a crucial marketing idea that offers perceptions into the competitive dynamics of a product. The many phases of a product's sales history are depicted by its life cycle [1], [2]. Different possibilities and issues in terms of market strategy and profit potential correspond to these phases. Companies may create better marketing strategies by determining the phase that a product is in or may be heading into. The lifespan of a product is 5s. Every product goes through a life cycle that consists of the following five stages: This is the first stage in the life cycle of a product. This is a developmental stage. The item is brand-new. The product is launched, but there is little awareness of it and little acceptance. Costs associated with promotion are substantial. Consequently, the profit might be little. In this stage, the company may use either a skimming pricing policy or a centralizing price policy.

#### Growth

During this stage, customers and businesspeople start to accept a product. The product starts to see quick sales growth as a result of the combined impacts of the initial promotion, distribution efforts, or word-of-mouth marketing. The market is satisfied with the product. There isn't much of a distinction between the growth and mature phases in terms of price.'

### **Maturity**

The level of competition is now fierce. Due to the diminishing pool of possible clients, sales growth is still occurring but at a slower pace. Competitors aim for price markdowns. The product's modification and enhancement incur more costs, hence the profit margin shrinks. This time frame is beneficial since it sends out signals to employ prudence in pricing strategy.

### **Saturation**

At this point, sales have reached their peak and more growth is not viable. The item is in high demand. Sales fluctuate according on supply and demand. Although it is its replacement demand, there is not much new demand that has to be developed. Therefore, full cost plus the typical markup applies to product price at the saturation stage.

### **Decline**

As consumers get weary of a product, sales start to drastically decline. With imitations and replacements, the rivals have entered the market. The competitive weapon is now price. The product should be reformulated to meet the desires of the customer; this is doable for a select few goods. Price and promotional elasticity of demand, as well as the expenses associated with the product's manufacture and delivery, alter during the course of the cycle. As a result, the pricing strategy has to be modified during the cycle's different stages.

### **Circular Pricing**

Cyclical pricing refers to the firm's price choices that are made to accommodate changes in the economic environment. The company must implement a policy based on cyclical pricing behavior in order to make decision-making in reaction to changes in the broader economic system easier. Saying that prices are reduced during recessions and jacked up during demand-pull or demand-push situations makes more sense. Different elements, including demand, competition, cost-push, price rigidity, price variations, fluctuations owing to alternatives, buying power, market share, and demand fluctuation should be taken into consideration while creating a cyclical pricing strategy.

## **DISCUSSION**

### **Demand**

A distinction is made between durable and non-durable items. The demand for the non-durable products that make up necessities is stable and inelastic. The purchase of durable products, however, may be delayed but not the purchase of necessities. Demand is crucial when there are flaws in the market.

### **Competition**

When a market is inefficient, businesses compete with one another and rely on one another in certain ways. Changes in a firm's policies will have an immediate impact on rivals. Price wars result from price reduction. As a result, modifications must be made [3], [4].

### **Cost-Push**

Producers often raise prices to pass on rising production costs to consumers. This might occur as a result of wage increases that are greater than output, insufficient plant investment that could lower output, a shortage of production-related elements, and a rise in the price of fundamental raw materials. Costs will inevitably increase under these circumstances. What type of pricing strategy should the businesses use in this situation? This question is tough to

respond to. Joel Dean believes that the following variables may be taken into account when creating a cyclical pricing policy:

### **Pricing Rigidity**

Businesses do not think that economic cycles are the source of pricing changes. Economic elements like revenue and profit as well as psychological ones like customer expectations are what lead to the cyclical oscillations. These variables are within their control. Additionally, they believe that altering pricing in response to cyclical swings is unhealthy.

### **Price Changes**

Prices fluctuate in accordance with changes in the current full cost, the standard full cost, and the incremental cost. Another common cyclical approach is to confirm pricing adjustments to changes in business expenses. It essentially stabilizes a certain kind of unit profit margin.

### **Fluctuation caused by Substitutes**

In many circumstances, using a replacement product as a cyclical pricing guide is an effective pricing strategy. Additionally, it may stabilize the industry's share of the sizable replacement market.

### **Purchasing Power**

The blanket index of purchasing power is what we have if prices may be lowered during a depression as a result of a decline in people's purchasing power. Averaging across large discrepancies, the purchasing power index is merely an average. Prices of the components are thus more significant.

### **Market Share**

A number of variables affect market share, with pricing playing a significant role. On the greater portion of the replacement market, price policy has a significant impact. Price decrease would boost market share. For cyclical pricing, market share might serve as a relevant price indicator.

### **Fluctuations in Demand**

Changes in demand should be considered while determining pricing. They are more significant than demand elasticity. One recession pricing strategy is to adjust prices in response to the right index of changes in the product's demand. This pricing strategy makes the following assumptions: that flexible pricing is preferable to rigid pricing, that price changes in the past have accurately accounted for demand changes, that these past pricing objectives are still relevant today, and that cost behavior and competitive responses will be consistent with previous similar periods.

### **Switch Pricing**

One of the trickiest issues in pricing is transfer pricing. The difficulty of pricing commodities that are internally moved from one division to another has been created by the expansion of big size, multi-divisional organizations. For the following reasons, divisional organizations are preferred:

1. It offers a methodical approach to decision-making and delegating.
2. To properly evaluate contributions and to accurately assess the manager's performance.



3. Sub-optimization is an issue that is involved here. The transfer fee must meet the two requirements below:
4. It ought to make it easier to determine how profitable each division or department.

### **Market Price Basis**

The market price basis is the method used to move commodities from one division to another under the same management to another firm. The transfer price needs to be the market price. To prevent sub-optimization, the inter-divisional transfer price for a product should be identical to the market price wherever there is one. The prospect of transferring the inefficiencies of one department to the other departments is certainly eliminated by this strategy.

### **Cost Basis**

The inter-divisional transfer should be priced at the level of the real cost of production if the product produced by one division of the company can only be sold to another division of the company. To attain the optimum combined level of production in this situation, transfer pricing would be helpful. Profits will be maximized [5], [6].

### **Cost plus Basis**

Using this system, each department's products and services are billed based on their real costs plus a profit margin. This method's primary flaw is that the transferring department could include a large margin in order to increase the department's profit. It may lead to an excessively high final price, which would hurt sales. Determine the transfer price by

### **Objectives:**

The following goals are pursued by businesses when establishing the transfer price:

1. The company wants to make sure that its objective and the goals of the associated divisions are in sync.
2. The transferred product's pricing should be set in a way that will guarantee the profitability of each division.
3. The price should be set in a way that encourages the corporation as a whole, rather than just one segment, to maximize profits.

The activities of large companies often break down into several divisions or departments. The output of one division is used by another division. When this happens, businesses must figure out what price to charge for the product that has been shifted from one division or sub-division to another. Transfer pricing, therefore, is the process of determining the cost of products and services that are moved across interdependent divisions or units within an organization. This serves as a gauge for the financial success of the company's profit-making segments. When estimating the transfer price, several situations must be taken into account.

**Pricing for Transfers: Lack of an External Market:** Transfer pricing will be determined by the producer's marginal cost if an intermediate product has no external market. Assume a company has a production division and a marketing division, each of which is autonomous. One product is created by the production division and sold to the marketing section of the same company.

The cost at which it is sold is referred to as the transfer price. Additionally, the marketing department packages the product, sells it to the general public, and displays it as a finished

good. We also suppose that the manufacturing division's manufactured goods have no external markets. In other words, the demand for the product is entirely dependent upon the manufacturing division, and the supply of the product is entirely dependent upon the marketing division. As a result, the amount of the product that the manufacturing division produces must match the amount that the marketing division sells. How much should the production division charge for the goods it purchases from the marketing division is now the issue. The production division's marginal income is equal to the transfer price. The production division's demand curve, which is horizontal and on which the marginal revenue equals the transfer price, or  $D=MR_p=P_1$ , ensures that the transfer price, once established, is always  $s$ . When Price, which is also its marginal revenue, equals its marginal cost, as in  $P_1=MR_p=MC_p$ , the manufacturing division will make the most money from its intermediate product. This circumstance occurs at the point where the  $MC_p$  curve divides the  $D=MR_p=P_1$  curve [7], [8].

### Transfer Pricing: Exiting Market Presence

The manufacturing division may generate more product than the marketing division requires if there is an external market for the intermediate product, and it may choose to sell the extra goods elsewhere. On the other hand, it can generate less than what the marketing division requires, in which case the marketing division can fulfill the remaining demands on the open market. As a result, it has greater freedom to increase its profit.

Transfer pricing: In the case of a perfectly competitive external market, where the firm can sell or purchase the intermediate product from the perfectly competitive external market, the quantity produced by the production division may not be the same as the quantity needed for the marketing division.

### Transfer Pricing

In an external market with imperfect competition, here, we'll talk about transfer pricing in the case when the manufacturing division sells its goods to the marketing division as well as an external market that's just marginally competitive. A significant issue of pricing differential in many marketplaces emerges under such circumstances. When the marginal revenue for each market is equal to the marginal revenue for the whole market and the marginal cost for the entire market is equal to the marginal revenue, the production division will benefit the most. In other words, the marginal cost of manufacturing division should be equal to the transfer price for the marketing division. In the situation of an external market with imperfect competition, transfer price determination.

The panel of the deals with an external market that is only marginally competitive, with a demand curve ( $D$ ) and a marginal revenue curve ( $MRE$ ). Panel is associated with the marketing department, and  $MRM$  is that department's net marginal revenue curve.  $MRM =$ , in other words. Here, the marginal cost of the manufacturing division equals the transfer price. Panel is associated with the production department. Marginal revenue curve of it  $MR_p$  is the total of marginal revenue from the firm's internal marketing division and marginal revenue from the outside market. When the  $MR_p$  curve is equal to the  $MC$  curve at point and the transfer price is  $OPT$ , the production division's optimal production level is  $OQ$ . The production division may sell  $OQE$  units of its output at  $OP$  price to the external market, while the marketing division can purchase  $OQM$  amount of output at  $OPT$  transfer price from the production division.

## Disparate Pricing

Some vendors use differential pricing as a strategy to adjust their rates based on the unique circumstances of their customers. The company may charge the same price for the same goods or a different price. It is a useful tool at the disposal of management to increase revenues. It takes use of the variations in demand elasticities. Quantity differentials, location differentials, product usage differentials, and time differentials are some of the most prevalent. Market segmentation is important to achieve differential pricing. Differentiations in product design, quality, channel choice, timing of sales, patents, packaging, and advertising are prominent methods used for market segmentation.

The location of the purchase, the quantity of the purchase, the time of the purchase, the position of the buyer, the promptness of the payment, and the personal circumstances are the key factors in pricing variations. The following are the primary objectives of pricing differentials: application of various market strategies, professional market segmentation, consumer attraction, competition, and production issue resolution. Distributor Discounts: Price discounts are a common way that various prices are expressed. A very large territory is covered by modern business. The whole market may be split up into several zones or regions, creating a trading channel. The producer uses a number of distributors or middlemen to get his goods into the market. He grants the distributors a certain rate of discount. These reductions are referred to as distributor discounts. They speak about price reductions or discounts made available to different channel distributors [9], [10].

## CONCLUSION

In conclusion, Pricing during a product's life cycle is a strategic process that calls for careful analysis of the state of the market, consumer preferences, and corporate goals. Businesses may successfully position their goods, optimize revenue and profitability, and adjust to changing market dynamics by using the right pricing methods at each step. To be successful in the long run, pricing choices should be backed by market analysis, data analysis, and a detailed knowledge of consumer behavior. The abstract also highlights how consumer input, data analysis, and market research play a key part in influencing price choices throughout the course of a product's life cycle. To find pricing possibilities, assess consumer price sensitivity, and match pricing with value propositions, businesses should use market insights.

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## CHAPTER 14

### FACTORS DETERMINING DISTRIBUTOR'S DISCOUNTS: AN ANALYSIS

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#### ABSTRACT:

Distributor's discounts play a crucial role in the relationship between manufacturers and distributors, influencing pricing, profitability, and the overall effectiveness of distribution channels. This abstract explores the factors that determine distributor's discounts, highlighting their significance in maintaining mutually beneficial partnerships and achieving business objectives. The abstract begins by acknowledging that distributor's discounts are negotiated price reductions offered by manufacturers to distributors as incentives for promoting and selling their products. These discounts serve as a crucial tool for manufacturers to incentivize distributors, gain market share, and effectively penetrate target markets.

#### KEYWORDS:

Competition, Customer Loyalty, Demand Forecasting, Distribution Channel, Inventory Levels, Market Conditions.

### INTRODUCTION

#### Services of the Distributor

For each product, the distributor's job is different. Generally speaking, the distributor of goods must make the investment decision himself, with some manufacturer assistance. On the other hand, those who manage specialized businesses, such as those that sell electrical devices, must dedicate their whole attention to the goods of a single company. The distributor discount is often at a modest, set amount, and it is typically large for specialized distributors [1], [2].

#### Running Expenses for the Distributor

To compensate operational expenses and typical distributor earnings, discounts are permitted to the distributor. The many tasks they carry out affect the operational expenses. The producer himself might assume the role of the distributor and choose the price. This could serve as a foundation for calculating the running cost.

#### Discounting Practices of the Competition

In a cutthroat market, other similar alternatives are readily accessible. Different discount rates will be offered by various manufacturers. The reductions offered by competitors work as a very useful guidance.

### **Impact of Discounts on Final Consumers**

A manufacturer must consider how a distributor's discount may affect the final consumers. He should keep an eye on the distributor's attempts to increase sales. By selling the goods at the list price, some distributors may choose to forgo some of their discounts. **Impact of Distributor Population:** Manufacturers need to establish a tempting discount scheme to swiftly increase the distributor population. The desire of a manufacturer to have a large network of small distributors or just a few large distributors must also be considered.

### **Selling Fees to Various Channels**

Another factor is the cost of delivering the item via various routes of distribution. In certain circumstances, the distributor will take orders and forward them to the manufacturer. The discount percentage through mail order channels is modest. In addition, the distance traveled, municipal taxes, and the form of transportation used may all affect the distribution cost.

### **Opportunities for Market Segmentation**

The market may sometimes be split into a number of smaller marketplaces. The niche market may have unique demand patterns and competitive traits. Variations in aggregate demand and cross demand elasticity are a defining feature of these marketplaces [3]–[5].

### **Discounts for Quantity**

Quantity discounts are dependent on how much is bought. These are crucial pricing tools for the majority of modern companies.

There are two primary factors to take into account here:

1. choosing the appropriate discount method, and
2. the maximum quantity discount that will be permitted.

Certain rules must be followed while choosing the sort of discount scheme. The key principles must be founded on:

1. how the size is calculated
2. Regarding the estimation of each product's specific amount
3. how the computation was done
4. a count of transactions.
5. The extent of the quantity discount that will be permitted is determined by two factors:
6. particular market objectives; and whether the discount is legal.

Quantity discounts may be used to encourage buyers to give the vendor larger quantities depending on the market's aims. The same clients may be encouraged to offer the seller a higher portion of their overall business. Through covert price cuts, competition will be defeated.

All quantity discounts are considered discriminatory and used to stifle competition under the validity of the quantity discount. When bulk discounts seem to stifle competition, the issue of legality comes up.

### **Cash Savings**

Cash discounts are price reductions that rely on early payment. It has to do with monetary sales. Producers permit cash discounts to dealers and dealers' consumers. The cash discount is

an easy approach to spot hazards associated with weak credit. A buyer could have to forgo the discount if he wishes to pay with credit. The manufacturer may lower working capital by deterring consumers from using credit to make purchases.

### **Geographic Price Variations**

It is another often used differential pricing strategy. Depending on the buyer's location, this. It centers on the kind of transportation costs and a few legal issues.

They come in many different shapes:

### **Priced F O B Factory**

Under FOB pricing, the buyer is responsible for covering the whole cost of transportation as well as any hazards that may arise during transportation that are not covered by the carrier. Customers may choose their preferred mode of shipment since the goods is priced at the seller's facility. No matter where the shipments go, it ensures a consistent net pricing. The vendor guarantees that there is no danger and is liable for any delays in delivery.

## **DISCUSSION**

### **Cost of postage stamps**

Pricing like a postage stamp refers to applying the same delivered price to all destinations, regardless of the buyer's location. Naturally, the cost of anticipated typical transportation is included in the pricing. It is most often used for products with widespread distribution and well-known brands. A manufacturer can reach all markets thanks to this price, regardless of where he is.

### **Zone Costing**

Zone pricing involves the vendor dividing the nation into zones and regions and charging the same delivery price inside each zone while varying prices across zones. I favor situations where the sale cannot take place because the transit costs are too expensive.

### **Cost per basic point:**

A factory price plus transportation costs that are computed in relation to a certain basic point make up a basic point price! The provided price under the method may be calculated using a single basic point or many basic points. Single basic point pricing is the practice of computing the supplied price using a single basic point. Multiple basic prices is when more than one basis point is used for pricing.

### **Full-Cost or Cost-Plus Pricing**

Cost-plus is a quick way to determine a product's price. In order to determine the price, it involves adding a certain portion of the expenses as profits to the cost of manufacturing [6]–[8]. This is exactly what is meant by cost-plus pricing. According to this approach, a product's pricing should create returns as investments at a certain markup percentage while also covering its costs. Full cost is full average cost, which consists of normal overhead expenses, normal direct costs, and a typical profit margin.

$$p = AVC + AFC + \text{markup or profit margin.}$$

Consequently, the cost and markup make up the two components of cost-plus pricing. These two elements are examined independently. Cost has a significant role in setting pricing. The cost serves as the foundation upon which the profit margin is based. Costs are the primary

drivers of price and serve as long-term price stabilizers. There are several ways to calculate costs.

In general, there are three ways to calculate the cost:

1. the true price,
2. the anticipated price, and
3. the common costing approaches.

The expenses that are really incurred during an item's manufacture are its actual costs. The pay rate, material costs, and overhead costs are all included. An estimate of the actual costs for the price period is the projected cost. If a product is anticipated to hit the market in, say, three months, the company will first calculate the cost of manufacturing one unit at the going rate. The anticipated cost is then calculated using the pricing of different components forecasted over the next three months.

The capacity of the plant is considered while using the conventional technique of costing. For instance, the facility may be operational if it is operating at 70% of its potential. It's possible that the cost is optimal or typical while it's operating at 90%. This is a consideration that will need to be made. The % markup is the second factor. The company should carefully assess cost, demand elasticity, and the level of competition the product faces in order to determine the right markup. In determining markup, the company should also take into consideration its long-term goals and brand image. Once the markup has been established, it should be included in the price of the product. On the basis of markup, cost-plus pricing may be divided into two groups: rigid cost-plus and flexible cost-plus.

### **Static Cost-Plus-Pricing**

A predetermined percentage is often added to the cost to get price in strict cost-plus pricing. Only variable costs are used, and they are then marked up by a set percentage. This approach conforms to the profit motivation and is straightforward to compute.

### **Cost-Plus Pricing That Is Adaptable**

Mark-up is not strictly established as a cost under flexible cost-plus pricing; rather, it is distributed across several headings of variable and fixed costs. It takes into account all cost factors, including labor, materials, machine hours, and other overheads.

The factors listed below, according to Hall and Hitch, should persuade the company to use full cost-pricing:

1. fairness considerations,
2. disregard for demand,
3. ignorance of rivals' possible responses,
4. the idea that there is little short-term market demand elasticity,
5. the idea that higher pricing would attract new competitors, and
6. Administrative challenges associated with a more flexible pricing strategy.

### **Turnover and markup:**

Mark-up and turnover may be directly related. Items with a high turnover rate may have minimal markup. This is as a result of the following factors. Customers would switch to another supplier if they knew the pricing of these commodities. For rapid turnover goods, storage space is a major issue, and the opportunity cost of space use and inventory accumulation should be taken into consideration.



### Markup and Return Rate:

The rate of return pricing is an alternative method of determining the price. A challenge with cost-plus pricing is the issue of markup. The rate of return pricing mechanism may be used to get around this issue. This approach bases the pricing on the anticipated rate of return on investment, which will be turned into a percentage markup. Three stages are required in order to establish the rate of return markup on cost:

1. In order to calculate the annual cost of production at the typical pace across a cycle,
2. To determine the proportion of invested money to a year's average cost, and
3. to alter the capital turnover according on the rate of return. We can get the markup % from this.

### Cost-Plus Price

The concept of Prof. Andrews' version is used to illustrate how cost-plus pricing is calculated. Prof. Andrews discusses how a manufacturing business really determines the selling price of its product based on the full-cost or average cost in his 1949 paper, *Manufacturing Business*. By dividing the current total expenses by the current total production, the company calculates the average direct costs. These are the typical variable costs, which are thought to remain constant throughout a broad range of production. In other words, if the prices of the direct cost elements are known, the AVC curve is, for a portion of its length, a straight line parallel to the output axis. A business would often offer a price for a certain product that is equal to the expected average direct manufacturing costs plus a costing margin or markup. When considering the industry as a whole, the costing-margin will often have the tendency to produce a level of net profit while also covering the expenses of the indirect production variables.

The costing margin will stay the same at this pricing, given the organization of the company, regardless of the volume of production. However, it will likely alter in response to any widespread, long-term changes in the costs of the production's indirect components. Price will typically stay the same, regardless of the amount of output, depending on the firm's capacity and the pricing of the primary inputs of production. At that pricing, the company will have a more or less defined market and sell the quantity that its clients need of the output sold during the previous production period, as a percentage of capacity, as the minimal or typical output that the company anticipates selling in the future. Only the first and third of these interpretations will apply whether the company is new or an established company presenting a new product. Given these conditions, it is really probable that the first will nearly follow the third, since the plant's capacity will be determined by anticipated future sales [9]–[11].

### Advantages

The following are the key benefits of cost-plus pricing:

1. Price stability results from long-term cost sufficiency; this is less expensive administratively and less irksome for businesses and consumers.
2. The cost-plus formula is straightforward and simple to compute.
3. The cost-plus approach provides a guarantee against a company generating a loss. If it discovers that expenses are growing, it may adjust production and pricing and take the necessary action.
4. The cost-plus approach might be utilized when the company is unable to predict the demand for its goods.

5. Cost-plus pricing is a suitable strategy when it is impossible to acquire market data for the product or it is costly.
6. Cost-plus pricing is appropriate when the kind and degree of competition are unpredictable.

### **Criticisms:**

The following reasons have been raised in opposition to the cost-plus pricing theory:

1. This approach is cost-based and disregards product demand, a crucial factor in pricing.
2. It is not always feasible to determine the entire expenses with accuracy.
3. Because the demand elasticity is not expressly taken into consideration, this pricing strategy seems stupid. In reality, the cost-plus price may be excessively low when the price elasticity of demand for a product is low, and vice versa.
4. If a company's fixed expenses account for a significant amount of its overall costs, a cyclic relationship might develop where prices increase in a declining market and reduce in a growing market. Due to the fact that average fixed costs per unit of production are low when output is big and high when output is little, this occurs.
5. The cost-plus pricing strategy is based on total cost accounting data rather than the opportunity cost associated with product sales.
6. Due to its long-term nature, this approach cannot be utilized to determine the price of perishable commodities.
7. The full-cost pricing hypothesis receives criticism for maintaining a fixed price. During a recession, firms often reduce their prices to move their inventory. When expenses increase during a boom, they also boost the price. Because of this, businesses often use an independent pricing strategy rather than a fixed one.
8. The terms "profit margin" and "costing margin" are also ambiguous. The idea does not explain how a corporation determines this costing margin and charges it in the total cost. According to its cost and demand circumstances, the company may charge more or less than the just profit margin. Hawkins said that "the bulk of the evidence suggests that the size of the "plus" margin varies; it grows in boom times and it varies with elasticity of demand and barriers to entry."
9. Empirical research on industry pricing in England and the US has shown that businesses' specific procedures don't always follow the full-cost concept. Contrary to popular belief, calculating the average cost and margin is a far more manual operation. In reality, in order to protect their long-term profits, prevent government interference, and preserve their good reputations, businesses are hesitant to disclose to economists how they arrived at their pricing and their interactions with competitor enterprises.
10. Prof. Full-cost pricing is not supported by Earley's research on "excellently managed companies" in the United States. Earley discovered that these companies generally disregarded the full-cost concept. According to his findings, the businesses adopted marginal accounting and costing concepts, and the majority of them adopted pricing, marketing, and new product strategies.

Pricing is the process of figuring out what a business will get in return for its goods or services. When selling a product or service, a firm may use a number of different pricing tactics. Pricing may be chosen to maximize profits from either the market as a whole or from

each individual item sold. It may be used to expand market share inside an existing market, protect an existing market from new competitors, or join a new market. Cost-plus, which adds a profit margin to the average service cost, and pricing in accordance with market average rates are the two most often utilized pricing strategies by service providers in the research. This could be as a result of the simplicity of both approaches. Given that customer-based goals are the most popular among the organizations polled, it is surprising that customer-based techniques, such as pricing according to consumers' demands or perceptions of value, or establishing a reasonably cheap price for a high-quality service, are not given more attention. The challenge of identifying consumers' requirements and desires may be one factor. Another reason for using the cost plus technique is that it allows businesses to pay their expenses while charging competitive pricing, which both retains current clients and draws in new ones [12], [13].

