**ANNAI WOMEN’S COLLEGE,**

**KARUR**

***Business Economics***

***(16CACCM1B)***

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## UNIT - I

## BUSINESS ECONOMICS

### Introduction

The term “economics” has been derived from a Greek Word “Oikonomia” which means “household”**.** Economics is a social science. It is called „social‟ because it studies mankind of society. It deals with aspects of human behavior. It is called science since it studies social problems from a scientific point of view.

**“Adam Smith, the father of modem Economics,** in his book entitled 'An Enquiry into the Nature and Causes of the Wealth of Nations’ (Published in 1776) defined Economics as a study of wealth. Smith considered the acquisition of wealth as the main objective of human activity. According to him the subject matter of Economics is the study of how wealth is produced and consumed. Smith's definition is known as wealth definition.

**DEFINITIONS OF ECONOMICS**

Several definitions of Economics have been given. For the sake of convenience let us classify the various definitions into four groups:

1. Science of wealth

2. Science of material well-being

3. Science of choice making and

4. Science of dynamic growth and development

**1. Science of wealth**

Some earlier economists defined Economics as follows: “An inquiry into the nature and causes of the wealth of the nations’’ by Adam Smith. “Science which deals with wealth" by **J.B. Say.**

In the above definition wealth becomes the main focus of the study of Economics. The definition of Economics, as science of wealth, had some merits.

The important ones are:

1. It highlighted an important problem faced by each and every nation of the world, namely creation of wealth.
2. Since the problems of poverty, unemployment etc. can be solved to a greater extent when wealth is produced and is distributed equitably; it goes to the credit of Adam Smith and his followers to have addressed to the problems of economic growth and increase in the production of wealth.

The study of Economics as a 'Science of Wealth' has been criticized on several grounds. The main criticisms leveled against this definition are;

1. **Adam Smith** and other classical economists concentrated only on material wealth. They totally ignored creation of immaterial wealth like services of doctors, chartered accountants etc.
2. The advocates of Economics as 'science of wealth' concentrated too much on the production of wealth and ignored social welfare. This makes their definition incomplete and inadequate.

**Criticism of Smith’s Definition**

1. The wealth-centric definition of economics limited its scope as a subject and was seen as narrow and inaccurate. Smith’s definition forced the subject to ignore all non-wealth aspects of human existence.
2. The Smithian definition over-emphasized the material aspects of well-being and ignored the non-material aspects. It was assumed that human beings acted as rational economic agents who mindlessly and thoughtlessly strived to maximize their own well-being.
3. The Smithian definition prevents the subject to explore the concept of resource [scarcity](https://corporatefinanceinstitute.com/resources/knowledge/economics/scarcity/). The allocation and use of scarce resources are seen as a central topic of analysis in modern economics.

**2. Science of material well-being.**

Under this group of definitions the emphasis is on welfare as compared with wealth in the earlier group. Two important definitions are as follows:

"Economics is a study of mankind in the ordinary business of life. It examines that part of individual and social action which is most closely connected with the attainment and with the use of the material requisites of well-being. Thus, it is on the one side a study of wealth and on the other and more important side a part of the study of the man", **Alfred Marshall "**

The range of our inquiry becomes restricted to that part of social welfare that can be brought directly or indirectly into relation with the measuring rod of money" **A.C. Pigou.**

In the first definition Economics has been indicated to be a study of mankind in the ordinary business of life. By ordinary business we mean those activities which occupy considerable part of human effort. The fulfillment of economic needs is a very important business which every man ordinarily does. Professor Marshall has clearly pointed that Economics is the study of wealth but more important is the study of man. Thus, man gets precedence over wealth. There is also emphasis on material requisites of well-being. Obviously, the material things like food, clothing and shelter, are very important economic objectives.

The second definition by Pigou emphasizes social welfare but only that part of it which can be related with the measuring rod of money. Money is general measure of purchasing power by the use of which the science of Economics can be rendered more precise.

**Marshall's and Pigou's** definitions of Economics are wider and more comprehensive as they take into account the aspect of social welfare. But their definitions have their share of criticism. Their definitions are criticised on the following grounds. (i) Economics is concerned with not only material things but also with immaterial things like services of singers, teachers, actors etc. Marshall and Pigou chose to ignore them. (ii) Robbins criticised the welfare definition on the ground that it is very difficult to state which things would lead to welfare and which will not. He is of the view that we would study in Economics all those goods and services which carry a price whether they promote welfare or not.

**Criticism of Marshall’s Definition**

1. The Marshallian definition, like the Smithian definition, ignored the problem of scarce resources, which possess unlimited potential uses.
2. Critics of the Marshallian definition asserted that it was difficult to separate material and non-material causes of welfare.
3. The Marshallian definition does not provide a clear link between the acquisition of wealth and welfare. Marshall’s critics claimed that it left the subject in a state of perpetual confusion. For instance, there are plenty of activities that might generate wealth that can reduce human welfare.

**3. Science of choice making.**

Robbins gave a more scientific definition of Economics. His definition is as follows:

"Economics is the science which studies human behavior as a relationship between ends and scarce means which have alternative uses".

The definition deals with the following four aspects:

**Economics is a science:**

Economics studies economic human behaviour scientifically. It studies how humans try to optimise (maximize or minimize) certain objective under given constraints. For example, it studies how consumers, with given income and prices of the commodities, try to maximize their satisfaction.

**Unlimited ends:**

Ends refer to wants. Human wants are unlimited. When one want is satisfied, other wants crop up. If man's wants were limited, then there would be no economic problem.

**Scarce means:**

Means refer to resources. Since resources (natural productive resources, man-made capital goods, consumer goods, money and time etc.) are limited economic problem arises. If the resources were unlimited, people would be able to satisfy all their wants and there would be no problem.

**Alternative uses:**

Not only resources are scarce, they have alternative uses. For example, coal can be used as a fuel for the production of industrial goods, it can be used for running trains, it can also be used for domestic cooking purposes and for so many purposes. Similarly, financial resources can be used for many purposes. The man or society has, therefore, to choose the uses for which resources would be used. If there was only a single use of the resource then the economic problem would not arise.

**4. Science of dynamic growth and development.**

Although the fundamental economic problem of scarcity in relation to needs is undisputed it would not be proper to think that economic resources - physical, human, financial are fixed and cannot be increased by human ingenuity, exploration, exploitation and development. A modern and somewhat modified definition is as follows:

"Economics is the study of how men and society choose, with or without the use of money, to employ scarce productive resources which could have alternative uses, to produce various commodities over time and distribute them for consumption now and in the future amongst various people and groups of society". **Paul A. Samuelson.**

**Criticism of Robbin’s Definition**

1. Robbin’s definition is too narrow and has restricted its scope.
2. All economics problems arise not only because of scarcity but also when it is in abundance.
3. This definition does not emphasis on welfare or on material well being.

**NATURE OF ECONOMICS**

Under this, we generally discuss whether Economics is science or art or both and if it is a science whether it is a positive science or a normative science or both.

**Economics - As a science and as an art:** Often a question arises - whether Economics is a science or an art or both.

1. **Economics is a science:**

A subject is considered science if It is a systematised body of knowledge which studies the relationship between cause and effect.

It is capable of measurement.

It has its own methodological apparatus.

It should have the ability to forecast.

If we analyse Economics, we find that it has all the features of science. Like science it studies cause and effect relationship between economic phenomena. To understand, let us take the law of demand. It explains the cause and effect relationship between price and demand for a commodity. It says, given other things constant, as price rises, the demand for a commodity falls and vice versa. Here the cause is price and the effect is fall in quantity demanded. Similarly like science it is capable of being measured, the measurement is in terms of money. It has its own methodology of study (induction and deduction) and it forecasts the future market condition with the help of various statistical and non-statistical tools.

But it is to be noted that Economics is not a perfect science. This is because Economists do not have uniform opinion about a particular event.

The subject matter of Economics is the economic behaviour of man which is highly unpredictable.

Money which is used to measure outcomes in Economics is itself a dependent variable.

It is not possible to make correct predictions about the behaviour of economic variables.

1. **Economics is an art:**

Art is nothing but practice of knowledge. Whereas science teaches us to know art teaches us to do. Unlike science which is theoretical, art is practical. If we analyse Economics, we find that it has the features of an art also. Its various branches, consumption, production, public finance, etc. provide practical solutions to various economic problems. It helps in solving various economic problems which we face in our day-to-day life. Thus, Economics is both a science and an art. It is science in its methodology and art in its application. Study of unemployment problem is science but framing suitable policies for reducing the extent of unemployment is an art.

**Economics as Positive Science and Economics as Normative Science**

**1. Positive Science**:

As stated above, Economics is a science. But the question arises whether it is a positive science or a normative science. A positive or pure science analyses cause and effect relationship between variables but it does not pass value judgment. In other words, it states what is and not what ought to be. Professor Robbins emphasised the positive aspects of science but Marshall and Pigou have considered the ethical aspects of science which obviously are normative.

According to Robbins, Economics is concerned only with the study of the economic decisions of individuals and the society as positive facts but not with the ethics of these decisions. Economics should be neutral between ends. It is not for economists to pass value judgments and make pronouncements on the goodness or otherwise of human decisions. An individual with a limited amount of money may use it for buying liquor and not milk, but that is entirely his business. A community may use its limited resources for making guns rather than butter, but it is no concern of the economists to condemn or appreciate this policy. Economics only studies facts and makes generalizations from them. It is a pure and positive science, which excludes from its scope the normative aspect of human behaviour.

Complete neutrality between ends is, however, neither feasible nor desirable. It is because in many matters the economist has to suggest measures for achieving certain socially desirable ends. For example, when he suggests the adoption of certain policies for increasing employment and raising the rates of wages, he is making value judgments; or that the exploitation of labour and the state of unemployment are bad and steps should be taken to remove them. Similarly, when he states that the limited resources of the economy should not be used in the way they are being used and should be used in a different way; that the choice between ends is wrong and should be altered, etc. he is making value judgments.

**2. Normative Science**:

As normative science, Economics involves value judgments. It is prescriptive in nature and described 'what should be the things'. For example, the questions like what should be the level of national income, what should be the wage rate, how the fruits of national product be distributed among people - all fall within the scope of normative science. Thus, normative economics is concerned with welfare propositions. Some economists are of the view that value judgments by different individuals will be different and thus for deriving laws or theories, it should not be used.

**Definition of Business Economics**

In simple words, business economics is the discipline which helps a business manager in decision making for acheiving the desired results. In other words, it deals with the application of economic theory to business management.

According to **Spencer and Siegelman**, Business economics is "the integration of economic theory with business practise for the purpose of facilitating decision-making and forward planning by management".

According to Mc **Nair and Meriam**, "Business economics deals with the use of economic modes of thought to analyse business situation".

From the above said definitions, we can safely say that business economics makes in depth study of the following objectives:

i) Explanation of nature and form of economic analysis

(ii) Identification of the business areas where economic analysis can be applied

(iii) Spell out the relationship between Business Economics and other disciplines outline the methodology of business economics.

**CHARACTERISTICS OF BUSINESS ECONOMICS**

The following characteristics of business economics will indicate its nature:

**1. Micro economics:** Business economics :s micro economic in character. This is so because it studies the problems of an individual business unit. It does not study the problems of the entire economy.

**2. Normative science:** Business economics is a normative science. It is concerned with what management should do under particular circumstances. It determines the goals of the enterprise. Then it develops the ways to achieve these goals.

**3. Pragmatic:** Business economics is pragmatic. It concentrates on making economic theory more application oriented. It tries to solve the business problems in their day-today functioning.

**4. Prescriptive:** Business economics is prescriptive rather than descriptive. It prescribes solutions to various business problems.

**5. Uses macro economics:** Marco economics is also useful to business economics. Macro-economics provides an intelligent understanding of the environment in which the business operates. Business economics takes the help of macro-economics to understand the external conditions such as business cycle, national income, economic policies of Government etc.

**6. Uses theory of firm:** Business economics largely uses the body of economic concepts and principles towards solving the business problems. Business economics is a special branch of economics to bridge the gap between economic theory and business practice.

**7. Management oriented:** The main aim of business economics is to help the management in taking correct decisions and preparing plans and policies for future. Business economics analyses the problems and give solutions just as doctor tries to give relief to the patient.

**8. Multi disciplinary:** Business economics makes use of most modern tools of mathematics, statistics and operation research. In decision making and planning principles such accounting, finance, marketing, production and personnel etc.

**9. Art and science.-**Business economics is both a science and an art. As a science, it establishes relationship between cause and effect by collecting, classifying and analyzing the facts on the basis of certain principles. It points out to the objectives and also shows the way to attain the said objectives.

**SCOPE OF BUSINESS ECONOMICS**

Business economics is a developing science which generates the countless problems to determine its scope in a clear-cut way. From the following fields, we can examine the scope of business economics.

**1. Demand analysis and forecasting:**

The foremost aspect regarding scope is demand analysis and forecasting. A business firm is an economic unit which transforms productive resources into saleable goods. Since all output is meant to be sold, accurate estimates of demand help a firm in minimising its costs of production and storage. A firm must decide its total output before preparing its production schedule and deciding on the resources to be employed. Demand forecasts serves as a guide to the management for maintaining its market share in competition with its rivals, thereby securing its profit.

**2. Cost and production analysis:**

A firm's profitability depends much on its costs of production. A wise manager would prepare cost estimates of a range of output, identify the factors causing variations in costs and choose the cost-minimising output level, taking also into consideration the degree of uncertainty in production and cost calculations. Production process are under the charge of engineers but the business manager works to carry out the production function analysis in order to avoid wastages of materials and time. Sound pricing policies depend much on cost control. The main topics discussed under cost and production analysis are: Cost concepts, cost-output relationships, Economies and Diseconomies of scale and cost control.

**3.Pricing decisions, policies and practices.**

Another task before a business manager is the pricing of a product. Since a firm's income and profit depend mainly on the price decision, the pricing policies and all such decisions are to be taken after careful analysis of the nature of the market in which the firm operates. The important topics covered in this field of study are : Market Structure Analysis, Pricing Practices and Price Forecasting.

**4. Profit management.** Each and every business firms are tended for earning profit, it is profit which provides the chief measure of success of a firm in the long period. Economists tells us that profits are the reward for uncertainity bearing and risk taking. A successful business manager is one who can form more or less correct estimates of costs and revenues at different levels of output. The more successful a manager is in reducing uncertainity, the higher are the profits earned by him. It is therefore, profit-planning and profit measurement constitute the most challenging area of business economics.

**5. Capital management**. Still another most challenging problem for a modern business manager is of planning capital investment. Investments are made in the plant and machinery and buildings which are very high. Therefore, capital management requires top- level decisions. It means capital management i.e., planning and control of capital expenditure. It deals with Cost of capital, Rate of Return and Selection of projects.

**6. Inventory management:** A firm should always keep an ideal quantity of stock. If the stock is too much, the capital is unnecessarily locked up in inventories At the same time if the level of inventory is low, production will be interrupted due to non-availability of materials. Hence, a firm always prefers to have an optimum quantity of stock. Therefore, business economics will use some methods such as ABC analysis, inventory models with a view to minimising the inventory cost.

**7. Linear programming and theory of games :** Linear programming and theory of games have came to be regarded as part of business economics recently.

**8. Environmental issues:** There are certain issues of macroeconomics which also form a part of business economics. These issues relate to general business, social and political environment in which a business enterprise operates.

**9. Business cycles:** Business cycles affect business decisions. They refer to regular fluctuations in economic activities in the country. The different phases of business cycle are depression, recovery, prosperity, boom and recession.

Thus, business economics comprises both micro and macro-economic theories. The subject matter of business economics consists of all those economic concepts, theories and tools of analysis which can be used to analyse the business environment and to find out solution to practical business problems.

**CONCEPTS OF BUSINESS ECONOMICS**

Decision making is the core of Business Economics. Some fundamental concepts and techniques help the management to take correct decisions. The following are the six fundamental concepts used in Business Economics:

**1. Principle of opportunity cost:**

Every scarce goods or activity has an opportunity cost. Opportunity cost of anything is the cost of the next best alternative which is given up. It refers to the cost of foregoing or giving up an opportunity. It is the earnings that would be realised if the available resources were put to some other use. It implies the income or benefit foregone because a certain course of action has been taken. Thus opportunity costs are measured by the sacrifices made in the decision. If there is no sacrifice involved by a decision there will be no opportunity cost. It is also called alternative cost or transfer cost.

The opportunity cost of using a machine to produce one product is the income forgone which would have been earned from the production of other products. If the machine has only one use, it has no opportunity cost. Similarly, the opportunity costs of funds invested in one's own business is the amount of interest earned if the amount had been used in other projects. If an old building is proposed to be used for a business, likely rent of the building is the opportunity cost. These are called opportunity costs because they represent the opportunities which are foregone.

Devenport, an American Economist explains the concept of opportunity cost with reference to an example. Suppose a girl had two kinds of fruits- one pear and one peach, and if a bad boy is after her to seize the fruits, then the best way for the girl is to drop one fruit and run with the other, so that, she can at least save one fruit, at the cost of the other. When the girl so drops by the way - side one fruit and runs with the other, then the opportunity cost of the fruit she saves is the foregone alternative of the fruit she lost. This is the opportunity cost theory.

