MANAGERIAL ECONOMICS

BY

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UNIT–I

MANAGERIAL ECONOMICS: DEFINITION - NATURE AND SCOPE OF MANAGERIAL ECONOMICS- ROLE AND RESPONSIBILITIES OF MANAGERIAL ECONOMIST - OBJECTIVES OF FIRM

Economics

Those activities of mankind are studied which are **concerned with earnings and spending of money.**

For the successful **handling** of these **activities** certain **laws and rules** are formulated which are known as various **theories of economics.**

Use of these rules & tools provided for analysing business conditions and applying them **for arriving at various economic decision** is known as **managerial economics.**

MicroEconomics & MacroEconomics

Microeconomics

Derived from the greek word **mikros** meaning "**Small**".

Microeconomics studies economic relationship or economic problems at the level of an individual- an individual firm, an individual household or an individual consumer.

E.g. Study of TISCO

It is basically concerned with determination of output and price for an individual firm or industry.

Macroeconomics

Derived from the greek word **makros** meaning "**Large**"

Macroeconomics studies economic relationships or economic problems at the level of the economy as a whole.

E.g. Study of Unemployment, inflation, Per capita income.

It is basically concerned with determination of aggregate output and general price level in the economy as a whole.

Positive and Normative Economics

Positive Economics

When we are studying a problem and its related issues which are subject to verification, like the extent of poverty and unemployment we are referring to positive economic.

The positive statement describe **what was, what is and what would be** under the given set of circumstances.

All these statements are capable of empirical verification. On the basis of which degree of truth can be found.

Normative Economics

When we are offering suggestions to solve the problem (which are not subject to verification, like for e.g. the suggestion of reservation in jobs to solve the problem of poverty) we are referring to normative economics.

Normative statements describe **what ought to be**. Its objective is to determine norms or aims.

These are opinions relating to right or wrong of a particular policy matter, and are always a matter of debate.

DFINITIONS OF ECONOMICS AND MANAGERIAL ECONOMICS

ECONOMICS: Economics is a social science . Its basic function is to study how people – individual house holds, firms and nations maximizing their gains from their limited resources and opportunities.

- In economic terminology it is called as **"maximizing behaviour"** or more approximately **"optimizing behaviour"** .

- Optimization means selecting best out of available resources with the objective of maximizing gains from given resources.

Meaning & Definition of Managerial Economics

- According to **Spencer and Siegelman**, " Managerial Economics may be defined as the **integration of economic** theory with business practice for the purpose of facilitating **decision making** and **forward planning** by management."

- **Decision Making**: Means selecting one out of a set of two or more alternatives or in other words, making a choice.
- **Planning**: Means planning for the business activities to be undertaken for future.

(The problem of selection arises because the supply of factors of production (land, labour, capital and enterprise) is scarce or limited.)

Managerial Economics helps management in making right decisions and planning for the future under the condition of uncertainty.