### CONCLUSION

In conclusion, Sales volume, value-added services, market competitiveness, financial resources, product qualities, and market circumstances are some of the variables that affect distributor discounts. Manufacturers must carefully take into account these elements when creating discount structures that reward distributors, promote sales development, and create enduring relationships. Manufacturers and distributors must work together effectively and communicate effectively in order to create mutually advantageous discount structures that advance business goals and enhance the effectiveness of the distribution channel as a whole. Furthermore, the significance of favorable interactions and good communication between distributors and manufacturers in deciding discounts. Distributors' demands and difficulties may be understood by manufacturers via open communication, trust, and openness, which results in fair and specialized discount structures that serve both sides' interests.

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## CHAPTER 15

### AN OVERVIEW OF LESSON PROFIT POLICY

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#### ABSTRACT:

Profit policy refers to the strategic decisions and actions taken by businesses to determine the level of profit they aim to achieve and how they distribute and utilize their profits. This abstract explores the concept of profit policy and its significance in business management, highlighting the factors that influence profit decisions and the implications for business performance and sustainability. The abstract begins by emphasizing the importance of profit in business operations. Profit serves as a key indicator of business success and sustainability, enabling reinvestment in the company, rewarding stakeholders, and supporting growth and expansion. Profit policy, therefore, plays a critical role in shaping the financial health and long-term viability of a business.

#### KEYWORDS:

Cost Analysis, Customer Segmentation, Discounting Strategies, Financial Goals, Market Research, Pricing Models, Profit Margins.

#### INTRODUCTION

Profit might suggest monopolistic profit. A company obtains it by extortion due to its market monopolistic position. It has nothing to do with any practical particular function. Therefore, monopolistic profit is not a useful incentive. Profit may sometimes take the form of a windfall. It is an inflationary boom, an unanticipated benefit received by a company just by coincidence.

#### Profit As a Business Value

The word "profit" has several diverse connotations. Profit might refer to the payment a company receives for performing management duties. The term "normal profit" refers to the minimal amount required to persuade the company to continue operating. Profit might be seen as a bonus for doing actual entrepreneurial duties. It is the compensation the entrepreneur receives for taking the risk. A supernormal profit analysis is what it is known as [1], [2]. Profit is what an entrepreneur makes. The fact that profit is a residual income is what the economist views as its most important feature. Profit, however, has a variety of meanings.

The distinguishing characteristics of profit as a factor reward are, in brief, as follows:

1. It is not an agreed-upon payment under a contract.
2. It is not a set salary.
3. It is an unutilized excess.
4. It's unclear.
5. It may even be detrimental. Rewards from other factors are always favorable.
6. Net profit and gross profit:
7. Profit is really the slang term for gross profit.

In addition to the net profit owed to the business owner, the following elements are referred to as "gross profit":

1. compensation for the business owner's own contributions to the production elements.
2. costs for maintenance and depreciation.
3. more money for you.
4. Net gain.
5. The only compensation for the entrepreneur's performance of the following tasks is net profit:
6. Compensation for coordination
7. reward for taking a risk

Reward for embracing uncertainty and Reward for creativity. Gross Profit is defined as Net Profit less Implied Rent, Implied Wages, Implied Interest, Implied Normal Profit, Implied Depreciation, Implied Maintenance Costs, and Implied Non-Entrepreneurial Profit. Gross profit plus net profit equals economic profit, or simply company profit. The net profit is what might be either positive or negative. Negative earnings equal a loss.

## DISCUSSION

### Accounting Profit and Economic Profit

A excess of revenues over expenses, as shown in the books of accounts, is what an accountant considers to be a profit. An accountant is concerned in planning, budgeting, profit accounting, and auditing. Implicit or opportunity costs are not taken into consideration by the accountant. Residual profit is another name for accounting profit. Accounting profit is highly crucial for the company organization. After deducting costs spent during the manufacture of a good, accounting profit is the revenue realized within a certain time. While reporting accounting gains, a company may really be losing money. Long-term, such a company would have to give up on its operations. Accounting profit is a significant item on a company's balance sheet [3]–[5].

The accountant's perspective on profit, however, is not shared by the economist. To calculate profit, the accountant would simply subtract the explicit or real expenses from the revenues. The economist makes the point that in addition to deducting explicit costs, imputed costs should also be taken into account. These costs are those that would have been incurred had self-owned factors not been used. Their examples include the entrepreneur's salaries, which he might have earned by working for someone else, the rental revenue from the business's own real estate and buildings, and the interest on its own cash that could have been gained by investing it somewhere else. Economic profit may thus be defined as the profit obtained after subtracting both explicit and imputed expenses. Economic profit is crucial from a management perspective since it demonstrates a company's viability on its own.

### Profits that are normal and supernormal

Normal profits are the assumed returns on investment and calculated risk that are merely required to keep the owners from leaving the sector. Typically, the supply price or opportunity cost of entrepreneurship is used to determine the typical earnings. If the company wants to remain in operation over the long term, these expenses must be met. When there is perfect competition among business owners, the product's market price is equal to its average cost, which already includes "normal profit." Normal profit is the bare minimum that will persuade an entrepreneur to stay in business over the long term. In the short term, it is feasible for the entrepreneur to lose money and have to sell his product at a loss, but over the long

term, every entrepreneur must make at least the typical profits. It is believed to be included in the cost. According to Mrs. Joan Robinson, "Normal profit is that profit which does not compel the existing firm to leave the industry nor does it attract a new firm to enter the industry."

The excess above regular profit is referred to as supernormal profit. It is acquired by the ultra-marginal businesses. The marginal company only receives the normal profit, but the intra-marginal firm decides the supernormal profit.

### **Profit as a Useful Reward**

Profit is seen as a functional reward by some economists. Profit, in their view, is the entrepreneur's reward for doing his business duties. Some have said that the major responsibilities of the entrepreneur are on organizing and managing other production elements. Others have said that an entrepreneur's ability to take calculated risks and make sound decisions is crucial.

They claim that the entrepreneur makes money because he takes risks in his firm. According to Schumpeter, the entrepreneur plays the role of an inventor, hence the reward for his ingenuity is profit. According to Prof. Knight, his willingness to take risks and accept uncertainty is what led to his success.

**monopolistic Profit:** When a company has monopolistic power, it may limit production and make more money than it might in a market where there is competition. Profit comes from ongoing scarcity. It can only exist in an imperfect market if production is constrained for a variety of reasons and consumers lack access to other supply sources.

Such authority often derives from regulatory limitations, exclusive control of raw resources, or access to certain markets for sales. Even a little amount of distinctiveness in a company's product grants some monopolistic power. In conclusion, it may be concluded that monopolies may result in profits.

### **Unexpected Gain:**

Profit is seen as a windfall gain by some. Profit, in their view, is not a reward for any entrepreneurial endeavor or monopolistic position. It's just a windfall profit, really. It develops as a result of changes in the market's overall price level. We refer to the profit as a windfall profit if the manufacturer or trader purchases his inputs and raw materials at a discount and sells the finished product at a sudden increase in price as a result of unanticipated external causes. This is thus accounted for in net profit [6]–[8].

### **The pay for management:**

With strong negotiating skills, the business owner may get favorable deals on raw materials. He makes wise preparations for the raw materials storage. He constantly manages the supply of raw materials via efficient inventory building.

He employs workers at standard pay rates and borrows working capital at fair interest rates. He controls and manages explicit expenses in this way. The primary purpose of profit is to ensure the availability of capital. A certain portion of net earnings is put aside for improved company management.

### **Margin Policy**

It is often believed that a company's primary goal is to maximize profits. Its profit margin is considered as the key indicator of its performance. Profit maximization is encouraged as the

main strategy of a corporation by economic theory. Modern businesses reject this viewpoint and push the profit maximization hypothesis to the side. This does not imply that modern businesses do not pursue profitability. They certainly seek for maximum profits, but they also have other objectives. These together make up the profit policy.

Industry Leadership Achieving the largest sales volume or producing the greatest number of product lines might be considered examples of industry leadership. There must be a suitable amount of profit commensurate with capital invested, labor force engaged, and volume of goods generated for the company to achieve leadership in the industry.

### **Putting Limits on Entry**

No rivals are likely to join the market if a company has a strategy of limiting its earnings. It must make reasonable earnings that ensure its existence and expansion. "Competitors can invade the market as soon as they discover its profitability," claims Joel Dean. "They can find ways to shift the patents and make the necessary changes in design, technique, production plant, and market penetration."

### **Political Influence**

High earnings are said to be a company's death knell. If the government learns that the businesses are making enormous profits, it may impose heavy taxes or consider nationalization. High profits are sometimes seen as a sign of monopolistic power, thus the government may implement price control and profit restriction regulations to avoid this.

### **Customer Service**

Any firm is built on the needs of its customers. Businesses must limit their profits in order to preserve customer goodwill. Keeping profits modest allows businesses to win customers' trust. These days, businesses cherish customer loyalty so highly that they often make concerted attempts via advertising.

### **Consideration of Pay**

Larger profits might be seen as proof that larger salaries can be paid. Naturally, the labor groups will demand greater pay, bonuses, etc. if they learn that the companies are announcing bigger dividends to the shareholders. In these situations, businesses maintain a respectable profit margin in the sake of good employee relations.

### **Preference for Liquidity**

Many concerns place more emphasis on a company's capital soundness and so favor liquidity above profit maximization. Liquidity preference refers to the desire to have cash on hand to handle daily transactions. The ratio of current assets to current liabilities is the first thing that one notices when looking at a balance sheet. Less profit is kept by company concerns while maintaining high cash levels in order to provide capital soundness.

### **Reduce Risk**

Another goal of the modern company is risk avoidance, and for this, the companies must limit their profits. Under the theory of profit maximization, risk is high. A new venture's establishment requires managers to make a variety of questionable managerial decisions. Experienced managements often forego the likelihood of such dangers. When oligopolistic uncertainty exists, enterprises may concentrate their efforts on minimizing losses. Business economics is based on the avoidance of loss, not the maximization of profit.



## Different Profit Strategies

Different profit policies have been proposed by economists for commercial enterprises to consider as an alternative to profit maximization.

### The following list of alternative profit policies

Profit maximization has up to this point been the perfect market key that has unlocked all doors leading to a comprehension of entrepreneur behavior, according to Prof. K. Rothschild. The results based on the maximum profit assumption may be modified by factors such as family pride, moral and ethical considerations, low IQs, and other similar factors, but it was correct to assume that these unsettling phenomena are sufficiently exceptional to warrant their exclusion from the main body of price theory. However, there is another motivation that should not be so easily discounted and that is arguably on a par with the need for maximal profits: the desire for safe earnings. He has argued that an organization's main goal should be its long-term survival.

He argues that the premise of profit maximization holds true whether there is perfect or monopolistic competition. The firm's goal in a monopolistic situation is to maintain monopoly profits. He claims that the premise of profit maximization is insufficient in the situation of oligopoly.

According to W.J. Baumol, the organization's ultimate goal should be to maximize sales. According to him, the producer would not see expenses spent as production or profits to be earned while maximizing sales. If the company's sales rise, it indicates that the manufacturer is not only paying expenses but also realizing a typical rate of return on investment. As an alternative to the notion of profit maximization, Baumol's theory of sales maximization as a rational producer behavior is taken into consideration.

If the producer is expected to maximize his pleasure, Benjamin Higgins, MekinReder, and Tibor Scitovsky have proposed utility maximization as an alternative to the theory of profit maximization. They have included leisure as a variable in their strategy. The wellbeing of a person depends on their ability to have fun. The producer's ability to relax will decrease as he puts in more effort. It is believed that the producer would feel the most content if his net profit is at its highest.

According to Donaldson and Lorsch, career managers favor policies that support the long-term stability and expansion of their companies, both of which are only achievable when they get the highest present earnings. Top managers work hard to increase corporate wealth in order to ensure the survival, self-sufficiency, and success of the company. The certainty of having the resources to survive increases with affluence.

### Objectives of Profit Policy

The company has a number of goals it wants to accomplish, with profit making being the primary goal but not the only one. Making a profit is undoubtedly vital. In addition to making a sufficient profit, the company often aims to accomplish other, sometimes competing, goals. A company may provide excellent dividends, attractive wages, etc. if it produces enough money. As its investment, the company might set a goal rate for earnings. The calculation of the desired profit rate has an issue [9], [10].

As follows:

1. Competitive profit margins
2. Previous profit rate

3. a profit rate high enough to safeguard equity, and
4. Reverse the profit rate.

The profit rate that is considered to be competitive is that which is achieved by businesses operating in the same sector or by a select few businesses operating in related sectors. It could change somewhat from other firms' profit margins. The historical rate of profit is the rate of profit calculated using prior profits from periods when everything were normal. The rates should be high enough to draw equity capital, provide shareholders a suitable dividend, and discourage excessive competition.

Profit rates that are high enough to preserve equity are high enough to draw equity capital, and investment rates that safeguard the interests of current owners. Ploughback of profit late refers to the late profit that should be sufficient to provide a surplus after paying dividends to support the industry's future expansion. Cyert and March have concentrated on five aims that serve as the primary operational organizational objectives.

As follows:

1. production target
2. Inventory target Sales target
3. Marketing share and profit objectives

### **Production Target**

In order to preserve employment and development, the businesses aim to keep product output at a certain level. The output must be stable in order to meet the fundamental need.

### **Inventory Target**

A minimum amount of inventory must be maintained in order to guarantee a full and practical stock of inventory throughout production and to help the company avoid price swings.

### **Sales Target**

It is seen as being crucial for the stability and sustainability of the company. Sales growth indicates the company is progressing. Sales help the company grow. The profit increases as sales increase.

### **Target Market Share**

Sales don't always indicate how well a firm is doing. When a company's market share increases, it gains ground on rivals; when it decreases, it loses ground on rivals.

### **Profit Target**

The set pricing, advertising, and sales promotion budgets all affect profits. Normal profit is necessary to guarantee extra resources for investing as well as dividend payments.

### **The Calculation of Profit**

Profit measuring has always been a challenging issue. The word "profit" is often dropped in the modern business sector in favor of the neutral term "business income." Profit is an ex-post notion in the context of accounting. Following tradition, accountants define their terminology using enumeration.

Instead of projected earnings, past profits are the main focus of conventional accounting. Economists define their terminology functionally and reject traditional methods. Profit is an ex-ante notion for an economist.

It is either the gap between an enterprise's cash worth at the start and conclusion of a period or a surplus over all opportunity expenses. Economic earnings, from a management perspective, are a stronger indicator of a company's profitability. The theoretical examination of profit is primarily what the economist is concerned in. The following are the key areas where the approaches of an economist and an accountant diverge most:

### **Integrity of Costs**

Economists include in expenses, wages, rent, and interest for all services used in the company, including both those that are legitimately paid for in the market and any fictitious salaries, interest, or rent for services provided by the owner. Accounting professionals only take away explicit or paid-out expenses from income to calculate profitability. The entrepreneurial salaries, land rental revenue, and the interest that capital may generate elsewhere are non-cost elements that are not recorded in the books of accounts. The costs of production determined by the economist are a payment required to divert resources away from the next best alternative employment. The accountant's strategy is rejected by the economist. The economist notes that in addition to deducting imputed costs, which the accountant would simply deduct from revenues together with real expenses, imputed costs should also be deducted.

### **Depreciation**

The way depreciation is handled has a significant impact on how profit is calculated. Depreciation is seen by economists as a capital consumption expense. The cost of replacing the equipment is the cost of capital consumption. It may signify several things. The unamortized cost of an asset is written down during its useful life in an accounting sense. It might be characterized as the decline in a physical asset's worth brought on by degradation in the feeling of value. Only two types of depreciation costs are recognized by economists: the potential cost of the equipment and the depletion of a year's worth of limited useful life. The latter seeks to save enough money so that the equipment may be replaced without incurring any loss, whereas the former considers the most lucrative alternative use of it that is forgone by putting it into its current usage. Both of these ideas are beneficial to management.

### **Causes of Decreasing Value**

The following categories may be used to group the main depreciation causes:

three types of depreciation: accidental, functional, and physical. Physical depreciation is the term used to describe the deterioration in an asset's physical usefulness as a consequence of regular usage. Abrasion, stress, vibration, collision, and other factors might be to blame for the damage. Economic variables including repression, obsolescence, and insufficiency cause functional degradation. In this situation, the asset's capability is unaffected; but, the demand for the asset may be suppressed, it may become outdated, or it may not be sufficient to meet the need. Accidental depreciation may include physical damages like fire, explosion, accident, and windstorm that are often covered as well as certain common business risks including modest losses from disasters. Therefore, all of these are taken into account and handled as depreciation [11]–[13].

## CONCLUSION

In conclusion, Profit policy is a key component of effective company management that influences sustainability and financial success. Businesses may create profit policies that are consistent with their strategic aims and principles by taking into account market circumstances, cost structures, stakeholder expectations, and long-term ambitions. Businesses need to strike a balance between short-term profitability and long-term development and sustainability in order to survive in a cutthroat market while also adding value to stakeholders and the whole economy. the trade-offs and effects of choices regarding profit policy. Businesses may decide to put an emphasis on cost-cutting strategies and maximizing quick returns in order to emphasize short-term profitability. This strategy, nevertheless, could stifle long-term development and innovation. As an alternative, companies might implement a more balanced profit strategy that takes into account long-term sustainability, spending on R&D, talent development, and customer pleasure.

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## CHAPTER 16

### AN EXPLANATION OF METHODS OF DEPRECIATION

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#### ABSTRACT:

Depreciation is a key accounting concept that reflects the systematic allocation of the cost of an asset over its useful life. This abstract explores different methods of depreciation used by businesses to record and recognize the reduction in the value of their assets over time. It highlights the characteristics, advantages, and limitations of various depreciation methods and their implications for financial reporting and decision-making. The abstract begins by introducing the concept of depreciation and its importance in accurately reflecting the consumption of an asset's economic benefits over its useful life. It emphasizes that depreciation is not a valuation of the asset's market value but a systematic allocation of its cost. Depreciation starts out greater at the beginning of an asset's life and becomes smaller with time. This approach is practical. It makes the choice to sell and replace the asset sooner than the expected end of its life after accounting for the asset's immediate decline in value.

#### KEYWORDS:

Accelerated Depreciation, Declining Balance Method, Double Declining Balance Method, Macros, Reducing Balance Method.

#### INTRODUCTION

The techniques of depreciation have a major impact in an enterprise's profitability. Depreciation is a significant internal funding source, and the depreciation technique plays a key role as a tool for capital accumulation. Depreciation is offset using a variety of techniques. Depreciation policy's primary goal is to close the gap between an asset's current book value and its current depreciated value [1]–[3].

There are several acceptable depreciation methodologies, including the following:

1. using a straight line
2. The manufacturing method's unit
3. Sinking fund technique
4. The technique of diminishing balance
5. using a double decreasing balance
6. The technique of adding the digits of the year
7. Revaluation technique
8. The technique of repair supply
9. The technique of retirement accounting
10. The mechanism of insurance policies, and mileage calculation.

### **Using a Straight Line**

It is the most straightforward and typical form of depreciation. The proportionate or equal instalments approach is another name for it. This approach is predicated on the notion that an asset's value decreases steadily over time. Assuming there is no scrap value, the yearly depreciation is computed by dividing the asset's starting expenses by its projected life in years. If an asset has a scrap value, the sum should be subtracted from the purchase price.

### **Unit-of-Production Approach**

The machine hour rate technique is another name for this approach. This depreciation process resembles depletion in certain ways. With this approach, the asset life is calculated in terms of working hours rather than years. This approach is unique in that it uses production as the unit of measurement rather than time. This approach recovers capital expenditures for the equipment based on the anticipated output. This approach works well for giving depreciation on expensive machinery.

### **Sinking Fund Technique**

The amount written off as depreciation under this form of depreciation is computed using predetermined recurring charges and placed in easily marketable securities at compound interest, which adds up to generate a total equal to the asset's initial purchase price. The profits from the sale of the securities are then used to buy the new asset. If the asset has to be replaced once it is turned into scrap, this technique is helpful. It works well when replacing equipment and plant.

### **Using Declining Balance**

Alternatively, it is referred to as the "fixed percentage method or Mathesan method of depreciation." According to this procedure, an annual depreciation charges equal to the asset's worth as it is recorded in the books at the start of the year is made. The fundamental goal of using this strategy is to ensure that the asset's total cost of production stays more or less constant over the course of its lifespan. According to this strategy, depreciation increases in the early years of an asset's life but decreases as time goes on.

### **Double Declining Balance Calculation**

With this technique, depreciation is applied at a uniform rate to the asset's book value at the start of the year. The balance of the asset's unamortized cost and depreciation costs, both of which continue to decrease at a consistent pace, is the book value. The management prefers any technique of calculating depreciation that permits large sums in the first years since it aids in the early recovery of the majority of the initial investment.

### **The Digit Method for the Sum of the Years**

This technique was once referred to as the Cole approach. The yearly depreciation charge likewise decreases annually using this strategy. This method's ability to quickly write off investments is its economic benefit. The diminishing balance approach is conceptually quite similar to this one.

### **The Method of Revaluation**

When it is impossible to account for depreciation on a quantitative basis, this technique is typically utilized in the case of tiny things such loose tools, laboratory glassware, cattle, jigs, packages, designs, etc. The amount of depreciation is determined by the process of providing

depreciation by periodic deductions, each of which is equal to the difference between the value of such assets and their revalued value at the end of the financial year [4]–[6].

### **The Repair Provision Method**

According to this method, the cost of repairs is added to the cost of the equipment.

This technique accounts for the total cost of depreciation and maintenance via periodic charges, each of which is equal to the total cost of the depreciated asset plus the anticipated maintenance expenses during the asset's useful life. When renting their own plants to other contractors, public works contractors often employ this strategy. This approach addresses both depreciation and repairs and maintenance.

### **Using Retirement Accounting**

This technique emphasizes that depreciation should only be charged when an asset is beyond repair, less the cost of capital minus salvage value. One of the more objective approaches is this one. The method's validity rests on the fact that depreciation is consistently applied to the whole cost of the capital.

### **Using an Insurance Policy**

This approach is comparable to the sinking fund approach. In this strategy, an endowment policy is used as the asset's life, and at the conclusion of a certain time period, the insurance company will pay the promised sum, which may then be used to buy a new asset. This approach is appropriate for leases if the asset's life is unquestionably known.

### **Mileage Calculation**

'Use method' is another name for this technique. This approach seems fair since the amount of depreciation charged will depend on how the item is used. This method is used when dealing with assets whose usage can be quantified in terms of miles, such as cars.

We have so far spoken about the various depreciation procedures, but not the approaches that are really employed in business. The type of the assets involved and the owner's preference determine the acceptability of depreciation techniques. However, a lax depreciation policy promotes riskier investments while serving to boost capital creation.

### **Capital Gains and Losses Treatment**

All of a company's assets are susceptible to gains from inflation, natural disasters, or court rulings. It has a significant impact on a firm's profitability. In general, these adjustments produce more costs than benefits. Conservative organizations never keep such records. The benefits from asset revaluation are often added to capital reserves.

## **DISCUSSION**

Some businesses include capital gains in their profits for the year in which they occur. Either retained earnings or current gains are used to offset capital losses. The least interested economists are in tracking these windfalls. Future worries are on their minds. According to economists, the majority of these gains or losses can be predicted before they are experienced. Profit projections are crucial in company decision-making. Accountants use past costs rather than current prices to calculate profits. Future income, assets, and net worth are of interest to economists. The economist's gross earnings are much higher than the accountant's net profits.



## Structure for Profit Planning and Control

As is well known, business organizations may have a variety of goals. On what commercial enterprises should be trying to achieve, economists and experts disagree. But one thing is certain: a company's ability to turn a profit determines whether it will survive. Therefore, the company must be a profit organization regardless of the purpose it sets for itself, whether it the maximization of revenues, the maximization of companies, growth, the maximization of managers' utility function, long-term survival, market share, or entry-prevention. Although profit must exist for a corporation to fulfill its mission, it may not be possible to maximize profit in the strictest meaning of the word. Although the businesses may disagree on "how much profit," they all have a profit goal. Some businesses have a "standard profit" as their goal, while others set a "target profit" or a "reasonable profit" as their goal. The most typical goal is "a reasonable profit."

## Revenue Planning

Profit planning is a systematic approach in which the environments encroaching on an organization are analyzed, the resources and internal competencies are recognized, shared goals are set, and plans are produced to attain them. The majority of profit planning is routine and has a set time frame. It's common to pair the phrase "strategy" with "profit planning." Planning for profits and formulating a strategy work together. Profit planning is often a justifiable replacement for the entrepreneurs' demand for fairness and creativity.

### Important Components of Profit Planning

The following components are crucial to profit planning:

1. At all management levels, objectives and outcomes are set and evaluated.
2. The chief executive's position is often crucial to success.
3. The system should take the lead in directing and regulating managerial performance.
4. The methodology should be used everywhere, particularly when defining goals.
5. The system is acknowledged as the primary management strategy inside the company.
6. Planners have received education in economics or related fields.
7. The essential components of managing a profit plan are budgeting, cost control, and contribution assessments.

## Profit Planning Process

In most organizations, there may already be some basic planning in place. It's possible to apply many of the methods used in profit planning. If the following actions are done now, they will need to be added, improved, or increased.

1. Establish Sui goals

The survival, earnings, and rise in net worth of the firm are only a few examples of objectives. Nearly as essential as the kinds of goals pursued is how they are decided upon. Past performance, resource availability, managerial skill, environment changes, competitor activity, and other factors must all be considered. It's not a good idea to impose goals.