The concept of opportunity cost plays an important role in business decisions. This concept helps in selecting the best possible alternative from among various alternatives available to solve a particular problem. This concept helps in the best allocation of available resources.

**2. Principle of incremental cost and revenue:**

Two important incremental concepts used in Business Economics are fundamental concepts of Business Economics are incremental cost and incremental revenue. Incremental cost is a change in total cost resulting from a decision. Incremental revenue means the change in total revenue resulting from a decision. A decision is profitable only if

(i) It increases revenue more than costs,

(ii) It decreases some costs more than it increases others,

(iii) It increases some revenue more than it decreases others, and

(iv) It reduces costs more than revenue.

Incremental principle can be used in the theories of consumption, production, pricing and distribution. Incremental concept is closely related to marginal cost and marginal revenue in the theory of pricing.

**3. Principle of Time Perspective:**

Another principle is the principle of time perspective which is useful in decision-making in output, prices, advertising and expansion of business. Economists distinguish between the short run and the long run in discussing the determination of price in a given market form because in the long run a firm must cover its full cost. On the contrary, in the short-run it can afford to ignore some of its (fixed) costs. Modern economists have started making use of an "intermediate run" between the short run and the long run in order to explain pricing and output behaviour under what is called oligopoly. The principle of time perspective can be stated as under : A decision should take into account both the short run and the long run effects on revenues and costs and maintain a right balance between the long run and the short run perspectives.

**4. Discounting Principle**:

Generally people consider a rupee tomorrow to be worth less than a rupee today. This is also implied by the common saying that a bird in hand is worth than two in the bush. Anybody will prefer Rs. 1000 today to Rs. 1000 next year.

There are two main reasons for this : (1) the future is uncertain and it is preferable to get Rs. 1000 today rather than a year after ; (2) even if one is sure to receive the Rs. 1000 next year, one would do well to receive Rs. 1000 now and invest it for a year and earn a rate of interest on Rs. 100 for one year.

**5. Equi-marginal principle:**

This is one of the widely used concepts in business economics. This principle is also known the principle of maximum satisfaction.

According to this principle, an input should be allocated in such a manner that the value added by the last unit of input is same in all uses. In this way, this principle provides a base for maximum exploitation of all the inputs of a firm so as to maximise the profitability.

The equi-marginal principle can be applied in different areas of management. It is used in budgeting. The objective is to allocate resources where they are most productive. It can be used for eliminating waste in useless activities. It can be applied in any discussion of budgeting. The management can accept investments with high rates of return so as to ensure optimum allocation of capital resources. The equi-marginal principle can also be applied in multiple product pricing. A multi product firm will reach equilibrium when the marginal revenue obtained from a product is equal to that of another product or products. The equi-marginal principle may also be applied in allocating research expenditures.

**6. Optimisation:**

This is another important concept used business economics. Business economics often aims at optimising a given objective. The objective may be maximisation of profit or minimisation of time or minimisation of cost. The important techniques for optimisation include marginal analysis, calculus, linear programming etc.

**Business Economics in Relation with other Disciplines / Branches of Knowledge**

Business economics has a close linkage with other disciplines and fields of study. The subject has gained by the interaction with Economics, Mathematics and Statistics and has drawn upon Management theory and Accounting concepts.

**1. Business Economics and Economics:**

Business Economics is economics applied to decision making. It is a special branch of economics, bridging the gap between pure economic theory and business practice. Economics has two main branches—micro-economics and macro-economics.

**Micro-economics:**

                ‘Micro’ means small. It studies the behaviour of the individual units and small groups of units. It is a study of particular firms, particular households, individual prices, wages, incomes, individual industries and particular commodities. Thus micro-economics gives a microscopic view of the economy.

**Macro-economics:**

                ‘Macro’ means large. It deals with the behaviour of the large aggregates in the economy. The large aggregates are total saving, total consumption, total income, total employment, general price level, wage level, cost structure, etc. Thus macro-economics is aggregative economics.

                It examines the interrelations among the various aggregates, and causes of fluctuations in them. Problems of determination of total income, total employment and general price level are the central problems in macro-economics.

                Macro-economics contributes to business forecasting. The most widely used model in modern forecasting is the gross national product model.

**2. Business Economics and Theory of Decision Making:**

                The theory of decision making is relatively a new subject that has significance for business economics. In the process of management such as planning, organising, leading and controlling, decision making is always essential. Decision making is an integral part of today’s business management. A manager faces a number of problems connected with his/her business such as production, inventory, cost, marketing, pricing, investment and personnel.

                Economist are interested in the efficient use of scarce resources hence they are naturally interested in business decision problems and they apply economics in management of business problems. Hence business economics is economics applied in decision making.

**3. Business Economics and Operations Research:**

                Mathematicians, statisticians, engineers and others join together and developed models and analytical tools which have grown into a specialised subject known as operation research. The basic purpose of the approach is to develop a scientific model of the system which may be utilised for policy making.

                The development of techniques and concepts such as Linear Programming, Dynamic Programming, Input-output Analysis, Inventory Theory, Information Theory, Probability Theory, Queuing Theory, Game Theory, Decision Theory and Symbolic Logic.

**4. Business Economics and Statistics:**

                Statistics is important to business economics. It provides the basis for the empirical testing of theory. It provides the individual firm with measures of appropriate func­tional relationship involved in decision making. Statistics is a very useful science for business execu­tives because a business runs on estimates and probabilities.

                Statistics supplies many tools to business economics. Suppose forecasting has to be done. For this purpose, trend projections are used. Similarly, multiple regression technique is used. In business economics, measures of central tendency like the mean, median, mode, and measures of dispersion, correlation, regression, least square, estimators are widely used.

                Statistical tools are widely used in the solution of business problems. For eg. sampling is very useful in data collection. Business economics makes use of correlation and multiple regression in business problems involving some kind of cause and effect relationship.

**5. Business Economics and Accounting:**

                Business economics is closely related to accounting. It is recording the finan­cial operation of a business firm. A business is started with the main aim of earning profit. Capital is invested / employed for purchasing properties such as building, furniture, etc and for meeting the current expenses of the business.

                Goods are bought and sold for cash as well as credit. Cash is paid to credit sellers. It is received from credit buyers. Expenses are met and incomes derived. This goes on the daily routine work of the business. The buying of goods, sale of goods, payment of cash, receipt of cash and similar dealings are called business transactions.

                The business transactions are varied and multifarious. This has given rise to the necessity of recording business transaction in books. They are writ­ten in a set of books in a systematic manner so as to facilitate proper study of their results.

**There are three classes of accounts:**

(i) Personal account,

(ii) Property accounts, and

(iii) Nominal accounts.

                Man­agement accounting provides the accounting data for taking business decisions. The accounting tech­niques are very essential for the success of the firm because profit maximisation is the major objective of the firm.

**6. Business Economics and Mathematics:**

               Mathematics is another important subject closely related to business economics. For the derivation and exposition of economic analysis, we require a set of mathematical tools. Mathematics has helped in the development of economic theories and now mathematical economics has become a very important branch of economics.

                Mathematical approach to economic theories makes them more precise and logical. For the estimation and prediction of economic factors for decision mak­ing and forward planning, mathematical method is very helpful. The important branches of math­ematics generally used by a business economist are geometry, algebra and calculus.

**MICROECONOMICS AND**[**MACROECONOMICS**](https://www.blocles4u.com/definition-of-macroeconomics-importance-and-its-features/)

Economics is broadly divided into two parts **1)** **Microeconomics**and**2)**[**Macroeconomics.**](https://www.blocles4u.com/definition-of-macroeconomics-importance-and-its-features/) Following is a brief description of the micro concept of economics.

**MICROECONOMICS**

**Meaning of Microeconomics**

Micro means small. Microeconomics deals with economic issues related to small economic units (i) an individual consumer, (ii) an individual producer (iii) an individual firm (iv) an individual industry and (v) an individual market.

**Definition**

“microeconomics is the study of particular firms, particular households, individual wages, incomes, individual industries, and particular commodities”. – **Professor Boulding**

**Micro Economics**

This is the study of the way individual units make decisions regarding the efficient allocation of their scarce resources. Also, these individual units are consumers or firms.

In [microeconomics](https://www.toppr.com/guides/economics/microeconomics-and-macroeconomics/introduction-to-microeconomics/), the focus is on a small number of units rather than all units combined. Further, it does not give us a picture of the happenings in the wider economic environment. The study includes:

* Product pricing;
* Consumer behavior;
* Factor [pricing](https://www.toppr.com/guides/business-studies/marketing/pricing/);
* The economic conditions of a section of people;
* The behavior of firms; and
* Location of the [industry](https://www.toppr.com/guides/geography/industries/introduction-to-industry/).

**Meaning and Definition of Macroeconomics**

**Macroeconomics** is a branch of economics that focuses on general or large-scale economic factors – it looks at the ‘big picture’. The word [macro means overall or large-scale](https://marketbusinessnews.com/financial-glossary/macros/).

Macroeconomics gathers and analyzes economy-wide data and phenomena such as inflation, unemployment, GDP (gross domestic product) growth, and national income.

According to **Professor Shapiro “*Macroeconomics deals with the functioning of the economy as a whole*.”**

**Macro Economics**

This is the study of the behavior of large economic aggregates like overall output levels, total consumption, etc. The study also includes the shift of these aggregates over time. Therefore, macroeconomics analyzes the overall economic conditions which are an overall effect of millions of decisions made by different firms and consumers.

* [National Income](https://www.toppr.com/guides/fundamentals-of-economics-and-management/national-income/concept-of-national-income/) and National Output;
* The general price level and interest rates;
* A balance of trade and balance of payments;
* The external value of currency;
* The overall level of savings and investment; and
* Level of employment and rate of economic growth.

## DIFFERENCE BETWEEN MICRO ECONOMICS VS MACRO ECONOMICS

|  |  |  |
| --- | --- | --- |
| **BASIS FOR COMPARISON** | **MICROECONOMICS** | **MACROECONOMICS** |
| **Meaning** | The branch of economics that studies the behavior of an individual consumer, firm, family is known as Microeconomics. | The branch of economics that studies the behavior of the whole economy, (both national and international) is known as Macroeconomics. |
| **Deals with** | Individual economic variables | Aggregate economic variables |
| **Business Application** | Applied to operational or internal issues | Environment and external issues |
| **Tools** | Demand and Supply | Aggregate Demand and Aggregate Supply |
| **Assumption** | It assumes that all macro-economic variables are constant. | It assumes that all micro-economic variables are constant. |
| **Concerned with** | Theory of Product Pricing, Theory of Factor Pricing, Theory of Economic Welfare. | Theory of National Income, Aggregate Consumption, Theory of General Price Level, Economic Growth. |
| **Scope** | Covers various issues like demand, supply, product pricing, factor pricing, production, consumption, economic welfare, etc. | Covers various issues like, national income, general price level, distribution, employment, money etc. |

**UNIT –II**

**DEMAND ANALYSIS**

**MEANING OF DEMAND**

Demand is a common parlance means desire for an object. But in economics demand is something more than this. In economics “Demand‟ means the quantity of goods and services which a person can purchase with a requisite amount of money.

In economic science, the term "demand" refers to the desire, backed by the necessary ability to pay. The demand for a good at a given price is the quantity of it that can be bought per unit of time at the price.

There are three important things about the demand:

1. It is the quantity desired at a given price.

2. It is the demand at a price during a given time.

3. It is the quantity demanded per unit of time.

**Demand Analysis**

Demand analysis means an attempt to determine the factors affecting the demand of a commodity or service and to measure such factors and their influences. The demand analysis includes the study of law of demand, demand schedule, demand curve and demand forecasting. Main objectives of demand analysis are;

1. To determine the factors affecting the demand.
2. To measure the elasticity of demand.
3. To forecast the demand.
4. To increase the demand.
5. To allocate the recourses efficiently

**DETERMINANTS OF DEMAND**

The factors that determine the size and amount of demand are manifold. The term "function" is employed to show such "determined" and "determinant" relationship. For instance, we say that the quantity of a good demanded is a function of its price

i.e., **Q = f(p)**

Where **Q** represents quantity demanded

**f** means function, and

**p** represents price of the good.

There are many **important determinants** of the demand for a commodity:

**1. Price of the goods**: The first and foremost determinant of the demand for good is price. Usually, higher the price of goods, lesser will be the quantity demanded of them.

**2. Income of the buyer:** The size of income of the buyers also influences the demand for a commodity. Mostly it is true that "larger the income more will be the quantity demanded".

**3. Prices of Related Goods**: The prices of related goods also affect the demand for a good. In some cases, the demand for a good will go up as the price of related good rises. The goods so inter-related arc known as substitutes, e.g. radio and gramophone. In some other cases, demand for a good will comes down as the price of related good rises. The goods so inter-related are complements, e.g. car and petrol, pen and ink, cart and horse, etc.

**4. Tastes of the buyer:** This is a subjective factor. A commodity may not be purchased by the consumer even though it is very cheap and useful, if the commodity is not up to his taste or liking. Contrarily, a good may be purchased by the buyer, even though it is very costly, if it is very much liked by him.

**5. Seasons prevailing at the time of purchase;** In winter, the demand for woolen clothes will rise; in summer, the demand for cool drinks rises substantially; in the rainy season, the demand for umbrellas goes up.

**6. Fashion:** When a new film becomes a success, the type of garments worn by the hero or the heroine or both becomes an article of fashion and the demand goes up for such garments.

**7. Advertisement and Sales promotion:** Advertisement in newspapers and magazines, on outdoor hoardings on buses and trains and in radio and television broadcasts, etc. have a substantial effect on the demand for the good and thereby improves sales.

The need to have clarity in demand analysis makes us adopt a 'ceteris paribus' assumption, i.e. all other things remain the same except one. This enables us to consider the relation between demand and each of the variable factors considered in isolation.

**Law of Demand**

Among the many causal factors affecting demand, price is the most significant and the price- quantity relationship called as the Law of Demand is stated as follows:

"The greater the amount to be sold, the smaller must be the price at which it is offered in order that it may find purchasers, or in other words, the amount demanded increases with a fall in price and diminishes with a rise in price" **(Alfred Marshall).**

**According to Samuelson,** “Law of Demand states that people will buy more at lower price and buy less at higher prices”.

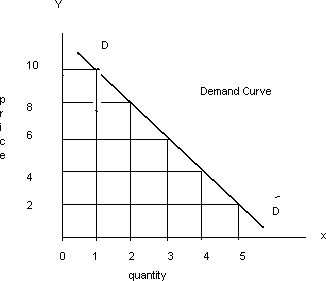
**The concept of law of demand may be explained with the help of a demand schedules.**

### Individual demand Schedule

An individual demand schedule is a list of quantities of a commodity purchased by an individual consumer at different prices. The following table shows the demand schedule of an individual consumer for apple.

|  |  |
| --- | --- |
| **Price of Apple (In Rs.)** | **Quantity demanded** |
| 10  8  6  4  2 | 1  2  3  4  5 |

When the price falls from Rs 10 to 8, the quantity demanded increases from one to two. In the same way as price falls, quantity demanded increases. On the basis of the above demand schedule we can draw the demand curve as follows:

**Demand Curve:** Demand curve is a graphical representation of a demand schedule.

The demand curve DD shows the inverse relation between price and demand of apple. Due to this inverse relationship, demand curve is slopes downward from left to right. This kind of slope is also called “negative slope”.

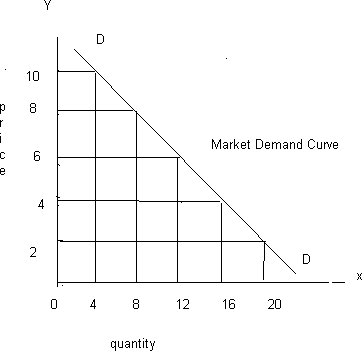
### Market demand schedule

Market demand refers to the total demand for a commodity by all the consumers. It is the aggregate quantity demanded for a commodity by all the consumers in a market. It can be expressed in the following schedule.

### Market Demand Schedule for eg.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Price per dozen(Rs)** | **Demand by consumers** | | | | **Market Demand** |
| **A** | **B** | **C** | **D** |
| 10 | 1 | 2 | 0 | 0 | 3 |
| 8 | 2 | 3 | 1 | 0 | 6 |
| 6 | 3 | 4 | 2 | 1 | 10 |
| 4 | 4 | 5 | 3 | 2 | 14 |
| 2 | 5 | 6 | 4 | 3 | 18 |

Derivation of market demand curve is a simple process. For example, let us assume that there are four consumers in a market demanding eggs. When the price of one dozen eggs is Rs.10, A buys one dozen and B buys 2 dozens. When price falls to Rs.8, A buys 2 , B buys 3 and C buys one dozen. When price falls to Rs.6, A buys 3 b buys 4,C buys 2 and D buys one dozen and so on. By adding up the quantity demanded by all the four consumers at various prices we get the market demand curve. So last column of the above demand schedule gives the total demand for eggs at different prices,ie,”Market Demand” as given below;

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**Importance of the Law of Demand**

The law of demand plays a crucial role in decision-making and forward planning of a business unit. The production planning in a firm mainly rests on accurate demand analysis. The law of demand has theoretical as well as practical advantages. These are as follows:

**1. Price determination:**

With the help of law of demand a monopolist fixes the price of his product. He is able to decide the most profitable quantity of output for him.

