

Introduction

The nature and scope of economics is a matter of wealth or human behaviour or of scarce resources. The subject matter of economics whether economics is a science or an art.

Wealth and Welfare

Wealth and Welfare are the central concepts in the classical view of Adam Smith and Neo-Classical View and the relating contemporaries.

The Classical View and Contemporaries -

The Classical Economist Adam Smith defines Economics as the science of Wealth. He defines as "nature and cause of wealth of nations"

Neo-Classical View and Contemporaries -

Alfred Marshall led neo-classical school which placed all the economists a reputable position among social science. He emphasised on a man's welfare. Wealth was observed as the basis of human welfare, not stop in itself but a means to a stop. According to Marshall "Political Economy or Economics is a study of mankind in the ordinary business of life. It inspects that part of individual and social accomplishment which is most intimately associated with the achievement and with the use of the material conditions of well being. It is on the one side a study of riches and on the other and more significant side a part of study of man. The contemporaries are it excludes activities of socially disagreeable and non-standard persons like thieves, misers etc, non-economic activities and activities having dishonourable ends are excluded from the study of economics.

Scarcity Definition of Robbins

According to Robbins, "Economics is the science which studies human behaviour as a relationship between ends and scarce means which have alternative uses." It was Lord Robbins, who exposed the rational discrepancy and insufficiencies of other economists' definitions.

Growth Oriented Definition

Modern Age is the age of economic development. Its key purpose is to enhance social wellbeing and progress the standard of living of the people by getting rid of poverty, redundancy, disparity of income and wealth, malnutrition etc. of the realm. Hence the financial development is the essential point of all economic policies.

Scope of Economics

The continuous growth in the subject matter of economics has led to divergent views about a scope of economics. It includes Subject matter of Economics, Economics is a science or an Art, or is it a

Positive or Normative science.

Subject Matter of Economics

The subject matter of economics is the study of grounds of material interests or as the science of wealth. Men who are sensible beings and take action under the active social, legal and institutional group. It eliminates the performance, manners of socially objectionable and uncharacteristic persons like misers, thieves etc. It consists of the study of the exertion of consumption, production, exchange and distribution of wealth, as well as the fortitude of the values of goods and services the amount of employment and the determinants of fiscal development. Further it comprises the study of grounds of poverty, unemployment, under employment, inflation etc. and actions for their elimination.

Economics as a Science

Economics is a science since its laws have widespread soundness such as the law of diminishing returns, the law of diminishing marginal utility, the law of demand etc. It is called as a science since its self-remedial nature. It goes on amendments in the dawn of new specifics based on interpretations. Hence Economics is a science like any other science that has its own generalisations, theories or laws of economics which traces out a casual relationship between two or more phenomena.

Economics as an Art

The practical application of scientific techniques is the Art of Economics. Some economists consider economics as a science and art while few others as science and applied science. It is considered as newest of science and oldest of arts and the queen of all the social sciences.