2. Develop the Sui Control System

It's possible that budgetary control methods gave rise to profit planning and control. A budgetary cost control system, plan monitoring system, and management information system are all required for good profit planning.

### 3. Setting Job Responsibilities

Job duties are often too vague to serve as the basis for setting performance criteria and evaluating employees' performance. Job breakdowns must be very specific so that the requirement for resources may be determined.

### 4. Conduct a situational analysis

It comprises an examination of all internal and external variables that may affect business operations. Establishing the abilities of the competitors, the economic environment that will affect business performance, and the prospective and current social, technical, and cultural changes that must be addressed should all be included.

### 5. Gap Analysis

In this exercise, the intended business goals are contrasted with the likely outcomes of maintaining the present patterns. Between the two, a gap will almost probably be clear. How to close the deficit is a major challenge in profit planning.

6. Creating Base Data Frequently, the base data required for profit planning is either nonexistent or presented in an incorrect manner for planning. The information includes expenses for the products and operations, production rates, material use, labor productivity, etc.

### 7. Set Up the Right Plans and Strategies

Plan integration should be monitored by management. Strategies are the outcomes of deciding amongst options when using business resources in a manner that is intended to accomplish the corporate goals. They may be quite complicated, thus suitable alternatives must be presented.

1. Planning for Need for Profit
2. Planning for profits is necessary because:
3. to enhance managerial efficiency.
4. to make sure that everyone inside the organization is moving in the correct direction.
5. To make sure that managers are stretched but not overextended, goals should be created.
6. to promote rigorous monetary appraisal of a manager's performance.
7. to manage a business more rigorously.

### Planning Tools for Profit

The following are tools that organizations may use to help in profit planning:

1. Organization Profit Planning: An organization must make sure that its profit plans are responsive to environmental changes and that they do so quickly. The organization has to be set up properly in order to carry out profit planning. A high level of competence is necessary, and the profit planning organization should reflect this.

Participation and involvement are more crucial. Decentralization should be developed whenever it is practicable. Dynamicity within the organization is crucial. The organization must assist in issue solving and goal identification.

2. Information System Management Information systems are crucial for controlling and planning for profits. This system must contribute to the methods for resource allocation and outcome assessment. The integration of numerous primary plans and sub-plans should be made easier as well as the identification of various strategy options.

### 3. Computer

A computer may be used to simulate profit planning. Information of various types may be accessed considerably more quickly than with traditional files. Management should be able to make judgments on profit planning with the use of the computer. Many planning choices may be created more cheaply while still being involved. Modifications to output needs may be made more quickly and cheaply, and application software modifications are made simpler.

### 4. Modeling Use

A model is a simulation of a real-world scenario. The linkages are created and integrated using a model. Models have been used to predicting and decision-making. A model offers the chance to control a circumstance. It is the only feasible method for finding a solution to the issue.

### 5. Planning Methods

At all management levels, profit planning should be a management activity that directs the use of corporate resources. Profit planning is a strategy in and of itself. Profit planning may make use of the majority of management services methods, including forecasting, investment analysis, risk analysis, decision theory, and organizational development [7]–[9].

## Regulation Of Profit

The primary objective of a commercial enterprise is to create and promote products and services that please customers in order to generate profits necessary for the company's existence and expansion. Making a profit is without a doubt a crucial part of a company organization. Profit in and of itself is in no way a flawed goal. Economic expansion in the future is dependent on profit production and reinvested earnings. Profit should be the driving force for growth, diversity, and innovation. As a result, we must exert some control over it. Controlling the internal and external elements that affect profitability is one way to accomplish profit control. To establish this control, some preparation at a certain level is required. To do this, we must identify the key variables that affect the amount of earnings. Actually, the two main variables that affect the amount of profit are sales income and overall manufacturing costs. Profit is often defined as the difference between a good's total cost of production or acquisition and its entire income from sales. The overall cost of production, sales revenue, price per unit of output sold, volume of inputs, and price per unit of input are all connected.

Similar measurement issues arise when taxes and depreciation are included in a profit analysis since they may differ from company to company based on the estimate technique and applicable tax rules. A big company could use a different depreciation accounting system than a smaller one. Returning to the profit accounting method, let's. For that, it is necessary to comprehend and establish the link between the numerous above-mentioned components.  $P = R - C$  if profit is defined as the difference between sales revenue and total cost of production.  $P$  stands for either gross or net profit, depending on what is included in  $C$ . We may write  $= r \cdot K + D$ , where  $K$  is the total cost of production,  $r$  is the industry-appropriate rate of return that accounts for depreciation, interest rates, and risk premiums, and  $D$  stands for direct

costs like labor. The volume of sales now determines the sales income, and the cost per unit of production sold is.

$$R = S.U, \text{ hence this is the connection.}$$

The price per unit of input and the volume of inputs combine to form the overall cost of manufacturing.

### **Profit Policy and Forecasting**

In order for the economic system to work, a project must fulfill two main functions. The project first serves as a signal to producers to alter their pace of production or join or exit a certain sector. Profit, as a reward, motivates businesspeople to organize the elements of production and take risks. High earnings in a given sector often indicate that consumers desire that sector to produce more.

These gains provide businesses the motivation to raise production and to expand into new markets. On the other hand, low earnings are an indication that customers are either demanding less output or that the manufacturing processes are inefficient. While businesses may not aim to maximize profits, they do have a profit policy. Profit planning and profit policy must be coordinated. Profit planning is more technique-focused, while the profit policy is more strategy-focused.

When creating its profit policy, the company must take a variety of short- and long-term issues into account. Making money is the businessman's primary goal. A company's desire for profit shouldn't lead to the exploitation of its customers. While generating earnings, the business must also meet customer demands. The idea of social responsibility has now been imposed onto the businessman. The business community has a responsibility to protect the public's health and well-being. The public should be a concern for the businesspeople. The government's objectives for the welfare of the populace should take precedence, they should. They are supposed to address a variety of social and environmental issues. Making judgments on profit policy involves two problems, namely:

### **Creating Profit Goals**

To compare accomplishments and objectives, profit standards need selecting a certain measure and idea of profit. The aim in deciding on a profit policy is to choose an acceptable profit rate. The company must take into account the profit margins attained by other companies in the same sector, its own historical profit margins, the profit margins required to attract equity capital, and the profit margins required to provide internal funding for replacement and growth.

### **Setting a Profit Target Limit**

In addition to establishing profit criteria, the company should take a number of environmental issues into account to lower its goal profit rate. Limiting the profit target prevents the shareholders from demanding higher dividends, the wage earners from demanding higher wages, the government from imposing high taxes, the customers from demanding lower prices, the suppliers from demanding higher rates, and the reputation of the company from being harmed. Profit planning is used to design profit policies. The firm's profit policy is given a tangible structure via profit planning.

## Profit Prediction

It is customary to construct a profit prediction for each significant product or service category that a company provides. It assumes that it is feasible to predict inflation rates, the firm's market share, and the level of general economic activity the company will experience. Profit forecasting is the estimation of future earnings while taking into account every element influencing the amount of a company's profits. It is crucial to the planning of an operation. Costs and turnover are the main determinants.

### 1. Turnover

The primary determinant is turnover, and the product is one of its components. However, it must be emphasized from once that the product serves as the basis for all planning operations. For a manufacturer, the unique quality of a product that generates a healthy profit is most important. A greater turnover rate suggests improved performance.

### 2. Expenses

The expenses serve as the foundation for many administrative choices. The firm's total profitability is determined by the ratio of expenses to revenue. A company aims to raise revenue and cut expenditures in order to maximize profits.

Costs may be reduced by either generating the maximum amount of output, using the least expensive input combinations, boosting factor productivities, or enhancing organizational effectiveness. Sales costs, product development, distribution, stocks, manufacturing, general administration, depreciation, and reserves are the components of expenses.

## Sales Charges

Sales expenses include commissions paid to salespeople, sales marketing, market analysis, and administration. The key to the economy is the salesperson. Salespeople need to be attracted, instructed, motivated, and managed. Creating a successful compensation plan is especially important for salespeople as the duties of selling allow for the evaluation of outcomes in real terms. The entire compensation given to salespeople is the comparison's level. The most frequent types of compensation include salary, commission, a mix of salary and commission, and bonus.

Sales promotion is intended to support and coordinate advertising and personal selling efforts. Stamp trading, mail reimbursements, trade events, free demonstrations, and sales and displays at retail locations are a few examples of sales marketing strategies. Although pricey, it is also a variable that can be controlled. Mass media are not involved.

Rapid growth in significance has been seen in marketing research. Market identification, market size, market share, market segmentation, and market trends are its primary concerns. It is a methodical investigation of data. Data gathering, analysis, and interpretation are involved. Although research cannot make judgments for marketers, it aids them in doing so. Additionally, it takes a lot of time and money. An activity at the highest level, administration is the role of formulating policies. The administration takes care of the present issues resulting from the management-set policies. It need the assistance of several persons. These employees fill the numerous jobs that were formed as a result of the organizing process.

The primary focus of top management is handling administrative tasks. The marketing manager makes a lot of choices that have a big influence on the company's profitability. A significant portion of the investment in the form of machinery, supplies, and labor is within the production manager's authority. The financial statements are a handy way for the senior

management to stay updated on the organization's overall performance while also ensuring that the long-term objectives of the company are realized. All accounting, personnel, legal, and office expenditures are included in the administration costs [10], [11].

### CONCLUSION

In conclusion, the kind of asset, how quickly its value declines, legal restrictions, and the company's goals for financial reporting and decision-making all factor into the choice of depreciation method. Each depreciation technique has unique qualities, benefits, and restrictions. To guarantee accurate financial reporting and insightful analysis of asset value and profitability over time, businesses must carefully take these elements into account. The effects of depreciation procedures on financial reporting and decision-making are another consideration. Depreciation impacts the income statement's profitability metrics and net income by lowering net income. By lowering the carrying value of assets, it has an impact on the balance sheet as well. Financial ratios, taxes, and investment decision-making may all be impacted by various depreciation strategies.

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## CHAPTER 17

### AN ANALYSIS OF PRODUCT DEVELOPMENT IN ORGANIZATION

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#### ABSTRACT:

Product development is a critical process that organizations undertake to create and introduce new or improved products into the market. This abstract explores the concept of product development in organizations, highlighting its significance in driving innovation, competitive advantage, and business growth. The abstract begins by emphasizing the importance of product development as a strategic initiative for organizations. In today's dynamic and competitive business environment, organizations must continually innovate and introduce new products to meet evolving customer needs, stay ahead of competitors, and seize market opportunities. To achieve the best economic goals of sufficiency, production engineering rationally coordinates knowledge search throughout the whole spectrum of integrated management and processing operations. It outlines a methodical use of tactics for boosting production with guaranteed quality and quantity. The common thread that ties together the fields of agriculture, civil engineering, architecture, mechanical, electrical, and electronics, metallurgy and mining, chemistry and environment, textile, computer and telecommunications, maritime, and other fields is production engineering.

#### KEYWORDS:

Customer Feedback, Design Thinking, Idea Generation, Innovation, Market Research, Minimum Viable Product (MVP).

#### INTRODUCTION

This task falls within the purview of R&D in many organizations. The need of sales, however, argues that marketing's contribution to product creation should have a positive effect on sales revenue and profit. R&D and production engineering are involved in the development of products. In order to preserve and enhance the company's position in terms of product design, quality, and cost as well as create new goods, materials, and manufacturing techniques when it is not economically feasible to do so, R&D indicates a role that will protect and promote profitability. After all cost-cutting and marketing strategies have been implemented, R&D must be employed to assist narrow the gap between the needed or desired profit and that expected [1]–[3].

#### Distribution

The next stage is distribution, which involves bringing the product to market and getting it in front of the customer once it has been designed, prepared, and its pricing has been established. A crucial external resource, distribution is just as significant as internal activities like research, engineering, and manufacturing. It entails two operations: physical distribution and the choice of the distribution channel. Storage, packing, and transportation are involved. The term "warehouse" refers to the location where commodities are kept. It suggests a building for goods. A warehouse is a structure used to store products and has amenities for

carrying out other marketing tasks. It is intended for finished goods. It serves as a distribution hub for the items. Related marketing tasks including grading, standardization, blending, mixing, and packaging are carried out at the warehouse. It makes it easier for the user to sell their products for the most profit feasible.

Protection, efficiency, convenience, and promotional factors are all taken into account while packaging. A consumer product's packaging plays a significant role in its marketing. It guards against damage, microbial contamination, theft, chemical deterioration, and insect assault. In modern packaging, attractiveness is a key factor. Sales are stimulated by a nice packaging. The packaging section of marketing's packing function. Consumers may gain a lot from innovative packaging, and manufacturers can make money. Transportation is the act of physically moving people or things from one location to another. It is the lifeblood of a nation's economy. Physical marketing is how it is characterized. It serves as the primary conduit between other marketing activities and production. It boosts trade and business. It promotes specialization, labor division, industrial output on a big scale, and market size. It broadens the market and improves mobility. The expansion of the market benefits both consumers and producers [4]–[6].

## DISCUSSION

### Inventories

Holding sufficient stockpiles is crucial in today's competitive and dynamic industry to prevent production delays and increase customer satisfaction. Material is an ongoing investment, and modern management is aware that regular inventory reviews may free up money while maintaining output and customer goodwill.

Large inventories will result in high inventory carrying costs and potential losses from price reductions. Similar to inventory shortages, production is halted, leaving workers and equipment idle and harming sales. Therefore, inventory management, also known as inventory planning, is necessary. It would be acceptable to mention that an efficient inventory management system provides the concerned business unit with a number of advantages. Holding inventories enables the business to segregate the processes of primary goods acquisition, manufacturing, and marketing. The forecasting of the number of units needed during the next term is part of inventory planning. It is necessary to have both a sales prediction and an estimate of the safety level of backing in the event of unforeseen sales prospects. In order to draw attention to greater profit goods, the marketing division should also supply price information.

### Production

Production is a measure of an organization's capacity to meet environmental demands. Profits, sales, market share, number of students who graduate, number of customers serviced, and other factors are used as production indicators. It is focused on the market's supply side. A company's primary duty is to prepare and provide a product for sale, perhaps with a profit. More relevant and immediately applicable metrics, such as added value and resource utilization of different sorts, are required. While the wider measurement of profit and return as investment will, to some degree, reflect the efficiency of the production units. A significant percentage of the company's resources will often be in the managers' hands. The decision-making process for the profit strategy may be fundamentally impacted by how they postpone these resources. It requires labor, supplies, manufacture, expenses, and upkeep.



## General Management

Administration is responsible for creating policies. The role of administration is the same in all company types. Typically, administrative staff members are involved in two tasks. First, the routine, which includes processing sales orders, bookkeeping, secretarial work, filing, etc. Second, actions for development that may be employed to positively support other important tasks like computer use, management accounting advancement, management services, different human services, etc. The two events must be organized, but each requires a distinct focus. The administration plan in a manufacturing organization should illustrate the costs and staffing levels of administration compared to other roles and activities.

## Depreciation

Gross working capital and net working capital are the two different ways that working capital is measured. The sum of current assets is known as gross working capital. The difference between the total of current assets and the total of current liabilities is known as net working capital. The working capital of a business is often replenished by revenue from sales and is made accessible to the owners for paying employees, buying raw supplies, and hiring productive workers. But with time, the money that was initially invested ages or loses its usefulness.

When the useful life of these assets expires, it cannot be retrieved. As a result, businesspeople have realized that in order to accurately report company profits, some allowance should be made to recover that portion of the original asset that ultimately loses value due to depreciation. A decrease in an asset's quality or worth is referred to as depreciation. An accountant is concerned in planning, budgeting, profit accounting, and auditing. Opportunity expenses are not taken into consideration by the accountant. The opportunity cost, on the other hand, is a major issue for the economist. The most lucrative alternative use of it that is sacrificed by using it for its current purpose is included in the opportunity cost. Since it is required for operational issues relating to profit-making, this idea is helpful to management [7], [8].

## Reserves

A sum put aside from earnings and other surpluses is referred to as a reserve. It is not intended to cover any current debt, contingency, or asset value decline. There may be two primary sorts of reserves. Revenue Reserves are those that result from regular gains. Through the profit and loss account, they are disburseable. Capital Reserves are defined as reserves created as a result of unexpected profit, such as the sale of fixed assets at a profit after revaluing assets and obligations. They are not often offered for sale or distribution. These are used to deduct capital losses, such as those from the sale of fixed assets, the discount that may be applied to shares or debt obligations, etc.

Profits may be set aside as a Revenue Reserve in order to improve the company's financial standing. 'General Reserve' is the term used to describe this. It is a free reserve that may be used for any objective. It may be used to offset unanticipated losses. Even the owners may share it, or it could be utilized as extra operating capital. Another option is to designate a Revenue Reserve for a certain objective. It goes by the name Specific Reserve. It is often made for things like paying back a long-term loan, replacing an asset, creating a fund for future asset acquisition, etc. A Specific Reserve may only be used for the purpose for which it was established. Distribution of it is not possible.

### **Hidden Reserve**

A reserve is referred to be a Secret Reserve if the Balance Sheet does not reveal its presence. It indicates that the net asset position is stronger than what the balance sheet makes public.

Secret Reserves may be made in a number of ways:

1. Using just asset depreciation,
2. By undervaluing or leaving out certain assets,
3. By setting aside money for bad debts, and
4. by allocating a capital expense to income.

### **Savings Fund**

The reserve is known as a Reserve Fund when it is established using earnings and a matching sum of cost is taken out of the company and invested externally in securities. The kind of company and the goal of the reserve will determine this. Reserve is a misappropriation of earnings, thus. Only during periods of profitability can a reserve be established. A reserve is intended to improve the company's financial standing. It is possible to distribute.

### **Techniques for Predicting Profits**

For-profit planning requires accurate profit predictions. Profit forecasting is estimating future earnings while taking into account variables such as the expansion of the company's size, its pricing strategies, its cost-control strategies, depreciation, and so on. It is also vital to forecast for certain years the growth of sales, the rise in expenses, and subsequently the growth of profits from the perspective of the firm's economic health and stability.

In Joel Dean's opinion, there are three methods for predicting profits:

1. projected spots
2. examination of the environment, and
3. Breakeven evaluation

### **A Spot Projector**

It has to do with forecasting the complete profit and loss for a certain time frame, such five, seven, or 10 years. The prediction of sales, expenses, and prices for this time affects the projection of profit and loss statements for that same period. Profits are surpluses that are the result of forces that determine how customers demand the company's products and how costs behave. As a result, their predictions are subject to large margins of error due to a buildup of mistakes in estimating revenues and costs as well as the interrelation of the income statement.

### **Environmental Assessment**

It connects the company's earnings to significant elements of the relevant period's economic development. The main factors are the overall level of pricing and business activity. These come from outside the business. These uncontrollable forces compel the company to give up its pursuit of profit maximization. In fact, profit-controlling variables often follow predictable patterns. The rate of production, pricing, salaries, material costs, and efficiency are the determining variables of profit. The whole company activity is related by all of these. The environmental study may highlight areas where the business has an advantage or better expertise.

## **Breakeven Evaluation**

The break-even analysis is an effective tool for management planning and profit forecasting. The break-even analysis is the most crucial tool for profit forecasting among the three methodologies. In order to determine the number of sales at which a company's expenses and revenues will be equal, break-even analysis entails analyzing a company's revenues and costs in relation to that volume. The number of sales at which total revenues and total expenses are equal and net income is equal to zero is known as the break-even point. This is often referred to as the no-gain, no-loss point. Break-even analysis's primary goal is to understand the link between costs, pricing, and volume within a company's feasible range rather than just identifying the BEP.

## **Setting A Profit Policy Problems**

A company may have several goals and purposes. In actuality, the majority of company concerns want to achieve a target rate of return on investment.

The goal rate of return is evaluated using the following four criteria:

1. A rate that will attract equity capital
2. Rates attained by rival businesses in the same sector
3. Profit margin, normal or historical
4. a rate high enough to fund internal growth
5. Structure of the Knowledge-Based Economy

In terms of global economic restructuring, the knowledge economy is also seen as having reached its most recent stage. The industrialized world's economies have so far evolved from being mostly agrarian to being primarily industrial, post-industrial/mass production, and knowledge-based. This most recent stage has been characterized by changes in technical breakthroughs and the necessity for innovation due to global competition with new goods and methods coming from the research community. The specialized labor force in the knowledge economy is described as computer literate, skilled in processing data, creating algorithms and simulated models, and innovative in procedures and systems. According to Harvard Business School Professor Michael Porter, the economy is much more dynamic now and competitive advantage, which is based on "making more productive use of inputs, which requires continual innovation," is more important than comparative advantage.

As a result, there will always be a need for technical, STEM vocations like computer scientists, engineers, chemists, biologists, mathematicians, and scientific innovators. In addition, well-located clusters interact locally with connected industries, manufacturers, and other organizations that are associated by talents, technologies, and other common inputs, which Michael Porter claims is important in global economies. Knowledge serves as both a catalyst and a connecting thread in contemporary economies.

## **What Knowledge-Based Economy Means**

The use of knowledge to produce both physical and intangible assets is known as the knowledge economy. A portion of human information is converted into machine knowledge with the use of technology, particularly knowledge technology. Systems that enable decision-making in a variety of sectors may leverage this information to provide economic value. Without technology, a knowledge economy is also feasible. The phrase, which Peter Drucker popularized as the title of his book *The Age of Discontinuity* and credited to economist Fritz Machlup, has its roots in Frederick Winslow Taylor's concept of "scientific management."

The global economy is transitioning to a "knowledge economy" as an extension of a "information society" in the Information Age driven by innovation, in addition to the agriculturally and labor-intensive economies. In a linked, globalized economy where intellectual resources like trade secrets and skill are equally important as other economic resources, the rules and practices that defined success in the industrial economy must be rewritten. In other words, a system of consumption and production centered on intellectual capital is the knowledge economy. In industrialized nations, the knowledge economy often accounts for a significant portion of total economic activity. Intangible assets, such as the worth of a company's employees' expertise, may make up a substantial portion of a company's value in a knowledge economy, yet commonly accepted accounting standards prohibit businesses from listing these assets on balance sheets.

1. Knowledge economy concepts
2. Knowledge and education may be seen as either of the following two, which is a fundamental tenet of the knowledge economy:
3. An intellectual product or service that is new and instructional may be exported for a high value return.

A useful asset is what is described as: Production and services based on knowledge-intensive activities that hasten the progress of science and technology and hasten obsolescence. A knowledge economy's defining feature is its increased emphasis on intellectual talents as opposed to physical inputs or natural resources. The *Effective Executive* by Peter Drucker, published in 1966, laid the fundamental groundwork for the information economy. Drucker outlined the distinction between knowledge workers and manual workers in this book. He claims that a manual worker is someone who uses their hands to create products or provide services. A knowledge worker, in contrast, uses their heads rather than their hands to create ideas, knowledge, and information. The main issue in formalizing and modeling the knowledge economy is how knowledge, which is a very relative notion, is defined. For instance, it is improper to equate the information society with the knowledge society. Knowledge is not always the same as information. Their usage is also "economy-dependent" and relies on individual and group choices.

### **Moving Factors**

Various interconnected driving factors, according to commentators, are altering the rules of business and affecting national competitiveness. These motivational factors are: Markets and goods are increasingly international due to globalization.

IT, which is connected to the following three:

1. Intensity of information/knowledge effective manufacturing depends on knowledge and expertise; many industrial employees utilize their minds rather than their hands.
2. New media - new media boosts information creation and dissemination, which leads to a rise in collective intelligence. Networked data bases that encourage online interaction between consumers and producers make it considerably simpler to access existing information.
3. The "global village" is becoming closer because to advancements in computer networking and connectivity, including the Internet.
4. As a consequence, products and services may be created, acquired, offered for sale, and in many instances even supplied over electronic networks.
5. Any new technology's uses rely on how well it satisfies market demand. It may become dormant or achieve commercial success [9], [10].

## CONCLUSION

In conclusion, Product development is an essential activity for businesses looking to spur innovation, gain a competitive edge, and promote expansion. Organizations may improve their capacity to create and launch successful products by adopting a customer-centric strategy, using efficient project management approaches, encouraging cross-functional cooperation, and controlling risks. Increased market share, revenue growth, and long-term organizational success are all results of successful product development activities. Organizations must also manage the risks and uncertainties connected to product development. The process of developing a product is always fraught with uncertainty about advancing technology, changing market conditions, and consumer acceptability. To reduce risks and improve the possibility of successful product launches, organizations should use efficient risk management techniques, carry out exhaustive feasibility analyses, and embrace iterative testing and validation procedures.

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## CHAPTER 18

### EXPLORING THE FEATURES OF KNOWLEDGE ECONOMY

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#### ABSTRACT:

The knowledge economy is characterized by the increased reliance on knowledge, information, and intellectual capital as primary drivers of economic growth and development. This abstract explores the key features of the knowledge economy, highlighting its transformative impact on industries, employment patterns, and the overall structure of economies. The abstract begins by emphasizing the significance of knowledge as a critical resource in the knowledge economy. Knowledge encompasses both explicit knowledge, which can be codified and transferred through various mediums, and tacit knowledge, which resides in the minds of individuals and is difficult to articulate. The ability to create, acquire, and effectively utilize knowledge is a fundamental asset for organizations and nations in the knowledge economy. The knowledge economy may take many different forms, but projections suggest that it will grow dramatically and establish a pattern in which even ideas will be recognized and treated as a commodity. There is a clear path ahead for this idea, even if the specifics are still hypothetical at this time, given the nature of "knowledge" itself and the fact that it drives this new kind of economy.