**2. Useful to government:**

The finance minister takes the help of this law to know the effects of his tax reforms and policies. Only those commodities which have relatively inelastic demand should be taxed.

**3. Useful to farmers:**

From the law of demand, the farmer knows how far a good or bad crop will affect the economic condition of the fanner. If there is a good crop and demand for it remains the same, price will definitely go down. The farmer will not have much benefit from a good crop, but the rest of the society will be benefited.

**4. In the field of planning:**

The demand schedule has great importance in planning for individual commodities and industries. In such cases it is necessary to know whether a given change in the price of the commodity will have the desired effect on the demand for commodity within the country or abroad. This is known from a study of the nature of demand schedule for the commodity.

**Assumptions of Law of Demand**

Law of demand is based on certain basic assumptions. They are as follows

1) There is no change in consumers‟ taste and preference

2) Income should remain constant.

3) Prices of other goods should not change.

4) There should be no substitute for the commodity.

5) The commodity should not confer any distinction.

6) The demand for the commodity should be continuous.

7) People should not expect any change in the price of the commodity.

**Why does demand curve slopes downward? Or What is the Economics behind Law of Demand?**

Demand curve slopes downward from left to right (Negative Slope). There are many causes for downward sloping of demand curve:-

1. **Law of Diminishing Marginal utility**

As the consumer buys more and more of the commodity, the marginal utility of the additional units falls. Therefore the consumer is willing to pay only lower prices for additional units. If the price is higher, he will restrict its consumption.

1. **Principle of Equi- Marginal Utility**

Consumer will arrange his purchases in such a way that the marginal utility is equal in all his purchases. If it is not equal, they will alter their purchases till the marginal utility is equal.

1. **Income effect.**

When the price of the commodity falls, the real income of the consumer will increase. He will spend this increased income either to buy additional quantity of the same commodity or other commodity.

1. **Substitution effect**.

When the price of tea falls, it becomes cheaper. Therefore the consumer will substitute this commodity for coffee. This leads to an increase in demand for tea.

1. **Different uses of a commodity.**

Some commodities have several uses. If the price of the commodity is high, its use will be restricted only for important purpose. For e.g. when the price of tomato is high, it will be used only for cooking purpose. When it is cheaper, it will be used for preparing jam, pickle etc...

1. **Psychology of people.**

Psychologically people buy more of a commodity when its price falls. In other word it can be termed as **price effect.**

1. **Tendency of human beings to satisfy unsatisfied wants**.

**TYPES OF DEMAND**

There are three types of demand. They are

1. Price Demand

2. Income Demand and

3. Cross Demand which are explained below:

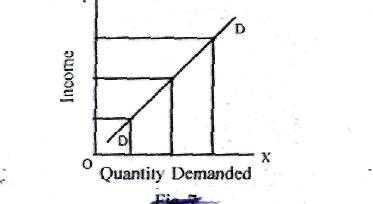
**1. Price Demand**

It refers to the various quantities of the good which consumers will purchase at a given time and at certain hypothetical prices assuming that other conditions remain the same. We are generally concerned with price demand only. In the explanation of the law of demand given above, we dealt in detail with price demand only.



**2.Income demand**:

Income demand refers to the various quantities of a commodity that a consumer would buy at a given time at various levels of income. Generally, when the income increases, demand increases and vice versa.



**3. Cross Demand**:

When the demand of one commodity is related with the price of other commodity is called cross demand. The commodity may be substitute or complementary.

Substitute goods are those goods which can be used in case of each other. For example, tea and coffee, Coca-cola and Pepsi. In such case demand and price are positively related. This means if the price of one increased then the demand for other also increases and vise versa. Complementary goods are those goods which are jointly used to satisfy a want. In other words, complementary goods are those which are incomplete without each other. These are things that go together, often used simultaneously. For example, pen and ink.



Tennis rackets and tennis balls, cameras and film, etc. In such goods the price and demand are negatively related. This means when the price of one commodity increases the demand for the other falls.

**EXCEPTIONS TO THE LAW OF DEMAND: (Exceptional Demand Curve)**

The basic feature of demand curve is negative sloping. But there are some exceptions to this. I.e... In certain circumstances demand curve may slope upward from left to right (positive slopes). These phenomena may due to;

**1) Giffen paradox**

The Giffen goods are inferior goods is an exception to the law of demand. When the price of inferior good falls, the poor will buy less and vice versa. When the price of maize falls, the poor will not buy it more but they are willing to spend more on superior goods than on maize. Thus fall in price will result into reduction in quantity. This paradox is first explained by Sir Robert Giffen.

**2) Veblen or Demonstration effect**

According to Veblen, rich people buy certain goods because of its social distinction or prestige. Diamonds and other luxurious article are purchased by rich people due to its high prestige value. Hence higher the price of these articles, higher will be the demand.

**3) Ignorance**

Sometimes consumers think that the product is superior or quality is high if the price of that product is high. As such they buy more at high price.

**4) Speculative Effect**

When the price of commodity is increasing, then the consumer buy more of it because of the fear that it will increase still further.

**5) Fear of Shortage**

During the time of emergency or war, people may expect shortage of commodity and buy more at higher price to keep stock for future.

**6) Necessaries**

In the case of necessaries like rice, vegetables etc., People buy more even at a higher price.

**7) Brand Loyalty**

When consumer is brand loyal to particular product or psychological attachment to particular product, they will continue to buy such products even at a higher price.

**8) Festival, Marriage etc**

In certain occasions like festivals, marriage etc. people will buy more even at high price.

**ELASTICITY OF DEMAND**

The concept of price-elasticity of demand was first of all introduced in economics by Dr. Marshall. In simple words, price elasticity of demand is the ratio of percentage change in quantity demanded to the percentage change in price. In other words, price elasticity of demand is a measure of the relative change in quantity purchased of a good in response to a relative change in its price. It is, thus a rate at which the demand changes to the given change in prices. So, it means the rate or the degree of response in demand to the change in price.

**Definition Elasticity of Demand**

According to **Alfred Marshall**: "Elasticity of demand may be defined as the percentage change in quantity demanded to the percentage change in price."

**There are mainly three types of elasticity of demand:**

1. Price Elasticity of Demand.

2. Income Elasticity of Demand. and

3. Cross Elasticity of Demand.

**Price Elasticity of Demand**

Price Elasticity of demand measures the change in quantity demanded to a change in price. It is the ratio of percentage change in quantity demanded to a percentage change in price. This can be measured by the following formula.

**Proportionate change in quantity demanded**

**Price Elasticity = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Proportionate change in price**

OR

**Change in Quantity demanded / Quantity demanded**

**Ep = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Change in Price/price**

OR

**(Q2-Q1)/Q1**

**Ep = \_\_\_\_\_\_\_\_\_\_\_**

**(P2-P1) /P1 ,**

Where: Q1 = Quantity demanded before price change

Q2 = Quantity demanded after price change

P1 = Price charged before price change

P2 = Price charge after price change.

**TYPES OF PRICE ELASTICITY OF DEMAND**

**There are five types of price elasticity of demand. (Degree of elasticity of demand) Such as**

1. Perfectly elastic demand,
2. Perfectly inelastic demand,
3. Relatively elastic demand,
4. Relatively inelastic demand and
5. Unitary elastic demand.

**1) Perfectly elastic demand (infinitely elastic)**

When a small change in price leads to infinite change in quantity demanded, it is called perfectly elastic demand. In this case the demand curve is a horizontal straight line as given below. (Here **ep= ∞**)



**2) Perfectly inelastic demand**

In this case, even a large change in price fails to bring about a change in quantity demanded. I.e. the change in price will not affect the quantity demanded and quantity remains the same whatever the change in price. Here demand curve will be vertical line as follows and **ep= 0**



**3) Relatively elastic demand**

Here a small change in price leads to very big change in quantity demanded. In this case demand curve will be fatter one and **ep=>1**

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**4) Relatively inelastic demand**

Here quantity demanded changes less than proportionate to changes in price. A large change in price leads to small change in demand. In this case demand curve will be steeper and ep=<1



**5) Unit elasticity of demand ( unitary elastic)**

Here the change in demand is exactly equal to the change in price. When both are equal, **ep= 1,** the elasticity is said to be unitary**.**



**Importance of Elasticity**

The concept of elasticity of demand is much of practical importance;

**1.** **Production**- Producers generally decide their production level on the basis of demand for their product. Hence elasticity of demand helps to fix the level of output.

**2.** **Price fixation**- Each seller under monopoly and imperfect competition has to take into account the elasticity of demand while fixing their price. If the demand for the product is inelastic, he can fix a higher price.

**3.** **Distribution**- Elasticity helps in the determination of rewards for factors of production. For example, if the demand for labour is inelastic, trade union can raise wages.

**4**. **International trade**- This concept helps in finding out the terms of trade between two countries. Terms of trade means rate at which domestic commodities is exchanged for foreign commodities.

**5.** **Public finance**- This assists the government in formulating tax policies. In order to impose tax on a commodity, the government should take into consideration the demand elasticity.

**6.** **Nationalization**- Elasticity of demand helps the government to decide about nationalization of industries.

**7.** **Price discrimination**- A manufacture can fix a higher price for the product which have inelastic demand and lower price for product which have elastic demand.

**8.** **Others**- The concept elasticity of demand also helping in taking other vital decision Eg.Determining the price of joint product, take over decision etc..

**Determinants of elasticity**

Elasticity of demand varies from product to product, time to time and market to market. This is due to influence of various factors. They are;

1. **Nature of commodity-** Demand for necessary goods (salt, rice,etc,) is inelastic. Demand for comfort and luxury good are elastic.
2. **Availability/range of substitutes –** A commodity against which lot of substitutes are available, the demand for that is elastic. But the goods which have no substitutes, demand is inelastic.
3. **Extent /variety of uses-** a commodity having a variety of uses has a comparatively elastic demand.Eg.Demand for steel, electricity etc..
4. **Postponement/urgency of demand-** if the consumption of a commodity can be post pond, then it will have elastic demand. Urgent commodity has inelastic demand.
5. **Income level-** income level also influences the elasticity. E.g. Rich man will not curtail the consumption quantity of fruit, milk etc, even if their price rises, but a poor man will not follow it.
6. **Amount of money spend on the commodity-** where an individual spends only a small portion of his income on the commodity, the price change doesn‟t materially affect the demand for the commodity, and the demand is inelastic... (match box, salt Etc)
7. **Durability of commodity-** if the commodity is durable or repairable at a substantially less amount (eg.Shoes), the demand for that is elastic.
8. **Purchase frequency of a product/time –**if the frequency of purchase of a product is very high, the demand is likely to be more price elastic.
9. **Range of Prices-** if the products at very high price or at very low price having inelastic demand since a slight change in price will not affect the quantity demand.
10. **Others –** the habit of consumers, demand for complimentary goods, distribution of income and wealth in the society etc., are other important factors affecting elasticity.

**FACTORS DETERMINING PRICE ELASTICITY OF DEMAND**

The factors that determine elasticity of demand are numberless. But the most important among them are the nature, uses and prices of related goods and the level of income. They are stated below:

**I. Nature of the commodity**: Generally, all commodities can be dividend into three categories i.e.

**(i) Necessaries of Life.** For necessaries of life the demand is inelastic because people buy the required amount of goods whatever their price. For example, necessaries such as rice, salt, cloth are purchased whether they are dear or cheap.

**(ii) Conventional Necessaries.** The demand for conventional necessaries is less elastic or inelastic. People are accustomed to the use of goods like intoxicants which they purchase at any price. For example, drunkards consider opium and wine almost as a necessity as food and water. Therefore, they buy the same amount even when their prices are higher and highest.

**(iii) Luxury Commodities. The** demand for luxury is usually elastic as people buy more of them at a lower price and less at a higher price. For example, the demand of luxuries like silk, perfumes and ornaments increases at a lower price and diminishes at a higher price. Here, we must keep in mind that luxury is a relative term, which varies from person to person, place to place and from time to time. For example, what is a luxury to a poor man is a necessity to the rich. The luxury of the past may become a necessity of today. Similarly a commodity which is a necessity to one class may be a luxury to another. Hence, the elasticity of demand in such cases should have to be carefully expressed.

**2. Substitutes.** Demand is elastic for those goods which have substitutes and inelastic for those goods which have no substitutes. The availability of substitutes, thus, determines the elasticity of demand. For instance, tea and coffee are substitutes. The change in the price of tea affects the demand for coffee. Hence, the demand for coffee and tea is elastic.

**3. Number of Uses.** Elasticity of demand for any commodity depends on its number of uses. Demand is elastic; if a commodity has more uses and inelastic if it has only one use. As coal has multiple uses, if its price falls it will be demanded more for cooking, heating, industrial purposes etc. But if its price rises, minimum will be demanded for every purpose.

**4. Postponement.** Demand is more elastic for goods the use of which can be postponed. For example, if the price of silk rises, its consumption can be postponed. The demand for silk is, therefore, elastic. Demand is inelastic for those goods the use of which is urgent and, therefore, cannot be postponed. The use of medicines cannot be put off. Hence, the demand for medicines is inelastic.

**5. Raw Materials and Finished Goods**. The demand for raw materials is inelastic but the demand for finished goods is elastic. For instance, raw cotton has inelastic demand but cloth has elastic demand. In the same way, petrol has inelastic demand but car itself has only elastic demand.

**6. Price Level.** The demand is elastic for moderate prices but inelastic for lower and higher prices. The rich and the poor do not bother about the prices of the goods that they buy. For example, rich buy Benaras silk and diamonds etc. at any price. But the poor buy coarse rice, cloth etc. whatever their prices are.

**7. Income Level.** The demand is inelastic for higher and lower income groups and elastic for middle income groups. The rich people with their higher income do not bother about the price. They may continue to buy the same amount whatever the price. The poor people with lower incomes buy always only the minimum requirements and, therefore, they are induced neither to buy more at a lower price nor less at a higher price. The middle income group is sensitive to the change in price. Thus, they buy more at a lower price and less at higher price.

**8. Habits.** If consumers are habituated of some commodities, the demand for such commodities will be usually inelastic. It is because that the consumer will use them even their prices go up. For example, a smoker does not smoke less when the price of cigarette goes up.

**9. Nature of Expenditure**. The elasticity of demand for a commodity also depends as to how much part of the income is spent on that particular commodity. The demand for such commodities where a small part of income is spent is generally highly inelastic i.e. newspaper, boot-polish etc. On the other hand, the demand of such commodities where a significant part of income is spent, elasticity of demand is very elastic.

**10. Distribution of Income.** If the income is uniformly distributed in the society, a small change in price will affect the demand of the whole society and the demand will be elastic. In case of unequal distribution of income and wealth, a change in price will hardly influence the poor section of the society and the demand will be relatively inelastic.

**11. Influence of Diminishing Marginal Utility**. We know that utility falls when we consume more and more units but not in a uniform way. In case utility falls rapidly, it means that the consumer has no other near substitutes. As a result, demand is inelastic. Conversely, if the utility falls slowly, demand for such commodity would be elastic and raises much for a fall in price.

**DEMAND FORECASTING**

**Meaning of Demand Forecasting**

Future is uncertain. There is great deal of uncertainty with regard to demand. Since the demand is uncertain, production, cost, revenue, profit etc. are also uncertain. Through forecasting it is possible to minimise the uncertainties.

Forecasting simply refers to estimating or anticipating future events. It is an attempt to foresee the future by examining the past. Thus demand forecasting means estimating or anticipating future demand on the basis of past data.

**Levels of Demand forecasting**

Demand forecasting may be undertaken at three different levels;

1. **Macro leve**l – Micro level demand forecasting is related to the business conditions prevailing in the economy as a whole.
2. **Industry Level** – it is prepared by different trade association in order to estimate the demand for particular industries products. Industry includes number of firms. It is useful for inter- industry comparison.
3. **Firm level** – it is more important from managerial view point as it helps the management in decision making with regard to the firms demand and production.

**Types of Demand Forecasting**

Based on the time span and planning requirements of business firms, demand forecasting can be classified into short term demand forecasting and long term demand forecasting.

**Short term Demand forecasting**:

Short term Demand forecasting is limited to short periods, usually for one year.

**Short Term Objectives**

1. To help in preparing suitable sales and production policies.
2. To help in ensuring a regular supply of raw materials.
3. To reduce the cost of purchase and avoid unnecessary purchase.
4. To ensure best utilization of machines.
5. To make arrangements for skilled and unskilled workers so that suitable labour
6. Force may be maintained.
7. To help in the determination of a suitable price policy.
8. To determine financial requirements.
9. To determine separate sales targets for all the sales territories.
10. To eliminate the problem of under or over production.

**Long term Demand Forecasting**:

This forecasting is meant for long period.