Economics as a Positive Science

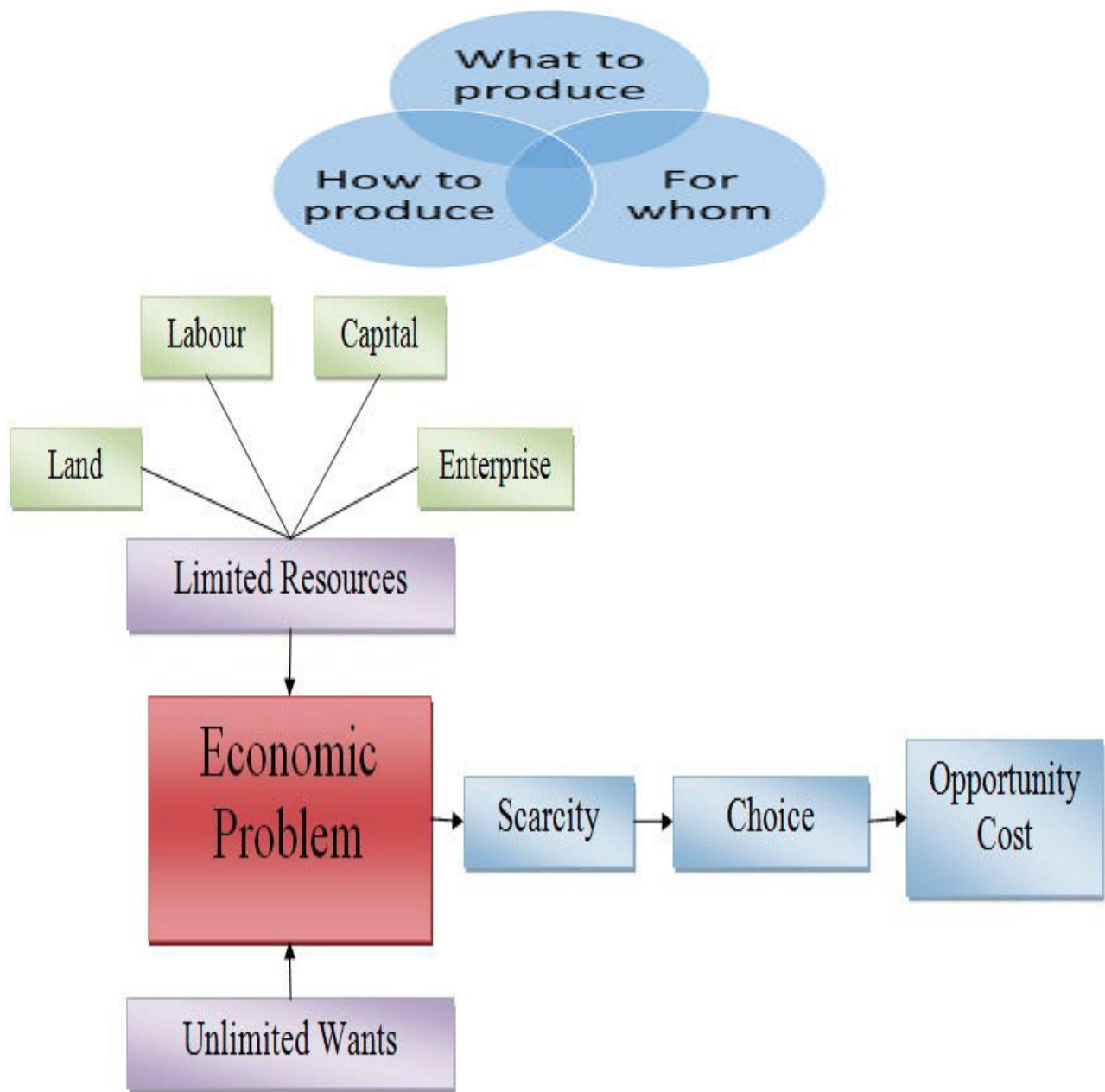
As per the nineteenth century experts, economics is a positive science. Since it seeks to explain what has actually happened but not what is ought to happen. According to J.N.Keynes, Positive science is defined as "A body of systematised knowledge concerning what ought to be and concerned with the ideal as distinguished from the actual."

Normative Economics

With contrast to the Positive Science, Normative Science deals with the "what is ought to happen" cases. That is predictions of future economic development with regards to the present conditions are discussed in this. The postulations on which economic laws, theories or principles are based relate to man and his problems. If we attempt to test and forecast fiscal actions on their basis the subjectivity elements always penetrates. Therefore, the laws of economics are at best propensities.

Conclusion

Economics is concerned with human well-being as well as ethical values. It is science and an art, since the scientific principles are applied practically. It is both positive and normative science since the actual happening and the future happenings are dealt. Hence the scope and nature of economics deals in with all the above as explained by the economists.