Other Definitions of Managerial Economics

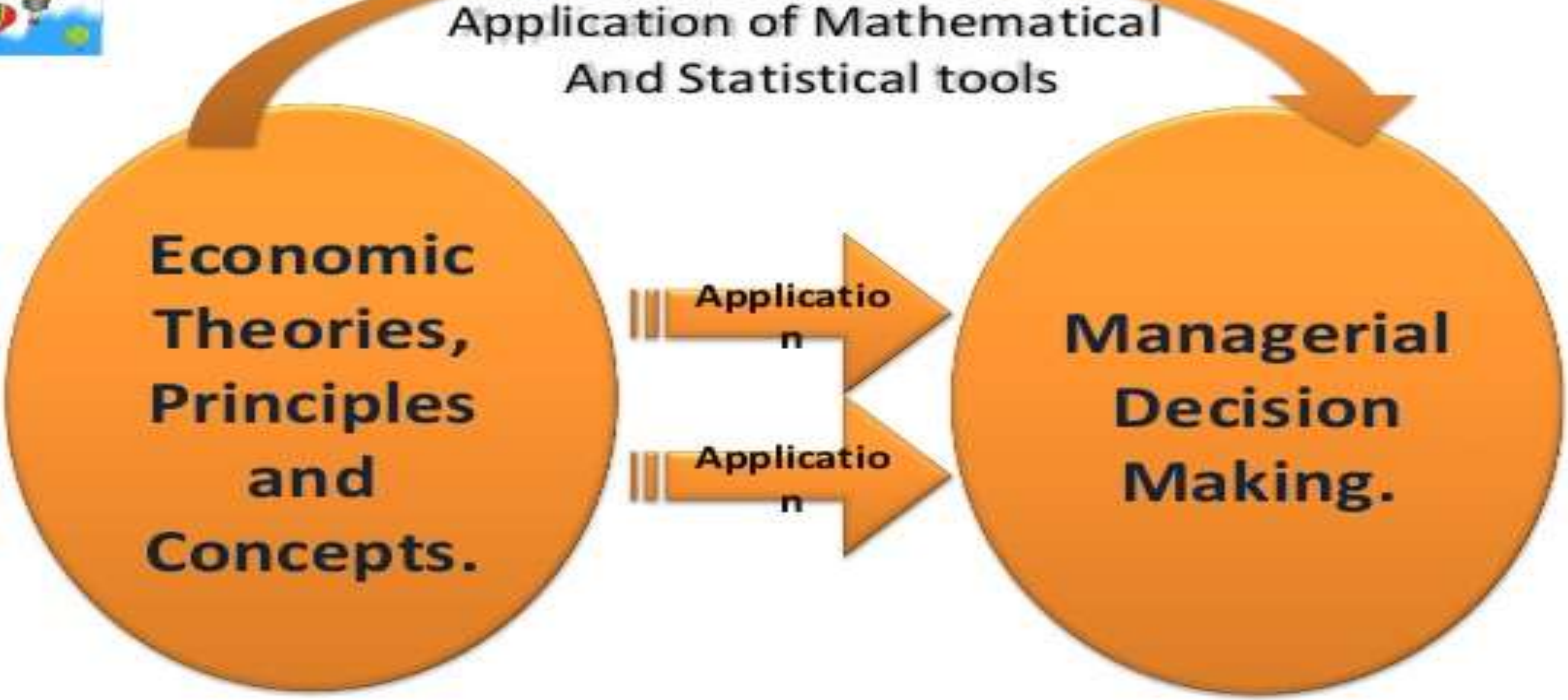
- According to **McNair and Meriam**, " Business Economics consists of the use of economic modes of thought to analyse business situation."
- According to **Joel Dean**, "The purpose of managerial economics is to show how economic analysis can be used in formulating business policies."
- In the words of **Joseph L. Messy**, " Business Economics is the use of economic theories by the management in making business decisions.

After the study of various definitions it can be concluded that:

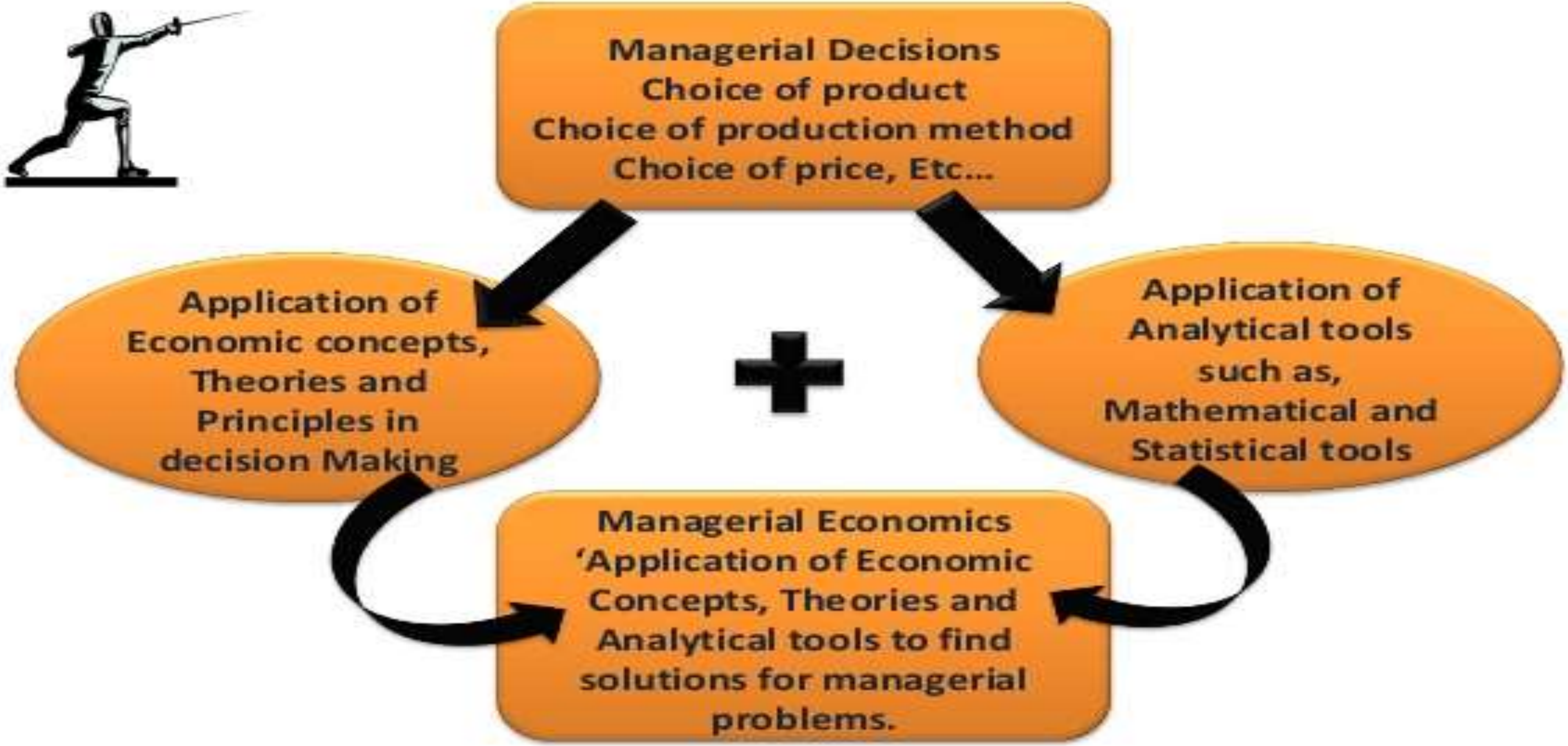
Managerial Economics is that branch of knowledge in which **theories of economic analysis** are **used for solving business** management **problems** and determination of business policies.