**Long term Objectives**

1. To plan long term production.
2. To plan plant capacity.
3. To estimate the requirements of workers for long period and make arrangements.
4. To determine an appropriate dividend policy.
5. To help the proper capital budgeting.
6. To plan long term financial requirements.
7. To forecast the future problems of material supplies and energy crisis.

**Factors Affecting Demand Forecasting**

The following are the important factors governing demand forecasting:

1. **Prevailing Business conditions** (price level change, percapita income, consumption pattern, saving, investments, employment etc..,
2. **Condition within the Industry** (Price –product-competition policy of firms within the industry).
3. **Condition within the firm.** (Plant capacity, quality, important policies of the firm).
4. **Factors affecting Export trade** (EXIM control, EXIM policy, terms of export, export finance etc..,)
5. **Market behaviour**
6. **Sociological Conditions** (Population details, age group, family lifecycle, education, family income, social awareness etc...)
7. **Psychological Conditions** (taste, habit, attitude, perception, culture, religion etc…)
8. **Competitive Condition** (competitive condition within the industry)

**METHODS OF DEMAND FORECASTING (Established Products)**

Several methods are employed for forecasting demand. All these methods can be grouped into survey method and statistical method.

**SURVEY METHOD**

Under this method, information about the desire of the consumers and opinions of experts are collected by interviewing them. This can be divided into four types;

**1. Opinion Survey method:** This method is also known as Sales- Force –Composite method or collective opinion method. Under this method, the company asks its salesmen to submit estimate for future sales in their respective territories. This method is more useful and appropriate because the salesmen are more knowledgeable about their territory.

**2. Expert Opinion:** Apart from salesmen and consumers, distributors or outside experts may also be used for forecast. Firms in advanced countries like USA, UK etc...make use of outside experts for estimating future demand. Various public and private agencies sell periodic forecast of short or long term business conditions.

**3. Delphi Method:** It is a sophisticated statistical method to arrive at a consensus. Under this method, a panel is selected to give suggestions to solve the problems in hand. Both internal and external experts can be the members of the panel. Panel members are kept apart from each other and express their views in an anonymous manner.

**4. Consumer Interview method:** Under this method a list of potential buyers would be drawn and each buyer will be approached and asked about their buying plans. This method is ideal and it gives firsthand information, but it is costly and difficult to conduct. This may be undertaken in three ways:

1. **Complete Enumeration** – In this method, all the consumers of the product are interviewed.
2. **Sample survey** - In this method, a sample of consumers is selected for interview. Sample may be random sampling or Stratified sampling.
3. **End-use method** – The demand for the product from different sectors such as industries, consumers, export and import are found out.

**STATISTICAL METHODS**

It is used for long term forecasting. In this method, statistical and mathematical techniques are used to forecast demand. This method is relies on past data. This includes;

**1. Trent projection method:** Under this method, demand is estimated on the basis of analysis of past data. This method makes use of time series (data over a period of time). Here we try to ascertain the trend in the time series. Trend in the time series can be estimated by using least square method or free hand method or moving average method or semi-average method.

**2. Regression and Correlation:** These methods combine economic theory and statistical techniques of estimation. in this method, the relationship between dependant variables(sales) and independent variables(price of related goods, income, advertisement etc..) is ascertained. This method is also called the economic model building.

**3. Extrapolation**: In this method the future demand can be extrapolated by applying binomial expansion method. This is based on the assumption that the rate of change in demand in the past has been uniform.

**4. Simultaneous equation method:** This means the development of a complete economic model which will explain the behaviour of all variables which the company can control.

**5. Barometric techniques:** Under this, present events are used to predict directions of change in the future. This is done with the help of statistical and economic indicators like:

* Construction contract,
* Personal income
* Agricultural income
* Employment
* GNP
* Industrial production

**INCOME ELASTICITY OF DEMAND**

Income elasticity of demand shows the change in quantity demanded as a result of a change in consumers‟ income. Income elasticity of demand may be stated in the form of formula:

**Proportionate Change in Quantity Demanded**

**Ey = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Proportionate Change in Income**

**Income elasticity of demand mainly of three types:**

1) Zero income Elasticity.

2) Negative income Elasticity

3) Positive income Elasticity.

**Zero income elasticity**

In this case, quantity demanded remain the same, eventhogh money income increases.ie, changes in the income doesn‟t influence the quantity demanded (Eg.salt,sugar etc). Here **Ey** (income elasticity) = **0**

**Negative income elasticity**

In this case, when income increases, quantity demanded falls.Eg, inferior goods. Here **Ey = < 0.**

**Positive income Elasticity**

In this case, an increase in income may lad to an increase in the quantity demanded. i.e., when income rises, demand also rises. (**Ey =>0**)

**This can be further classified in to three types:**

**a) Unit income elasticity;** Demand changes in same proportion to change in income.i.e, **Ey = 1**

**b) Income elasticity greater than unity:** An increase in income brings about a more than proportionate increase in quantity demanded.i.e, **Ey =>1**

**c) Income elasticity less than unity:** when income increases quantity demanded is also increases but less than proportionately. I.e., **Ey = <1**

**CROSS ELASTICITY OF DEMAND**

Cross elasticity of demand is the proportionate change in the quantity demanded of a commodity in response to change in the price of another related commodity. Related commodity may either substitutes or complements. Examples of substitute commodities are tea and coffee. Examples of compliment commodities are car and petrol. Cross elasticity of demand can be calculated by the following formula;

**Cross Elasticity = Proportionate Change in Quantity Demanded of a Commodity**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Proportionate Change in the Price of Related Commodity**

If the cross elasticity is positive, the commodities are said to be substitutes and if cross elasticity is negative, the commodities are compliments. The substitute goods (tea and Coffee) have positive cross elasticity because the increase in the price of tea may increase the demand of the coffee and the consumer may shift from the consumption of tea to coffee.

Complementary goods (car and petrol) have negative cross elasticity because increase in the price of car will reduce the quantity demanded of petrol.

The concept of cross elasticity assists the manager in the process of decision making. For fixing the price of product which having close substitutes or compliments, cross elasticity is very useful.

**INDIFFERENCE CURVE ANALYSIS**

A very popular alternative and more realistic method of explaining consumer's demand is the Indifference Curve Analysis. This approach to consumer behaviour is based on consumer preferences. It believes that human satisfaction being a psychological phenomenon cannot be measured quantitatively in monetary terms as was attempted in Marshall's utility analysis. In this approach it is felt that it is much easier and scientifically more sound to order preferences than to measure them in terms of money.

The consumer preference approach, is, therefore an ordinal concept based on ordering of preferences compared with Marshall's approach of cardinality.

**Assumptions Underlying Indifference Curve Approach**

1. The consumer is rational and possesses full information about all the relevant aspects of economic environment in which he lives.

2. The consumer is capable of ranking all conceivable combinations of goods according to the satisfaction they yield. Thus if he is given various combinations say A, B, C, D, E he can rank them as first preference, second preference and so on.

3. If a consumer happens to prefer A to B, he cannot tell quantitatively how much he prefers A to B.

If the consumer prefers combination A to B, and B to C, then he must prefer combination A to C. In other words, he has consistent consumption pattern behaviour.

5. If combination A has more commodities than combination B, then A must be preferred to B.

**What are Indifference Curves?**

Ordinal analysis of demand (here we will discuss the one given by Hicks and Allen) is based on indifference curves. An indifference curve is a curve which represents all those combinations of goods which give same satisfaction to the consumer. Since all the combinations on an indifference curve give equal satisfaction to the consumer, the consumer is indifferent among them. In other words, since all the combinations provide same level of satisfaction the consumer prefers them equally and does not mind which combination he gets. To understand indifference curves let us consider the example of a consumer who has one unit of food and 12 units of clothing. Now we ask the consumer how many units of clothing he is prepared to give up to get an additional unit of food, so that his level of satisfaction does not change. Suppose the consumer says that he is ready to give up 6 units of clothing to get an additional unit of food. We will have then two combinations of food and clothing giving equal satisfaction to consumer: Combination A has 1 unit of food and 12 units of clothing, combination B has 2 units of food and 6 units of clothing.

Similarly, by asking the consumer further how much of clothing he will be prepared to forgo for successive increments in his stock of food so that his level of satisfaction remains unaltered, we get various combinations as given below:

**Table Indifference Schedule**

**Table 2**

|  |  |  |  |
| --- | --- | --- | --- |
| **Combination** | **Food** | **Clothing** | **MRS** |
| A | 1 | 12 | - |
| B | 2 | 6 | 6 |
| C | 3 | 4 | 2 |
| D | 4 | 3 | 1 |

Now if we draw the above schedule we will get the following figure.

In Figure 8, an indifference curve IC is drawn by plotting the various combinations of the indifference schedule. The quantity of food is measured on the X axis and the quantity of clothing on the Y axis. As in indifference schedule, combinations lying on an indifference curve will give the consumer same level of satisfaction.

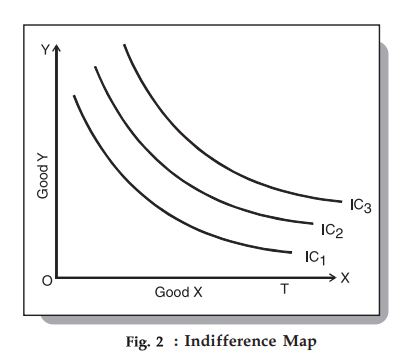


**Fig. 8 : A Consumer's Indifference Curve**

**Indifference Map:** A set of indifference curves is called indifference map.

An indifference map depicts complete picture of consumer's tastes and preferences. In Figure 9, an indifference map of a consumer is shown which consists of three indifference curves.

We have taken good X on X-axis and good Y on Y-axis. It should be noted that while the consumer is indifferent among the combinations lying on the same indifference curve, he certainly prefers the combinations on the higher indifference curve to the combinations lying on a lower indifference curve because a higher indifference curve signifies a higher level of .satisfaction. Thus while all combinations of IC, give same satisfaction, all combinations lying on IC2 give greater satisfaction than those lying on IC1



**Marginal Rate of Substitution**:

Marginal Rate of Substitution (MRS) is the rate at which the consumer is prepared to exchange goods X and Y Consider Table-2. In the beginning the consumer is consuming 1 unit of food and 12 units of clothing.

Subsequently, he gives up 6 units of clothing to get an extra unit of food, his level of satisfaction remaining the same. The MRS here is 6. Like wise which he moves from B to C and from C to D in his indifference schedule, the MRS are 2 and 1 respectively. Thus, we can define MRS of X for Y as the amount of Y whose loss can just be compensated by a unit gain of X in such a manner that the level of satisfaction remains the same. We notice that MRS is falling i.e., as the consumer has more and more units of food, he is prepared to give up less and less units of cloths. There are two reasons for this.

1. The want for a particular good is satiable so that when a consumer has its more quantity, his intensity of want for it decreases. Thus, when consumer in our example, has more units of food, his intensity of desire for additional units of food decreases.

2. Most of the goods are imperfect substitutes of one another. If, they could substitute one another perfectly. MRS would remain constant.

**CONSUMERS EQUILIBRIUM**

A consumer is in equilibrium when he derives maximum satisfaction from the goods and is in no position to rearrange his purchases.

**Assumptions**

* There is a defined indifference map showing the consumer’s scale of [preferences](https://www.toppr.com/guides/economics/theory-of-consumer-behavior/preferences-of-the-consumer/) across different [combinations](https://www.toppr.com/guides/quantitative-aptitude/permutation-and-combination/combination/) of two goods X and Y.
* The consumer has a fixed [money](https://www.toppr.com/guides/fundamentals-of-economics-and-management/money/definition-and-functions-of-money/) income and wants to spend it completely on the goods X and Y.
* The prices of the goods X and Y are fixed for the consumer.
* The goods are homogenous and divisible.
* The consumer acts rationally and maximizes his satisfaction.

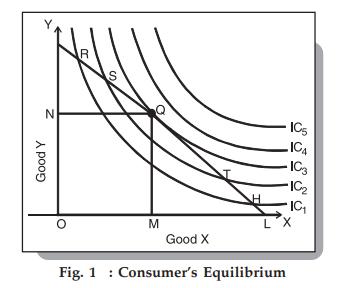
**Consumers Equilibrium**

In order to display the combination of two goods X and Y, that the consumer buys to be in equilibrium, let’s bring his [indifference curves](https://www.toppr.com/guides/business-economics/theory-of-consumer-behavior/indifference-curve/) and budget line together.

We know that,

* Indifference Map – shows the consumer’s preference [scale](https://www.toppr.com/guides/maths/mapping-your-way/scaling/) between various combinations of two goods
* Budget Line – depicts various combinations that he can afford to buy with his money [income](https://www.toppr.com/guides/fundamentals-of-economics-and-management/national-income/concept-of-national-income/) and prices of both the goods.

In the following figure, we depict an indifference map with 5 indifference [curves](https://www.toppr.com/guides/maths/basic-geometrical-ideas/curves/) – IC1, IC2, IC3, IC4, and IC5 along with the budget line PL for good X and good Y.



From the figure, we can see that the combinations R, S, Q, T, and H cost the same to the consumer. In order to maximize his level of satisfaction, the consumer will try to reach the highest indifference curve. Since we have assumed a budget constraint, he will be forced to remain on the budget line.

**UNIT III**

**PRODUCTION FUNCTION**

**Meaning of Production**

Production is the conversion of input into output. The factors of production and all other things which the producer buys to carry out production are called input. The goods and services produced are known as output.

**Factors of Production**

As already stated, production is a process of transformation of factors of production (input) into goods and services (output). The factors of production may be defined as resources which help the firms to produce goods or services. In other words, the resources required to produce a given product are called factors of production. Production is done by combining the various factors of production. Land, labour, capital and organisation (or entrepreneurship) are the factors of production (according to Marshall).

We can use the word **CELL** to help us remember the four factors of production:

**C: Capital;**

**E: Entrepreneurship;**

**L: Land: and**

**L: Labour.**

**Production Function**

Production is the process by which inputs are transformed in to outputs. Thus there is relation between input and output. The functional relationship between input and output is known as production function. The production function states the maximum quantity of output which can be produced from any selected combination of inputs. In other words, it states the minimum quantities of input that are necessary to produce a given quantity of output.

The production function is largely determined by the level of technology. The production function varies with the changes in technology. Whenever technology improves, a new production function comes into existence. Therefore, in the modern times the output depends not only on traditional factors of production but also on the

level of technology.

The production function can be expressed in an equation in which the output is the dependent variable and inputs are the independent variables. The equation is expressed as follows:

Q= f (L, K, T……………n)

Where, Q = output

L = labour

K = capital

T = level of technology

n = other inputs employed in production.

**There are two types of production function** :

**Short Run Production Function And**

**Long Run Production Function.**

In the short run production function the quantity of only one input varies while all other inputs remain constant. In the long run production function all inputs are variable.

**Assumptions of Production Function**

The production function is based on the following assumptions.

1. The level of technology remains constant.

2. The firm uses its inputs at maximum level of efficiency.

3. It relates to a particular unit of time.

4. A change in any of the variable factors produces a corresponding change in the output.

5. The inputs are divisible into most viable units.

**Managerial Use of Production Function**

The production function is of great help to a manager or business economist. The managerial uses of production function are outlined as below:

**1. It helps to determine least cost factor combination**:

The production function is a guide to the entrepreneur to determine the least cost factor combination. Profit can be maximized only by minimizing the cost of production. In order to minimize the cost of production, inputs are to be substituted. The production function helps in substituting the inputs.

**2. It helps to determine optimum level of output:**

The production function helps to determine the optimum level of output from a given quantity of input. In other words, it helps to arrive at the producer's equilibrium.

**3. It enables to plan the production:**

The production function helps the entrepreneur (or management) to plan the production.

**4. It helps in decision-making:**

Production function is very useful to the management to take decisions regarding cost and output. It also helps in cost control and cost reduction. In short, production function helps both in the short run and long run decision-making process.

**ISOQUANT CURVE**

The terms “ Iso-quant” has been derived from the Greek word *iso* means `equal` and Latin word *quantus* means `quantity`. The iso-quant curve is therefore also known as`` equal product curve ``or production indifference curve . An iso- quant curve is locus of point representing the various combination of two inputs –capital and labour –yielding the same output. It shows all possible combination of two inputs, namely- capital and labour which can produce a particular quantity of output or different combination of the two inputs that can give in the same output . An isoquant curve all along its length represents a fixed quantity of output.

The following table illustrates combination of capital (K) and labour (L) which give the same output say-20units.

The combinations of A uses one unit of „K‟ and 12 units of „L‟ to produce is20 units. likewise the combinations B,C,D and E give the same output --20 units.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Combination** | **Capital** | **Labour** | **Output** | **Combination** |
| A | 1 | 12 | 20 | A |
| B | 2 | 8 | 20 | B |
| C | 3 | 5 | 20 | C |
| D | 4 | 3 | 20 | D |
| E | 5 | 2 | 20 | E |

The above curve shows the four different combinations of inputs. (capital and labour) which give the same output namely 20units ,40units ,60units respectively. Thus it provides fixed level of output. Further the shape of isoquants reveal the degree of substitutability of one factor for another to yield the same level of output . It also implies the diminishing marginal rate of technical substitution. Marginal rate of technical substitution refers to the rate at which one output can be substituted for another in order to keep the output constant . The slope of an isoquant indicates the marginal rate of technical substitution at the point.