#### KEYWORDS:

Digitalization, Globalization, Human Capital, Innovation, Intellectual Property, Knowledge Sharing.

#### INTRODUCTION

Diminished, in certain economic activities: With the right technology and techniques, it is possible to build virtual organizations and markets that have the advantages of speed, agility, 24/7 operation, and worldwide reach. or, on the other hand, strengthened in certain other economic sectors by the development of commercial hubs around knowledge-based institutions like research institutions and universities. Clusters, however, were present prior to the knowledge economy [1], [2]. One may argue that the knowledge economy is fundamentally different from the old economy in the following ways:

1. The economy is based on plenty rather than scarcity. Information and expertise, in contrast to most resources, may be shared and even increase via use.
2. Where you are has one of two effects:
3. It is challenging to apply laws, restrictions, taxes, and measurement techniques just on a national level. Where demand is greatest and obstacles are smallest, knowledge and information "leak" to those areas.
4. Items or services with higher levels of embedded knowledge or knowledge intensity might be more expensive than equivalent items.

5. Value and pricing are very context-dependent. As a result, different individuals or even the same person at various times might place a very different value on the same information or expertise.

6. Knowledge has a greater intrinsic value when it is locked within systems or processes rather than when it can "walk out the door" in people's thoughts.

7. Human capital abilities are an important part of value in a firm that relies on knowledge, yet few businesses disclose competence levels in annual reports. In contrast, downsizing is often seen as a successful "cost-cutting" strategy.

8. Communication is increasingly seen as being essential to the transmission of information. Knowledge economies consequently place a premium on social structures, cultural background, and other elements impacting social connections.

Policymakers, managers, and knowledge workers must all adopt novel strategies in order to address these features.

### **Framework of Knowledge Economy**

It is evident that it is necessary to reconsider nations' overall development strategy in light of the information revolution and the technical and economic changes it entails. These plans should be based on four pillars: the nation's education and training foundation, its information and telecommunications infrastructure, the innovation system, and the general business and governance framework. At their center should be policies connected to knowledge and innovation [3]–[5].

### **Knowledge Economy Framework**

#### **Rationales**

Knowledge is the primary source of economic development in a knowledge-based economy. It is an economy where information is obtained, produced, shared, and utilized in order to further economic growth. A dense and contemporary information infrastructure, a successful innovation system, and an institutional regime that provides incentives for the effective creation, dissemination, and use of existing knowledge would seem to be necessary for a knowledge-based development process.

In order to effectively develop and apply information, the labor force should be made up of educated, competent people who can continually improve and adapt their abilities. Primary and secondary education, vocational training, higher education, and lifelong learning are all included in the education and training systems. Depending on a country's degree of development, the weight assigned to the various categories will vary slightly. For instance, because fundamental reading and numeracy are essential building blocks for more advanced abilities, basic education will get greater focus at low levels of development. Similar to how the contemporary environment of the knowledge revolution, which necessitates ongoing adaptation of information and know-how, has increased the necessity of lifelong learning. Additionally, it becomes more crucial as the population ages. While this is happening, globalization is bridging the gap between the demand for basic skills and the supply of advanced skills, compelling nations with low levels of development to catch up to advanced economies in order to stay competitive.

The efficient transmission, diffusion, and processing of information and knowledge will be made possible through a contemporary and appropriate information infrastructure. technologies of information and communication, such as the telephone,As with utilities,

roads, and railroads in the industrial period, television and radio networks constitute the foundation of today's global, information-based industries. By providing easy access to information, they may significantly lower transaction costs. The regulation of telecommunications as well as the investments required to develop and use ICTs across the economy and society via different "e-applications" such as e-government, e-business, and e-learning are covered by ICT-related regulations. Low-income nations should prioritize building up their ICT infrastructure before pushing cutting-edge solutions.

Companies, research facilities, academic institutions, consulting companies, and other organizations that keep up with new information and technology, draw on the expanding body of global knowledge, and integrate and adapt it to local requirements make up an efficient innovation system. Public support for innovation, science, and technology extends to a broad variety of institutional and infrastructural tasks, from the spread of fundamental technologies to cutting-edge research endeavors. The former should be given a lot of consideration in emerging nations. For the majority of emerging nations, a large portion of the knowledge and technology that fosters innovation will come from outside the nation and be imported via foreign direct investment, the importation of machinery and other items, and licensing agreements. While imports must not be permitted to conceal or marginalize the nation's distinctive indigenous knowledge assets, such as traditional knowledge, imports are necessary when the economy is less developed. In emerging nations, there should be a lot of focus on the diffusion of fundamental technology [6]–[8].

## DISCUSSION

The institutional structure of the nation and the set of economic incentives it fosters should enable effective resource mobilization and allocation, encourage entrepreneurship, and promote the development, distribution, and efficient use of knowledge. The idea encompasses a wide range of topics and policy areas, including trade laws, financial and banking regulations, labor markets, and governance. It also includes components of the macroeconomic framework. The latter covers corruption levels, the quality of the bureaucracy as shown by measurements of government efficacy, and the rule of law and how it is applied. The single biggest obstacle to economic and social progress in general, and knowledge-based development in particular, is mediocre governance that results in a bad business environment.

### **Itineraries between the Pillars and the Circles of Virtuous Development**

As we've seen, knowledge-driven development depends on the effectiveness of each of the four KE framework pillars. However, more is required: investments in the four pillars need to be balanced and coordinated so that they work together to provide advantages that go beyond what would be possible from their separate operation. The World Bank's Knowledge Economy framework aims to build successful knowledge economies that can compete in the global economy by assessing the quality, adaptability, and application of knowledge in an economy.

The Knowledge Economy framework focuses on four pillars that it contends are necessary to enable a successful knowledge economy. A knowledge economy is one that harnesses knowledge to produce and maintain long-term economic development. The first pillar of the framework is an economic and institutional framework that supports the production, dissemination, and use of knowledge. A regime that offers incentives to promote the effective use and distribution of both new and old information would support policy change. The economic climate must support market transactions and have sound policies, such as being



open to free trade and foreign direct investment. To promote business and knowledge investment, the government should defend property rights.

A knowledgeable and competent populace that effectively produces, distributes, and applies knowledge is the second pillar. To advance technology, education is essential, particularly in the sciences and engineering. The technical sophistication of a more educated society tends to increase demand for information. A dynamic information infrastructure that makes it easier to communicate, disseminate, and process information and technology is the third pillar. The enhanced global exchange of information and expertise lowers the cost of transactions, improving communication, productivity, and production.

The last pillar is an effective innovation system made up of businesses, research institutions, academic institutions, think tanks, consultancies, and other organizations that applies and customizes global knowledge to regional need to produce new technologies. Technical knowledge creation increases productivity. Countries may build a knowledge economy and maintain long-term economic development by putting these pillars in place.

### **South Korea after 1997 serves as an illustration of the framework in use**

The South Korean government's 1997 post-financial crisis development plan may be included into the Knowledge Economy framework. A plan to create a knowledge economy was developed in collaboration with the World Bank, the Organization for Economic Cooperation and Development, and many think tanks. The organizations discovered that South Korea needed to increase its productivity since it was not seeing the benefits from its significant capital and investment inputs that it had anticipated. They concluded that modernizing Korea's institutional framework, which included the role performed by the government, would increase productivity. Since universities didn't do much research, an environment that was more conducive to innovation was required. Greater productivity would result from the specialization and information exchange among universities, local government, businesses, and research organizations. Information and communication technology was developing more quickly than anticipated. Therefore, there was no need to significantly upgrade the information infrastructure.

However, it was found that education constituted a significant barrier to a knowledge economy. It was seen ineffective and improper because the nation only allocated 13 percent of its GDP on education. The Ministry of Education's authority over education was deregulated, outcome-oriented governance was implemented, public and private resources were reallocated, learning systems were integrated, and connections to the global education system were strengthened. Korea was able to transition to a knowledge economy by enacting sound economic policies, adopting a high-growth development strategy, building social capital, and upgrading the labor force via improved education.

### **Policy recommendations does the framework offer**

According to the Knowledge Economy concept, economies need to have four pillars in place if they are to be successful knowledge economies where information is generated, shared, and utilised effectively. In terms of proper policies, institutions, investments, and coordination, policy guidance would concentrate emphasis on which of the pillars is most in need. A tool called the Knowledge Assessment Methodology, created by the World Bank, may be used to determine what a nation requires in order to develop a knowledge economy.

### **'Knowledge Economy' Breakdown**

Less developed nations often have economies based on agriculture and manufacturing, while emerging nations typically have economies based on manufacturing and services, and developed nations typically have economies centered on services. Each of these three key types of economic activity makes up the economies of the majority of nations, but in varying amounts depending on their relative wealth. Activities that fall under the knowledge economy umbrella include technical assistance, consultancy, and research. The global economy shifted toward the knowledge economy during the Information Age. In order to create an interconnected and globalized economy where sources of knowledge like human expertise and trade secrets are crucial players in economic growth and are considered as important as other economic resources, the transition to the Information Age includes the best practices taken from the service-intensive, manufacture-intensive, and labor-intensive types of economies as well as additional knowledge-based factors.

As innovative and intellectual services and products can be sold and exported and can yield profits for the individual, the business, and the economy, the knowledge economy addresses how education and knowledge, commonly referred to as "human capital," can serve as a productive asset or a business product. Instead of relying on physical labor or natural resources, this sector of the economy heavily depends on intellectual capacity. The creation of information-based services and goods accelerates quickly in the technological and scientific disciplines of the knowledge economy, paving the way for increased innovation across the board.

### **Knowledge employees versus manual laborers**

The distinction between a knowledge worker and a physical worker was covered in Peter Drucker's 1966 book "The Effective Executive," which introduced the idea of the knowledge economy. The manual worker, in Drucker's view, produces and offers services and other things using his hands and other physical talents. A knowledge worker, on the other hand, employs his or her intellect to create knowledge, information, and ideas that may be useful for the organization's overall system or that may have been the main inspiration for starting the business in the first place [8], [9].

### **Technology**

Technology must be able to spread a unified process by which a working technique may converge scientific and technological answers, as well as organizational solutions, according to the World Bank Institute's definition of an innovative system. By definition, such innovation would help realize the World Bank Institute's goal as expressed in their Millennium Development Goals.

### **Problems with Developing Economies**

In order for poor nations to effectively integrate ICTs and sustainable development and participate in the knowledge economy, the United Nations Commission on Science and Technology for Development study found that collective and strategic action is required. The establishment of effective national ICT policies that support the new regulatory framework, encourage the production of particular knowledge via the use of ICTs, and take advantage of their organizational changes in order to be in accordance with the Millennium establishment Goals is the recommended collective intervention. The research also advises developing nations to create the necessary ICT strategies, laws, and regulations while taking into consideration the need to be responsive to convergence-related concerns.

### Analysis of K-Profit

Some could argue that the knowledge economy is so obviously self-evident that a more specific description is superfluous, and that because knowledge is such a hard notion to define, any measurements are always going to be inadequate or even deceptive. The knowledge economy will, however, remain an ill-defined idea in the absence of quantifiable definitions. The knowledge economy's effects on institutional structures, employment, and society would continue to be more of a question of assertion and intuition than of measurable proof based on concrete evidence. Basic inquiries such as how many people work in the knowledge economy, whether it is expanding and at what pace, and how the UK compares with other OECD countries would not be able to be addressed. And it would be difficult, if not impossible, to provide policymakers in the private and public sectors with a set of useful evidence-based suggestions. It will be difficult to come up with better definitions of the knowledge economy, nevertheless.

We must identify distinguishing characteristics that we would not anticipate to find—or at least not in such abundance in the rest of the economy if the term knowledge economy is to be effective. The fundamental role of new information and technology in enabling knowledge and information to be utilized in ways that support the knowledge economy notion is an obvious distinguishing characteristic. A major underlying factor in the development of networked systems with the ability to store, analyze, and manage knowledge and information flows has been the quick decrease in cost and enormous growth in processing power. Knowledge workers may be defined more specifically in terms of their occupations, which, in theory, tests against hard data. Innovation-related definitions of the share of innovative firms may be used to define the knowledge economy more precisely. The idea of and definition of the knowledge economy often refer to knowledge-intensive sectors with a large proportion of highly educated workers and/or ICT production or consumption. Initially focusing on manufacturing, industrial definitions often employed R&D intensity as a marker to differentiate between high-, medium-, and low-tech sectors. The term has gradually been broadened to include service businesses that make little R&D investments but make heavy use of ICT technology and/or have highly qualified workers who take advantage of technical advancements. Because it is cross-sectoral, defining the knowledge economy in terms of knowledge workers avoids the drawbacks of industrial definitions. The drawback of this is that there is no clear-cut definition of what a knowledge worker is.

There are three ways we can define knowledge workers: those who work in the top three standard occupational classifications; those with high levels of skill, as evidenced by degrees or equivalent credentials; and those who use computers to perform tasks that call for sophisticated reasoning and complex communication skills. The shift occurring in advanced industrial countries from an economy based on physical inputs and natural resources to one based on intellectual assets has been extensively studied by social scientists. Our analysis of patent data demonstrates this transformation and demonstrates how the increase of knowledge is related to the emergence of new sectors, such as information and computer technology and biotechnology. However, the literature on the knowledge economy pays less attention to information diffusion and effect and places a greater emphasis on knowledge generation. This omission is regrettable since a central finding of the productivity debate is that large productivity increases can only be made when new organizational practices are combined with complementing technological advancements.

Information technology that enables the widespread dissemination of information cannot be effectively connected to a hierarchical control structure. Since modern information technologies provide unprecedented opportunities for both choice and control, it is thus

incorrect to assume that there is a natural connection between knowledge creation and flexible labor. The examination of the skills mismatch thesis can also benefit from a focus on information distribution. Although it is obvious that older, less trained, and minority employees have bore the brunt of the shift to an economy focused on intellectual talents, the claim that certain groups of workers are severely disadvantaged by technological change is oversimplified. However, detailed examinations of how some less skilled people gained the technical abilities required to operate in new environments are uncommon and would be useful. The argument over talents also highlights the relative dearth of accepted measurements in this field of study. Patents have established themselves as a suitable signal of knowledge stocks, but we lack any similar indicators of abilities, and researchers much too often depend on professional designations or classifications [10].

## CONCLUSION

In conclusion, the hallmarks of the knowledge economy center on the importance of information, innovation, and knowledge in advancing economic progress. Investments in education, R&D, digital infrastructure, and guidelines that support innovation and knowledge production are necessary to adopt the elements of the knowledge economy. In the face of quick technology breakthroughs and global difficulties, a successful shift to a knowledge-based economy provides potential for greater productivity, competitiveness, and wealth. The value of protecting information and intellectual property rights in the knowledge economy. Intellectual property, such as patents, copyrights, and trademarks, encourages innovation and knowledge production by offering innovators and inventors legal protection as well as financial incentives. Strong intellectual property regimes protect the rights and incentives of knowledge creators while promoting knowledge exchange.

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## CHAPTER 19

### EXPLORING THE GROWTH OF KNOWLEDGE ECONOMY

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#### ABSTRACT:

The growth of the knowledge economy has been a transformative force in the global economy, reshaping industries, employment patterns, and economic structures. This abstract explores the factors driving the growth of the knowledge economy and its implications for individuals, organizations, and societies. The abstract begins by highlighting the fundamental role of knowledge and information in driving economic growth and development. In the knowledge economy, knowledge is viewed as a key resource and source of competitive advantage. The abstract discusses the shift from traditional, resource-based economies to knowledge-based economies, where the ability to create, acquire, and utilize knowledge effectively becomes crucial. For librarians and libraries, the new Knowledge Economy represents a time of fast transformation and a paradigm shift. With the rapid development of digital computer and telecommunication technologies, as well as the networking power of the Internet, intranets, and other extranets, it can be seen as either the start of a new "golden age" for the profession or as the time when librarians and information professionals became marginalized and possibly rendered irrelevant.

#### KEYWORDS:

Digital Transformation, Education and Skills Development, Entrepreneurship, Globalization, Innovation, Intellectual Property Rights.

#### INTRODUCTION

The knowledge economy and the expansion of knowledge management as an organizational competence provide new possibilities for librarians and information specialists to broaden their current responsibilities and use their polished abilities to achieve organizational goals. Through collaboration and partnership, it is possible to more effectively achieve the key information management roles that both internal and external information play in fostering organizational excellence, customer benefit, and competitive advantage. These roles also contribute to information competence and the ability to contextualize information [1]. Information specialists like librarians are in a position to develop into knowledge professionals that contribute value. But this will need a fundamental shift in how people see their positions and responsibilities in knowledge-based businesses. It will be necessary for students to picture a world where change happens quickly, communications happen instantly, and companies move from being ones with well-defined borders to networks of commercial ties. The difficulty the profession is experiencing is this.

Because of a greater understanding of the importance that information and technology play in economic development, the phrase "knowledge-based economy" has emerged. Knowledge has always been essential to economic growth in its human and technological manifestations. However, its relative relevance has just recently come to light, despite the fact that

importance has been increasing. The creation, sharing, and use of knowledge today rely more than ever on the OECD economies. High-tech sectors like computers, electronics, and aerospace are seeing the biggest growth in output and employment.

## **Economy Knowledge Development Steps**

### **Finding out from Others**

Even if the pertinent policy actions were part of broader development strategies and an explicit knowledge economy approach was only recently identified and named, it is useful to look at countries that have succeeded in setting their growth processes on a knowledge and innovation-based track to understand how to build knowledge-based economies. Numerous situations worldwide need special consideration. Many people believe Finland to be the most competitive nation in the world. Australia and Canada both have robust economies. Beginning from a low-income basis to take the lead in the global economy, the Republic of Korea and Ireland launched clear KE policies in recent decades.

Economies with middle incomes A few decades ago, countries like Mauritius and Botswana in Africa, Malaysia in East Asia, Tunisia in the Middle East, and Chile and Costa Rica in Latin America implemented multi-sector reforms to draw in foreign investment and foster an atmosphere that was KE-oriented. economy in transition. Over the last several decades, the Baltic nations, particularly Estonia, have implemented KE changes that are now beginning to bear fruit. economies with low incomes. Vietnam has quickly prospered by using globalization. Mauritania, Mozambique, Uganda, and Rwanda are African nations that are actively implementing KE reforms and have had some degree of economic success. India and China. The examples of China and India are the last ones. These are the two up-and-coming titans of our day, and the judicious application of the KE strategy has contributed to their ascent.

The problems of what to do and how to establish a knowledge economy are answered by the experiences of these nations. Ireland, Finland, and the Republic of Korea are used as examples. Despite the fact that their economies are already quite developed, they nevertheless provide helpful and universally relevant insights. The government implemented corrective financial and economic policies and simultaneously launched a national, multi-sector KE plan, which was publicized via an awareness campaign in the country's leading business daily, in order to end the crisis and put the economy back on firm ground. The strategy, which was coordinated by the Ministry of Finance, included changes to the educational system at all levels, rewards for encouraging R&D, the support of start-up companies, and the creation of a vibrant information society. The construction of a sophisticated information infrastructure backed by a highly active information technology sector was the most successful aspect of the plan's final phase [2]–[4].

These instances served as inspiration for the following guidelines for using KE techniques, which include:

1. the mental shift required for KE tactics
2. the broad perspectives that should guide KE efforts
3. the adjusting of policy actions to levels of development
4. the administration of reform
5. taking advantage of entrance locations like highways and cities
6. dealing with numerous forms of contextual specifics.

## DISCUSSION

### Adopting Conducive Attitudes

**A New Mindset for Government Action** The KE development urges government action that goes beyond the usual initiatives for market liberalization and targeted, modernizing reforms. The modernization and liberalization viewpoints are enhanced by the new strategy rather than replaced by it.

**Key Attitudes:** Determination, vision, openness, and pragmatism are the broad attitudes that should drive knowledge-based tactics. The successful initiatives of other nations are also supported by the same attitudes: Determination A KE-based strategy requires determination. Adherence to the so-called Washington Consensus on policy change, which advocates for privatization, trade liberalization, deregulation, and macroeconomic stability, is insufficient in and of itself. In order to promote and use knowledge across the economy, policies must take into account all intangible assets and sources of development, including education, research, information, communication, and entrepreneurship. It takes determination to think big. Knowledge-based initiatives that are effective need for concerted effort across industries and disciplines [5]–[7].

Concentrating efforts on a single policy plank is acting narrowly. Determination refers to the strategies and tactics used to carry out the fundamental policy measures required in a nation's stage of development. Although moving from one stage of growth to another is challenging, it is still feasible to use contemporary methods to accomplish the goals that are relevant to that stage. For instance, even in the most impoverished nations, education goals may be met via the employment of cutting-edge communication systems and distant learning. Similar to this, using simple telephone and Internet services in nations that are farther along in their development may drastically and quickly change the business environment for businesses, including farmers and fishers. Government initiatives may be used to successfully encourage the use of these methods. Clear-cut industrial policies designed to promote the growth of a robust manufacturing sector show determination.

These actions enhance the climate in which enterprises develop generally. **Vision:** Those nations that have advanced have a vision that, in some way or another, identifies them and guides them in the direction of a goal. A clear vision provides expression to a person's resolve. A vision often takes the long view, with objectives occasionally coming to fulfillment 20 years in the future. Small groups of individuals, local or regional leaders, and perhaps even the head of state, are the sources of vision. Visionaries must explore for resources across a range of societal domains, including business and education. This is required to ground the idea in reality and win the public's support. It is essential to immediately translate a concept into actionable initiatives, no matter how little. Thus, the vision gains credibility and boosts confidence and investment throughout the country. **Openness.** The requirement for openness to the outside world is another lesson to be learned from the Korean, Irish, and Finnish experiences as well as from other successful transitions to a KE strategy. The chance to draw FDI and use it effectively is one of the many possibilities that globalization presents. Each nation must set up tools and avenues to methodically track down foreign technology and information that could be pertinent to its endeavors and objectives.

A thriving knowledge economy depends on exposure to policy, which may be attained via international exchange, study abroad trips, and pilot projects based on successful policy initiatives from other countries. Realistic pragmatism, determination, vision, and openness are essential. In order to moderate their aspirations and aims and to tailor their efforts to their nation's capabilities and resources, policymakers must properly comprehend the requirements



and limitations of their economy. In order to put the nation on a successful KE track, they must make the greatest use of their competitive edge, whether it be in agriculture, tourism, or natural resources. They must also focus their efforts initially on the areas with the biggest leverage. Building a knowledge economy is a gradual process, as shown by the experiences of the Republic of Korea, Finland, and Ireland. At each stage of development, efforts, investments, and policy actions are adjusted in accordance with an understanding of the nation's unique needs, capabilities, and comparative advantages.

### **Policy Actions That Take Development Levels into Account**

The three case studies of Finland, Ireland, and the Republic of Korea provide policy recommendations suitable for varied phases of development. The World Bank's phases of development and corresponding degrees of advancement are used to gauge progress toward a knowledge economy. Low-income nations are in the early stages of KE and must lay the groundwork; lower-middle-income nations are in the upgrading stages of KE and must increase their KE assets before launching a broad KE strategy for growth; upper-middle-income nations are in the emerging stages of KE; and high-income nations are prepared to launch a full-fledged KE strategy.

#### **Low Income Nations**

Early-stage KE low-income nations must have strong foundations in governance and the business environment. Governments may decide to create special economic zones that have minimal transaction costs and bureaucratic red tape. This draws in foreign investment, which brings new management and technology and generates employment. The decrease of illiteracy via basic education is a significant yet crucial endeavor, and the development of core competence in cutting-edge technology, engineering, and science via the strengthening of a select group of technical and tertiary institutions. Low-income nations should first develop a rudimentary telephone infrastructure that utilizes mobile technologies before establishing fixed-line connections for the Internet. They should also effectively use TV and radio networks for the promotion of education and culture, particularly to reach rural regions. To serve the population's basic needs and develop the foundational infrastructure for quality control, metrology, and other services necessary to support technology diffusion and adaptation across the country, particularly in rural areas, they should make the best use of local, national, and international knowledge. If it is feasible to capitalize on a literate labor pool and entrepreneurial people with strong connections to global markets, investments may be focused toward specific IT niches.

#### **Countries with Lower Middle Incomes**

Lower-middle-income nations that are transitioning to knowledge economies should concentrate on the financial and labor markets and facilitate the reallocation of both financial and human resources to a developing formal private sector in order to further enhance their business environments. Administrative and governmental barriers to growth should be eliminated. The economy should create additional SEZs, and via targeted policies and incentives, more FDI should be drawn in. complete access to basic education and better standards of quality are required, as well as access to secondary and vocational education, in order to attain complete literacy and strengthen the higher education base by joining networks of advanced institutions throughout the globe. To enhance governance, logistics, commercial services, and the provision of social services, internet access should be increased. Increased global development awareness is necessary for innovation in order to find and import relevant technology. Extension programs aimed at boosting industry and agricultural production have to be expanded. Private R&D may be promoted, but the current public R&D

infrastructure has to be improved. Both must be backed up by initiatives to improve management and technical proficiency. Selective university-industry collaboration should be promoted with the right resources and incentives [8], [9].