Managerial Economics **serves as a bridge** between Economics and Business Management.

Managerial Economics



Managerial Economics



Managerial Economics

- **Economics.**
  - Theories
  - Principles
  - Concepts
- **Decision Making.**
  - Selection of best alternative out of various possible alternatives.

Risk & Uncertainty

Nature of Managerial Economics

- Science as well as Art of decision making.
- It is essentially Micro in nature but Macro in analysis.

- It is mainly a Normative science but positive in analysis.
- It is concerned with the application of theories and principles of economics.
- It discusses Individual problems.
- It is dynamic in nature not a Static.
- It discuss the economic behavior of a firm.
- It concentrates on optimum utilization of resources.

Scope of Managerial Economics

- Objectives of a Firm.
- Demand Analysis and Forecasting.
- Production and cost analysis.

- Pricing decisions.
- Profit management.

- Capital management.

- Market structure.
- Inflation and economic conditions.

Managerial economics and Decision Making

- **Decision making:**
  - Decision making on **internal affairs**.
  - Decision making on **external affairs**.

Internal affairs talk on **internal environment** which consists of internal factors such as, **Production, Financial, Marketing and Human resource** related decisions.

External Affairs talk on **external environment** which consists of external factors such as, **PEST** related decisions.

Decision Making

- Uncertainty: 
  - Nothing can be expectable because of the constant changes in the environment both internally as well as externally.
- Risk:
  - It is the situation which comes under uncertainty.

Basic Principles of Managerial Economics

- Opportunity cost principle.
- Marginalism principle.
- Equi-marginalism principle.
- Incremental principle.
- Time perspective principle.
- Discounting principle.

Opportunity Cost Principle

Choice involves sacrifice.

The cost involved with the sacrifice

It is the cost of an next best opportunity which is lost will be called as Opportunity cost.

Ex: 100 Rs can be used for purchasing book or eating in pizza corner or purchasing of stationeries.

Now the cost of purchasing book is also include the cost of 'Eating pizza.'

Marginalism Principle

Marginal cost

and

Marginal profit/benefit

Marginal cost is the cost which incurred to produce the next or one more unit.

Marginal Revenue is the benefit which gets by producing one more or next unit.

Cost will be less and benefit will be more.