**The laws of production**

Production function shows the relationship between a given quantity of input and its maximum possible out put. Given the production function, the relationship between additional quantities of input and the additional output can be easily obtained. This kind of relationship yields the law of production The traditional theory of production studies the marginal input-output relationship under

1. Short run; and (II) long run. In the short run, input-output relations are studied with one variable input, while other inputs are held constant .The Law of production under these assumptions are called “ the Laws of variable production”. In the long run input output relations are studied assuming all the input to be variable. The long-run input output relations are studied under `Laws of Returns to Scale.

**Law of Diminishing Returns (Law of Variable Proportions)**

The Laws of returns states the relationship between the variable input and the output in the short term. By definition certain factors of production (e.g.-Land, plant, machinery etc) are available in short supply during the short run . Such factors which are available in unlimited supply even during the short periods are known as variable factor. In short-run there fore ,the firms can employ a limited or fixed quantity of fixed factors and an unlimited quantity of the variable factor . In other words, firms can employ in the short run varying quantities of variable inputs against given quantity of fixed factors. This kind of change in input combination leads to variation in factor proportions. The Law which brings out the relationship between varying factor properties and output are there fore known as the Law of variable proportions..

The variation in inputs lead to a disproportionate increase in output more and more units of variable factor when applied cause an increase in output but after a point the extra output will grow less and less. The law which brings out this tendency in production is known as‟ Law of Diminishing Returns`

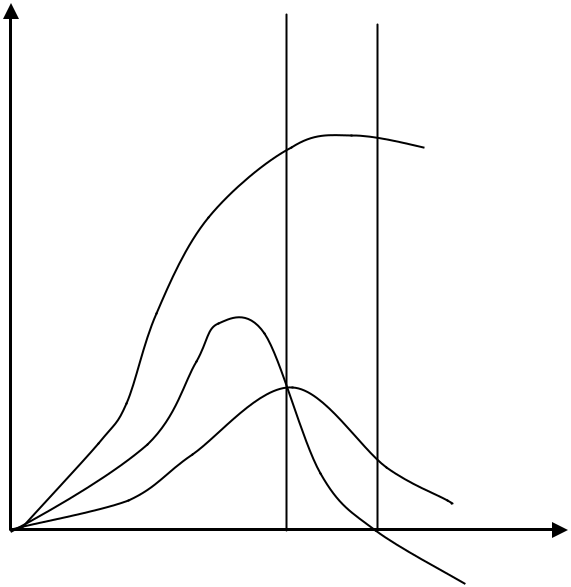
The Law of Diminishing returns levels that any attempt to increase output by increasing only one factor finally faces diminishing returns. The Law states that when some factor remain constant ,more and more units of a variable factor are introduced the production may increase initially at an increasing rate; but after a point it increases only at diminishing rate. Land and capital remain fixed in the short-term whereas labour shows a variable nature.

The following table explains the operation of the Law of Diminishing Returns.

|  |  |  |  |
| --- | --- | --- | --- |
| No. of | Total | Average | Marginal |
| Workers | product | product | product |
| 1 | 10 | 10 | 10 |
| 2 | 22 | 11 | 12 |
| 3 | 36 | 12 | 14 |
| 4 | 52 | 13 | 16 |
| 5 | 66 | 13.2 | 14 |
| 6 | 76 | 12.7 | 10 |
| 7 | 82 | 11.7 | 6 |
| 8 | 85 | 10.5 | 3 |
|  |  |  |  |
| 9 | 85 | 905 | 0 |
|  |  |  |  |
| 10 | 83 | 8.3 | (-2) |
|  |  |  |  |

The above table illustrates several important features of a typical production function .With one variable input.- here both Average Product (AP) and Marginal Product (MP) first rise ,reach a maximum - then decline. Average product is the product for one unit of labour . It is arrived at by dividing the Total Product (TP) by number of workers Marginal product is the additional product resulting term additional labour. It is found out by dividing the change in total product by the change in the number of workers. The total output increases at an increasing rate till the employment of the 4th worker. The rate of increase in the marginal product reveals this .Any additional labour employed beyond the 4th labour clearly faces the operation of the Law of Diminishing Returns. The maximum marginal product is

Stage 1 Stage 2 Stage 3



**Y**

Output

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| OX axis | | represents the units of labour | | | | | | and | | OY | | axis | represents | | | | the unit of output . The total | | | | |
| output(TP)curve has a | | | | | steep rise till the | | | employment | | | | | of | the | 4th | | worker. This | | | shows that the | |
| output increases at an increasing rate till the | | | | | | | | | employment of the 4th | | | | | | | labour . TP curve still goes on | | | | | |
| increasing but only at a diminishing rate. Finally TP curve shows a downward trend. | | | | | | | | | | | | | | | | | | | |  |  |
|  |  | The Law of Diminishing | | | | | Returns operation at three stages .At the first stage, total product | | | | | | | | | | | | | | |
| increases | | at | an | increasing rate .The marginal | | | | | product at | | | | this stage | | |  | increases at an | | | increasing | rate |
| resulting | | in a greater increases in total product .The average | | | | | | | | | | | | | product also | | | | increases. This | | stage |
| continues up | | | to | the point where average product is | | | | | | | equal to | | | marginal | | | product .the law of increasing | | | | |
| returns is in operation at this stage | | | | | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | The | | Law of increasing Returns operates from the second | | | | | | | | | | | |  | stage | on wards .At the second | | | |
| stage , the | | total | | product continues to | | | increase | | but | | at | a | diminishing | | | | rate . | As the marginal product | | | |
| at this stage starts falling ,the average product also | | | | | | | | | | | declines . The | | | | | second | | stage comes to an end | | | |
| where | total | | product | | become | maximum | | and | | marginal | | | | product | |  | becomes | | zero. | The marginal | |
| product | becomes negative in the | | | | | third stage. So the total product also declines. The average product | | | | | | | | | | | | | | | |

continues to decline in the third stage.

**Assumptions of Law Diminishing Returns**

The Law of Diminishing Returns is based on the following assumptions;-

Returns is based on the following assumptions;-

1. The production technology remains unchanged
2. The variable factor is homogeneous.
3. Any one factor is constant
4. The fixed factor remains constant.

**Law of Returns to scale**

In the long –run all the factor of production are variable ,and an increase in output is possible by increasing all the inputs. The Law of Returns to scale explains the technological relationship

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| between changing scale of | | input and output. The law of returns of scale explain how a simultaneous | | | | | |
| and proportionate Increase in all the | | | inputs | affect the | total output. The increase in output may be | | |
| proportionate , | more than | proportionate or | | less than | proportionate. If | the | increase in output is |
| proportionate | to the increase in input , | | it is | constant Returns to scale .If It | | is | less then proportionate |
| it is diminishing returns to | | scale . The | increasing returns to the scale comes | | | | first ,then constant and |
| finally diminishing returns to scale happens. | | | |  |  |  |  |

**Increasing Returns to scale**

When proportionate increase in all factor of production results in a more than proportionate increase in output and this results first stage of production which is known as increasing returns to scale. Marginal output increases at this stage. Higher degree of specialization, falling cost etc will lead higher efficiency which result increased returns in the very first stage of production.

**Constant Returns to scale**

Firms cannot maintain increasing returns to scale indefinitely after the first stage , firm enters a stage when total output tends to increase at a rate which is equal to the rate of increase in inputs. This stage comes in to operation when the economies of large scale production are neutralized by the diseconomies of large scale operation.

**Diminishing Returns to Scale**

In this stage ,a proportionate increase in all the input result only less than proportionate increase in output . This is because of the diseconomies of large scale production. When the firm grows further, the problem of management arise which result inefficiency and it will affect the position of output.

**ECONOMIES OF SCALE**

The factors which cause the operation of the laws of returns the scale are grouped under economies and diseconomies of scale . Increasing returns to scale operates because of economies of scale and decreasing returns to scale operates because of diseconomies of scale where economies and diseconomies arise simultaneously. Increasing returns to scale operates when economies of scale are greater then the diseconomies of scale and returns to scale decreases when diseconomies .overweight the economies of scale . Similarly when economies and diseconomies are in balance ,returns to scale becomes constant.

When a firm increases all the factor of production it enjoys the same advantages of economies of production . The economies of scale are classified as ;

1. Internal economies.
2. External economies

**Internal economies of scale**

Internal economies are those which arise form the explanation of the plant-size of the firm .Internal economies of scale may be classified;-

1. Economies in production.
2. Economies in marketing
3. Economies in economies
4. Economies in transport and storage

A . Economies in production :-it arises term

1. Technological advantages
2. Advantages of division of labour and specialization

B . Economies in marketing;-It facilitates through

1. Large scale purchase of inputs.
2. Advertisement economies ;
3. Economies in large scale distribution
4. Other large-scale economies

C . Managerial economies ;- It achieves through

1. Specialization in management
2. Mechanization of managerial function.

D . Economies in transport and storage

Economies in transportation and storage costs arise form fuller utilization of transport and storage facilities.

**External Economies of scale**

External or pecuniary economies to large size firms arise from the discounts available to it due

to;

1 . Large scale purchase of raw materials

2 . Large scale acquisition of external finance at low interest

3 . Lower advertising rate fun advertising media.

4 . Concessional transport charge on bulk transport.

1. Lower wage rates if a large scale firm is monopolistic employer of certain kind of specialized labour

|  |  |
| --- | --- |
|  |  |

Thus External economies of scale are strictly based on experience of large –scale firms or well managed small scale firms. Economies of scale will not continue for ever. Expansion in the size of the firms beyond a particular limit , too much specialization, inefficient supervision, Improper labour relations etc will lead to diseconomies of scale .

|  |  |
| --- | --- |
|  |  |

## UNIT IV

**SUPPLY**

## Supply

Production is the process of turning inputs of scarce resources into an output of goods or services. The role of a firm is to organize scarce resources to satisfy consumer demand in a profitable way. Supply is defined as the willingness and ability of firms to produce a given quantity of output in a given period of time, or at a given point in time, and take it to market. Not all output is taken to market, and some output may be stored and released onto the market in the future.

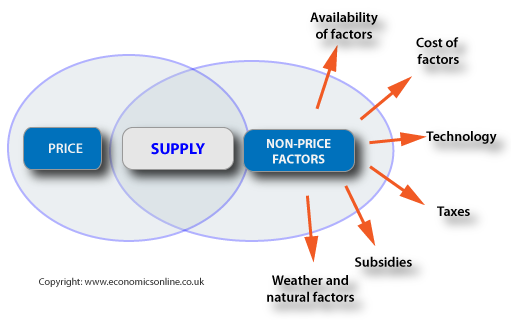
Supply can be measured for a single factor of production, for a single firm, for an industry and for the whole economy.

**Supply**

**Definition**

Supply is the willingness and ability of producers to create goods and services to take them to market. Supply is positively related to price given that at higher prices there is an incentive to supply more as higher prices may generate increased revenue and profits.

## Determinants of supply



### Price

The [**price**](https://www.economicsonline.co.uk/Competitive_markets/Producer_supply.html#Supply_and_price) of the product is the starting point in building a model of supply. The supply model assumes that price and quantity supplied are directly related.

### Non-price factors

As well as price, there are several other underlying non-price determinants of supply, including:

### The availability of factors of production

The availability of factors of production, such as labour or raw materials, can affect the amount that can be produced and supplied. For example, if a firm producing motor vehicles experiences a shortage of steel for its body panels, then its ability to produce vehicles will be reduced.

### Cost of factors

Changes in [**costs**](https://www.economicsonline.co.uk/Business_economics/Costs.html)will alter a firm’s calculation of how much to supply at a given price. For example, if the same motor manufacturer experiences an increase in labour costs due to an increase in the wage rate, the cost of producing each vehicle will rise. This means that the price the manufacturer expects to receive will increase. If the price does not increase, less will be produced, [**ceteris paribus**](https://www.economicsonline.co.uk/Competitive_markets/What_is_economics.html).

### New firms entering the market

In terms of total supply to a market, the number of firms in the market will affect the total supply. New firms in a market will increase market supply and firms leaving will reduce supply. New firms may be attracted into a market because of the expectation of profits and existing firms may leave because they cannot cover their costs, and make losses.  They may also leave because they cannot cover their [**opportunity cost**](https://www.economicsonline.co.uk/Competitive_markets/The_economic_problem.html), meaning that leaving becomes the best alternative.

### Weather and other natural factors

Changes in the weather can have a considerable impact on the ability to produce certain products, like farm produce and [**commodities**](https://www.economicsonline.co.uk/Competitive_markets/Primary_markets.html). This tends to affect the primary sector more than manufacturing.

### Taxes on products

Taxes on products, such as [**Value Added Tax**](https://www.economicsonline.co.uk/Competitive_markets/Indirect_taxes_and_subsidies.html) (VAT), have a direct effect on supply. An indirect tax imposed on a product has an effect similar to that of a cos. which means that increased taxes affect a producer’s decision to supply, and how much to supply.

### Subsidies

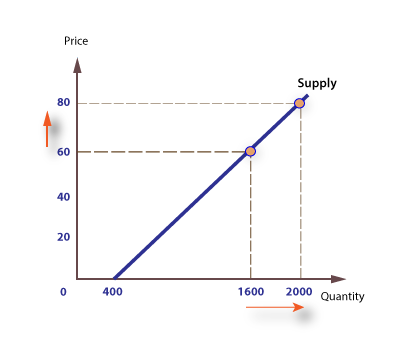
Subsidies are funds given to firms to enable them to increase their supply or to reduce the price of their product to the consumer. Subsidies can alter the firm’s willingness and ability to produce and supply.

## Supply and price

***Supply schedules***

A supply schedule shows the relationship between price and planned supply over a hypothetical range of prices. For example, this supply schedule shows how many cans of cola would be supplied by a school or college canteen in a single week.

|  |  |
| --- | --- |
| **PRICE (p)** | **QUANTITY SUPPLIED** |
| 80 | 2000 |
| 70 | 1800 |
| 60 | 1600 |
| 50 | 1400 |
| 40 | 1200 |
| 30 | 1000 |
| 20 | 800 |
| 10 | 600 |
| 0 | 400 |



The higher the price, the greater the quantity supplied. A supply curve is derived from a supply schedule. The upward slope of a supply curve illustrates the direct relationship between supply decisions and price. In this case, the supplier of cola would supply 400 more cans at 80p compared with 60p.

Mathematically, the supply schedule can be derived from a supply function, and in this case the supply function is Qs = 400 + 20p.

## Why do supply curves slope upwards?

There are a number of explanations of this relationship, including the law of diminishing marginal returns.

### The Law of diminishing returns

The law of diminishing marginal returns explains what happens to the output of products when a firm uses more variable inputs while keeping a least one factor of production fixed. Real capital, such as buildings, machinery, and equipment, is usually the factor kept fixed when demonstrating this principle.

Economic theory predicts that, when employing these extra variable factors, such as labour, the marginal returns (additional output) from each extra unit of input will eventually diminish.

### Diminishing returns and increasing costs

Firms need to sell their extra output at a higher price so that they can pay the higher [**marginal cost of production**](https://www.economicsonline.co.uk/Business_economics/Costs.html). Hence, decisions to supply are largely determined by the marginal cost of production. The supply curve slopes upward, reflecting the higher price needed to cover the higher marginal cost of production. The higher marginal cost arises because of diminishing marginal returns to the variable factors.

## Definition of 'Law of Supply'

***Definition:***Law of supply states that other factors remaining constant, price and quantity supplied of a good are directly related to each other. In other words, when the price paid by buyers for a good rises, then suppliers increase the supply of that good in the market.

***Description:*** Law of supply depicts the producer behavior at the time of changes in the prices of goods and services. When the price of a good rises, the supplier increases the supply in order to earn a profit because of higher prices.

|  |
| --- |
| https://economictimes.indiatimes.com/photo/19490988.cms |

The above diagram shows the supply curve that is upward sloping (positive relation between the price and the quantity supplied). When the price of the good was at P3, suppliers were supplying Q3 quantity. As the price starts rising, the quantity supplied also starts rising.

### **Meaning of Elasticity of Supply:**

The law of supply indicates the direction of change—if price goes up, supply will increase. But how much supply will rise in response to an increase in price cannot be known from the law of supply. To quantify such change we require the concept of elasticity of supply that measures the extent of quantities supplied in response to a change in price.

Elasticity of supply measures the degree of responsiveness of quantity supplied to a change in own price of the commodity. It is also defined as the percentage change in quantity supplied divided by percentage change in price.

**It can be calculated by using the following formula:**

ES = % change in quantity supplied/% change in price

Symbolically,

ES = ∆Q/Q ÷ ∆P/P = ∆Q/∆P × P/Q

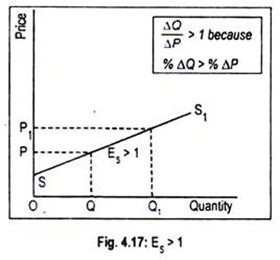
### Types of Elasticity of Supply:

For all the commodities, the value of Escannot be uniform. For some commodities, the value may be greater than or less than one.