### **Countries with Upper-Middle Incomes**

Upper middle-income nations should improve their business climate as they get closer to a strong knowledge economy. By supporting the mobilization of development and venture capital, they must pay special attention to the financial and stock markets. An educated workforce and better administration should increase the effectiveness of tax collection and spending by the government. The availability of higher education should be expanded, and the quality of instruction should rise. It is important to create systems for lifelong learning that include a variety of providers and paths. In order to further cut transaction costs and boost economic efficiency, Internet-based technologies should be used and used more often. With the aim of boosting R&D investment to 2% of GDP, domestic inventive capability should be supported via suitable incentives, especially for expanding private sector R&D. Expanding the protection of intellectual property rights is also necessary, however it is less crucial for low-income nations.

### **Advanced Nations**

A quickly adaptable and flexible environment is necessary for advanced economies to create and maintain a real knowledge economy. Incentives should be tailored for a service-based economy and should be focused on intangibles like R&D, education, software, and marketing. Increasing access to and the quality of higher education should be a top goal in the field of education. In exchange, this joins a wider, seamless system of lifelong learning that includes a sizable number of tertiary students, including adults. With the widespread growth of specialized applications, including specialized software and multimedia, ICT becomes the fundamental infrastructure of the economy. Growth now relies heavily on innovation. Government assistance promotes international strategic collaborations for R&D, manufacturing, and marketing.

### **Controlling the Reform Process**

#### **Timeline and Reforms' Effects**

Although persistent activity across the four pillars is necessary for the Knowledge Economy reforms to have their full impact, they may nevertheless have a big influence in a short period of time. In sectors like company growth and the attraction of FDI, the effects of policies that enhance the business climate may be felt in one or two years—and sometimes in as little as a few months. Similar to this, ICT-related expenditures or activities may have noticeable results in as little as a few years—just look at how quickly mobile phones have taken off. While education policy changes won't fully take effect for one to two decades at most, innovation policy takes a minimum of five years to significantly increase technological diffusion, job creation, company development, and international competitiveness. However, initiatives to retrain employees—and more broadly, to create spaces for lifelong learning—should increase job opportunities for a large portion of the population much more quickly. Processes for KE development is not linear. Unexpected occurrences, such as a crisis that necessitates quick action or a restructure of a company or industry that results in unexpectedly rapid industrial development, may result in a significant shift in course.

### **Dynamics of Knowledge: Incremental Change**

Building faith that a new and better period in national development is near requires resolve and vision. Even in nations that have experienced a severe crisis, the requirements for a significant reform in the institutional framework are often not met. Policymakers may encounter both market failure and government failure when efficient market processes and government organizations are still in their infancy. Knowledge strategies should be based on pragmatism, which is the adoption and adaptation of what works, under such circumstances. It is not necessary to completely overhaul the public sector in order to build institutional solutions for knowledge-based growth. Policies that build institutional shortcuts may be useful when time and resources are scarce. The realities of a nation and the difficulties of transformation may be functionally matched by imperfect and peculiar institutions.

For instance, the astounding success of town and village companies in China has baffled many observers. Local governments owned and managed these businesses. Their competitive advantage over private businesses is not explained by standard theory. It seems that the current public framework takes into account the unique characteristics of the Chinese economy and society. China is not the only nation that use gradual change. India's economy looked to have grown as a result of small changes, which allowed the country to develop faster than its historical average of 3%. Rajiv Gandhi's administration liberalized industrial restrictions, promoted the importation of capital goods, and streamlined the tax code throughout the 1980s. Even though the changes were small, they managed to tilt the scales by promoting rather than inhibiting entrepreneurial endeavors. Both a key entry point into the world's information flows and a key player in turning knowledge into riches are entrepreneurship. These developing titans' recent development spurt may be attributed to their approach of amassing information that can later be converted into money. The reforms in China and India are examples of bottom-up, gradual improvements that provide a favorable balance of risks and rewards by encouraging first moves at many, varied entrance points. The likelihood of starting the cycle of institutional change and knowledge-based growth is increased by this gradual process.

### **Initiatives from the Bottom-Up and the Top-Down for Sustaining Knowledge Dynamics**

Since fundamental changes must be implemented by the majority of emerging nations if they are to advance. It may be difficult to build agreement for reform agendas as it is to get rid of institutional barriers to change. Finland and the Republic of Korea are two countries that have successfully implemented knowledge-based economies as a result of deliberate efforts to develop agreement. A national economic crisis forced the affected parties in both situations to create and carry out a new agenda via an explicit or tacit national agreement on objectives and procedures for progress. The time frame for outcomes from the enacted policies was extended by decision-makers and business executives. In both situations, preexisting systems anticipated change and the need to implement or modify necessary improvements. These examples demonstrate the need for a mix of top-down and bottom-up strategies in order to get over institutional rigidities and bottlenecks.

### **Arrangement Reforms**

To enable the coordinated efforts that are essential to the success of reforms, transitions are necessary. One might suggest a three-stage plan that is motivated by effective procedures: Current agenda. build awareness, build logical metrics to track progress toward a knowledge economy, and assess current pilot projects via a top-down approach. Agendas for the near and medium term. Establish a national monitoring system connected to budgetary priorities, establish a common vision driven by the business sector, combine micro level

"rapid results" programs and/or pilot projects in visible efforts across regions and sectors. Budgetary priorities are likely to shift significantly as a consequence of the priorities of a national monitoring system. Longer-term objectives. Establish a comprehensive reform plan that will major entrenched interests be transformed or eliminated, and provide a new incentive system for main actors.

### **Driving Sectors and Cities: Exploiting Entry Points**

After a sufficient amount of talent, resources, and entrepreneurship have been accumulated in a certain area or industry, innovation and development often occur there. A suitable infrastructure must be in place, as well as an acceptable, if not encouraging, atmosphere for entrepreneurial endeavors. Competitive industries or clusters form when these factors come together. The Irish Shannon-Limerick region and Finnish cities are two instances of this phenomenon in developed nations. Additionally, there are several instances in low-income nations. Government's job is to encourage innovation and development by bringing people and resources together who can make a difference. China's pragmatic approach resulted in the deliberate creation of development hubs known as export processing zones and technology parks inside SEZs that provide financial and regulatory incentives, along with training facilities, to local and international businesses eager to migrate. An effective clustering process starts with well-equipped government labs or state schools run by inspirational leaders and supported by a vibrant private sector.

An illustration is provided by the Indian metropolis of Bangalore. It started out as a functioning IT service center, using nearby IT colleges and a few private businesses with contracts with American businesses based in Silicon Valley. It expanded quickly thanks to a skilled and reasonably priced labor force. Although Bangalore currently seems to be nearing certain limitations, other Indian towns have tried to replicate its success. In a broader sense, IT communities and industries provide viable entry opportunities globally. They are driven by entrepreneurs who take use of cutting-edge technology to provide quick and appealing chances for exports, profit, and employment. ICTs are popular with the general people today and provide a gateway into the information and knowledge age [10].

### **CONCLUSION**

In conclusion, Innovation, entrepreneurship, the expansion of human capital, and advances in ICT have all contributed to the rise of the knowledge economy. Investments in digital infrastructure, education, and regulations that support innovation and knowledge production are necessary to embrace the development of the knowledge economy. It provides chances for social growth, job creation, and economic success, but it also needs careful management to deal with any possible problems and guarantee widespread advantages for people and communities. the effects of the knowledge economy's expansion on social well-being. While the knowledge economy presents chances for improved productivity and economic development, it also presents problems like the digital divide, inequality, and job displacement. Governments and decision-makers must guarantee inclusive development, fair access to information, and assistance for people and communities impacted by technology disruptions.

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## CHAPTER 20

### DEVELOPMENT TRAJECTORIES AND POLICY AGENDAS: A REVIEW STUDY

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#### ABSTRACT:

When conducting business in a foreign country, understanding and effectively dealing with the country's context is crucial for success. This abstract explores the importance of considering the country's context and provides insights into strategies for effectively navigating the unique challenges and opportunities presented by different national contexts. The abstract begins by emphasizing the significance of the country's context in shaping business environments. Factors such as culture, politics, legal frameworks, economic conditions, and social norms vary from country to country and greatly impact business operations. Failing to understand and adapt to the country's context can lead to miscommunication, misunderstandings, and ineffective business practices.

#### KEYWORDS:

Cultural Norms, Economic Conditions, Government Regulations, Language and Communication, Legal Framework, Social Dynamics, Socioeconomic Factors.

#### INTRODUCTION

##### Development Trajectories and Policy Agendas

The World Bank has acknowledged the necessity to modify development plans and legislative initiatives to fit the unique environment of each nation. Different industrial strategy stances must be taken into account while determining the growth trajectory that is best suitable for a nation. With the aid of foreign technology, Korea's industries have flourished thanks to its systematic OEM agreements and licensing strategy. The main chaebol business entities were family-run. For instance, Korea needs now increase its capacity for domestic innovation while also addressing the tendencies toward division in its economy and culture. Ireland needs to expand its research infrastructure and broaden the scope of its innovation hubs. Finland should continue to lead the world in technical innovation and competitiveness by identifying new market niches. The World Bank has evaluated a growth diagnostics technique based on the identification of binding limitations in light of the notable variations across nations. Instead of using the customary long list of policies that cover all bases, a government must concentrate its policy efforts on addressing these systemic barriers. First and foremost, Brazil's economic process is impacted by restrictions on entrepreneurs, notably the dearth of development capital. As a result, the circumstances call for completely diverse approaches to policy [1], [2].

## Social and Cultural Problems

In the development process, sociocultural issues are of the utmost significance. Efforts, investments, and economic trajectories will be influenced by slowly shifting socio-cultural specificities, regardless of the governmental actions and reform initiatives. The many layers of a "culture tree" may be used to examine cultural impacts on and consequences for economic systems and policies of nations, especially their knowledge and innovation facets. Between Eastern and Western cultures, there are noticeable distinctions. These may be partially attributed to various cognitive processes, which has ramifications for how people relate to the outside world as well as how societies are organized. There are two distinct stances that may be seen: in the West, thinking often implies removing oneself from reality, whereas in the East, reality is immersed. These distinct modes of thought indicate variations in a range of human endeavors, such as law, science, human rights, and international affairs. In the fields of science and technology, the Western perspective on reality favors the use of science to understand the causes of natural events, while the Eastern viewpoint favors the use of holistic combinations of already existent materials as the foundation for technological advancement. Regarding the establishment and observance of the rule of law as the fundamental means of protecting the individual, Western societies are focused on these issues, while Eastern societies tend to place more emphasis on informal relationships that govern collective groupings, such as the Chinese *guanxi*. This results in two distinct economic systems with some striking differences.

Nation's geographic location and historical experiences are also important factors in determining its collective attitudes and behaviors. History has a significant impact on behavior and thought patterns at the national level. The consequences of colonization are especially significant for emerging nations. When trauma has been minimized or the interaction has been successfully assimilated, the situation is improved. Japan, for instance, has preserved its integrity throughout the course of its history and has been able to incorporate contemporary elements into its customs. Another recent example on a continent with specific problems is Botswana. Geographically speaking, an island seems to have a unique sense of identity that aids in mobilizing the resources available, provided that the nation is sufficiently open to external influences and possibilities. Value judgements should all be abandoned. It is important to comprehend how deeply ingrained factors—which through time have molded attitudes and behaviors and produced the genuine riches of humanity in all its astounding diversity—have a positive or negative impact on development processes. It is possible that the globalization process drives civilizations and countries to increase their specificities, rather than leading to uniformity, and so contributes to a healthy variety. Cultures and related mindsets and behaviors are extremely hard to change. Cultural traits exhibit both strengths and limitations, and the consequences for policy are obvious: capitalize on one's inherent talents while keeping one's flaws in mind [3]–[5].

## Constraints To the Growth of Knowledge Economy

### Challenges and Opportunities

The phrase "knowledge economy" was created for all of these reasons. Its definition is considerably larger than the often-used information society and goes beyond concepts like high technology or the new economy, which are both intimately related to the Internet. The production, transfer, and application of knowledge serve as its cornerstones. A knowledge economy is one in which the amount and complexity of information permeating economic and social activity reaches extremely high levels and in which knowledge assets are purposefully given higher prominence than capital and labor assets.

## Dealing with Knowledge-Based Competition in the Economy

Industrialized nations, for whom the word "KE" was first used, are adjusting to the changing circumstances in different ways. The countries of North America seem to have profited immediately from the increased possibilities provided, as seen by the region's recent increases in growth rate and productivity. The disparities between North America and Europe's per-capita income have widened. Small, competitive economies in Europe, like Finland and Ireland, have emerged as role models for knowledge-based development and competitiveness, whereas bigger continental countries, like France and Germany, which once led the scientific and industrial revolution, have struggled to adapt. In the meanwhile, Japan has had a challenging decade with poor development brought on by a number of causes, but it has continued to develop KE assets in particular. In the course of expansion, each of the 18 governments named performed a distinct role. China started along the path of knowledge-based economy by drawing significant FDI and then creating a domestic knowledge base via significant spending in research and education. India has achieved success by making the most of its top universities and seizing global IT-related possibilities, in part via the skillful use of knowledge resources. For nations at various stages of development, there is a unique KE model and procedure [6].

For developing nations, the effects of globalization and the information revolution are both possibilities and difficulties. On the one hand, there is the potential for the current knowledge gap with industrialized nations to become even wider. Indeed, industrialized nations tend to have higher concentrations of research and innovation capabilities as shown by the typical measures of R&D spending and outputs. However, this does not account for the significant disparities in access to the internet between the affluent and the poor in developing nations or the subpar quality of Internet infrastructures. On the other hand, the digital divide differences in telephone and Internet use is steadily closing.

## DISCUSSION

Easy access to global information and technology is essential for emerging nations. Relevant information and cutting-edge technology may make a significant difference in helping these nations achieve some of the eight Millennium Development Goals at a very cheap cost. However, there are many more requirements for a knowledge economy to flourish than there were for conventional industries. Competition back then was determined by capital investments in natural resources or by the availability of cheap, unskilled labor. Climbing up the value chain is now necessary to compete globally, and success in this climb depends on modernizing the work force and maintaining effective communications and logistics. Not only a population with a basic education, but a sizeable portion of highly educated individuals, is needed for a knowledge economy. Low labor costs have the potential to attract foreign direct investment (FDI) and stimulate economic development, but they also carry the danger of trapping economies in the manufacturing stage of the production process.

### World Problems

Globalization and the most recent technology revolution are two factors contributing to the growing number of significant difficulties confronting the economies of the globe. These issues include the rising fragility of the international community, the deepening of global economic imbalances, unsustainable urbanization, and the more obvious limitations on economic development imposed by the environment and resource availability. These obstacles, some of which are listed below, may be overcome by countries with the aid of innovation and knowledge.



## **Fragility**

The global community is more vulnerable due to a number of circumstances, increasing the likelihood of systemic propagation effects and paralysis. Uncontrolled diseases like the bird flu, international financial speculation on networked markets, terrorist strikes on strategic locations, the spread of WMDs, and more. These hazards are caused, in part, by the faster economic and social integration brought on by ICTs. However, these technologies also support the monitoring and management of possible risks.

## **Imbalances**

Production has been redistributed as a result of outsourcing and offshoring in conjunction with economic globalization. The majority of FDI has historically been concentrated in China and Eastern Europe. This has caused significant and long-lasting disruptions in the global job landscape for lower-skill sectors. Low- to medium-income nations have lost export and employment prospects, while high-income countries have lost jobs. Due to India's fast economic development, this tendency will probably intensify over the next several years and continue to have an impact on the service sector. The consequences are severe for places that really need work, like the Middle East, where it is predicted that 90 million new jobs would need to be generated over the next 20 years in order to stop the unemployment rate from rising higher. More than 30% of young people and 15% of the general population are now jobless.

## **Improper Urbanization**

Developing nations are particularly impacted by the frantic and chaotic urbanization that comes with industrialization. A 33 percent rise since 1990, 48 percent of the world's population was living in urban areas in 2003. By 2020, 4.1 billion people are expected to reside in metropolitan areas. The majority of this growth—nearly 94%—will take place in emerging nations. There will be 22 megacities and 475 cities with a population of one million or more by 2015. Urbanization aids in the renewal of cultures and introduces innovations into people's lives, but it also comes with a loss of autonomy, violence, human trafficking, and other problems. Urbanization and its repercussions provide a significant problem. It calls for the ability to invent, manufacture, and spread technology that support independent local development processes. This may aid in avoiding the harmful population fragmentation that results from overcrowding.

## **Restrictions On Resources And The Environment**

Finally, it's critical to acknowledge that the world economy cannot continue to use energy and natural resources at the present pace due to the fast rise of China and India and global warming. Both in emerging and industrialized nations, the systems of production and consumption will need to undergo significant adjustment. As growth limits approach, global innovation is threatened—possibly to a degree never previously seen.

To sum up, society's evolution has always been influenced by knowledge. But during the last two decades, successful economies throughout the world—in both industrialized and developing nations have started to exhibit a distinctive Knowledge Economy model and process. Insofar as such nations adhere to effective economic patterns, globalization and the rapidly advancing digital era provide new chances for emerging nations. The investments and changes necessary for emerging nations to create knowledge-based economy must be implemented immediately. The three main demands are to create employment, compete with China and India, and address environmental issues.

## Upcoming Difficulties for A Knowledge-Based Economy

The Lisbon objectives of making Europe a more dynamic and competitive knowledge-based economy have not only not been met in general, but challenges are actually growing over time as a result of demographic shifts, rising competition from China in high value-added goods and from India in services, and the continued dominance of the United States in KBE sectors like ICT and biotechnology. Over the next few decades, a number of significant structural changes that are pertinent to knowledge-based economies will change the environment for innovation and competition. As a result, they will have an impact on the types of indicators that European policymakers and academics will need to be able to effectively assess and address future challenges. The significant structural alterations include:

1. Globalized manufacturing chains for products and services are changing where comparative advantages are located.
2. The creation of new knowledge- and innovation-centered institutions.
3. Demographic changes, such as longer average lifespans.
4. Modifications in the stocks and flows of skilled labor.
5. Changes in technology brought on by new inventions or environmental demands.

This article looks at these five difficulties as well as the kinds of indicators that will be needed to monitor structural changes over time. We also provide a short discussion of three linked situations involving the need for innovation, the availability of trained labor, and the environment. These scenarios aim to evaluate the applicability of current indicators and, if appropriate, propose new indicators.

Global production chains make up the first structural transformation, which involves significant movements in the areas where manufactured products and services are produced best. India is becoming more competitive in services like software development, clinical trials, and contact centers while China continues to dominate manufacturing. Businesses in industrialized nations are projected to react to cost competition from China and India during the next 20 years by increasing manufacturing delocalization, including the manufacture of high-tech goods like ICT or aerospace equipment. ICT, innovation in organizational structures and logistics, and affordable transportation have all made it feasible for such changes in the place of production. Due to globalization and the growing modularization of standard components, innovative businesses depend on cross-border manufacturing networks and get value from the effective use of global supply chains. There is a need for new categories of indicators to guide private investment choices and governmental alternatives. MNEs are significant players in the innovation process, but more research is needed to fully appreciate what they do. Statistics on MNEs are often restricted to comparisons across nations and at the national level, resulting in a lack of detail and a hazy picture of their operations, including where they are investing in innovation globally.

The scope and true effects of industry delocalization are poorly understood due to a lack of public data. Additional research is needed to determine employment consequences, including the kinds of jobs affected, the vocations most impacted, compensation differences for the same job between the off-shored site and the source nation, as well as rates of salary growth overseas. The fact that the present shift in the site of comparative advantage won't endure is a vital point to remember. The rising productivity and wealth of China, India, and other developing nations will eventually lead to currency realignments that will lessen wage and income disparities, which are what motivate offshoring strategies based on the search for

lower wage costs in manufacturing and service provision. The benefits of far-off, inexpensive manufacturing are marginal, which is a point that is often overlooked. The economic advantage of making certain products in China may be eliminated with only a 10% increase in transportation expenses. If the sharp rise in petroleum product prices that began in 2006 is maintained, some production in China may move to regions closer to important markets [7]–[9].

Outsourcing and the localization of production are not brand-new occurrences. a. The shifting environment for innovation strategies. Data, however, indicate that nations like India and China are likely to compete more often based on their innovation skills, notably in knowledge-intensive industries like software, capital goods, and ICT manufacturing, rather than just their cheap wages. It seems that American FDI or suppliers to American enterprises in these two nations are also increasingly in charge of creating patent inventions for their parent company, indicating that both China and India have the ability to use FDI as a tool for creating inventive skills. One effect is that high-wage nations may find it more challenging to compete on the basis of "continual innovation". The growth of inventive capacities in China and India may encourage businesses to establish more R&D centers in these two nations. First, businesses can take advantage of local labor markets that are both affordable and highly skilled. Next, they can look for specialized knowledge that is unavailable in their home countries. Finally, they can set up R&D labs in foreign markets to modify current products to local preferences or create new products that will satisfy local demand. The OECD's prediction that up to 20% of all employment in the EU may be offshored, including many of the 'knowledge jobs' of the future, causes one to stop.

This is already happening in several industries, such software development in India and the building of research facilities by telecom and biotech companies in China. We lack trustworthy data on the level of globalization of innovation activities like R&D as well as, more crucially, the innovation capacities of the research institutes that multinational corporations have created in developing nations. We don't know whether these centers do cutting-edge research or if they mostly modify items for regional markets. As more businesses base their competitive strategies on innovation, driven by both growing innovation awareness among businesses in developed countries and growing innovation use among businesses in developing countries, the competitive advantages that innovation provides may start to erode. The potential of creative activities to offer the additional rents that fuel profitability and investment may decline as competition increases. This might lead to a contradiction where state initiatives to promote more innovative thinking, like the 3% R&D intensity objective for Europe, have the paradoxical effect of lowering private returns on innovation. Three variables, however, might reduce the decline in earnings brought on by increased rivalry over innovation. The first aspect relates to the prices and location of innovation activities. The second factor is that businesses can more aggressively manage intellectual property to profit from their investments in innovation, such as through patenting. R&D is becoming more of a commodity, so it can be purchased from universities, start-ups and spin-offs, or from less expensive R&D centers in developing countries.

Innovation productivity may increase as a result of improvements being made to the way it is organized. IT has lowered experimentation costs, while globalization has brought down outsourcing and research cooperation expenses. Businesses now leverage links like networks, partnerships, and formal and informal relationships more often than freestanding central laboratories. By reducing uncertainty, sharing resources and information, and hastening the introduction of novel goods and services to the market, these links may be causing fundamental structural changes that enhance research productivity. Policies that enable this

experimentation while maintaining a competitive environment need indicators to monitor and comprehend these dynamics. The effectiveness of these three countermeasures to increase innovation profitability relies on favorable technical prospects or the balance between the R&D and engineering expenditures of producing new technologies and the anticipated profits from these advances. Although there is no solid data on technical opportunity, it is assumed that opportunities are greatest in the early stages of a new technology, are lowest in the middle of its development, and grow as the technology develops.

**Demand and demographic change:** The third significant structural shift is the rising average age of the population in many wealthy nations. A KBE is affected by this development in two ways: first, by the market's need for creative goods, and second, by the availability of highly trained workers. Services have a negative relationship with age and a positive relationship with income. Aggregate domestic demand for innovative products and services may decrease as a result of demographic change that results in a significant rise in the population proportion of older age cohorts. An elderly population with low levels of interest in innovation might lower the creative capabilities of the domestic market, assuming that a sophisticated domestic market contributes to national innovative capabilities. These elements could prompt businesses with headquarters in aging populations to look for markets and research resources in younger nations. User-centered innovation is another advancement that may be impacted by shifting demographics.

Although it is uncertain to what extent user-centered innovation affects the direction of innovation or lowers enterprises' innovation costs, the low internet connection rates among older age cohorts may be of concern if user-centered innovation happens online. On the other hand, businesses may use the internet to get worldwide feedback on their goods and services. Data on the value that innovation creates for consumers is required because consumer demand may function as a key motivator or restraint in influencing the inventive activity carried out by private enterprises. Additionally, the environment in which innovation occurs changes as user-centered innovation may rise. Organizational innovation is necessary to integrate client needs and ideas in order to achieve this. The function of suppliers, consumers, and relationships between them must be taken into consideration. This entails creating innovation process indicators that analyze such relationships while using new technologies.

**Demand for innovation scenario** In the KBE, innovation has a significant role in both productivity and economic development. Along with competition, which helps businesses lower manufacturing costs, there are also more complicated elements that stimulate product innovation, such as market demand and technological push factors. Based on the need for novel products and services, businesses engage in product innovation. Innovation activities could be hampered in the absence of an existing or future market. The market may consist of other businesses, specific customers, authorities, or export markets. One of the two primary forces behind innovation is demand. Therefore, a number of policy activities, in addition to the development of a single European market, might have an impact on innovation. The demand for innovation scenario offers metrics that might be used to assess regional variations in demand determinants and determine how demand may be influenced by policy in a manner that would encourage inventive activity.