5 Basic Problems of an Economy

1. What to Produce and in What Quantities?

The first central problem of an economy is to decide what goods and services are to be produced and in what quantities. This involves allocation of scarce resources in relation to the composition of total output in the economy. Since resources are scarce, the society has to decide about the goods to be produced: wheat, cloth, roads, television, power, buildings, and so on.

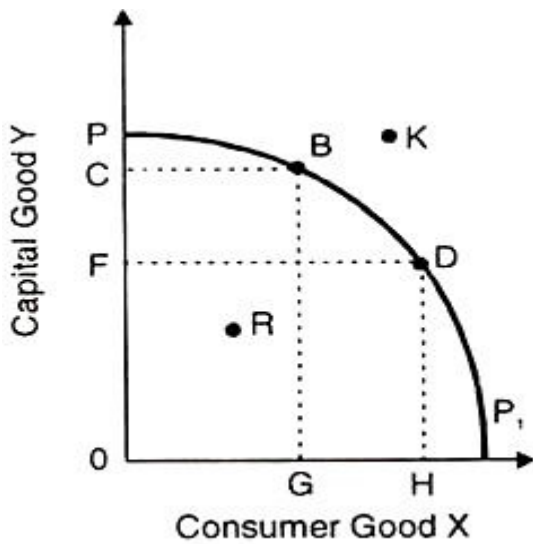


Fig. 1

2. How to Produce these Goods?

The next basic problem of an economy is to decide about the techniques or methods to be used in order to produce the required goods. This problem is primarily dependent upon the availability of resources within the economy.

1. labour incentives techniques
2. capital incentives techniques

The technique to be used also depends upon the type and quantity of goods to be produced. For producing capital goods and large outputs, complicated and expensive machines and techniques are required. On the other hand, simple consumer goods and small outputs require small and less expensive machines and comparatively simple techniques.

Further, it has to be decided what goods and services are to be produced in the public sector and what goods and services in the private sector. But in choosing between different methods of production, those methods should be adopted which bring about an efficient allocation of resources and increase the overall productivity in the economy.

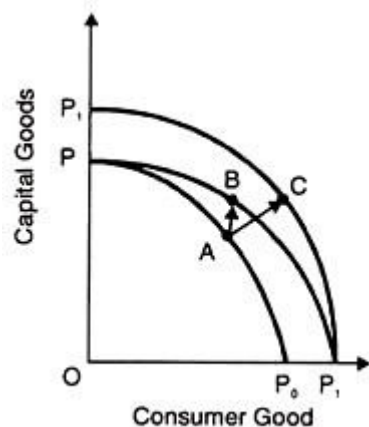


Fig. 2

3. For whom is the Goods Produced?

The third basic problem to be decided is the allocation of goods among the members of the society. The allocation of basic consumer goods or necessities and luxuries comforts and among the household takes place on the basis of among the distribution of national income.

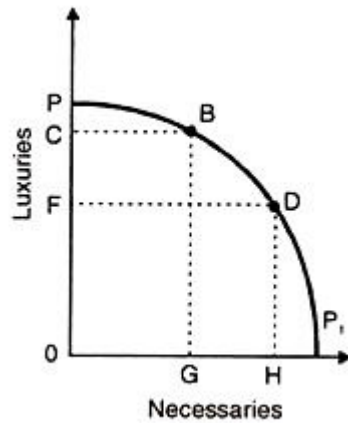


Fig. 3

4. How Efficiently are the Resources being Utilised?

This is one of the important basic problems of an economy because having made the three earlier decisions, the society has to see whether the resources it owns are being utilised fully or not. In case the resources of the economy are lying idle, it has to find out ways and means to utilise them fully.