**Like elasticity of demand, there are five cases of ES:**

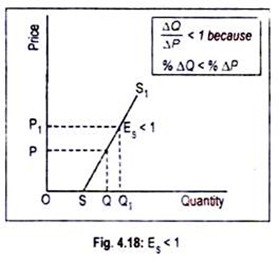
#### (a) Elastic Supply (ES>1):

Supply is said to be elastic when a given percentage change in price leads to a larger change in quantity supplied. Under this situation, the numerical value of Es will be greater than one but less than infinity. SS1 curve of Fig. 4.17 exhibits elastic supply. Here quantity supplied changes by a larger magnitude than does price.

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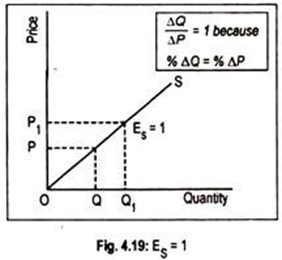
#### (b) Inelastic Supply (ES< 1):

Supply is said to be inelastic when a given percentage change in price causes a smaller change in quantity supplied. Here the numerical value of elasticity of supply is greater than zero but less than one. Fig. 4.18 depicts inelastic supply curve where quantity supplied changes by a smaller percentage than does price.

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#### c) Unit Elasticity of Supply (ES = 1):

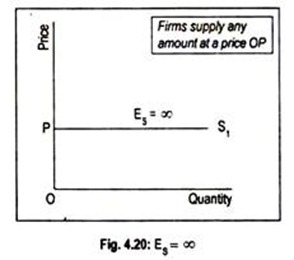
If price and quantity supplied change by the same magnitude, then we have unit elasticity of supply. Any straight line supply Curve passing through the origin, such as the one shown in Fig. 4.19, has an elasticity of supply equal to 1. This can be verified in this way.

**[](http://cdn.economicsdiscussion.net/wp-content/uploads/2016/01/clip_image005-11.jpg)**

For any straight line positively-sloped supply curve drawn through the origin, the ratio of P/Q at any point on the supply curve is equal to the ratio ∆ P/∆ Q. Note that ∆ P/∆ Q is the slope of the supply curve while elasticity is (1/∆P/∆Q = ∆Q/∆P).Thus, in the formula (∆Q/∆P. P/Q), the two ratios cancel out each other.

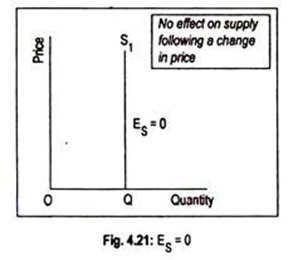
#### (d) Perfectly Elastic Supply (ES = ∞):

The numerical value of elasticity of supply, in exceptional cases, may reach up to infinity. The supply curve PS1 drawn in Fig. 4.20 has an elasticity of supply equal to infinity. Here the supply curve has been drawn parallel to the horizontal axis. The economic inter­pretation of this supply curve is that an unlimited quantity will be offered for sale at the price OS. If price slightly drops down below OS, nothing will be supplied.

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#### (e) Perfectly Inelastic Supply (ES= 0):

Another extreme is the completely or perfectly inelastic supply or zero elasticity. SS1 curve drawn in Fig. 4.21 illustrates the case of zero elasticity. This curve describes that whatever the price of the commodity, it may even be zero, quantity supplied remains unchanged at OQ. This sort of supply curve is conceived when we consider the supply curve of land from the viewpoint of a country, or the world as a whole.

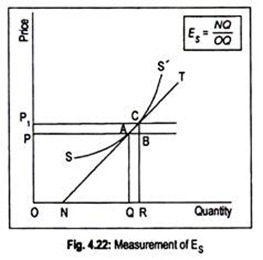
**[](http://cdn.economicsdiscussion.net/wp-content/uploads/2016/01/clip_image007-3.jpg)**

One important point to note here. Any straight line supply curve that intersects the vertical axis above the origin has an elasticity of supply greater than one (Fig. 4.17). Elasticity of supply will be less than one if the straight line supply curve cuts the horizontal axis on any point to the right of the origin, i.e. the quantity axis (Fig. 4.18).

### Measurement of Elasticity of Supply:

Here we will measure the elasticity of supply at a particular point on a given supply curve. This is shown in Fig. 4.22 where SS’ is the supply curve.

To measure the elasticity of supply at a particular point on the curve SS’, we have drawn a straight line NT in such a way that it touches the SS’ curve at points A and C. As these two points lie very close to each other, the slope of the supply curve as well as the slope of the NT line is the same.

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### Meaning of Market:

Ordinarily, the term “market” refers to a particular place where goods are purchased and sold. But, in economics, market is used in a wide perspective. In economics, the term “market” does not mean a particular place but the whole area where the buyers and sellers of a product are spread.

According to Prof. R. Chapman, “The term market refers not necessarily to a place but always to a commodity and the buyers and sellers who are in direct competition with one another.”

### Market Structure:

#### Meaning:

Market structure refers to the nature and degree of competition in the market for goods and services. The structures of market both for goods market and service (factor) market are determined by the nature of competition prevailing in a particular market.

#### Determinants:

There are a number of determinants of market structure for a particular good.

**They are:**

(1) The number and nature of sellers.

(2) The number and nature of buyers.

(3) The nature of the product.

(4) The conditions of entry into and exit from the market.

(5) Economies of scale.

**They are discussed as under:**

#### 1. Number and Nature of Sellers:

The market structures are influenced by the number and nature of sellers in the market. They range from large number of sellers in perfect competition to a single seller in pure monopoly, to two sellers in duopoly, to a few sellers in oligopoly, and to many sellers of differentiated products.

#### 2. Number and Nature of Buyers:

The market structures are also influenced by the number and nature of buyers in the market. If there is a single buyer in the market, this is buyer’s monopoly and is called monopsony market. Such markets exist for local labour employed by one large employer. There may be two buyers who act jointly in the market. This is called duopsony market. They may also be a few organised buyers of a product.

#### 3. Nature of Product:

It is the nature of product that determines the market structure. If there is product differentiation, products are close substitutes and the market is characterised by monopolistic competition. On the other hand, in case of no product differentiation, the market is characterised by perfect competition. And if a product is completely different from other products, it has no close substitutes and there is pure monopoly in the market.

#### 4. Entry and Exit Conditions:

The conditions for entry and exit of firms in a market depend upon profitability or loss in a particular market. Profits in a market will attract the entry of new firms and losses lead to the exit of weak firms from the market. In a perfect competition market, there is freedom of entry or exit of firms.

#### 5. Economies of Scale:

Firms that achieve large economies of scale in production grow large in comparison to others in an industry. They tend to weed out the other firms with the result that a few firms are left to compete with each other. This leads to the emergency of oligopoly. If only one firm attains economies of scale to such a large extent that it is able to meet the entire market demand, there is monopoly.

### **Forms of Market Structure:**

**On the basis of competition, a market can be classified in the following ways:**

1. Perfect Competition

2. Monopoly

3. Duopoly

4. Oligopoly

5. Monopolistic Competition

#### 1. Perfect Competition Market:

A perfectly competitive market is one in which the number of buyers and sellers is very large, all engaged in buying and selling a homogeneous product without any artificial restrictions and possessing perfect knowledge of market at a time.

**(1) Large Number of Buyers and Sellers:**

The first condition is that the number of buyers and sellers must be so large that none of them individually is in a position to influence the price and output of the industry as a whole. The demand of individual buyer relative to the total demand is so small that he cannot influence the price of the product by his individual action.

**(2) Freedom of Entry or Exit of Firms:**

The next condition is that the firms should be free to enter or leave the industry. It implies that whenever the industry is earning excess profits, attracted by these profits some new firms enter the industry. In case of loss being sustained by the industry, some firms leave it.

**(3) Homogeneous Product:**

Each firm produces and sells a homogeneous product so that no buyer has any preference for the product of any individual seller over others. This is only possible if units of the same product produced by different sellers are perfect substitutes. In other words, the cross elasticity of the products of sellers is infinite.

**(4) Absence of Artificial Restrictions:**

The next condition is that there is complete openness in buying and selling of goods. Sellers are free to sell their goods to any buyers and the buyers are free to buy from any sellers. In other words, there is no discrimination on the part of buyers or sellers.

**(5) Profit Maximisation Goal:**

Every firm has only one goal of maximising its profits.

**(6) Perfect Mobility of Goods and Factors:**

Another requirement of perfect competition is the perfect mobility of goods and factors between industries. Goods are free to move to those places where they can fetch the highest price. Factors can also move from a low-paid to a high-paid industry.

**(7) Perfect Knowledge of Market Conditions:**

This condition implies a close contact between buyers and sellers. Buyers and sellers possess complete knowledge about the prices at which goods are being bought and sold, and of the prices at which others are prepared to buy and sell. They have also perfect knowledge of the place where the transactions are being carried on.

**8) Absence of Transport Costs:**

Another condition is that there are no transport costs in carry­ing of product from one place to another. This condition is essential for the existence of perfect compe­tition which requires that a commodity must have the same price everywhere at any time.

**(9) Absence of Selling Costs:**

Under perfect competition, the costs of advertising, sales-promotion, etc. do not arise because all firms produce a homogeneous product.

#### 2. Monopoly Market:

Monopoly is a market situation in which there is only one seller of a product with barriers to entry of others. The product has no close substitutes. The cross elasticity of demand with every other product is very low. This means that no other firms produce a similar product. According to D. Salvatore, “Monopoly is the form of market organisation in which there is a single firm selling a commodity for which there are no close substitutes.”

#### Characteristics of Monopoly:

**The main features of monopoly are as follows:**

1. Under monopoly, there is one producer or seller of a particular product and there is no differ­ence between a firm and an industry. Under monopoly a firm itself is an industry.

2. A monopoly may be individual proprietorship or partnership or joint stock company or a co­operative society or a government company.

3. A monopolist has full control on the supply of a product. Hence, the elasticity of demand for a monopolist’s product is zero.

4. There is no close substitute of a monopolist’s product in the market. Hence, under monopoly, the cross elasticity of demand for a monopoly product with some other good is very low.

5. There are restrictions on the entry of other firms in the area of monopoly product.

6. A monopolist can influence the price of a product. He is a price-maker, not a price-taker.

7. Pure monopoly is not found in the real world.

8. Monopolist cannot determine both the price and quantity of a product simultaneously.

9. Monopolist’s demand curve slopes downwards to the right.

#### 3. Duopoly:

Duopoly is a special case of the theory of oligopoly in which there are only two sellers. Both the sellers are completely independent and no agreement exists between them. Even though they are inde­pendent, a change in the price and output of one will affect the other, and may set a chain of reactions. A seller may, however, assume that his rival is unaffected by what he does, in that case he takes only his own direct influence on the price.

#### 4. Oligopoly:

Oligopoly is a market situation in which there are a few firms selling homogeneous or differenti­ated products. It is difficult to pinpoint the number of firms in ‘competition among the few.’ With only a few firms in the market, the action of one firm is likely to affect the others. An oligopoly industry produces either a homogeneous product or heterogeneous products.

#### Characteristics of Oligopoly:

**In addition to fewness of sellers, most oligopolistic industries have several common characteris­tics which are explained below:**

**(1) Interdependence:**

There is recognised interdependence among the sellers in the oligopolistic market. Each oligopolist firm knows that changes in its price, advertising, product characteristics, etc. may lead to counter-moves by rivals. When the sellers are a few, each produces a considerable fraction of the total output of the industry and can have a noticeable effect on market conditions.

**(2) Advertisement:**

The main reason for this mutual interdependence in decision making is that one producer’s fortunes are dependent on the policies and fortunes of the other producers in the indus­try. It is for this reason that oligopolist firms spend much on advertisement and customer services.

**(3) Competition:**

This leads to another feature of the oligopolistic market, the presence of com­petition. Since under oligopoly, there are a few sellers, a move by one seller immediately affects the rivals. So each seller is always on the alert and keeps a close watch over the moves of its rivals in order to have a counter-move. This is true competition.

**(4) Barriers to Entry of Firms:**

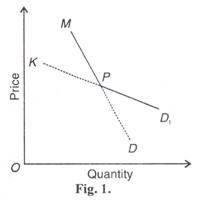
As there is keen competition in an oligopolistic industry, there are no barriers to entry into or exit from it. However, in the long run, there are some types of barriers to entry which tend to restraint new firms from entering the industry.

**(5) Lack of Uniformity:**

Another feature of oligopoly market is the lack of uniformity in the size of firms. Finns differ considerably in size. Some may be small, others very large. Such a situation is asymmetrical. This is very common in the American economy. A symmetrical situation with firms of a uniform size is rare.

**(6) Demand Curve:**

It is not easy to trace the demand curve for the product of an oligopolist. Since under oligopoly the exact behaviour pattern of a producer cannot be ascertained with certainty, his demand curve cannot be drawn accurately, and with definiteness. How does an individual seller s de­mand curve look like in oligopoly is most uncertain because a seller’s price or output moves lead to unpredictable reactions on price-output policies of his rivals, which may have further repercussions on his price and output.



So the demand curve for the individual seller’s product will be less elastic just below the present price P (where KD1and MD curves are shown to intersect). On the other hand, when he raises the price of his product, the other sellers will not follow him in order to earn larger profits at the old price. So this individual seller will experience a sharp fall in the demand for his product.

**(7) No Unique Pattern of Pricing Behaviour:**

The rivalry arising from interdependence among the oligopolists leads to two conflicting motives. Each wants to remain independent and to get the maximum possible profit. Towards this end, they act and react on the price-output movements of one another in a continuous element of uncertainty.

#### 5. Monopolistic Competition:

Monopolistic competition refers to a market situation where there are many firms selling a differ­entiated product. “There is competition which is keen, though not perfect, among many firms making very similar products.”

**Features:**

**The following are the main features of monopolistic competition:**

**(1) Large Number of Sellers:**

In monopolistic competition the number of sellers is large. They are “many and small enough” but none controls a major portion of the total output. No seller by chang­ing its price-output policy can have any perceptible effect on the sales of others and in turn be influenced by them.

**(2) Product Differentiation:**

One of the most important features of the monopolistic competi­tion is differentiation. Product differentiation implies that products are different in some ways from each other. They are heterogeneous rather than homogeneous so that each firm has an absolute monopoly in the production and sale of a differentiated product. There is, however, slight difference between one product and other in the same category.

**(3) Freedom of Entry and Exit of Firms:**

Another feature of monopolistic competition is the freedom of entry and exit of firms. As firms are of small size and are capable of producing close substitutes, they can leave or enter the industry or group in the long run.

**(4) Nature of Demand Curve:**

Under monopolistic competition no single firm controls more than a small portion of the total output of a product. No doubt there is an element of differentiation neverthe­less the products are close substitutes. As a result, a reduction in its price will increase the sales of the firm but it will have little effect on the price-output conditions of other firms, each will lose only a few of its customers.

In monopolistic competition, every firm has independent policy. Since the number of sellers is large, none controls a major portion of the total output. No seller by changing its price-output policy can have any perceptible effect on the sales of others and in turn be influenced by them.

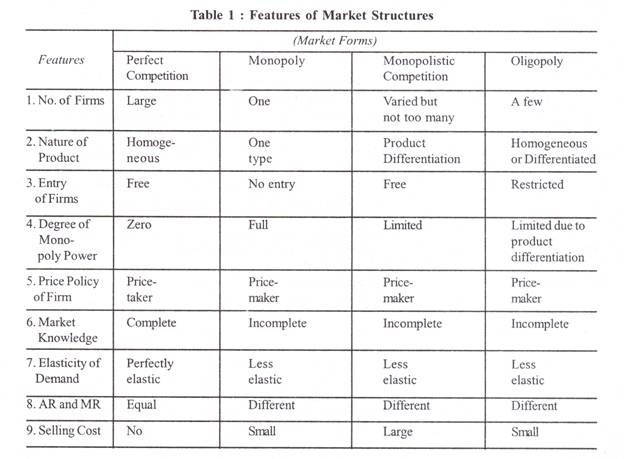
**(6) Product Groups:**

There is no any ‘industry’ under monopolistic competition but a ‘group’ of firms producing similar products. Each firm produces a distinct product and is itself an industry. Chamberlin lumps together firms producing very closely related products and calls them product groups, such as cars, cigarettes, etc.

**(7) Selling Costs:**

Under monopolistic competition where the product is differentiated, selling costs are essential to push up the sales. Besides, advertisement, it includes expenses on salesman, allowances to sellers for window displays, free service, free sampling, premium coupons and gifts, etc.

**The features of market structures are shown in Table 1.**



# Monopoly and Perfect Competition | Difference

### Difference:

**Following points make clear difference between both the competitions:**

#### 1. Output and Price:

Under perfect competition price is equal to marginal cost at the equilibrium output. While under monopoly, the price is greater than average cost.

#### 2. Equilibrium:

Under perfect competition equilibrium is possible only when MR = MC and MC cuts the MR curve from below. But under simple monopoly, equilibrium can be realized whether marginal cost is rising, constant or falling.