**Modern technology** It is difficult to forecast significant technology developments. They could be brought about by the creation of novel, general technologies like biotechnology or nanotechnology in response to the world's fast rising need for food, minerals, fiber, and energy, or as a result of environmental pressures to stop the unsustainable use of the planet's resources. Whatever the reason, technological changes may raise the need for funding for research and the expertise needed to employ new technologies. For instance, innovation in

the resource sectors and in how energy is utilized across all sectors will be needed if science and technology are to advance on multiple fronts connected to energy. Although its economic effect is probably going to be far lower than that of ICT, biotechnology is often seen as an emerging generic technology. However, in addition to having positive social and environmental implications, the application of biotechnology to business and agriculture might have significant economic consequences. Long-term research will be necessary to achieve these advantages, and this research may increasingly be conducted in important emerging nations rather than in the original biotechnology leaders, the US and Europe. Shifts in technology may also be the consequence of variations in public support for research, as shown in the US, where support for technological areas has declined while support for the living sciences, including biotechnology, has increased. It takes a long time for life sciences R&D to produce commercial goods, which contributes to the controversy around this change in priority.

Materials and energy will be necessary for the expansion of all sorts of economic activities in the future. China has realized the value of resources and is presently spending significant sums of money in the exploitation and acquisition of natural resources across the globe, whilst developed nations are investing extensively in innovation. Future owners of commodities might expect to receive significant rents as a result of the growing scarcity of resources.

### **Knowledge-based economy policies**

The creation of a KBE is seen by policymakers in industrialized economies as being crucial for economic growth in light of the rising competition from lower cost nations in both basic manufacturing and highly skilled services and production. European nations continue to come under pressure from nations like the United States and Japan, two nations listed as the key rivals in European policy papers since 1995, in addition to the challenge provided by competition from these growing nations.

A wide variety of policies are pertinent to the objective of supporting a KBE, in addition to those already in place to encourage ICT usage, R&D, and education. Policies to support organizational and "presentational" innovation as well as "soft" criteria like human creativity and human resource management are among them. The objective is to create policies based on verifiable data. The difficulties include the lack of empirical support for current KBE advancements as well as the necessity to deal with uncertainty and future tendencies. Political, economic, and cultural circumstances must all be considered when developing policies. There are a few obstacles to policy formation that must be considered.

1. First, since sufficient data and indicators are easily accessible, policy tends to concentrate on objectives and results that are simple to quantify, like the 3% R&D intensity target agreed upon in Lisbon and Barcelona. In contrast, several KBE targets have less data and indications. This discrepancy in the availability of data and indicators may prevent the policy community from pursuing other crucial measures for promoting KBE development.

2. Measuring the impact of government initiatives on policy objectives is difficult when a variety of variables might affect the results. Many of the indicators needed to determine the impact of variables may not be accessible other than as one-time indicators gathered during a single survey at a specific moment in time. Such issues may arise when assessing a variety of KBE-relevant policies, including those that encourage the use of patents and other IPR, public sector innovation, and higher human capital standards.

3. The need to consider how we want our economies and societies to develop in the future is a third problem. As a result, indicators that are pertinent to medium- and long-term objectives are needed for determining policy. The lag in data and indicators used to gauge policy effects, as well as the time-lag between policy design and execution, is a major drawback of any discussion of policy.

Policy often involves using lessons from the past to make plans for the future. We must think about policy from two angles in order to solve the issues posed by a KBE in terms of policy. First, what regulations already exist, and are they able to address the problems we have today? Second, can policies be created with enough flexibility to allow for future issues that may arise? Data and indicators for emerging concerns, such as the effects of an aging workforce, globalization, increased imports, and rising job insecurity, are necessary for the implementation of effective policies to promote a KBE. Fears of more job losses have grown as a result of the fast entry of China and India into the global economic system, both of which have big populations of low-wage workers, as well as the recent expansion of the European Union. There are a variety of ways to respond to competition, including creating new goods, differentiating those products, branding, improving designs, and gaining efficiency via organizational and technical development. These strategies all need some level of inventiveness.

The strength of the economic environment affects innovation in that certain trends remain consistent while others flare up and acquire greater prominence, while still others fizzle out and lose significance. In the KBE, several economic sectors experience growth or collapse, and various actors experience significance shifts, emergences, and disappearances. Knowledge production, exchange, and learning processes vary from those of earlier economies and are still evolving. Even if the contribution of ICT to the KBE is evident, indicators must be created to reflect the restructuring of economic, social, and political interactions. Indicators are often seen more as a collection of disconnected dots on a drafting board, or to extend our earlier analogy, the real constellation patterns in the night sky are not yet apparent, according to the interviews with policy analysts. Understanding the system of innovation's interconnections and process, as well as creating indications and metrics that may link together the individual stars or dots, are among the problems [10].

## CONCLUSION

In conclusion, Successful foreign commercial operations depend on understanding the background of a given nation. Building good connections, navigating regulatory frameworks, aligning with market dynamics, and successfully competing in the global marketplace are all made possible by understanding and adjusting to the cultural, political, legal, economic, and social components of a country's setting. Businesses may position themselves for success and achieve sustainable development in international markets by investing in cultural intelligence, market research, local alliances, and adherence to local rules. Additionally, the value of establishing regional networks and collaborations when addressing a nation's situation. Relationships with local stakeholders, such as vendors, distributors, representatives of the government, and trade groups, may provide helpful information, access to resources, and assistance in navigating the regional business climate. Additionally, working with local partners may improve trust, reduce risks, and speed up market entrance and development.

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## CHAPTER 21

### EXPLORATION THE CONCEPT OF NATIONAL INCOME

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#### ABSTRACT:

National income serves as a fundamental measure of a country's economic performance and plays a significant role in economic policymaking and analysis. This abstract explores the concept of national income, its measurement, and its implications for understanding the economic well-being of a nation. The abstract begins by defining national income as the total value of all final goods and services produced within a country's borders over a specific period, typically a year. It highlights the importance of national income as a key indicator of economic activity, providing insights into the overall production, income distribution, and standard of living within a nation. Uncertain terms like national dividend, national production, and national spending are all used to refer to national revenue. Based on this, there are several approaches to determine national income. The entire value of products and services generated yearly in a nation is referred to as national income.

#### KEYWORDS:

Disposable Income, Gross Domestic Product (GDP), Gross National Income (GNI), Income Distribution, National Accounts, Per Capita Income.

#### INTRODUCTION

In other terms, national income is the overall money generated by a nation's economic activity over the course of a year. It covers all payments made in the form of salaries, interest, rent, and profits to all resources. Two groups of national income definitions may be distinguished: Marshall, Pigou, and Fisher put forward two types of definitions: conventional definitions and contemporary definitions. The labor and capital of a nation operating on its natural resources generate a particular net aggregate of commodities, both material and intangible, including services of all sorts, every year, according to Marshall. This is the actual national dividend or net yearly income of the nation. The term "net" in this definition refers to deductions from the gross domestic product for machine depreciation and wear and tear. Additionally, revenue from overseas must be added to this [1]–[3].

This definition's restrictions: Despite being straightforward and inclusive, Marshall's concept has a number of drawbacks. First off, it is quite challenging to accurately estimate the commodities and services produced in the modern world since they are so many and diverse. As a result, it is impossible to determine the national income accurately. Second, it is impossible to accurately estimate the national income since there is always a chance of double counting. Double counting refers to the possibility of include a specific good or service—such as labor or raw materials more than once in the national revenue.

For instance, a peasant would sell wheat for Rs. 2000 to a flour mill, which would then process that wheat into flour and sell it to a wholesaler, who would then sell it to a retailer, who would then sell it to the public. When factoring in this wheat or its flour every time, the



total comes to Rs. 8000, but the actual gain in the national revenue is just Rs. 2000. Third, it is once again impossible to accurately estimate national income since many of the goods produced are not sold and the producer instead either consumes the goods herself or trades them for other goods. It often occurs in a nation with a strong emphasis on agriculture, like India. Consequently, the size of the national revenue is understated.

### **The Pigou Definition**

The income that can be quantified in terms of money is included in A.C. Pigou's definition of national income. Pigou said that "National income is that part of objective income of the community, including of course income derived from abroad which can be measured in money". The Marshallian definition is inferior than this one. Additionally, it has shown to be more useful. Today, estimates are created in accordance with the two criteria outlined in this definition for estimating the national income. First, the commodities and services that may be valued in money are included in national income to prevent duplicate counting. Second, earnings from investments made abroad are included as part of national income.

### **It's Flaws**

Although the Pigouvian definition is clear, concise, and useful, it is not without faults. First, based on Pigou's definition, we must arbitrarily distinguish between goods that can be traded for money and those that cannot. However, despite the fact that they may be traded for money, the underlying forms of these commodities are the same. Second, when only those goods that may be sold for money are taken into account for estimating national income, the national income cannot be accurately calculated, according to this definition [4]–[6]. Pigou argued that although a woman's services as a nurse would be included in national income, they would be omitted when she cared for her children at home without compensation. Pigou holds the opinion that if a man marries his woman secretary, the national income would decline since he will no longer be required to pay for her services. As a result, there are many paradoxes that result from the Pigouvian concept. Third, only industrialized nations where goods and services are traded for money on the open market may use the Pigouvian definition.

This definition states that accurate estimation of national income is impossible in poor and backward nations where the majority of output is simply traded since the estimate will always be lower than the actual amount of revenue. As a result, the definition put forward by Pigou has a narrow scope.

### **According to Fisher**

Marshall and Pigou considered national income to be determined by "production," but Fisher accepted "consumption" as the criteria. Fisher claims that "The National dividend or income consists solely of services received by ultimate consumers, whether from their material or from the human environments." Therefore, a piano or an overcoat manufactured for me this year is added to the capital rather than being included in this year's revenue. The only services these objects provided to me this year are revenue. Because Fisher's definition offers a sufficient understanding of economic wellbeing, which is based on consumption and reflects our level of living, it is seen to be superior to that of Marshall or Pigou.

### **It's Flaws:**

However, from a practical standpoint, this definition is less helpful since it may be difficult to quantify commodities and services in terms of money. First, estimating the monetary worth of net consumption is more challenging than estimating the value of net output. It is exceedingly challenging to estimate a country's overall consumption in terms of money since many people

consume a certain item, and that too at various locations. Second, certain consumer items are long-lasting and durable.

If we take Fisher's piano or overcoat as an example, only the services provided for usage during a calendar year will be included against their revenue. Fisher will only consider Rs. 100 as national revenue for one year, however Marshall and Pigou would include Rs. 100 in the national income for the year, when the overcoat is created, if it costs Rs. 100 and lasts for ten years.

Additionally, it cannot be guaranteed that the overcoat would endure merely 10 years. It could continue for a longer time or end sooner. Third, since durable items often change ownership, their value is also subject to change. As a result, it becomes challenging to quantify the service value of these commodities in terms of consumer spending. For instance, the owner of a Maruti vehicle may sell it for more than it is really worth, and the buyer might later sell the car at its true value after using it for a while.

## DISCUSSION

When it is moved from one person to another, whatever portion of its worth based on its average age should be included in national income? The issue now is which portion of its price, whether real or black market, should we take into consideration. However, not all of the definitions put out by Marshall, Pigou, and Fisher are perfect. However, although Fisher's definition enables us to compare economic wellbeing over years, Marshallian and Pigovian definitions inform us of the factors impacting economic welfare. Simon Kuznets defined national income from a contemporary perspective as "the net output of commodities and services flowing during the year from the country's productive system in the hands of the ultimate consumers." In contrast, national income has been characterized in one of the UN reports using methodologies for calculating national income, as net national product, as an addition to the shares of various elements, and as net national spending in a country over the course of a year. Any of these three criteria may be used in practice for calculating national income since, if various things were accurately included in the calculation, the same national income would result [7]–[9].

### Concepts and Natural Income Elements

the entire net worth of all commodities and services produced inside a country during a certain time period, which includes the total of all salaries, profits, rents, interest payments, and pensions made to citizens of the country.

There are many ideas on national income as well as several ways to quantify them.

1. GDP measures the total worth of goods and services generated in a nation over the course of a year. GDP at market prices is the name given to this calculation, which uses market pricing. GDP at market value, according to Dernberg, is "the market value of the output of final goods and services produced in the domestic territory of a country during an accounting year."
2. The Product Method, Income Method, and Expenditure Method are the three methods used to calculate GDP.

1. Using a product: This approach involves totaling the worth of all products and services generated during the year in various sectors. This is sometimes referred to as the GDP at factor cost by industry of origin or GDP at value added approach. Agriculture and related services, mining, manufacturing, construction, electricity, gas, and water supply, transport, communication, and trade, real estate, home ownership, and business services, as well as

public administration, defense, and other services are all included in India. It is, in other words, the whole gross value added.

2. **The Income Method:** A nation's citizens who contribute to its GDP over the course of a year are paid for their labor. The total factor incomes, including wages and salaries, rent, interest, and profit, make up GDP as calculated by the income method.

3. **Expenditure Method:** This approach is centered on the commodities and services produced in the nation over the course of a year.

Consumer spending on both durable and non-durable goods and services is included in GDP calculated using expenditures investment in fixed capital, such as equipment, inventory, and residential and non-residential buildings, spending by the government on finished products and services, export of products and services made by nation's citizens, less imports. GDP is reduced by the amount of consumption, investment, and government spending that goes toward imports. A similar exclusion applies to any imported component, such as raw materials, utilized in the production of export products.

### **B. GDP Factor Cost in**

The total net value contributed by all domestic producers is the GDP at factor costs. GDP is the total of domestic factor incomes and fixed capital consumption because net value created is dispersed as income to the owners of means of production. Therefore, Net Value Added plus Depreciation equals GDP at Factor Cost. Wages, salaries, and other forms of employee compensation are included in GDP at factor cost. Operating surplus, or business profit, is the financial gain of both incorporated and unincorporated businesses.

#### **Self-employment income that is mixed.**

Conceptually, the end value of products and services at market pricing must match the factor cost of creating those items, hence the GDP at factor cost and GDP at market price must be equal. The market value of products and services, however, differs from the wages of the production elements.

Indirect taxes are included in GDP at market value while government subsidies are not. Indirect taxes are therefore deducted from GDP at factor cost and added to GDP at market price in order to calculate GDP at factor cost. GDP at Factor Cost is thus equal to GDP at Market Price less Indirect Taxes and Subsidies.

### **C. Domestic Product**

The net production of the economy for the year is measured by the NDP. During the course of production, a certain amount of the nation's capital equipment ages or becomes outdated. This capital consumption represents a portion of total investment that is subtracted from GDP. So, GDP at factor cost less depreciation equals net domestic product.

### **D. Real and Nominal GDP**

GDP at current prices, or nominal GDP, is the term used when GDP is calculated using current prices. Contrarily, GDP at constant prices or real GDP refers to GDP that is determined using set prices for a given year.

The value of goods and services generated in a year is assessed in terms of rupees at the current exchange rate and is known as nominal GDP. The rupee is not a reliable indicator of buying power, which is a difficulty when comparing one year to another. GDP may increase significantly in a year, not because the economy has been expanding quickly, but rather

because prices have increased. In contrast, a year's worth of falling prices may result in a rise in GDP, but it may still be smaller than the previous year. GDP does not accurately reflect the status of the economy in both of the five scenarios. We need a metric that accounts for both increasing and decreasing prices in order to correct the under- and overestimation of GDP. Real GDP, often known as GDP at constant prices, may be used to achieve this. A base year is selected when the overall price level is normal, that is, when it is neither too high nor too low, in order to calculate the real GDP. The base year's pricing is set at 100.

The deflator index, often known as the following formula, is used to connect the general price level of the year for which real GDP is to be derived to the base year:

### **Index for Base Year Current Year**

Assume that 1990–1991 serves as the base year, the GDP for 1999–2000 is Rs. 6, 00,000 crores, and the year's price index is 300.

Real GDP for 1999–2000 hence equals Rs. 6, 00,000  $\times$  100/300 = Rs. 2,000 crores.

### **E. GDP Deflator**

The GDP deflator measures changes in the prices of the products and services that are included in GDP. It is a price index that is calculated by multiplying the result of dividing the nominal GDP for a particular year by the real GDP for that same year by 100. Thus, it demonstrates that GDP in 1997–98 rose by 135.9% at constant prices, from Rs. 1049.2 thousand crores in 1993–94 to Rs. 1426.7 thousand crores in 1997–98, as a result of inflation.

### **F. Gross Domestic Product**

The gross national product (GNP), which includes net income from abroad, is the complete measurement of the flow of goods and services at market value arising from current output throughout a year in a country.

Consumer goods and services to meet people's immediate needs are included in GNP, as are gross domestic product (GDP), government-produced goods and services, and gross private domestic investment in capital goods, which includes fixed capital formation, residential construction, and inventories of finished and unfinished goods. The difference between the value of exports and imports of goods and services is known as net exports and is sometimes referred to as net income from abroad. There are a few things to keep in mind while using this notion of GNP: First, GNP is a monetary measure in which all products and services produced in a nation over the course of a year are valued in terms of money at current prices and then put together.

But in this way, the GNP displays a gain or reduction that may not be true because of a change in prices. In order to prevent errors on this front, a base year is chosen in which prices were normal, and the GNP is then modified in line with the index number for that year. GNP at 1990–1991 prices or at constant prices will be used to describe this. Second, only the market price of finished goods should be used when calculating the economy's GNP. Before being bought by customers, many of the items go through a number of steps. If the items were counted at every step, the national product would often contain them. As a result, the GNP would grow excessively. Therefore, only the end products and not the intermediate commodities should be counted in order to prevent duplicate counting. Third, as it is impossible to accurately determine the market price of products and services provided for free, they are not included in the GNP. As an example, consider how a mother raises her kid, how a teacher instructs her son, how a musician performs for his friends, etc.

Fourth, the GNP does not include transactions that do not result from current-year output or that do not in any way support it. The sale and purchase of used products, as well as shares, bonds, and assets of already-existing enterprises, are not included in the gross national product (GNP) since they do not increase it and the items are only transferred. Fifth, since beneficiaries do not provide any services in exchange for social security benefits like unemployment insurance allowance, old age pension, and interest on public loans, these payments are likewise excluded from the calculation of GNP. However, the GNP is not reduced for the depreciation of machinery, factories, and other capital items.

Sixth, if they do not contribute to current production or economic activity, earnings made or losses incurred due to changes in capital assets as a consequence of price changes in the market are not included in the GNP. For instance, the profit made from selling a home or a piece of land will not be included in the GNP if the price of such items rises owing to inflation. However, if a piece of a home is built from scratch during the current year, the rise in the house's worth will be included toward the GNP. Similar to how changes in the value of assets that can be predicted in advance and are covered by fire or flood insurance are not included in the GNP.

Last but not least, money made illegally is never included in the GNP. Although the goods sold on the black market are reasonably priced and meet consumer needs, money made from their sale and purchase is always excluded from the GNP because they are not useful from a social perspective. There are primarily two causes for this. One is that it is unknown if these items were created in the current year or the years before. Two, many of these products are smuggled and manufactured elsewhere, so they are not included toward the GNP [10]–[12].

### **GNP: Three Approaches**

It is crucial to understand how GNP is computed after studying its basic components. To do this, three strategies are used. There are three ways to calculate GNP: the income approach, the spending method, and the value-added technique. Since gross income and gross spending are equal, the estimated GNP using each of these techniques would be same after the necessary corrections.

#### **1. GNP Calculated by Income:**

The yearly monetary compensation given to the production components in a nation is the income component of GNP.

GNP is thus the total of the following:

#### **Salary and wages:**

All types of earnings and salaries that employees and business owners receive via productive endeavors fall under this heading. It covers all funds collected or deposited over the course of a year in the form of contributions of any kind, such as commissions, overtime pay, provident funds, insurance, etc.

#### **Rents:**

The total rent comprises the expected rentals of all such assets utilized by the owners themselves as well as the rents of the land, store, home, factory, etc.

#### **Interest:**

Interest is the money that a person in a nation receives in the form of interest from various sources. The anticipated interest on the private cash that the businessman invested rather than

borrowed in his own firm is added to this. However, because interest on government loans is only a transfer of income, it must be eliminated.

**Dividends:**

The GNP includes dividends received by shareholders from corporations.

Corporate earnings that haven't been shared:

The GNP includes any profits that businesses keep rather than distributing.

**Varying incomes:**

These include self-employment, partnership, and unincorporated company earnings. They contribute to the GNP.

**Direct taxation:**

Individual, corporate, and other company taxes are all covered in the GNP.

**Explicit taxes**

Numerous indirect taxes are levied by the government, including sales tax and excise taxes.

The cost of goods includes these taxes. However, the money earned by them flows into the government's coffers rather than the producing factors. As a result, the GNP includes the revenue attributable to these taxes.

**Depreciation:**

Every firm budgets for the cost of depreciating and wearing out machinery, factories, and other capital equipment. This amount is also included in the GNP since it is not a portion of the revenue that the elements of production get.

**Net international income:**

The difference between the value of products and services exported and imported is represented by this. This difference is added to the GNP if it is positive, and subtracted from the GNP if it is negative. GNP calculated using the income method is thus equal to wages and salaries plus rent, interest, dividends, unreported corporate profits, mixed income, and direct taxes.

+ Depreciation + Net Foreign Income + Indirect Taxes.

**2. The expenditure-to-GNP formula**

According to the expenditure perspective, a country's GNP is the entire amount spent on goods and services over the course of a single year. It contains the following things:

**Personal consumption costs:**

It comprises all forms of personal consumption spending made by people in a nation. It includes spending on permanent products like watches, bicycles, and radios as well as single-use consumer goods like milk, bread, ghee, and clothing. It also includes spending on services of all types such as tuition for schools, legal fees, and transportation costs. These are all regarded as finished commodities.

### **Private domestic gross investment**

The cost spent by private firm for new investments and the replacement of outdated capital falls under this. Construction costs for homes, factories, and all kinds of machinery, plants, and capital equipment are included. In specifically, the addition to or subtraction from the inventory as a result of a growth or decline. The inventory contains the raw material stockpiles that must be taken into account for calculating GNP as well as manufactured and semi-manufactured items that were created throughout the year but were not sold. Since the sale and purchase of shares and stocks is not a true investment, it does not account for their financial exchange. Depreciation, however, is included.

### **Net international investment**

In other words, it refers to the difference between exports and imports or export surplus. Every nation sells to or imports from a few other nations. The national income cannot be calculated using imported commodities since they were not produced in the nation; nevertheless, exported items were made in the nation. Consequently, whether positive or negative, the amount of the difference between exports and imports is included in the GNP.

### **Spending by the government on goods and services:**

The GNP includes the cost of goods and services incurred by the government. Governments at all levels—federal, state, local—spend a lot of money on their personnel, police, and military. Governments must also pay for eventualities, such as paper, pens, pencils, and other forms of stationery, as well as clothing, furniture, automobiles, and other items, in order to operate the offices. The money spent on government enterprises is also included. However, as transfer payments are not provided in exchange for goods and services produced in the current year, their cost is not added to the total.

In other words, the GNP calculated using the expenditure method is equal to the total of government spending on goods and services plus private consumption expenditures plus gross domestic private investment plus net foreign investment. As was previously said, assuming all the elements are computed properly, the GNP estimate produced by either the income technique or the spending method would result in the identical results.

### **Value-Added Approach to GNP**

Value added is a different metric to use to calculate GNP. The monetary worth of finished products and services produced at current prices over the course of a year is taken into consideration when calculating GNP. One method to prevent duplicate counting is by doing this. However, it might be challenging to tell the difference between an intermediate result and a final product.

For instance, one industry may sell another industry inputs such as raw materials, semi-finished goods, fuels, and services. They could be intermediate items for certain industries and end goods for others. In order to prevent duplication, the value of intermediate goods needed to make final goods must be deducted from the value of the economy's total output from each industry. Value added is therefore defined as the difference between the value of material outputs and inputs at each step of production. We arrive at the GNP by value added if all such disparities are tallied together for all economic sectors. Gross value added plus net foreign income equals GNP by value added. In sections 1, 2, and 3, it is calculated.

1 is built on the premise that, for the sake of total output, the economy as a whole consists of three sectors. They include manufacturing, agriculture, and other tertiary sector industries.

To calculate the value added for the overall economy, the value of each sector's intermediary purchases is subtracted from the total output of that sector. Thus, according to 1, the value of the economy's overall output is Rs. 155 crores, and the value of its main inputs is Rs. 80 crores. So, the GDP is 75 crores of rupees based on value added.

"The total value added equals the value of the economy's gross domestic product." The majority of this value added is distributed as wages and salaries, rent, interest, and profits; a tiny piece is sent to the government as indirect taxes; and the remaining share is designated for depreciation. As a result, we discover that an economy's total gross value added is equal to its gross domestic product. Deducting depreciation from the gross value-added results in net value added, which is Rs. 67 crores.

At market pricing, this is nothing more than net domestic product. Once again, the net value added at factor cost, which is equal to the net domestic product at factor cost, is Rs. 60 crores when indirect taxes are subtracted from the net domestic product at factor cost, which is Rs. 67 crores. According to the sum of items 1 through 4 of 2, net value added at factor cost is the same as net domestic product at factor cost. Gross value added, often known as GDP, is calculated by combining indirect taxes and depreciation and equals Rs 75 crores.

Gross national income is obtained by combining net foreign income with the total value added. Assume you have a net foreign income of Rs. 5 crores. The gross national income then equals 80 crores of rupees, as in 3.