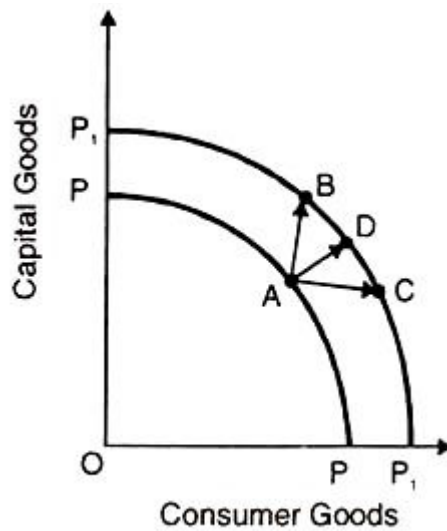
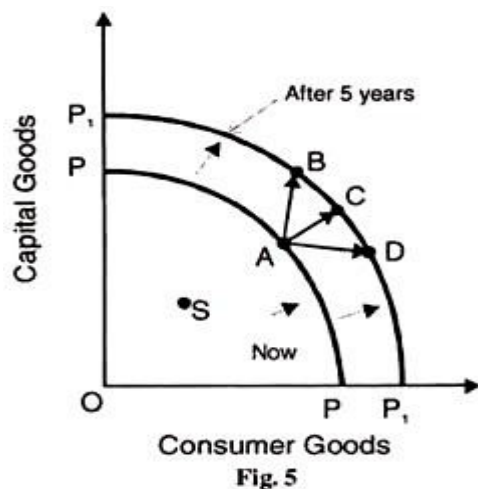


Fig. 4

5. Is the Economy Growing?

The last and the most important problem is to find out whether the economy is growing through time or is it stagnant. If the economy is stagnant at any point inside the production possibility curve, says in Figure 5, it has to be moved on to the production possibility curve PP whereby the economy now produces larger quantities of consumer goods and capital goods.



Meaning of Production Possibility Curve

A graphical representation of the alternative combinations of the amounts of two goods or services that an economy can produce by transferring resources from one good or service to the other. This curve helps in determining what quantity of a nonessential good or a service an economy can afford to produce without jeopardizing the required production of an essential good or service. Also called transformation curve.

Explanation of Production Possibility Curve

Alternative Production Possibilities

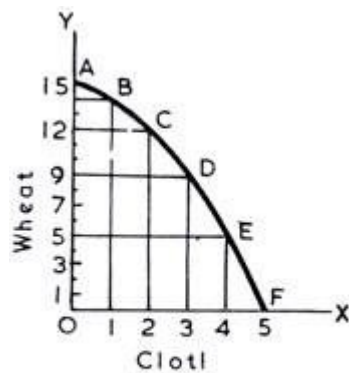
<i>Production Possibilities</i>	<i>Cotton (in *000 quintals)</i>	<i>Wheat (in 000 quintals)</i>
A	0	15
B	1	14
C	2	12
D	3	9
E	4	5
F	5	0

It all available resources are employed for the production of wheat, 15,000 quintals of it can be produced. If, on the other hand, all available resources are utilized for the production of cotton, 5000 quintals are produced. These are the two extremes represented by A and F and in between them are the situations represented by B, C, D and E. At B, the economy can produce 14,000 quintals of wheat and 1000 quintals of cotton.

At C the production possibilities are 12,000 quintals of wheat and 2000 quintals of cotton, as we move from A to F, we give up some units of wheat for some units of cotton. For instance, moving from A to B, we sacrifice 1000 quintals of wheat to produce 1000 quintals of cotton, and so on. As we move from A to F, we sacrifice increasing amounts of cotton.

This means that, in a full-employment economy, more and more of one good can be obtained only by reducing the production of another good. This is due to the basic fact that the economy's resources are limited.

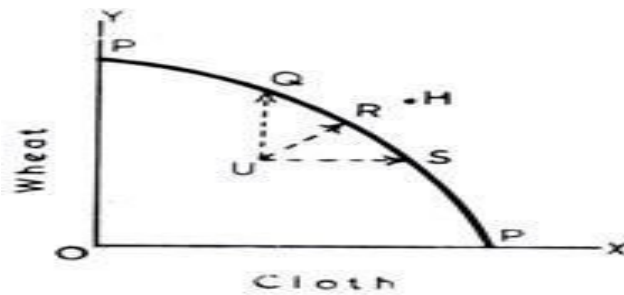
The following diagram (21.2) illustrates the production possibilities set out in the above table.