Marginalism Principle

- Marginal cost (MC)= $(TC)_n$ - $(TC)_{n-1}$
- Marginal Revenue(MR)=$(TR)_n$ – $(TR)_{n-1}$

Decision Rule:

MR > MC.....MR=MC.....MR<MC

Equi-marginalism Principle

- Allocation of scarce resources on different alternative uses should be equally distributed.

i.e.. $MPa = MPb = MPc = MPd$

Or

$$\frac{MPa}{COPa} = \frac{MPb}{COPb} = \frac{MPc}{COPc} = \frac{MPd}{COPd}.$$

Incremental Principle

- Incremental principle gives an idea to increase the production not only with one more product it could be any quantity till the profit exists.
- According to this principle profit can be existed either by increasing sales or total revenue or by decreasing total cost
- Decision Rule,
- **i.e. TC<TR……**TC=TR……TC>TR

Time Perspective Principle

- According to the principle all decisions should be under **two formats i.e. short run and long run,** Because of the decisions characteristics.
- So each decision should be made in Short run basis as well as long run basis.
- According to short run decision the long run decision will get change.

Discounting Principle

- According to this principle, if a decision affects costs and revenues in long-run, all those costs and revenues must be discounted to present values before valid comparison of alternatives is possible. This is essential because a rupee worth of money at a future date is not worth a rupee today. Money actually has time value.

Discounting Principle

- This could be understood using the formula,

$$FV = PV^{*}(1+r)\ t \quad \text{And}$$

$$PV = FV/\ (1+r)\ t$$

- Where, FV is the future value, PV is the present value, r is the discount (interest) rate, and t is the time between the future value and present value.

Importance

- Basis of Business Policies
- Predicting economic Quantities
- Estimating economics relationship
- Helpful in Understanding the External forces constituting the environment.
- Reconciling theoretical concepts of economics in relation to the actual business behavior and conditions.

Fundamental Concepts

- Opportunity cost
- Incremental Principle
  - Incremental Cost
  - Incremental Revenue
  - Business implication of Incremental Concept
- Time Perspective
  - Series of order
  - Discrimination
- Discounting Principle
- The Equi-marginal Principle

Characteristics of Managerial Economics

1) **Micro- economic in Nature:** The problem of a particular firm is studied in it and not the whole economy.

2) **Theory of Firm or Economics of Firm:** All the economic theories, concepts and economic models known as "Theory of Firm" or "Economics of Firm" are studied in Managerial economics.

3) **Importance of Macro Economics too :** Macro economics helps to understand the overall environment in which a firm operates its activities. The knowledge of Macro economics enables the managers to co-ordinate and adjust their business in the best possible way with environmental forces with which they have no control. E.g. Fiscal policy, industrial policy,exim policy.

4) **Applied Approach:** Managerial economist analyses good or bad effects of various decisions on the firm. So BE is not a theoretical subject but a subject of practical utility.

Characteristics of Managerial Economics

5) **Perspective nature:** It indicates what should be done and what not.

6) **Decision making at Managerial level:** ME is a practical subject and its main object and function is to help the management in formulating suitable business policies.

7) **Co-ordinating Nature:** Managerial economics provides the business managers practical and theoretical solutions of their business problems.

8) **Both Science and Art:** Managerial economics is used as a systematic knowledge, therefore, it is a science. It provides methods to reach the most beneficial decision to the business requiring various skills hence it is an art too.

9) **As a complementary subject:** In managerial economics, helps are sought from various disciplines like statistics, mathematics, operation research in order to understand the business situation and arrive at their solution by using tools provided by these discipline.

Importance of Application of Economics in Business Management

1) **Helpful in Organizing:** Business managers can learn through the study of Business Economics what to produce, how to produce, for whom to produce and when to produce. This helps them to organize well.

2) **Helpful in Planning:** Managers with the use of business economics can plan to mobilise and use resources effectively.

3) **Helpful in Decision making:** Business manager can decide on the basisi of their knowledge of Business Economics number of relevant things such as what kind of production should be undertaken, what should be the technique etc. so as to get the maximum profit.

4) **Helpful in co ordination:** Business economics helps to establish co ordination between traditional theoretical concepts of economics and actual business practices.

Importance of Application of Economics in Business Management

5) **Helpful in Formulating Business Policies:** Business Economics helps in deciding its policies for the real objectives and certain business situation of the firm.

6) **Helpful in Cost Control**

7) **Helpful in Demand Forecasting:** Business economics provides the use of economic concepts for estimating economic relations among various variables for managerial decisions.