#### 3. Entry:

Under perfect competition, there exist no restrictions on the entry or exit of firms into the industry. Under simple monopoly, there are strong barriers on the entry and exit of firms.

#### 4. Discrimination:

Under simple monopoly, a monopolist can charge different prices from the different groups of buyers. But, in the perfectly competitive market, it is absent by definition.

#### 5. Profits:

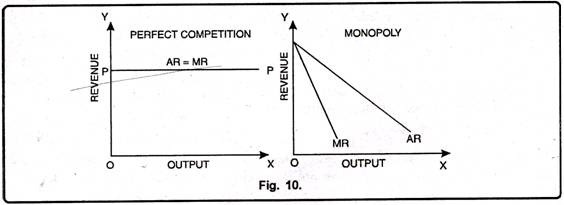
The difference between price and marginal cost under monopoly results in super-normal profits to the monopolist. Under perfect competition, a firm in the long run enjoys only normal profits.

#### 6. Supply Curve of Firm:

Under perfect competition, supply curve can be known. It is so because all firms can sell desired quantity at the prevailing price. Moreover, there is no price discrimination. Under monopoly, supply curve cannot be known. MC curve is not the supply curve of the monopolist.

#### 7. Slope of Demand Curve:

Under perfect competition, demand curve is perfectly elastic. It is due to the existence of large number of firms. Price of the product is determined by the industry and each firm has to accept that price. On the other hand, under monopoly, average revenue curve slopes downward. AR and MR curves are separate from each other. Price is determined by the monopolist. It has been shown in Figure 10.

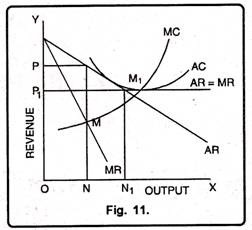
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#### 8. Goals of Firms:

Under perfect competition and monopoly the firm aims at to maximize its profits. The firm which aims at to maximize its profits is known as rational firm.

#### 9. Comparison of Price:

Monopoly price is higher than perfect competition price. In long period, under perfect competition, price is equal to average cost. In monopoly, price is higher as is shown in Fig. 11. The perfect competition price is OP1, whereas monopoly price is OP. In equilibrium, monopoly sells ON output at OP price but a perfectly competitive firm sells higher output ON1 at lower price OP1.

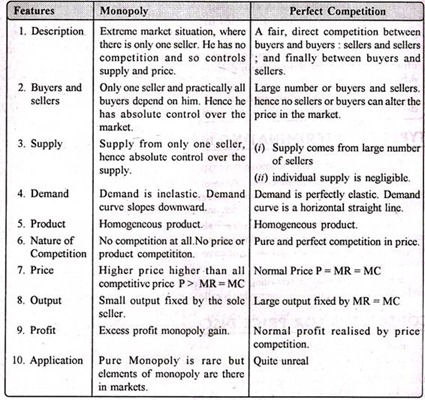
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#### 10. Comparison of Output:

Perfect competition output is higher than monopoly price. Under perfect competition the firm is in equilibrium at point M1 (As shown in Fig. 11 (a)), AR = MR = AC = MC are equal. The equilibrium output is ON1. On the other hand monopoly firm is in equilibrium at point M where MC=MR. The equilibrium output is ON. The monopoly output is lower than perfectly competitive firm output.

### Summary of Comparison:

**A general comparison between monopoly and perfect competition for easy understanding has been depicted as under:**



### Meaning of Firm and Industry:

It is essential to know the meaning of firm and industry before analysing the two. Firm is an organisation which produces and supplies goods that are demanded by the people with the goal of maximising its profits.

According to R.L.Miller, “Firm is an organisation that buys and hires resources and sells goods and services.” To Lipsey, “Firm is the unit that employs factors of production to produce commodities that it sells to other firms, to households, or to the government.”

Industry is a group of firms producing homogeneous products in a market. According to Lipsey, **“Industry is a group of firms that sells a well-defined product or closely related set of products.”** For example, Raymond, Maffatlal, Arvind, etc., are cloth manufacturing firms, whereas a group of such firms is called the textile industry.

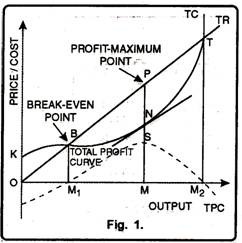
**The above conditions of the equilibrium of the firm can be examined in two ways:**

1. Total Revenue and Total Cost Approach

2. Marginal Revenue and Marginal Cost Approach.

#### 1. Total Revenue and Total Cost Approach:

A firm is said to be in equilibrium when it maximizes its profit. It is the point when it has no tendency either to increase or contract its output. Now, profits are the difference between total revenue and total cost. So in order to be in equilibrium, the firm will attempt to maximize the difference between total revenue and total costs. It is clear from the figure that the largest profits which the firm could make will be earned when the vertical distance between the total cost and total revenue is greatest.

**[](http://cdn.economicsdiscussion.net/wp-content/uploads/2015/05/clip_image00227.jpg)**

In fig. 1 output has been measured on X-axis while price/cost on Y-axis. TR is the total revenue curve. It is a straight line bisecting the origin at 45°. It signifies that price of the commodity is fixed. Such a situation exists only under perfect competition.

TC is the total cost curve. TPC is the total profit curve. Up to OM1 level of output, TC curve lies above TR curve. It is the loss zone. At OM1 output, the firm just covers costs TR=TC. Point B indicates zero profit. It is called the break-even point. Beyond OM1output, the difference between TR and TC is positive up to OM2 level of output. The firm makes maximum profits at OM output because the vertical distance between TR and TC curves (PN) is maximum.

The tangent at point N on TC curve is parallel to the TR curve. The behaviour of total profits is shown by the dotted curve. Total profits are maximum at OM output. At OM2 output TC is again equal to TR. Profits fall to zero. Losses are minimum at OM] output. The firm has crossed the loss zone and is about to enter the profit zone. It is signified by the break-even point-B.

#### 2. Marginal Revenue and Marginal Cost Approach:

According to marginal revenue and marginal cost approach, a monopolist will be in equilibrium when two conditions are fulfilled i.e., (i) MC=MR and (ii) MC must cut MR from  
below. The study of equilibrium price according to this analysis can be conducted in two time periods.

1. The Short Run
2. The Long Run

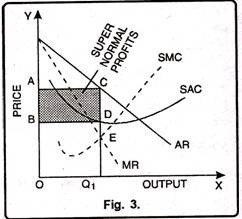
#### i. Short Run Equilibrium under Monopoly:

Short period refers to that period in which the monopolist has to work with a given existing plant. In other words, the monopolist cannot change the fixed factors like, plant, machinery etc. in the short period. Monopolist can increase his output by changing the variable factors. In this period, the monopolist can enjoy super-normal profits, normal profits and sustain losses.

**These three possibilities are described as follows:**

**Super Normal Profits:**

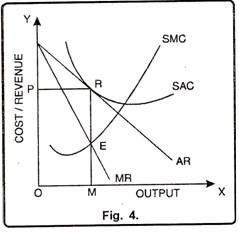
If the price determined by the monopolist in more than AC, he will get super normal profits. The monopolist will produce up to the level where MC=MR. This limit will indicate equilibrium output. In Figure 3 output is measured on X-axis and price on Y-axis. SAC and SMC are the short run average cost and marginal cost curves while AR or MR are the average revenue or marginal revenue curves respectively.

**[](http://cdn.economicsdiscussion.net/wp-content/uploads/2015/05/clip_image00425.jpg)**

The monopolist is in equilibrium at point E because at point E both the conditions of equilibrium are fulfilled i.e., MR = MC and MC intersects the MR curve from below. At this level of equilibrium the monopolist will produce OQ1 level of output and sells it at CQ1 price which is more than average cost DQ1 by CD per unit. Therefore, in this case total profits of the monopolist will be equal to shaded area ABDC.

**Normal Profits:**

A monopolist in the short run would enjoy normal profits when average revenue is just equal to average cost. We know that average cost of production is inclusive of normal profits. This situation can be illustrated with the help of fig 4.

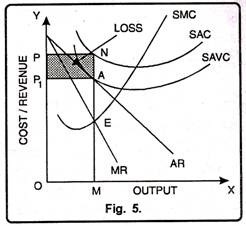
[](http://cdn.economicsdiscussion.net/wp-content/uploads/2015/05/clip_image00623.jpg)

In Fig. 4 the firm is in equilibrium at point E. Here marginal cost is equal to marginal revenue. The firm is producing OM level of output. At OM level of output average cost curve touches the average revenue curve at point P. Therefore, at point ‘P’ price OR is equal to average cost of the total product. In this way, monopoly firm enjoys the normal profits.

**Minimum Losses:**

In the short run, the monopolist may have to incur losses. This situation occurs if in the short run price falls below the variable cost. In other words, if price falls due to depression and fall in demand, the monopolist will continue to produce as long as price covers the average variable cost. Once the price falls

Below the average variable cost, monopolist will stop production. Thus, a monopolist in the short run equilibrium has to bear the minimum loss equal to fixed costs. Therefore, equilibrium price will be equal to average variable cost. This situation can also be explained with the help of Fig. 5.

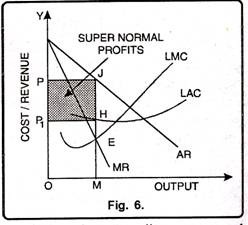
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In Fig. 5 monopolist is in equilibrium at point E. At point E marginal cost is equal to marginal revenue and he produces OM level of output. At OM level of output, equilibrium price fixed by the monopolist is OP1. At OP1 price, AVC touches the AR curve at point A.

It signifies that the firm will cover only average variable cost from the prevailing price. At OP1 price, firm will bear loss of fixed cost i.e., A per unit. The firm will bear the total loss equal to the shaded area PP1 AN. Now if the price falls below OP1, the monopolist will stop production. It is so because if he continues production, he will have to bear the loss of variable costs along with fixed costs.

#### ii. Long Run Equilibrium under Monopoly:

Long-run is the period in which output can be changed by changing the factors of production. In other words, all variable factors can be changed and monopolist would choose that plant size which is most appropriate for specific level of demand. Here, equilibrium would be attained at that level of output where the long-run marginal cost cuts marginal revenue curve from below. This can be shown with the help of Fig. 6.

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In Fig. 6 monopolist is in equilibrium at OM level of output. At OM level of output marginal revenue is equal to long run marginal cost and the monopolist fixes OP price. HM is the long run average cost? Price OP being more than LAC i.e., HM which fetch the monopolist super normal profits. Accordingly, the monopolist earns JM – HM = JH super normal profit per unit. His total super normal profits will be equal to shaded area PJHP1.

**The Equilibrium of the Firm under Perfect Competition**

The short run means a period of time within which the firms can alter their level of output only by increasing or decreasing the amounts of variable factors such as labour and raw materials, while fixed factors like capital equipment, machinery etc. remain un­changed.

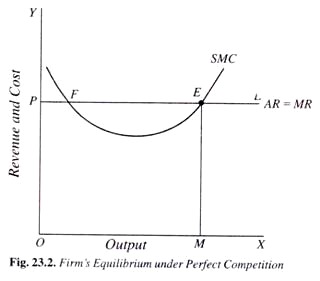
**Short-run Equilibrium of the Firm (Identical Cost Conditions:**

Identical cost conditions implies that all firms are facing same cost-conditions, that is, their average and marginal cost curves are of the same level and shapes. This would be so if the entrepreneurs of all firms are of equal efficiency and also the other factors of production used by them are perfectly homogeneous and are avail­able to all of them at the same prices.

Now, in order to decide about its equilibrium output, the firm will compare marginal cost with marginal revenue. It will be in equilibrium at the level of output at which marginal cost equals marginal revenue and marginal cost curve is cutting marginal revenue curve from below.

At this level it will be maximising its profits. Since marginal revenue is the same as price (or average revenue) under perfect competition, the firm will equalise marginal cost with price to attain equilibrium output.

Consider Fig. 23.2 in which price OP is prevailing in the market. PL would then be the demand curve or the average and marginal revenue curve of the firm. It will be seen from Fig. 23.2 that marginal cost curve cuts average and marginal revenue curve at two different points, F and E.

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F cannot be the position of equilibrium, since at F second order condition of firm’s equilibrium, namely, that marginal cost curve must cut marginal revenue curve from below at the point of equilibrium, is not satisfied. The firm will be increasing its profits by increasing production beyond F because marginal revenue is greater than marginal cost.

**Hence the twin conditions of firm’s equilibrium under perfect competition are:**

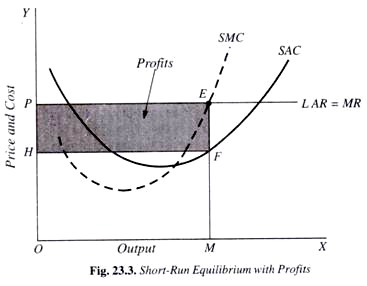
(1) MC=MR = Price

(2) MC curve must be rising at the point of equilibrium.

But the fulfillment of the above two conditions does not guarantee that the profits will be earned by the firm. In order to know whether the firm is making profits or losses and how much of them, average cost curve must be introduced in the figure. This has been done in Fig. 23.3 where SAC and SMC curves are short-run av­erage cost and short-run mar­ginal cost curves respectively.

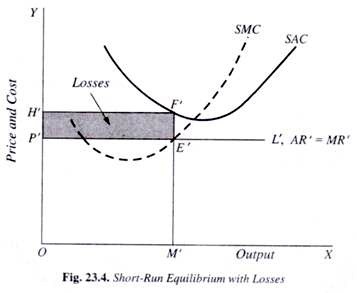
Profit per unit of output is the difference between average revenue (price) and average cost. In Fig. 23.3, at the equi­librium output OM, average revenue is equal to ME, and average cost is equal to MF. Therefore, the profit per unit of output is EF the difference between ME and MF.

The to­tal profits earned by the firm will be equal to EF (profit per unit) multiplied by OM or HF (total output). Thus, the total profits will be equal to the area HFEP. Because normal profits are included in average cost, the area HFEP indicates super-normal profits.



Since we are assuming that all firms in the industry are working under same cost con­ditions and also for all of them price is OP, all will be earning super-normal profits equal to the area HFEP. Thus, while all firms in the industry will be in short-run equilibrium, but the industry will not be in equilib­rium since there will be a ten­dency for the new firms to enter the industry to complete away the super-normal profits. But the short run is not a period long enough for the new firms to enter the industry.

The existing firms will therefore continue earning super-normal profits equal to HEFP in the short period. It is evident that in the situation depicted in Fig. 23.3 all firms will be in equilibrium at E and each will be producing OM output, but the tendency for the new firms to enter the industry will be present, though they cannot enter during the short period.

**[](http://cdn.yourarticlelibrary.com/wp-content/uploads/2014/04/clip_image006108.jpg)**

Now suppose that the prevailing market price of the product is such that the price line or aver­age and marginal revenue curve lies below average cost curve throughout. This case is illustrated in Fig. 23.4 where the ruling price is OP’ which is taken as given by the firm.

P’ L’ is the price line which lies below AC curve at all levels of output. The firm will be in equilibrium at point E at which marginal cost is equal to price (or marginal revenue) and marginal cost curve is rising. Firm would be producing OM’ output but would be making losses, since average revenue (or price) which is equal to ME’ is less than average cost which is equal to MF.

The loss per unit of output is equal to E’F’ and total loss will be equal to P’E’F ‘FT which is the minimum loss that a firm can make under the given price-cost situation. Since all the firms are working under the same cost conditions, all would be in equilibrium at point E’ or output OM’ and every one will be making losses equal to P’E’F’H.

As a result, the firms will have a tendency to quit the industry in order to search for earning at least normal profits elsewhere. We thus see that at price OP’ the firms will be in equilibrium at E’ but there will be a tendency for firms to leave it through they cannot do so in the short period.**The Long-Run Equilibrium of the Firm under Perfect Competition!**

The long run is a period of time which is sufficiently long to allow the firms to make changes in all factors of production. In the long run, all factors are variable and none fixed. The firms, in the long run, can increase their output by changing their capital equipment; they may expand their old plants or replace the old lower-capacity plants by the new higher-capacity plants or add new plants.

As explained above, a firm is in equilibrium under perfect competition when marginal cost is equal to price. But for the firm to be in long-run equilibrium, besides marginal cost being equal to price, the price must also be equal to average cost.

**If price is equal to both marginal cost and average cost, then we have a double condition of long-run perfectly competitive equilibrium:**

Price = Marginal Cost – Average Cost

But from the relationship between marginal cost and average cost we know that marginal cost is equal to average cost only at the minimum point of the average cost curve.

**Therefore, the condi­tion for long-run equilibrium of the firm can be written as:**

Price = Marginal Cost = Minimum Average Cost.