Production Possibility Curve
Fig. 21.2

In this diagram AF is the production possibility curve, also called or the production possibility frontier, which shows the various combinations of the two goods which the economy can produce with a given amount of resources. The production possibility curve is also called transformation curve, because when we move from one position to another, we are really transforming one good into another by shifting resources from one use to another.

It is to be remembered that all the points representing the various reduction possibilities must lie on the production possibility curve AF and not inside or outside of it. For example, the combined output of the two goods can neither be at U nor H. (See Fig. 21.3) This is so because at U the economy will be under-employing its resources and H is beyond the resources available.



Problem of Under-Utilisation of Resources

Fig. 21.3

Economic Laws:

Meaning:

A law (or generalisation) is the establishment of a general truth on the basis of particular observations or experiments which traces out a causal relationship between two or more phenomena. But economic laws are statements of general tendencies or uniformities in the relationships between two or more economic pheno

Marshall defined economic laws in these words, “Economic laws, or statements of economic tendencies, are those social laws, which relate to those branches of conduct in which the strength of the motives chiefly concerned can be measured by money price.”

It can be inferred from this definition that economic laws are (a) statements of economic tendencies, (b) social laws, (c) concerned with human behaviour, and (d) human behaviour can be measured in money. On the other hand, according to Robbins, “Economic laws are statements of uniformities about human behaviour concerning the disposal of scarce means with alternative uses for the achievement of ends that are unlimited.” These two definitions are common in that they consider economic laws as statements of tendencies or uniformities relating to human behaviour.

Nature of Economic laws

Scientific or like Natural or Physical Laws. Economic laws are like scientific laws which trace out a causal relationship between two or more phenomena. As in natural sciences, a definite result is expected to follow from a particular cause in economics. The law of gravitation states that things coming from above must fall to the ground at a specific rate, other things being equal. But when there is a storm, the gravitational force will be reduced and the law will not work properly. As pointed out by Marshall, “The law of gravitation is therefore, a statement of tendencies.”

Similarly economic laws are statements of tendencies. For instance, the law of demand states that other things remaining the same, a fall in price leads to an extension in demand and vice versa. Again, some economic laws are positive like scientific laws such as the Law of Diminishing Returns which deal with inanimate nature. Since economic laws are like scientific laws, they are universally valid.

According to Robbins, “Economic laws describe inevitable implications. If the data they postulate are given, then the consequences they predict necessarily follow. In this sense, they are on the same footing as other scientific laws.”

Non-Precise like the Laws of Natural Sciences:

Despite these similarities, economic laws are not as precise and positive as the laws of natural sciences. This is because economic laws do not operate with as much certainty as the scientific laws. For instance, the law of gravitation must operate whatever the conditions may be. Any object coming from above must fall to the ground. But demand will not increase with the fall in price if there is depression in the economy because consumers lack purchasing power. Therefore, according to Marshall, “There are no economic tendencies which act as steadily and can be measured as exactly as gravitation can, and consequently, there are no laws of economics which can be compared for precision with the law of gravitation.”

There is controlled experimentation in natural sciences and the natural scientist can test scientific laws very rapidly by altering natural conditions such as temperature and pressure in his experiments in the laboratory. But in economics, controlled experiments are not possible because an economic situation is never repeated exactly at another time.

Moreover, the economist has to deal with man who acts in accordance with his tastes, habits, idiosyncrasies, etc. The entire universe or that part of it in which he carries out his research is the economist’s laboratory.

As a result, predictions concerning human behaviour are liable to error. For instance, a rise in price may not lead to contraction in demand rather it may expand it, if people fear shortage of goods in anticipation of war. Even if demand contracts as a result of the price rise, it is not possible to predict accurately how much the demand will contract. Thus economic laws “do not necessarily apply in every individual case; they may not be reliable in the ever-changing environment of real economy; and they are in no sense, of course, inviolable.”