8) **Minimizing Uncertainties:**

9) **Helpful in Understanding External Environment**: Business Economics helps the business managers in understanding the external environment in which the firm has to function and shows him the way to co-ordinate his business with it.

Scope of Managerial Economics

1) **Demand Analysis and Forecasting:** Demand analysis and forecasting of demand facilitates the decision making and forward planning. If demand forecasting of a firm is correct, the firm earns more profit and if they are wrong it suffers losses.

2) **Production Planning and Management:** Every firm is engaged in certain production, hence it has to plan and manage the production. Firm has to make profitable decisions keeping its factors of production and the product in view.

3) **Cost Analysis:** One of the important responsibilities of business managers is to analyze and control costs in order to maximize the profit. It can be done only by the proper investigation and research about the respective costs.

4) **Pricing Policies and Practices:** Deciding the price is one of the important subject of business economics. The success of a firm depends upon decisions regarding prices.

Scope of Managerial Economics

5) **Profit Management**: Managerial economics helps in analysis of profit measurement and control.

6) **Capital Management**: Capital management in business economics includes cost of capital, profitability of the capital and the selection of suitable project or projects out of various projects.

7) **Decision Theory under Uncertainty**: Uncertainties are many fold such as uncertainty of demand, uncertainty of cost, uncertainty of capital etc. Many statistical methods are developed for taking decision under condition of such uncertainties.

Managerial Economics Vs Economics

Business Economics	Economics
It deals with the application of economic principles and theories to the problems of business firms.	Economics deals with the body of principles and theories itself.
Nature of managerial economics is Micro economics.	Nature of economics is both Micro economics and Macro economics.
Managerial economics is micro in character but it deals with the problems of business firms only and it does not study problems of individuals.	Economics has a wider scope.
The main focus of study in managerial economics is profit theory.	Under economics all the distribution theories like rent, wages and interest are studied along with the theory of profit.

Managerial economics relationship with other disciplines:

- Many new subjects have evolved in recent years due to the interaction among basic disciplines. managerial economics can be taken as the best example of such a phenomenon among social sciences. Hence it is necessary to trace its roots and relation ship with other disciplines.

- 1. Relationship with economics
- 2. Management theory and accounting
- *3.* Managerial Economics and mathematics
- 4. Managerial Economics and Statistics
- *5. Managerial Economics, Operations Research*
- *6. Managerial Economics and the theory of Decision- making*
- *7. Managerial Economics and Computer Science:*

1. Relationship with economics:

- The relationship between managerial economics and economics theory may be viewed form the point of view of the two approaches
- **Micro Economics and Marco Economics**.
- Microeconomics is the study of the economic behavior of individuals, firms and other such micro organizations. Managerial economics is rooted in Micro Economic theory.
- Managerial Economics makes use to several Micro Economic concepts such as marginal cost, marginal revenue, elasticity of demand as well as price theory and theories of market structure to name only a few.
- It deals with the analysis of national income, the level of employment, general price level, consumption and investment in the economy and even matters related to international trade, Money, public finance, etc.

2. Management theory and accounting:

- Managerial economics has been influenced by the developments in management theory and accounting techniques. Accounting refers to the recording of pecuniary transactions of the firm in certain books
- . A proper knowledge of accounting techniques is very essential for the success of the firm because profit maximization is the major objective of the firm.
- Managerial Economics requires a proper knowledge of cost and revenue information and their classification.
- A student of managerial economics should be familiar with the generation, interpretation and use of accounting data. The focus of accounting within the firm is fast changing from the concepts of store keeping to that if managerial decision making, this has resulted in a new specialized area of study called “Managerial Accounting”.
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Managerial Economics and mathematics:

- The use of mathematics is significant for managerial economics in view of its profit maximization goal long with optional use of resources.
- The major problem of the firm is how to minimize cost, hoe to maximize profit or how to optimize sales.
- Mathematical concepts and techniques are widely used in economic logic to solve these problems
- Mathematical symbols are more convenient to handle and understand various concepts like incremental cost, elasticity of demand etc., Geometry, Algebra and calculus are the major branches of mathematics which are of use in managerial economics.

4. Managerial Economics and Statistics:

- Managerial Economics needs the tools of statistics in more than one way.
- A successful businessman must correctly estimate the demand for his product. He should be able to analyses the impact of variations in tastes, Fashion and changes in income on demand only then he can adjust his output.
- Statistical methods provide and sure base for decision-making. Thus statistical tools are used in collecting data and analyzing them to help in the decision making process.
- Managerial Economics also make use of correlation and multiple regressions in related variables like price and demand to estimate the extent of dependence of one variable on the other. The theory of probability is very useful in problems involving uncertainty.