### **Its Relevance:**

Because it eliminates the issue of double counting by removing the value of intermediary items, the value-added technique of assessing national income is more realistic than the product and revenue methods. The significance of intermediary goods in the national economy is therefore established using this technique. Second, the contribution of each production sector to the value of the GNP may be determined by looking at the national income accounts pertaining to value added. For example, it may reveal if agriculture is contributing more this year than in some past years, whether manufacturing is contributing less, or whether the tertiary sector is contributing more. Third, this approach is very helpful as "it provides a means of checking the GNP estimates obtained by summing the various types of commodity purchases."

### **It's Challenges:**

However, there are certain public services like the police, military, health, and education that cannot be precisely evaluated in monetary terms, making it impossible to determine value contributed. Similarly, it is difficult to determine the contribution that revenues from irrigation and electricity projects make to value added.

### **Market Prices, G.GNP:**

The Gross National Product at Market Prices is calculated by dividing the total output generated in a year by the market prices that were in effect in that nation during that year. GNP, thus, is defined as the gross domestic product (GDP) at market prices, which also includes net foreign income. It covers the total gross production of every good and service included under GNP from to. GDP at Market Prices plus Net Income from Foreign Sources equals GNP at Market Prices.



### At Factor Cost, H.GNP

The GNP at factor cost is the total of the revenue generated by and accruing to the different factors of production over the course of a year in a nation. It covers everything included under the income method of calculating GNP, less indirect taxes. Indirect taxes imposed by the government on items that drive up their costs are always included in GNP at market prices. However, GNP at factor cost is the amount of money that the only factors of production get in exchange for their labor. It is the manufacturing cost.

GNP at market prices thus always exceeds GNP at factor cost. Therefore, we subtract indirect taxes at market prices from GNP in order to arrive at GNP at factor cost. Once again, it often occurs that a producer's cost of production is greater than the price of a comparable item on the market. The government provides these producers with financial assistance in the form of a subsidy that is equivalent to the price differential between the market price and the cost of producing the product. As a consequence, the manufacturer pays less for the good and it now costs the same as other identical goods on the market.

For instance, if the market price of a kilogram of rice is Rs. 3, the cost to the growers in certain regions is Rs. 3.50. They get a 50 paise per kilogram subsidy from the government to help them cover their manufacturing costs. Subsidies are therefore applied to GNP at market prices in order to arrive at GNP at factor cost [13], [14].

### CONCLUSION

In conclusion, National income is an important indicator of a nation's economic success and is used extensively in economic research and policymaking. Policymakers and analysts may learn more about economic activity, income distribution, and general well-being by knowing the various assessment methodologies. To get a full picture of a country's economic health and growth, it is crucial to combine national income statistics with other metrics. In addition, there are constraints and difficulties in precisely estimating national income. It draws attention to problems that may affect the accuracy and comparability of national income statistics, including informal economic activity, underreporting, data collecting techniques, and the changing structure of the economy. To increase the precision and applicability of national income statistics, continuing work is being done to better data collecting procedures, fill up data gaps, and take into account shifting economic structures.

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## CHAPTER 22

### AN ECONOMIC INDICATOR: NET NATIONAL PRODUCT

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#### ABSTRACT:

Net National Product (NNP) is a key economic indicator that measures the value of a nation's output after accounting for depreciation and adjusting for net income from abroad. This abstract explores the concept of NNP, its calculation, and its significance in assessing a country's economic well-being. The abstract begins by defining NNP as the total value of goods and services produced by a country's residents over a specific period, minus depreciation and adjusted for net income from abroad. NNP provides a more accurate measure of a nation's economic output than Gross National Product (GNP) by accounting for the wear and tear of capital goods over time and considering the income earned from foreign sources. Depreciation or capital consumption allowance refers to the whole process. We subtract depreciation from GNP to arrive at NNP. When anything is described as "net," depreciation-related portions of the overall production are excluded. NNP therefore equals  $GNP - \text{Depreciation}$ .

#### KEYWORDS:

Capital Consumption, Depreciation, Disposable Income, Gross National Product (Gnp), National Income, Net Investment.

#### INTRODUCTION

The value of the whole production of products for consumption and investments is included in NNP. But a certain amount of fixed capital is used throughout the producing process. Some fixed equipment degrades with time, while other parts are broken or destroyed or become outdated due to advancements in technology [1]–[3]. Net The net worth of finished products and services assessed at market prices over the course of a year in a nation is known as the national product at market prices. Depreciation is subtracted from GNP at market prices to yield NNP at market prices. NNP at Market Prices hence equals  $GNP \text{ at Market Prices} - \text{depreciation}$ . Net The net production measured at factor prices is the national product at cost. It comprises earnings from involvement in the production process by components of production, such as wages and salaries, rents, profits, etc. National Income is another name for it.

Indirect taxes and subsidies are subtracted from NNP at market prices and added to NNP at factor cost in order to arrive at this figure, which is different from NNP at market prices. Thus,  $GNP \text{ at Market Prices} - \text{Depreciation} - \text{Indirect taxes} + \text{Subsidies} = NNP \text{ at Factor Cost} = NNP \text{ at Market Prices} - \text{Indirect taxes} + \text{Subsidies}$ . Because indirect taxes are larger than government subsidies, NNP at market pricing is often higher than NNP at factor cost. However, when government subsidies surpass indirect taxes, NNP at market prices may be lower than NNP at factor cost.

## Domestic Income

Domestic income or domestic product refers to the revenue produced by factors of production using domestic resources. Domestic earnings consist of:

Payroll expenses, rent, including alleged housing costs, interest, dividends, undistributed corporate gains, including surpluses from state enterprises, mixed earnings, including direct taxes and the revenues of unincorporated businesses, independent contractors, partnerships, etc. Domestic income may alternatively be expressed as: Domestic Income = National Income - Net revenue generated overseas because domestic income excludes revenue generated overseas. Therefore, the net income received from overseas is the difference between domestic income and national income. National income is obtained by combining net income gained abroad with domestic income, i.e., National Income = Domestic Income + Net Income gained Abroad [4]–[6].

However, the net foreign revenue received by the country may be either positive or negative. Net foreign income is positive if exports outpace imports. In this instance, national revenue exceeds personal income. However, when imports outpace exports, net foreign income is negative and domestic income exceeds national revenue.

## Private Earnings

Private income includes both the retained profits of businesses and money received by private persons from any source, whether it be productive or not. By adding specific amounts and subtracting certain amounts, it may be calculated from NNP at Factor Cost.

Transfer payments like pensions, unemployment benefits, illness and other social security benefits, gifts and remittances from overseas, unanticipated winnings from lotteries or horse racing, and interest on the nation's debt are among the increases. The deductions include employee contributions to social security programs like provident funds, life insurance, etc. as well as revenue from government agencies and surpluses from public enterprises. Private income is thus equal to national income plus transfer payments, interest on the public debt, Social Security, and the profits and surpluses of public enterprises.

## Individual Income

Personal income is the entire income a country's citizens earn from all sources within a given year, before direct taxes are paid. Personal income and national income are never equal since personal income includes transfer payments whereas national income does not. By subtracting corporate earnings that have not been dispersed, profit taxes, and employee payments to social security programs, personal income is calculated from national income. These three factors are not included in national income since they affect people.

However, the national income also includes transfers from businesses and governments, as well as transfers from overseas in the form of gifts and remittances, windfall profits, and interest on the nation's public debt, all of which are sources of income for private citizens. Personal Income is thus equal to National Income minus Undistributed Corporate Profits minus Profit Taxes minus Social Security Contribution minus Transfer Payments minus Interest on Public Debt.

Private income is different from personal income in that the former is lower since it doesn't include undivided corporate earnings. Personal income is thus calculated as Private Income minus Undistributed Corporate Profits minus Profit Taxes.

### **Discretionary Income**

Personal disposable income, often known as disposable income, is the real money that individuals and families have access to for spending. Since personal income is earned prior to the actual payment of direct taxes, the whole amount cannot be used for consumption. Direct taxes are thus subtracted from personal income in order to generate disposable income. Personal Income - Direct Taxes equals Disposable Income, therefore.

However, not all of the disposable income is used for spending; some of it is saved. As a result, savings and consumption are the two categories into which disposable income is separated. Thus, disposable income is equal to savings plus consumption expenditure. In order to subtract disposable income from national income, we add transfer payments and net income from abroad to it after subtracting indirect taxes plus subsidies, direct taxes on individuals and businesses, social security payments, undistributed corporate profits, and taxes on personal and company income.

So, disposable income is equal to the sum of national income, business savings, and indirect taxes.

+ Subsidies, Direct Taxes on Persons, Direct Taxes on Businesses, Social Security Benefits, Transfer Payments, and Net Income from Abroad.

### **Real Income,**

Real income is national income calculated using the average price level of a given year as the basis. The value of products and services produced, represented in terms of money at current prices, is known as national income. However, it does not reflect the true health of the economy.

It's conceivable that this year's net national product of goods and services was lower than last year's, but this year's NNP might be greater due to a rise in prices. On the other hand, it is also conceivable that NNP climbed but prices decreased, giving the impression that national income is lower than it was the previous year. The national income does not accurately reflect either situation's reality. The idea of actual income has been developed in order to correct such an error.

## **DISCUSSION**

A certain year is chosen as the base year when the general price level is neither too high nor too low, and the price level for that year is assumed to be 100 in order to determine the actual income of a nation. Now, the prices of the base year are used to analyze the overall level of prices in the given year for which the national income is to be calculated. The formula below is used for this purpose. Real NNP is determined by dividing the current-year NNP by the base-year index.

### **Index**

Assume that the base year is 1990–1991 and that the national income in 1999–2000 is Rs.20,000 crores, and this year's index number is 250. As a result, the Real National Income for the years 1999–2000 will be equal to  $20000 \times 100/250$ , or Rs. 8000 crores. The term "national income at constant prices" also applies to this.

### **Q. Per Capita Earnings**

The term "per capita income" refers to the average annual income of a nation's population. The measuring of revenue at both current and constant prices is included in this idea. For

instance, the national revenue of a country is divided by the population of that country in 2001 to get the per capita income for that year, at current prices.

1. 2001 Per Capita Income equals 2001 National Income
2. 2001 population
3. Similar to this, the Real Per Capita Income is calculated using the same exact method.
4. Real National Income in 2001 equals Real Per Capita Income in 2001

### **2001 population**

We can learn about the average income and living standards of the population thanks to this idea. However, it is not particularly trustworthy since the income obtained by the average person is lower than the per capita income because of the uneven distribution of national revenue that occurs in every country.

### **National Income Analysis's Impact**

The relevance of the national income statistics is as follows:

1. For the Economy - Information on national income is crucial to a nation's economy. The statistics on national income are now seen as social accounts, which are economic accounts of the economy. These are the terms used to describe net national income and net national expenditure, which are eventually equal. Social accounting explains how the sums of a country's revenue, production, and product are produced from the earnings of various people, the output of industries, and the exchanges of goods and services between nations. Each specific account may be used to confirm the accuracy of any other account since their key components are interrelated [7]–[9].

2. National Policies- National income statistics serve as the foundation for national policies like employment policy because they let us know how industrial production, investment, and savings are changing and allow us to take the appropriate actions to steer the economy in the correct direction.

3. Economic Planning - National statistics are very important in today's planning world. Data about a nation's gross income, production, saving, and consumption from many sources must be readily accessible in order to conduct economic planning. Planning is not feasible without them.

4. Economic Models - Economists propose long-term investment models or long-term economic models, both of which extensively use national income data.

5. Research: Economics researchers also utilize the statistics on national income. They utilize a variety of statistics from social accounts, including information on the nation's input, output, income, savings, consumption, investment, employment, etc.

6. Per Capita Income: Data on national income are important because they show a country's per capita income, which is a good indicator of that country's economic health. The economic well-being of the nation increases with per capita income.

7. Income Distribution: Using national income data, we can learn how the country's revenue is distributed. We learn about the differences in the earnings of various groups in society through the statistics on wages, rent, interest, and profits. The distribution of income by region is also made clear.

The government can only take action to eliminate income distribution disparities and to bring about regional balance on the basis of these. The choices to charge additional taxes and boost

public spending to address these personal and regional inequalities also depend on national income figures. The dollar worth of all products and services generated in a nation over the course of a year is known as national income. The two primary statistics in national accounts are gross domestic product and gross national income. Both of these are significant economic indicators that may be used to analyze the overall state of an economy. The former is especially helpful for reflecting the level of output, while the latter is beneficial for determining the total household income. GDP is a measure of the total value of output of all resident producing units of an economy in a certain time, before subtracting the expenditure of fixed capital. Statistics on GDP are collected starting in 1961, whereas those on GNI start in 1993. A country's per capita GDP is calculated by dividing its annual total GDP by its population during that same year. We may do comparison studies and learn about the economic gains made thanks to national income. The three ways used to calculate national income are the product method, income method, and expenditure method. The Central Statistical Organization of India calculates and publishes national income. Some of the key ideas connected to national income are Net National Product, Per Capita Income, etc.

### **National Income Structure Measurement**

National income may be considered as an amalgamation of several component flows for the purposes of measurement and analysis. The Gross National Product at market prices is the most complete and well-known indicator of total revenue. Gross emphasizes that no deduction for depreciation has been made and that no provision has been made for capital consumption. Net means that depreciation has already been taken into account or that a provision has already been made for capital consumption. The word "national" indicates that the entire revenue received by a country's typical citizens as a result of their involvement in global production during the current year is what is being considered in the aggregate. A country's internal territory, which has a defined geographical limit, may also be quantified in terms of its total production or revenue. "Domestic product" is the resultant metric. While the valuation of the national product at factor cost is a measure of the overall amount gained by the factors of production for their contribution to the final output, the valuation of the national product at market prices represents the total amount actually paid by the ultimate purchasers.

GNP at market price is calculated by adding indirect taxes, subsidies, and GNP at factor cost. NNP at market price is equal to NNP at factor cost plus any indirect taxes and subsidies. Regardless of whether it belongs to the citizens of that country or not, we sometimes need to calculate the total revenue created by output inside the borders of an economy. Such money is found as "gross domestic product," which is a measure of national revenue.

### **GDP is equal to GNP less foreign factor income.**

Net Factor Income from Abroad is equal to Factor Income Paid Abroad Minus Factor Income Received from Abroad. The NNP is a different but similar way to quantify national income. It only has one distinction above GNP. Final goods make up GNP. It comprises net exports, government spending on goods and services, gross investment, and consumption of products.

### **Depreciation GNP = NNP**

While GNP covers gross domestic private investment, NNP includes net domestic private investment. By deducting from the national income, the forms of income that are earned but not received and adding the types that are received but not presently earned, personal income is determined.

NNP @ Factor Cost "Undistributed Profits" Corporate Taxes = Personal Income

### **Payment Transfers**

The amount of money that is really left over for people to spend whatever they see fit is known as disposable income. It varies from personal income in terms of how much direct taxes people pay.

### **Personal income equals disposable income Personal taxation**

To determine the precise amount that is added to the value of the final product at each step of manufacturing, the idea of value added is a valuable tool. Value added is the difference between an organization's output's value and its overall expenditures for the raw materials and intermediary goods it bought from other businesses [10]–[12].

### **Assessment Methods for National Income**

The entire monetary worth of the commodities and services a nation produces in a given time period is its national income. This time frame often lasts for a year. Three perspectives, namely the production, income, and spending views, may be used to define national income. These perspectives lead to three alternative approaches to estimate national income, which are listed in -1:

When calculating national income, an economy is seen from the following three perspectives:

1. An economy's production units are divided into primary, secondary, and tertiary sectors. National income is calculated using the value-added approach based on this categorization.
2. The economy is also seen as a collection of people and families that own various types of production-related inputs. This combination provides the foundation for the income technique, which is used to calculate national income.
3. The economy is seen as a group of things utilized for spending, saving, and investing. The final expenditure approach is used to calculate national income based on this collection.

### **CONCLUSION**

In conclusion, an important economic statistic called Net National Product (NNP) corrects Gross National Product (GNP) for depreciation and net income from overseas. It helps determine a country's economic production more precisely and evaluates its financial health. Policymakers, analysts, and academics may learn important information about the viability of economic development, income distribution, and the general state of a country's economy by comprehending the computation and constraints of NNP. The connection between NNP and other economic indicators is another factor. For a thorough understanding of a country's economic performance, NNP may be used in combination with indicators like Gross Domestic Product (GDP), Disposable Personal Income (DPI), and National Income. When these indicators are examined together, they provide information on output, revenue creation, and general economic health.

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## CHAPTER 23

### AN ANALYSIS OF VALUE-ADDED METHOD

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#### ABSTRACT:

The value-added method is a crucial approach used in national income accounting to measure the contribution of each sector of the economy to the overall Gross Domestic Product (GDP). This abstract explores the concept of the value-added method, its calculation, and its significance in assessing economic performance and sectoral contributions. The abstract begins by explaining the value-added method as a measure of economic output that focuses on the value added by each stage of production within an industry or sector. It emphasizes the importance of this method in capturing the value created at each stage of production, thereby avoiding double-counting and providing a more accurate representation of economic activity. The value of production at market prices less intermediary consumption is referred to as GVAMP. The amount of output generated by a production unit over the course of a specific time period may be multiplied by the price per unit to get the value of the output. For instance, if a manufacturing unit produces 10,000 units per year at a cost of Rs. 10, the output's total value is \$100,000.

#### KEYWORDS:

Economic Output, Gross Value Added, Intermediate Inputs, National Accounts, Output Approach, Value Chain.

#### INTRODUCTION

The value-added approach, often known as the net output method, is used to quantify how much a country's production units contribute to GDPmp. In other words, the value-added technique calculates the value that each sector contributes to an economy. Gross value added at market price, net value added at market price, and net value added at factor cost must first be determined in order to compute national income using the value-added technique. You may compute them as follows: The following formula is used to compute output: Total Sales + Closing Stock - Opening Stock equals the value of the production. Where, closing Stock - Opening Stock equals the net change in stock. Closing stock, which serves as the opening stock for the new year, consists of the value of unsold production from the previous year. Unsold production for the current year may thus be determined by subtracting the initial stock from the ending stock. The value of non-durable products and services that a production unit purchases from another production unit over a certain period of time is referred to as intermediate consumption, on the other hand. These products and services were either consumed at that time or were sold again.

**So, the following formula may be used to determine GVAMP:**

GVAMP stands for Value of Intermediate Output Consumption.

The term gross in GVAMP denotes that depreciation is included.

NVAmp: GVAmp does not include depreciation. NVAmp is, in other words, GVAmp less depreciation.

NVAfc: When determining national income using the value-added technique, the following precautions should be taken into account:

i. Refraining from double counting production, which inflates national revenue. As an example, a farmer produces 5 kg of wheat that is worth Rs. 10,000. He offers this wheat for sale to a baker, who will use it to make bread. For an additional Rs. 20,000, the baker sells these loaves to a grocery store. Finally, the grocer charges Rs. 25,000 to clients for these loaves of bread.

Thus, Rs. 55,000 would represent the combined output of the farmer, baker, and grocery store. This cannot be regarded as the value of the real physical product, however. This is so that it accounts for the three times the value of wheat and the two times the value of bread. There are two ways to prevent duplicate counting. First, instead of taking the entire production, take the total value contributed.

The value contributed by the farmer in the aforementioned case is zero, that of the baker is 10,000, and that of the grocer is 15,000 rupees. The total value added is thus Rs. 25,000. The second is to exclusively consider the worth of finished goods. Final goods are ones that are bought for investment and consumption. The final product in the case above is bread, which is offered to customers for Rs. 25,000. The total production is thus Rs. 25,000.

Calculating the total output by include output generated by producing units for self-consumption. Whether or not a product is offered on the market, all manufacturing should be considered. Additionally, the worth of free services offered by public and nonprofit organizations should be considered. The national income will be underestimated if they are not taken into account. Excluding used-item sales from the calculation. This is so that when these items are sold for the first time, they are already tallied. Only freshly created commodities are counted in the overall production. However, the value of the services rendered by agents in the sale of used products is new production and should be taken into account when calculating total output.

## DISCUSSION

### Income Method

All revenue earned to the primary elements of production utilized to produce the nation's gross domestic product is calculated using the income technique, often known as the factor income method. Land, labor, capital, and organization are the traditional four components of production. Rent, employee salary, interest payments, and profit are the four key payments as a result. Mixed income is a different kind of factor payment [1]–[3].

The following is an explanation of these factor payments: Rent is the sum that a renter must pay the landlord in cash or in kind in exchange for the use of the property. The word "rent" in national revenue accounting only refers to real estate and excludes other items like equipment. In addition to rent, royalty—defined as the sum paid to the landlord for giving the lease rights to assets that may be produced from land, such as coal and natural gas—is also included in national income. Refer to the payment made to workers in return for the labor they provide in the production of products and services.

The two components of an employee's compensation are as follows: Wages and salaries: Include compensation paid to workers on a daily, weekly, or monthly basis in the form of

cash. It includes perks like transportation expenses, bonuses, commissions, rent-free housing, low-interest loans, and medical and educational costs. Employer compensation paid in the form of insurance, pensions, and provident funds is referred to as social security contribution.

**Interest:** The sum that the producing unit must pay in order to use the borrowed funds. In general, manufacturing units borrow money to finance investments, whereas consumers borrow money to cover consumption costs. Interest payments made by manufacturing units are the only ones allowed under national income accounting. The interest is paid to producing units in the form of imputed interest if they employ their own funds.

**Profits:** The amount of money a manufacturing unit owner receives as a result of his or her business skills. The producing unit divides the revenues among three heads. The first is through paying corporate profit tax, sometimes known as income tax. The second is through giving shareholders dividends. Undistributed profits, another name for retained earnings, comes in third. Profit is thus the total of retained profits, dividends, and corporate profit tax.

**Mixed income:** This term describes income from agricultural businesses, solo proprietorships, and other professions like law and medicine. Owners play the roles of an entrepreneur, financier, employee, and landlord in various occupations. Mixed income also accounts for earnings from multiple sources, such as wages, rentals from personal property, and interest on personal funds.

Rent + Wages + Interest + Profit + Mixed Income = National Income Let's now go through the procedures for calculating national income using the income technique.

#### **Final Method of Expenditure:**

Measurement of final expenditures made by production units for creating final products and services within an economic region during a certain time period is done using the final expenditure technique, also known as the final product method. These costs are related to both consumption and investment. The value-added technique is in opposition to this method. This is due to the fact that the spending technique determines national income from the purchasing side, while the value-added method estimates national revenue from the sales side. Following are some examples of how consumption spending and investment expenditure are separated in an economy's final expenditure:

#### **Spending on consumption includes the following items:**

Spending on private non-profit organizations that provide services to households as well as spending by households are included in this category. As a result, PFCE is split into two components: PNPISH Final Consumption Expenditure and Household's Final Consumption Expenditure. The term "household final consumption expenditures," or "HFCE," refers to household spending on final products and services to meet their needs. In addition to real monetary outlays, HFCE also takes into account the imputed value of products and services acquired without monetary outlays, such as self-consumed output and gifts received in kind. Non-resident expenditure is not accounted for in HFCE. However, HFCE includes the costs that citizens of the country spend when traveling abroad. Imports are thus a component of HFCE. Additionally, HFCE does not include revenues from the sale of used items, garbage, or scraps.

#### **With the use of the following formula, HFCE may be calculated:**

HFCE is calculated as follows: Spending on consumption by residents - Sales of used items, trash, and scraps - Imputed value of consumer goods and services received in kind by

inhabitants PNPISH, on the other hand, takes into account the costs paid by private charitable institutions, labor unions, and religious organizations that manufacture products and services that are provided to customers for free or at a little cost.

PNPISH-FCE stands for Imputed Value of Produced Goods and Services. Sales of commodities and non-commodities Sales of commodities mean sales at prices that cover costs, while sales of non-commodities suggest sales at prices that do not.

Government final consumption expenditures are those that the government incurs to provide people with free products and services. GFCE is equivalent to production value less sales.

The following are these steps:

1. Dividing the production processes into the primary, secondary, and tertiary sectors.
2. Calculating each industry's ultimate spending on products and services. These costs are known as PFCE, GFCE, and GDCE. Net exports, which are calculated as exports minus imports, are also included in the expenditure.
3. Calculating GDPmp by adding the final expenses. GDPmp is equal to PFCE, GFCE, GDCE, and Net Exports.
4. Estimating net indirect taxes and fixed capital consumption to determine NDPfc.

Net Indirect Taxes - Consumption of Fixed Capital - GDPmp = NDPfc

To calculate national income, add NFIA.  $NNPfc = NDPfc + NFIA$

When estimating national income using the final expenditure approach, the following safety measures should be taken into account: Including the imputed expenditure incurred for producing goods for self-consumption, excluding the expenditure on transfer payments, and excluding the expenditure on financial assets, such as shares and debentures. Excluding the intermediate expenditure because it is already included in the final expenditure excluding the cost of used products, Figure 1 displays the national income calculated using the following three methods: Value Added Technique Income Approach Method of Final Expenditures

### **Product / Process**

This technique determines the total value of finished products and services produced in a nation over the course of a year using market pricing. Data from all productive activities, including agricultural products, wood from forests, minerals from mines, goods produced by industries, and the contributions to production made by transport, communications, insurance companies, lawyers, doctors, and teachers, among others, are gathered and valued at market prices in order to determine the GNP. The intermediate items and services are not included; only the final goods and services are.