Non-predictable like the Law of Tide:

But accurate predictions are not possible in economics alone. Even sciences like biology and meteorology cannot predict or forecast events correctly. The law of tide explains why the tide is strong at full moon and weak at the moon’s first quarter. On this basis, it is possible to predict the exact hour when the tide will rise. But this may not happen.

It may rise earlier or later than the predicted time due to some unforeseen circumstances. Marshall, therefore, compared the laws of economics with the laws of tides “rather than with simple and exact law of gravitation. For the actions of men are so various and uncertain that the best statements of tendencies, which we can make in a science of human conduct, must needs be inexact and faulty.”

Behaviourist:

Most economic laws are behaviourist, such as the law of diminishing marginal utility, the law of equimarginal utility, the law of demand, etc., which depend upon human behaviour. But the behaviourist laws of economics are not as exact as the laws of natural sciences because they are based on human tendencies which are not uniform.

This is because all men are not rational beings. Moreover, they have to act under the existing social and legal institutions of the society in which they live. As rightly pointed out by Prof. Schumpeter: “Economic laws are much less stable than are the ‘laws’ of any physical science...and they work out differently in different institutional conditions”

Indicative:

Unlike scientific laws, economic laws are not assertive. Rather, they are indicative. For instance, the Law of Demand simply indicates that other things being equal, quantity demanded varies inversely with price. But it does not assert that demand must fall when price increases.

Hypothetical:

Prof. Seligman characterised economic laws as “essentially hypothetical”, because they assume ‘other things being equal’ and draw conclusions from certain hypotheses. In this sense, all scientific laws are also hypothetical as they too assume the ceteris paribus clause (i.e. other things being equal). For instance, other things being equal, a combination of hydrogen and oxygen in the proportion of 2:1 will form water. If, however, this proportion is varied or/and the required temperature and pressure are not maintained, water will not be formed. Still there is difference in hypothetical element present in economic laws as against scientific laws. It is more pronounced in the former because economics deals with human behaviour and natural sciences with matter.

But as compared with the laws of other social sciences, the laws of economics are less hypothetical but more exact, precise and accurate. This is because economics possesses the measuring rod of money which is not available to other social sciences like ethics, sociology, etc. which makes economics more pragmatic and exact. Despite this, economic laws are less certain like the laws of social sciences because the value of money does not always remain constant. Rather, it changes from time to time.

Truisms or Axioms:

There are certain generalisations in economics which may be stated as truism. They are like axioms and do not have any empirical content, such as ‘saving is a function of income,’ ‘human wants are numerous’, etc. Such statements are universally valid and need no proof. So they are superior to scientific laws. But all economic laws are not like axioms and hence not universally true and valid.

Historico-Relative:

On the other hand, economists of the Historical School regarded economic laws as abstractions which are historico-relative, that is economic laws have only a limited application to a given time, place and environment. They have limited validity to certain historical conditions and have no relevance to the

analysis of social phenomena outside that. But Robbins does not agree with this view because according to him, economic laws are not historico-relative.

They are simply relative to the existence of certain conditions which are assumed to be given. If the assumptions are consistent with one another and if the process of reasoning is logical, economic laws would be universally valid. But these are big “ifs”. We, therefore, agree with Prof. Peterson that economic laws “are not detailed and photographically faithful reproductions of a portrait of the real world, but are rather simplified portraits whose purpose is to make the real world intelligible.”

Meaning of Utility:

Utility refers to want satisfying power of a commodity. It is the satisfaction, actual or expected, derived from the consumption of a commodity. Utility differs from person- to-person, place-to-place and time-to-time. In the words of Prof. Hobson, “Utility is the ability of a good to satisfy a want”.

In short, when a commodity is capable of satisfying human wants, we can conclude that the commodity has utility.