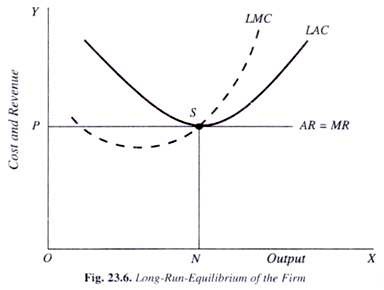
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Fig. 23.6 represents long-run equilibrium of firm under perfect compe­tition. The firm cannot be in the long-run equilibrium at a price greater than OP in Fig. 23.6. This is be­cause if price is greater than OP, then the price line (demand curve) would lie somewhere above the minimum point of the av­erage cost curve so that marginal cost and price will be equal where the firm is earning abnormal profits.

Since there will be tendency for new firms to enter and compete away these abnormal profits, the firm cannot be in long-run equilibrium at any price higher than OP. Likewise, the firm cannot be in long-run equilibrium at a price lower than OP in Fig. 23.6 under perfect competition.

# Optimum Firm:

## Definition and Explanation:

***Optimum firm*** is that firm which fully utilizes its scale of operation and produces optimum output with the minimum cost per unit production.

**In the short-run,** a firm would build the scale of plant and operate it at a point where the average cost is at its minimum. This is regarded as the ***optimum level of production for the firm*** concerned, if the demand for the product increases from this least cost output; it cannot change the amount of land, buildings, machinery and other input in short period of time. It has to move along the same scale or type of plant. The average total cost, therefore, begins to rise due to the diseconomies of the scale.

**In the long run,** all inputs are variable. The firm can build larger plant sizes or revert to smaller plants to deal with the changed demand for the product. If the size of plant increases to cope with the increased demand, the average cost per unit begins to fall due to the economies of scale such as increased specialization of labor, better and greater specialization of management, efficient utilization of productive equipment, etc., etc. So long as the resources are successfully utilized, the average cost of production continues declining.

  Eventually a stage comes when the firm is not able to use the least cost combination of inputs. The building of a still larger plant cause the average cost of production to go up. The point at which the per unit cost is the lowest is the optimum level of production for the firm. The firm of the most efficient size.

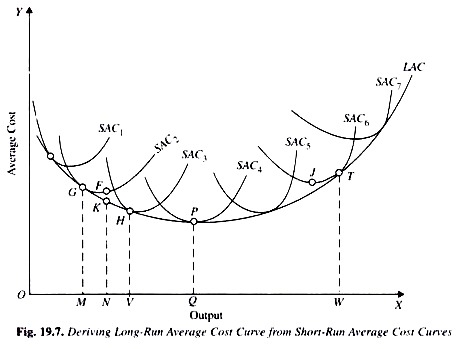
### Diagram/Figure:

The ***concept of the optimum firm*** can be explained with the help of the following figure:

It should be noted that in Fig. 19.7 the plant of SAC4is optimum plant, since its minimum cost of production is the lowest of the minimum costs of all other plants. If the size of the plant is increased beyond SAC4, it results in higher average cost of production.

Similarly, if the size of the plant is smaller than SAC4, average cost of production is higher. Further, the least-cost output, or in other words, the optimum output of the plant SAC4 is OQ. Now, if the firm produces output OQ with the optimum plant SAC4, it is said to have achieved the optimum size.

Thus, an optimum firm is that firm which is producing optimum output (i.e., least-cost output) with the optimum plant. In our Fig. 19.7 the firm is of optimum size if it employs plant SAC4 and uses it to produce OQ. Since the point of minimum cost of the optimum plant SAC4 coincides with the minimum point of the long-run average cost curve, the optimum firm can also be defined as one which produces at the minimum point of the long-run average cost curve (LAC).



The optimum size of the firm varies a great deal in different industries. In agriculture, extractive industries, wholesale and retail trade, optimum size is relatively small, that is, the minimum point of the long-run average cost curve is reached at a comparatively small output.

**UNIT V**

**NATIONAL INCOME**

**INTRODUCTION**

The term National Income is used to refer the money value of the total income of the economy in a year. In common parlance national income means the total value of goods and services produced annually in a country. In other words the total amount of income accruing to a country from economics activities in a year's time is known as national income. Firstly it measures the market value of annual product. Secondly National income is a monetary measure. Thirdly national income includes the market value of all final goods the value of intermediate products are not included. A final product is one which is available for immediate consumption. For example, a shirt or a sewing machine. The example of intermediate product is raw materials.

**DEFINITIONS OF NATIONAL INCOME**

This watermark does not appear in the registered version 264 The definitions of National income can be grouped into two classes as the traditional definition advanced by Marshall, Pigou and Fisher and the modern definitions.

**Marshallion Definition**

According to Marshall, the labour and capital of a country acting on its natural resources produce annually a certain net aggregate of commodities, material and immaterial, including services of all kinds. This is the true net annual income or revenue of the country or national dividend.

**Pigovian Definition**

According to Pigou "National income is that part of objective income of the community, including of course income derived from abroad which can be measured in money”

**CIRCULAR FLOW OF INCOME**

The total income obtained as wages, rent, interest and profits are the national income of the country. Various households get their income from the firms for the production of goods and services. The value of all the goods produced is the national product. Thus the total national product produced by firms in a year is distributed to all factors in the form of wages, interest rent and profits. The sum of all these factors income will be equal to the national income. Thus the national product is equal to the national income. National Income = Wages + Rent + Interest + profit National income = Domestic income + Net income from abroad. Personal Income = Domestic income + Net income from abroad + Transfer Payments + Net interest on borrowings + Unearned income - Taxes on profit - Undistributed profit - Contribution to social security measures.

**METHODS OF MEASUREMENT OF NATIONAL INCOME**

There are three methods to calculate the national income of a country. They are: This watermark does not appear in the registered version

1**. Product or inventory method:**

Under this method national income is computed by adding the net value of all commodities and services produced during a given period. Thus national income is equal to the total of final products. We first estimate the gross value of domestic output in the various sectors of production (Agriculture, manufacturing industry, and services including government). The value of gross output is obtained by multiplying the output of each sector by their respective market prices and adding them together.

**2. Income Method:**

Under this method the national income of a country is obtained by adding the incomes accrue to factors of production within the national territory. Basic factors of production used producing the national products are land, labour, capital and organisation. The national income is equal to total rent plus total wages and salaries of all employees including income of self employed persons plus total interest on capital including dividends of the shareholders plus total profit of all firms including undistributed corporate profits and earnings of public enterprises.

**3. Expenditure method:**

This method is based on the assumption that income is equal to expenditure plus savings. Under this method the personal consumption expenditure, government purchase of goods and services, gross private domestic investment and net This watermark does not appear in the registered version - 266 foreign investment are added together to get the national income of a country.

4**. Value Added Method**

Another method of measuring national income is the value added by industries. The difference between the value of material output and input at each stage of production is the value added. If all such differences are added up for all industries in the economy we arrive at the gross domestic product.

**CONCEPTS OF NATIONAL INCOME**

**There are various concepts of national income**

**1. Gross National Product (GNP)**

Gross national product is defined as the total market value of all final goods and services produced in a year. GNP includes four types of final goods and services, (i) Consumer goods and services to satisfy the immediate wants of the people (ii) gross private domestic investment on capital goods consisting of fixed capital formation, residential constructions and inventories of finished and unfinished goods, (iii) goods and services produced by government and (ir) net export of goods and services' GNP = government production + private output

**2. Net National Product (NNP)**

This watermark does not appear in the registered version - 267 The second concept is Net National Product. The capital goods like machinery wear out as a result of continuous use. This is called depreciation. This is also called National income at market prices. Hence NNP = GNP - depreciation.

**3. National Income**

At factor cost National income at factor cost denotes the sum of all incomes earner by the factors. GNP at factor cost is the sum of the money value of the income produced by and accruing to the various factors of production in one year in a country. It includes all items of GNP less indirect tax. GNP at market price is always more than GNP at factor cost as GNP at factor cost is the income which the factors of production receive in return for their service alone. National income at factor cost = net national product - indirect taxes + subsidies.

**4. Personal Income**

(PI) Personal income is the sum of all incomes received by all individuals during a given year. Some incomes such as Social security contribution are not received by individuals, similarly some incomes such as transfer payments are not currently earned, for example Old Age Pension. Therefore, Personal income = national income - social security contribution - Corporate income taxes - undistributed corporate profit + transfer payment.

**5. Disposable Income**

(DI) Disposable income = personal income - personal taxes

After a part of the income is paid to the Government in the form of taxes, the remaining income is called disposable income.

### Income Inequality

[Income inequality](https://www.investopedia.com/articles/investing/110215/brief-history-income-inequality-united-states.asp) is an extreme disparity of income distributions with a high concentration of income usually in the hands of a small percentage of a population. When income inequality occurs there is a large gap between the wealth of one population segment compared to another. There can be varying types of income disparity segregations and analysis used to understand income inequality.

### Income Inequality Explained

Income inequality and income disparity segregations can be analyzed through a variety of segmentations. Segmentations of income disparity analysis are used for analyzing different types of income distributions. Income distributions by demographic segmentation form the basis for studying income inequality and income disparity.

The different types of income segmentations studied when analyzing income inequality may include distributions for:

* Male vs. female
* [Ethnicity](https://www.investopedia.com/articles/professionals/072815/best-and-worst-companies-workplace-diversity.asp)
* Geographic location
* Occupation
* Historical income

### Fiscal policy

### Meaning of Fiscal policy

Fiscal policy means the use of taxation and public expenditure by the government for stabilisation or growth. According to Culbarston, “By fiscal policy we refer to government actions affecting its receipts and expenditures which we ordinarily taken as measured by the government’s receipts, its surplus or deficit.” The government may offset undesirable variations in private consumption and investment by compensatory variations of public expenditures and taxes.

**Objectives of Fiscal Policy**

**The following are the objectives of fiscal policy**

1. To maintain and achieve full employment.

2. To stabilize the price level.

3.To stabilize the growth rate of the economy.

4. To maintain equilibrium in the balance of payments.

5. To promote the economic development of underdeveloped countries.

**Use of Fiscal Policy for Economic Development (4 Methods)**

In underdeveloped countries, following methods of fiscal policy may be pursued to bring economic development.

### 1. Taxation Policy:

**The government should adopt such a taxation policy as may:**

* Promote capital formation. Taxation system should provide incentive to all those people who save to invest or who are keen to invest,
* Curb consumption expenditure to boost saving. Increased saving can be used to increase investment,
* mobilize economic surplus.

**Therefore, taxation system in less developed countries should be such that it should:**

* help the government in mobilizing resources for capital formation
* increase the ratio of saving
* reduce the consumption of luxury goods and
* help diminish inequalities in the distribution of income,
* help to control inflation and
* bring economic stability with growth.

### 2. Public Expenditure Policy:

In underdeveloped countries, public expenditure policy is adopted. Generally these countries face the problem of capital which is the basic requirement of economic development. It cannot be expected from private sector alone. Thus, public investment is made in different sectors like expansion of means of transport and communication, irrigation, supply of power projects, health and human capital.

### 3. Public Debt Policy:

Resources collected through tax are not sufficient to meet the development requirement of the underdeveloped countries. Tax collection is very poor due to poverty of the common masses and it adversely affects the saving and investment. Thus, it becomes necessary to mobilize resources through public debt.

**Public debt is of two types:**

(i) Internal debt and

(ii) External debt.

#### (i) Internal debt:

Internal debt is floated within the country.

#### ii) External Debt:

When internal debt alone is not sufficient to meet the requirements of under developed countries then they have to borrow from external sources. Therefore, external debt refers to funds which are floated in other countries.

### 4. Deficit Financing:

Today, deficit financing has emerged as an important tool of fiscal policy. It means the gap caused by the excess of government expenditure over its receipts through the creation of new money. Generally, deficit financing is done by the method of borrowing from central bank, withdrawal of its cash balance from the central bank and issuing of new currency and putting into circulation. This type of fiscal policy was specially advocated by Lord Keynes. In underdeveloped countries, there is low level of income.

**Public Finance**

**Meaning of Public Finance**

The word public refers to general people and the word finance means resources.So public finance means resources of the masses, how they are collected and utilized.Thus, Public Finance is the branch of economics that studies the taxing and spending activities of government.The discipline of public finance describes and analyses government services,subsidies and welfare payments,and the methods by which the expenditures to these ends are covered through taxation,borrowing,foreign aid and the creation of money.

**Definition**

**According to  Findlay Shirras** “Public finance is the study of principles underlying the spending and raising of funds by public authorities”.

**According to H.L Lutz** “Public finance deals with the provision,custody and discursement of resources needed for conduct of public or government function.”

**Nature of Public Finance**

**Nature of public finance implies whether it is a science or art or both.**

**Public Finance as Science**

Science is the systematic study of any subject which studies relationship between facts. Public finance has been held as science which deals with the income and expenditure of the government’s finance. It studies the relationship between facts relating to revenue and expenditure of the government.

Arguments in support of Public Finance as Science:

* Public finance is systematic study of the facts and principles relating to government expenditure and revenue.
* Principles of Public finance are empirical.
* Public finance is studied by the use of scientific methods.
* Public finance is concerned with definite and limited field of human knowledge.

**Public Finance as Art**

Art is application of knowledge for achieving definite objectives. Fiscal Policy which is an important instrument of public finance makes use of the knowledge of government’s revenue and expenditure to achieve the objectives of full employment, economic development and equality. Price stability etc. To achieve the goal of economic equality taxes are levied which are likely to be opposed. Therefore it is important to plan their timing and volume. The process of levying tax is therefore an art. Study of Public finance is helpful in solving many practical problems. Public finance is therefore an art also.

From the above discussion it can be concluded that public finance is both science and art. It is positive science as well as normative science.

It is  a **positive  science** as by the study of public finance factual information about the problems of government’s revenue and expenditure can be known. It also offers suggestions in this respect.

It is also **normative science** as study of public finance presents norms or standards of the government’s financial operations . It reveals what should be the quantum of taxes,kind of taxes and on what items less of public expenditure can be incurred.

## THE SCOPE OF PUBLIC FINANCE

### PUBLIC INCOME

As the name suggests, public income refers to the income of the government. The government earns income in two ways – tax income and non-tax income. Tax income is easy to recognize, it’s the tax paid by people of the country in the form of income tax, sales tax, duties, etc. On the other hand non-tax income includes interest income from lending money to other countries, rent & income from government properties, donations from world organizations, etc.

This area studies methods of taxation, revenue classification, methods of increasing government revenue and its impact on the economy as a whole, etc.

### PUBLIC EXPENDITURE

Public expenditure is the money spent by government entities. Logically, the government is going to spend money on infrastructure, defense, education, healthcare, etc. for the growth and welfare of the country.

This area studies the objectives and classification of public expenditure, effects of expenditure in different areas, effects of public expenditure on various factors such as employment, production, growth, etc.

### PUBLIC DEBT

When public expenditure exceeds public income, the gap is filled by borrowing money from the public, or from other countries or world organizations such as The World Bank. These borrowed funds are public debt.

This area of public finance explains the burden of public debt, why it is necessary and its effect on the economy. It also suggests methods to manage public debt.

### FINANCIAL ADMINISTRATION

As the name suggests this area of public finance is all about the administration of all public finance i.e. public income, public expenditure, and public debt. Financial administration includes preparation, passing, and implementation of government budget and various government policies. It also studies the policy impact on the social-economic environment, inter-governmental relationships, foreign relationships, etc.

# Importance of Public Finance

### ****1. Steady state economic growth:****

Government finance is important to achieve sustainable high economic growth rate. The government uses the fiscal tools in order to bring increase in both aggregate demand and aggregate supply. The tools are taxes, public debt, and public expenditure and so on.

### ****2. Price stability:****

The government uses the public finance in order to overcome form inflation and deflation. During inflation it reduces the indirect taxes and genera expenditures but increases direct taxes and capital expenditure. It collects internal public debt and mobilizes for investment. In case of deflation, the policy is just reversed.  
**3.Economic stability:**  
 The government uses the fiscal tools to stabilize the economy. During prosperity, the government imposes more tax and raises the internal public debt. The amount is used to repay foreign debt and invention. The internal expenditures are reduced. During recession, the case is just reversed.

### ****4. Equitable distribution:****

The government uses the revenues and expenditures of itself in order to reduce inequality. If there is high disparity it imposes more taxes on income, profit and properties of rich people and on the goods they consume. The money collected is used for the benefit of poor people through subsidies, allowance, and other types of direct and indirect benefits to them.

### ****5. Proper allocation of resources:****

The government finance is important for proper utilization of natural, manmade and human resources. For it, on the production and sales of less desirable goods, the government imposes more taxes and provides subsidies or imposes taxes lightly on more desirable goods.

### ****6. Balanced development:****

The government uses the revenues and expenditures in order to erase the gap between urban and rural and agricultural and industrial sectors. For it, the government allocates the budget for infrastructural development in rural areas and direct economic benefits to the rural people.  
**7. Promotion of export:**  
 The government promotes the export imposing less tax or exempting form the taxes or providing subsidies to the export oriented goods. It may supply the inputs at the subsidized prices. It imposes more taxes on imports and so on.

**8. Infrastructure development:**

The government collects revenues and spends for the construction of infrastructures. It has to keep peace, justice and security too. It has to bring socio-economic reformation too. For all these things it uses the revenues and expenditures as fiscal tools.