5. Managerial Economics and Operations Research:

- Operation research provides a scientific model of the system and it helps managerial economists in the field of product development, material management, and inventory control, quality control, marketing and demand analysis. The varied tools of operations Research are helpful to managerial economists in decision-making.
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6. Managerial Economics and the theory of Decision- making:

- The Theory of decision-making is a new field of knowledge grown in the second half of this century.
- Most of the economic theories explain a single goal for the consumer i.e., Profit maximization for the firm. But the theory of decision-making is developed to explain multiplicity of goals and lot of uncertainty.
- As such this new branch of knowledge is useful to business firms, which have to take quick decision in the case of multiple goals.
- Viewed this way the theory of decision making is more practical and application oriented than the economic theories.

7. Managerial Economics and Computer Science:

- Computers have changes the way of the world functions and economic or business activity is no exception.
- Computers are used in data and accounts maintenance, inventory and stock controls and supply and demand predictions.
- What used to take days and months is done in a few minutes or hours by the computers
- In most countries a basic knowledge of computer science, is a compulsory programme for managerial trainees.

Role of a managerial economist in the firm

- Demand estimation and forecasting
- Preparation of business / sales forecasts
- Analysis of market survey to determine the nature and extent of competition
- Analyzing the issues and problems of concerned industry

- Assisting the business planning process of the firm
- Discovering new possible fields of business endeavor and its cost-benefit analysis
- Advising on prices, investment and capital budgeting policies
- Evaluation of capital budgeting etc.

DECISION MAKING AREAS

Business decision making is influenced not only by economic considerations, but also by human behavioral, technological and environmental factors due to growing public awareness.

"Decision making and processing information are two important tasks of managers"

In order to make good decisions managers must be able to obtain, process and use information.

Decision Making Areas

- Demand forecasting
- Production planning and cost revenue decision
- Study of economic environment
- Pricing and related decisions
- Investment decisions

OBJECTIVE OF FIRM

Objectives of firm

- Sales maximisation
- Profit maximisation
- Utility maximisation
- Welfare maximisation
- Growth maximisation

SALES MAXIMISTION

According to prof. baumol the ultimate objective of firm is sales maximisation rather than the profit maximisation. He thinks that when a firm considers sales maximisation as a priority objective, it does not neglect the objective of profit maximisation. The objective of sales maximisation with minimum profit can be easily understood with the Fig. Where:

TC- Total Cost.

TR- Total Revenue.

TP- Total product.

PROFIT MAXIMISATION

It is yet another important objective guiding the entrepreneur for the production of goods. Profit plays crucial role in the production decision taken by the firm. According to the traditional theory that level output which the maximum difference between the total revenue (TR) and total cost (TC) will help an entrepreneur maximize his profit . It is depicted in the Fig.

UTILITY MAXIMISATION

Utility or satisfaction remains the end objective of human behavior. Taking this idea into account, economists like Benjamin higgins was of the view that small firms pursue the objective of utility maximisation. It is also called as preference function maximisation. According to this view the satisfaction to the entrepreneur does not come only from the maximisation of profit, but he may get this satisfaction from the leisure which he is able to enjoy. The figure help us...

WELFARE MAXIMISATION

PERSONAL WELFARE:- The people who make decisions for a business are, in fact, people. They have likes and dislikes. They have personal goals and aspirations just like people who do not make decisions for firms. On occasion these people use the firm to pursue their own personal welfare. When they do, their actions could enhance the firm's profit maximization or, in many cases, prevent profit maximization.

SOCIAL WELFARE:- The people who make decisions for firms also have social consciences. Part of their likes and dislikes might be related to the overall state of society. As such, they might use the firm to pursue social welfare, which could enhance or prevent the firm's profit maximization.

GROWTH MAXIMISATION

A famous U.S. economist J.K.Galbraith made an empirical study of big corporation and came to the conclusion that managers pursue not single but multiple goals such as sales maximisation, utility maximisation etc. along with these objective, managers keep the prime objective to achieve the top level or the highest possible level of growth in output. They also try to improve their prestige, technical superiority and market power. They take the help of effective advertising on a large scale to influence the consumer in order to attain the above mentioned objective.