Total Utility (TU):

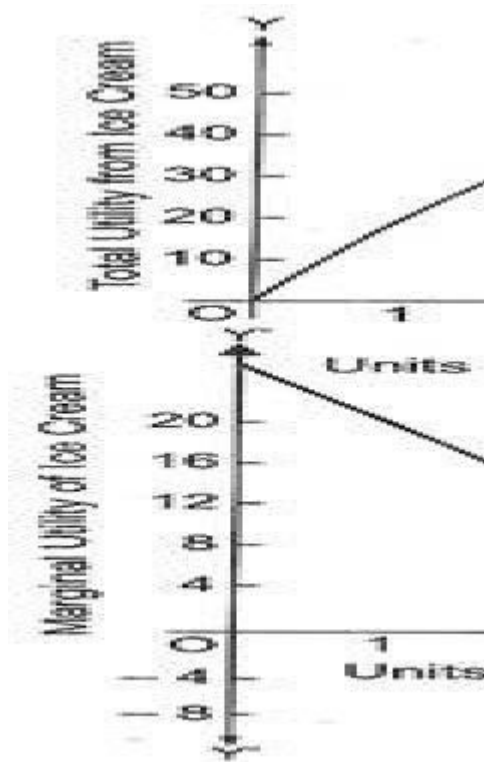
Total utility refers to the total satisfaction obtained from the consumption of all possible units of a commodity. It measures the total satisfaction obtained from consumption of all the units of that good.

Marginal Utility (MU):

Marginal utility is the additional utility derived from the consumption of one more unit of the given commodity. It is the utility derived from the last unit of a commodity purchased.

Table 2.1: TU and MU

Ice-creams Consumed	Marginal Utility (MU)	Total Utility (TU)
1	20	20
2	16	36
3	10	46
4	4	50
5	0	50
6	-6	44



Measurement of Utility:

According to Marshall, the utility of a commodity can be measured in terms of money. If a consumer is willing to pay Rs.2 for an orange and Re 1 for a banana, then the utility of an orange is equal to Rs.2 and that of a banana is Re. 1 to him.

It means that the utility of one orange is equal to 2 bananas. In other words, the utility of an orange to the consumer is twice that of the banana. But this analysis does not hold when there are two different consumers offering two different prices for the same commodity.

Suppose Bhanu offers Rs.2 for a banana for which Gautam is prepared to pay Re. 1. The higher price paid by Bhanu does not mean that he gets more utility and Gautam less utility. Thus money does not measure the utility from a commodity. It simply measures the intensity of our desire for a commodity. Despite this weakness, money is used as a measure of utility.

Cardinal and Ordinal Utility:

The terms 'cardinal' and 'ordinal' have been borrowed from mathematics. The numbers 1, 2, 3, 4, etc. are cardinal numbers. According to the cardinal system, the utility of a commodity is measured in units and that utility can be added, subtracted and compared. For example, if the utility of one apple is 10 units, of banana 20 units and of orange 40 units, the utility of banana are double that of apple and of orange four times the apple and twice the banana.

The ordinal numbers are 1st, 2nd, 3rd, 4th, etc. which may stand for 1, 2, 4, 6 or 30, 40, 60, 80, etc. They tell us that the consumer prefers the first to the second and the third to the second and first, and so on. But they cannot tell by how much he prefers one to the other.

The entire Marshallian utility analysis is based on the cardinal measurement of utility. According to Hicks, utility cannot be measured cardinally because utility which a commodity possesses is subjective and psychological. He, therefore, rejects the quantitative measurement of utility and measures utility ordinally in terms of the indifference curve technique.

characteristics of utility:

1. Utility and Usefulness:

Anything having utility does not mean that it is also useful. If a good possesses want satisfying power, it has utility. But the consumption of that good may be 'useful' or 'harmful'. For example, the consumption of wine possesses utility for a man habitual to drinking because it satisfies his want to drink. But the use of wine is harmful for health, but it has utility. Thus utility is not usefulness.