### **Problems Or Difficulties with Measuring National Income**

Accurately determining a country's national income is quite challenging.

The conceptual and statistical challenges that come with national income accounting are many. 1. Problems with definition, i.e., what should be included in the National Income? is the first of six significant challenges encountered in measuring national income. Although it would be ideal to include all commodities and services generated during the year, certain services, such as those provided by housewives, are not measured in terms of money.

### **Lack of sufficient data**

The challenge of estimating national income is made more challenging and complicated by the absence of reliable statistical data. **Lack of Access to Reliable Information** The majority of producers do not maintain regular accounts and are unaware of the amount and worth of their work, which is one of the causes of illiteracy. **technique Selection:** Making a technique choice for the national income calculation is a crucial step. Results are subpar when the improper approach is used. **Lack of Differentiation in Economic Functioning:** Occupational specialization is still insufficient in all of the nations, which results in a lack of differentiation in economic activity. A person's income may come from owning a farm and from physical labor in the industrial sector during the slow season. **Double Counting:** When estimating national income, double counting is a significant issue. Because certain items are presently consumed while being utilized to create other things, if the value of all goods and services were added together, the total would surpass the country's production. Calculating just the value of those items and services that are used for ultimate consumption is the best strategy to prevent this problem.

The measurement of national income using the income method, product method, and expenditure method involves several additional conceptual and statistical issues.

In light of the three techniques, we discuss each of them separately:

### **Issues with the Income Method**

When calculating national income using the income approach, the following issues occur:

#### **1. Homes inhabited by the owner**

When someone leases out a home to another person, they generate rental revenue; but, if that person lives in the home themselves, their income is included as part of national income. The owner-occupied home's services are included as part of national income just as if the owner were renting out the property to himself.

The amount of imputed rent is calculated as the maximum rent for which the owner-occupied home might have been leased for the purposes of national income accounting. The amount that would have accrued to the home owner after all costs are subtracted is used to compute the imputed net rent.

**2. Self-employed People:** "The income of self-employed people presents another issue. Finding out the many contributions that the owner himself supplied in their situation is really challenging. He can be investing money, land, labor, and his skills in the company. However, it is impossible to calculate the value of each manufacturing input element. As a result, he receives a variety of revenue, including interest, rent, wages, and profits from his factoring services. The national income accounts for this.

**3. Goods for Self-use:** In developing nations like India, farmers retain a significant amount of the food and other products they produce on the farm for their own use. The issue is whether or not the portion of the product that isn't sold on the market may be included toward national revenue. The farmer would have to use his cash earnings to purchase the items he needs for self-consumption if he sold all of his crops at the market. Instead, if he retains any of the food for his own use, it has monetary worth and must be included into national revenue.

#### **4. Payments in Kind for Wages and Salaries:**

Regarding wages and salaries given to workers in the form of free food, accommodation, clothing, and other perks, there is another issue. Employer gifts are included as part of national income. This is due to the fact that the workers would have gotten money revenue from the business equivalent to the value of free meals, housing, etc. and used that amount to purchase those items.

### **Issues with the Product Method**

The calculation of national income using the product approach encounters the following issues:

#### **1. Housewife services**

A significant challenge is presented when estimating the value of the housewife's unpaid labor in the national income. A housewife provides several helpful services, such as food preparation, serving, tailoring, mending, washing, cleaning, raising children, etc.

She does not get payment for them, nor are her services included toward national revenue. These compensated servant services are accounted for in national income. The national income is consequently understated by leaving out a housewife's services. The love and devotion a housewife put into doing her domestic labor cannot be quantified in monetary terms, which is why her services are excluded from national revenue. Because of this, when a company owner weds his woman secretary, her services are not included against national revenue after she ceases working as a secretary and starts raising a family. The job of a teacher who instructs his own children is likewise excluded from the calculation of national income. For the same reason as above, a variety of commodities and services, such as hobbies like painting, singing, and dancing, are challenging to value financially.

#### **Intermediate and Final items**

Failure to adequately discriminate between intermediate and final items is the biggest challenge in the estimation of national income by product approach. Only final products are included in national income estimates, but it is always possible to include an item or service more than once. Due to the issue of double counting, the national income is overestimated as a result.

#### **Second-hand Goods and Assets**

The sale and acquisition of second-hand goods and assets provide another issue. We discover that transactions for used scooters, cars, homes, machines, etc. happen every day throughout the nation. However, since they were included in the national product in the year they were made, they are not included in the national income. Every time they are purchased and sold, if they were included, the national revenue would rise dramatically. Similarly, since they were already included in national revenue when a company was founded, the sale and purchase of old stocks, shares, and bonds of corporations is not included as part of national income. Now they represent claims and are just financial transactions [4]–[6]. However, the commission or fees that brokers charge for the repurchase and sales of old shares, bonds, homes, cars, scooters, and other items are included against national income. Because of this, they get compensated for their fruitful services throughout the year.

#### **Unlawful Operations**

Income from unlawful operations such as smuggling, illegal wine extraction, and gambling is excluded from the calculation of national income. Even if these activities are valuable and meet people's needs, they are not seen as productive from a societal standpoint. However, in

nations where gambling is permitted, such as Nepal and Monaco, it is included as part of the national revenue. In a similar vein, horse racing is permitted in England and contributes to national revenue.

### **Consumers' Service**

Several people in society provide services to customers without creating anything physical. They include musicians, attorneys, barbers, physicians, singers, instructors, dancers, actors, and more. Since they don't generate physical goods, there is an issue with include their services in national income. However, since they fulfill human needs and are compensated for their services, their output is included as a final good for measuring national revenue.

### **Capital Gains**

The issue with capital gains also exists. When a capital assetsuch as a home, another piece of property, stocks or shares, etc.is sold for more money than it cost to buy it, capital gains are generated. Since capital gains are not a result of ongoing economic activity, they are not included in national income. Similarly, while measuring national income, capital losses are not taken into account.

### **Inventory Changes**

Whether positive or negative, all inventory changes are accounted for in national income. The process entails taking adjustments to physical inventory units for the year valued at the typical current prices paid for them.

Changes in inventory may have a positive or negative value that is added to or deducted from the company's current output. Keep in mind that while estimating national income, inventories change rather than total inventories for the year are taken into consideration.

### **Depreciation**

To calculate NNP, depreciation is subtracted from GNP. Depreciation thereby reduces national income. However, the challenge is in determining the present depreciated worth of, let's say, a machine with a thirty-year lifespan. Businesses determine the depreciation value based on the machine's initial cost and estimated lifespan. Because machine costs fluctuate virtually year, this does not provide a solution.

### **Price Variations**

The value of finished products and services at recent market prices is used to calculate national income using the product approach. However, prices change over time. Both climb and fall. Even though national output may have decreased, as prices rise, so does the national revenue. On the other hand, despite the fact that national output may have grown, if the price level declines, so does the national revenue. Therefore, price fluctuations are a poor indicator of national income. To address this issue, economists use the consumer price index to determine the actual national income at a constant price level [7]–[10].

## **CONCLUSION**

In conclusion, in national income accounting, the value-added technique is a useful instrument that offers insights into economic performance and industry contributions. It provides a more accurate depiction of economic activity and enables a thorough study of sectoral contributions to GDP by capturing the value contributed at each step of production. Policymakers, researchers, and analysts may establish policies that promote economic growth and development by comprehending and using the value-added technique. Additionally, the



value-added method's drawbacks. It draws attention to problems with data collecting accuracy, the inclusion of unofficial and covert economic activity, and the difficulties of measuring value-added for certain industries. To address these constraints, continuing work is being done to better data collection, expand the coverage of economic activities, and improve estimating methods.

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## CHAPTER 24

# NATIONAL INCOME ACCOUNTING: A COMPREHENSIVE ANALYSIS

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### ABSTRACT:

The expenditure method is a widely used approach in national income accounting to calculate the Gross Domestic Product (GDP) by summing up the total spending on goods and services within an economy. However, this method is not without its limitations and problems. This abstract explores the problems associated with the expenditure method and their implications for measuring economic activity and assessing economic performance. The abstract begins by explaining the expenditure method as an approach that measures GDP by summing up the expenditures made by households, businesses, government, and foreign entities on final goods and services. It highlights the importance of this method in capturing the aggregate demand and economic activity within a country. Only they would be included toward national revenue if they were considered final items. On the other hand, they wouldn't be counted toward national revenue if they were employed as intermediary items for further manufacture. On this subject, there are numerous opposing viewpoints.

### KEYWORDS:

Double Counting, Expenditure Classification, External Trade, Hidden Economy, Incomplete Data, Inflation, Leisure and Non-Market Activities.

### INTRODUCTION

When calculating national income using the expenditure approach, the following issues occur: The issue of assessing government services emerges when computing national income using the expenditure approach. The government offers a variety of services, including administrative, legal, and police/military services. Should government spending be accounted for in national income? According to one theory, if the people's lives, property, and liberties are protected by the police, military, legal, and administrative services, they are considered as final products and hence contribute to national revenue. They are similar to intermediate commodities that do not enter into national revenue if they contribute to the peaceful and secure operation of the manufacturing process [1], [2]. It is really impossible to distinguish between services that protect individuals and those that safeguard productive processes. All of these services are thus seen as final products and are accounted for in national revenue.

### Transfer Payments

The inclusion of transfer payments in national income presents a challenge. Pensions, unemployment benefits, subsidies, interest on the national debt, and other types of payments are made by the government. Although they are government expenses, since they are paid without improving the current year's production process, they are not included in the national revenue. For instance, the government provides pensions and unemployment benefits to

people without requiring them to do any useful labor throughout the course of the year. The market price of the goods is often lowered via subsidies. Because the government gives money to people and businesses based on their prior savings and does not require them to do any useful labor, interest on national or public debt is also seen as a transfer payment.

### **Durable-use Consumers' Goods**

Consumer items for long-term usage are likewise problematic. Despite being purchased in a single year, durable consumer products like scooters, vehicles, fans, TVs, furniture, etc. are utilized for a number of years. In the estimates of national income, should they be categorized as consumption or investment expenditures? Due to the inability to calculate their used-up worth for future years, the cost of them is considered as final consumption expenditure. There is, however, one exception. The cost of a new home is seen as an investment, not as a consumption, expense. This is so that the property owner may invest in a new home using the rental revenue or imputed rent that they get. However, a household's purchase of an automobile is consumer spending. However, if he spends the money on utilizing it as a taxi, it is considered an investment expense.

**Public Expenditure:** The government invests money on things like roads, canals, buildings, irrigation, parks, street lighting, museums, education, public health, and administrative and judicial services. The challenge is determining which expenditures are for consumption and which are for investment. Spending on civil and judicial administration, education, museums, public health, police, parks, and street lighting is considered a consumption expense. Investment expenditures include costs for constructing, building maintenance, and repair. Defense-related costs, however, are seen as consumption expenditures since they are used up during a conflict when they are lost or get dated. All of these costs, including the pay of military personnel, are, nevertheless, accounted for in national income [3], [4].

### **Applications Of National Income Data**

For a variety of reasons, modern governments go to remarkable lengths to gather statistics on national income. All economic activity should aim to increase the level of the national income. The availability of commodities and services for the population's consumption determines a nation's economic well-being.

The primary applications of national income data are as follows:

1. Data on national income are used to gauge the community's economic well-being. Economic wellbeing is higher if national income is higher, other things being equal.
2. We can determine a community's level of life based on its national income.
3. The national income statistics are also helpful in determining how quickly a nation's economy is developing. They will at least show us the patterns even if they do not measure development accurately.
4. Studying national income data may help identify a nation's economic problems and provide solutions.
5. The community's capacity for saving and investing is evaluated using statistics on national income. The level of national income ultimately determines the pace of saving and investment.
6. To get a sense of the economic circumstances that prevailed throughout each time period, we might compare two periods of time inside the nation, or inter-temporal comparisons.

7. By using the national income statistics of two countries, we may also compare the economies of different nations. This will enable us to assess our position among the economies of the globe.
8. We can evaluate an economy's intersectoral growth using statistics on national income. The planning of the growth of the different industries may benefit from this knowledge.
9. The statistics on national income also provide a sound foundation for predicting future economic developments. This will help a nation predict the likely outcomes of a certain economic program.

The national income estimates may also be used to provide insight on the national income distribution between classes. The many members of the community's welfare standards may be assessed. All contemporary countries strive to lessen income disparities, and this is impossible without the help of national income statistics. According to Samuelson, "By means of statistics of national income, we can chart the movements of a country from depression to prosperity, its steady long-term rate of economic growth and development, and finally, its material standard of living in comparison with other nations."

### **National Income Accounts' limitations**

The importance and even need of the national income statistics for a contemporary society cannot be disputed. However, we must be careful not to give them an excessive amount of significance. They cannot be viewed as 100 percent accurate or as an unfailing guide to economic policy.

#### **They are constrained by the following issues:**

Despite the effort and expenditure put into their preparation, they are still simply imprecise estimates. As a result, we must utilize them extremely carefully. Instead of measuring actual income, the national income measures money earnings. A whole number of additional uncertainties will be produced by any effort to inflate or deflate money revenues in order to determine actual income. Comparisons between two different historical eras in the nation are not conceivable on an intertemporal scale. This is because many modifications must have taken place in the meantime to make the comparison worthless.

Comparing different nations does not provide particularly useful results either. This is because the two nations' economies, as well as the types of commodities and services that have been included in the computation, may vary significantly. Due to a significant amount of approximation in their derivation, the national income figures do not warrant any projection. They do not allow us to predict whether a certain policy will result in the anticipated outcomes.

### **Development of Skills**

#### **Systematic decision-making approach**

You may add the crucial component that produces a sound judgment with the aid of a rational and systematic decision-making process. By adopting an ordered strategy, you're less likely to overlook crucial considerations and you may improve the strategy to make selections that are increasingly better.

Making a wise decision requires following these six steps:

1. Establish a positive atmosphere.
2. Create a quality alternative.

3. Investigate these options.
4. Pick the most suitable substitute.
5. Review your choice.

Inform others of your choice and follow through.

### Approach of Management Science

Management challenges are resolved scientifically in management science.

It is used by several organizations to address a wide range of issues.

It includes a mathematically rational approach to issue resolution.

It is also known as a: Modeling a Decision

### Operations with Quantitative Analysis Research

List the variables influencing price policy in a chart. Solution: There are two categories of variables that influence pricing decisions: internal factors and external influences.

#### Internal Elements:

1. **Organizational aspects:** In the organization, pricing choices are made at two different levels. Top executives deal with overall pricing strategy. They establish the fundamental market segment ranges into which the product falls. Lower levels of the organization deal with the real mechanics of pricing and concentrate on specific product strategies. Price determination often involves a mix of manufacturing and marketing experts.
2. **Marketing Mix:** According to marketing professionals, pricing is only one of the many crucial components of the marketing mix. When one of the factors changes, the other three—Production, Promotion, and Distribution—are immediately impacted. A company could use price reduction as a marketing strategy in various sectors.

Other businesses could purposefully boost prices in order to develop a range of high-end products. In either scenario, the endeavor won't be successful unless the price adjustment is coupled with a comprehensive marketing plan that backs it. A company that boosts its rates could also add a better-looking packaging and start a new marketing campaign [5], [6].

3. **Product Differentiation:** The features of the product affect both its pricing and its value. Different features are added to the product, such as quality, size, color, appealing packaging, alternative applications, etc., in order to draw in clients. Customers often pay more for products that are of newer styles, fashions, nicer packages, etc.
4. **Product Cost:** A product's cost and price are tightly connected. The cost of manufacturing is the most crucial element. When selecting whether to sell a product, a company may attempt to determine what pricing are reasonable, taking into account the market's competitors and existing demand. In the end, the product is sold to the general public, and their ability to pay will determine the price; otherwise, the product will fail to find a market.
5. **Purposes of the business:** A business may have a variety of goals, and price plays a role in attaining some of these purposes. Businesses may aim to maximize sales income, increase market share, increase customer volume, decrease customer volume,

preserve brand equity, maintain pricing, and other value-oriented goals. Pricing policy should only be created after carefully considering the firm's goals.

## DISCUSSION

### External Factors

#### 1. Demand

Clearly, a product or service's price is heavily influenced by the market demand for it. The number and size of rivals, the potential customers' ability and readiness to pay, their preferences, etc. are all taken into consideration when determining the price since these variables have an impact on demand.

By experimenting with different pricing in various markets and comparing the outcomes with a controlled market where the price is kept constant, a company may estimate the anticipated price in a few test markets. High pricing may be set if the product's demand is rigid. On the other hand, if demand is elastic, the company should set prices that are lower than those of its rivals rather than setting them at a high level.

**2. Competition:** Pricing choices are impacted by competitive situations. Price setting is greatly influenced by competition. As long as the product quality is never worse than that of the competitors, a company may set its pricing at a level with or below that of its rivals.

**3. Suppliers:** The price of a product may be significantly influenced by the suppliers of raw materials and other commodities. Suppliers will pass on any increases in cotton prices to producers. Consumers then get it from manufacturers.

However, sometimes when a manufacturer looks to be earning significant profits on a certain product, suppliers may try to increase their profits by raising the price of their supplies. In other words, the cost of a completed good is closely related to the cost of its constituent parts. Pricing is also influenced by the availability or scarcity of the raw materials.

**4. Economic Conditions:** Pricing is impacted by inflationary or deflationary tendencies. Prices are raised during a boom to offset rising production and distribution costs, whereas prices are decreased significantly during a recession to maintain the level of turnover. To adapt to changes in price, demand, etc.

2. There are many price options available:
3. Prices may be raised to safeguard profits from increasing costs,
4. The emphasis may be changed from sales volume to profit margin and cost reduction, for example, and price protection systems that relate the price at delivery to actual expenses can be devised.

**5. Buyers:** The numerous individuals and organizations that purchase a company's goods and services may have an impact on the choice of price. When their number is big, their character and behavior about the purchase of a certain product, brand, or service, etc., have an impact on price.

**6. Government:** When it is deemed necessary to stop the inflationary tendency in the pricing of certain items, the government may regulate prices by enacting laws. As the government closely monitors pricing in the private sector, prices cannot be set higher. While the marketers have little to no influence over the exterior elements, they can clearly exert significant control on the internal ones.

Demand forecasting is the art and science of predicting consumer demand to guide a company's supply chain and business management in executing that demand holistically. Both informal approaches, such as informed estimates, and quantitative ones, like the utilization of historical sales data and statistical tools, or current data from test markets, are used in demand forecasting. Demand forecasting may be utilized in inventory management, production planning, capacity planning, and sometimes in determining whether to join a new market. Demand forecasting projects what the product's future demand will be. In other terms, it relates to the estimation of future demand for a product or a service based on historical occurrences and current trends.

### **Predicting Of the Demand for Maggie Noodles**

With a market share of 58.3% for the whole category and more than 80% for pure noodles, Nestlé dominates the market. Noodles have long been associated with Nestlé's Maggi. It has, however, been losing market share on a monthly basis over the last couple of years to new competitors including ITC's SunFest Yippee, GlaxoSmithKline's Horlicks noodles, Hindustan Unilever's Knorr Soupy noodles, Big Bazaar's Tasty Treat, Top Ramen, and a number of other smaller businesses. In only a few years, Maggi's share of the Indian noodle market fell from over 90% to over 85%. Every region of India has seen a decline in its market share for instant noodles at the same time. In India, Maggi has the largest sales and has been the market leader in the noodle category. Nestlé had to invest a lot of time, money, and resources to build its noodles brand in India.

### **Collect and present the national income for five years in tabular form.**

#### **Recent Economic Trends in India**

India has seen a paradigm change as a result of its global competitiveness. The Indian economy, which boasts of a high annual growth rate, expanding foreign currency reserves, and flourishing capital markets among other things, is on a strong growth trajectory. According to the Ministry of Statistics and Programme Implementation, the Indian economy would expand at a pace of 5% in 2012–13 as opposed to 6.2% in 2011–12. These GDPs are based on constant pricing factor costs for the year 2012–2013. According to the information provided, the Gross Domestic Product (GDP) at factor cost at constant prices in the year 2012–13 is anticipated to reach a level of US\$ 1013.63 billion, up from the US\$ 966.56 billion estimated for the GDP in the year 2011–12.

Construction, commerce, hotels, transportation and communications, finance, insurance, real estate and business services, and community, social, and personal services are among the industries that saw growth rates of above 5%. Agriculture, forestry, and fishing as well as industry and energy, gas, and water delivery may all see poor development. According to estimates, the mining and quarrying industry will rise by 2%. According to the Department of Agricultural and Cooperation, the GDP growth rate for the agricultural, forestry, and fishery industry is predicted to be 1.8% in 2012–13 as opposed to 3.6% in 2011–12. Compared to growth of 5.2% in the previous agricultural year, a decrease of 2.8% is anticipated in food grain production. Additionally, it is anticipated that cotton and sugarcane output would both see declines in 2012–2013 of 4.0% and 6.5%, respectively. Compared to the previous year, when output of horticultural crops increased by 5.1 percent, it is anticipated that fruit and vegetable production would rise by 3.5% in 2012–2013.

During 2012–2013, the manufacturing sector is anticipated to expand GDP by 1.9%. Manufacturing and electricity experienced growth rates of 1.0% and 4.4%, respectively, between April and November 2012 and 2013, according to the most recent estimates on the

Index of Industrial Production, compared to growth rates of 4.2% and 9.6% in these sectors during the same period in the previous year. Compared to a negative increase of 0.6% in 2011–12, the mining industry is predicted to rise by 0.4% in 2012–13. In comparison to growth of 5.6% the year before, the construction industry is predicted to develop at a pace of 5.9% in 2012–2013. Between April and December of 2012–13, the primary indices for the construction sector—cement production and steel consumption—showed growth rates of 6.1% and 3.9%, respectively [7], [8].

The 2012–2013 GDP growth for the commerce, hospitality, transportation, and communication sectors is projected to be 5.2%, down from the previous year's rise of 7.0%. This is mostly due to decreases in passenger and cargo handling in civil aviation of 3.4% and 4.8%, respectively, and decreases in cargo handling at significant marine ports of 3.1% between April and November 2012–13. As of November 2012, the number of telephone connections has increased by 4.3%. From April through December 2012, there was a 0.74 percent rise in commercial vehicle sales. Financing, insurance, real estate, and business services are predicted to rise at an 8.6% annual pace between 2012 and 2013, thanks to increases of 11.1% in aggregate deposits and 15.2% in bank credit as of December 2012. Community, social, and personal services are expected to expand at a 6.8% annual pace from 2012 to 2013.

In contrast to the 2012–2013 projection of US\$ 842.42 billion, the net national income at factor cost, often known as the national income, at 2004–2005 prices is projected to be US\$ 877.38 billion. In terms of growth rates, the national income increased by 4.2% in 2012–13, compared to a growth rate of 6.1% in the previous year. Compared to the estimated figure for the year 2011–12 of US\$ 700.851, the per capita income in real terms for the year 2012–13 is anticipated to reach a level of US\$ 721.06. Compared to the forecast for the prior year, which was 4.7%, the growth rate in per capita income is projected to be 2.9% from 2012 to 2013. In comparison to the growth rate of 7.24 percent in 2014–15, the real GDP growth, or gross domestic product growth, of India in the year 2015–16 is predicted to be 7.56 percent at constant prices. The GDP growth rates for each quarter are: Q1, Q2, Q3, and Q4. Agriculture and related industries, industry, and services all saw GVA growth rates of 1.25%, 7.4%, and 8.92%, respectively. The expansion in manufacturing is 9.3%. Agriculture, forestry, and fisheries saw the lowest growth in India at 1.2%, while the financial, real estate, and professional services sector saw the greatest increase of 10.3%. GDP growth rates for 2015–16 is 8.71% at current prices. In Q1, Q2, Q3, and Q4, growth was 8.8%, 6.4%, 9.1%, and 10.4%, respectively. The predicted rates of increase for India's GVA, GNI, and NNI at constant prices are 7.2%, 7.5%, and 7.6%, respectively. These yields are 7.0%, 8.7%, and 8.7% at the current price. Data from 1950–51 to 2011–12 are drawn from the 2004–05 series, and from 2011–12 to 2014–15 are drawn from the 2011–12 period.

India is the ninth fastest growing country in the world, with a GDP growth rate of 7.336% in 2015, according to the IMF World Economic Outlook. India's GDP growth rate of 7.244% placed it as the 14th fastest growing country in the world in 2014. The average growth rate between 1980 and 2014 is 6.27%, with record highs of 10.26% in 2010 and record lows of 1.06% in 1991. According to earlier calculations, the average growth rate from 1951 to 2014 was 4.96%, with a record high of 10.16% in 1988–1989 and a record low of -5.2% in 1979–1980. Growth was negative during a 4-year period [9]–[11].

## CONCLUSION

In conclusion, Although the spending method is a popular way to determine GDP, it is not without issues and restrictions. Accurately measuring economic activity is challenging due to



the exclusion of non-market transactions, measurement difficulty for certain economic activities, the possibility of duplicate counting, and measurement difficulties for foreign transactions. To get trustworthy GDP estimates that appropriately represent economic performance and promote informed decision-making and policy formation, these issues must be resolved. consequences of these issues with the spending technique. Inaccurate GDP figures may result in poor evaluations of economic performance, resource misallocation, and ineffective policy development. To achieve accurate and trustworthy GDP estimates, these issues must be addressed and measuring methods refined.

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