2. Utility and Satisfaction:

Utility is the quality or power of a commodity to satisfy human wants, whereas satisfaction is the result of utility. Apples lying in the shop of a fruit seller have utility for us, but we get satisfaction only when we purchase and consume them. It means utility is present even before the actual consumption of a commodity and satisfaction is obtained only after its consumption. Utility is the cause and satisfaction is the effect or result.

3. Utility and Pleasure:

It is not necessary that a commodity possessing utility also gives pleasure when we consume it. Utility is free from pain or pleasure. An injection possesses utility for a patient, because it can relieve him of his illness. But injection gives him no pleasure; instead it gives him some pain. Quinine is bitter in taste but it has the utility to treat the patient from malaria. So, there is no relationship between utility and pleasure.

4. Utility is Subjective:

Utility is a subjective and psychological concept. It means utility of a commodity differs from person to person. Opium is of great utility for a man accustomed to opium, but it has no utility for a man who is not accustomed to opium. In the same manner, utility of different commodities differs from person to

person. Therefore, utility is subjective.

5. Utility is Relative:

Utility is a relative concept. A commodity may possess different utility at different times or at different places or for different persons. In olden days, a Tonga had greater utility. But now with the invention of bus, its utility has become less. A rain coat has greater utility in hilly areas during rainy season than in plain areas. A fan has greater utility in summer than in winter.

6. Utility is Abstract:

Utility is abstract which cannot be seen with eyes, or touched or felt with hands. For example, the argumentative power of an advocate is abstract. Similarly, utility is abstract. Utility of a commodity can neither be seen not touched or felt with hands.

Types of Utility:

Utility may take any of the following forms:

(1) Form Utility:

When utility is created and or added by changing the shape or form of goods, it is form utility. When a carpenter makes a table out of wood, he adds to the utility of wood by converting it into a more useful commodity like furniture. He has created form utility.

(2) Place Utility:

When the furniture is taken from the factory to the shop for sale, it leads to place utility. This is because it is transported from a place where it has no buyers to a place where it fetches a price.

(3) Time Utility:

When a farmer stores his wheat after harvesting for a few months and sells it when its price rises, he has created time utility and added to the value of wheat.

(4) Service Utility:

When doctors, teachers, lawyers, engineers, etc. satisfy human wants through their services, they create service utility. It is acquired through specialised knowledge and skills.

(5) Possession Utility:

Utility is also added by changing the possession of a commodity. A book on economic theory has little utility for a layman. But if it is owned by a student of economics, possession utility is created.

(6) Knowledge Utility:

When the utility of a commodity increases with the increase in knowledge about its use, it is the creation of knowledge utility through propaganda, advertisement, etc.

(7) Natural Utility:

All free goods such as water, air, sunshine, etc., possess natural utility. They have the capacity to satisfy our wants.

Law of Diminishing Marginal Utility:

Definition of the Law:

"Other things remaining the same when a person takes successive units of a commodity, the marginal utility diminishes constantly".

The marginal utility of a commodity diminishes as the consumer gets larger quantities of it. Marginal utility is the change in the total utility resulting from one unit change in the consumption of a commodity per unit of time.

Assumptions:

Following are the assumptions of the law of **diminishing marginal utility**.

1. The utility is measurable and a person can express the utility derived from a commodity in qualitative terms such as 2 units, 4 units and 7 units etc.
2. A rational consumer aims at the maximization of his utility.
3. It is necessary that a standard unit of measurement is constant
4. A commodity is being taken continuously. Any gap between the consumption of a commodity should be suitable.
5. There should be proper units of a good consumed by the consumer.
6. It is assumed that various units of commodity homogeneous in characteristics.
7. The taste of the consumer remains same during the consumption of the successive units of commodity.
8. Income of the consumer remains constant during the operation of the law of diminishing marginal utility.
9. It is assumed that the commodity is divisible.
10. There should be no change in fashion. For example, if there is a fashion of lifted shirts, then the consumer may have no utility in open shirts.
11. It is assumed that the prices of the substitutes do not change. For example, the demand for CNG increases due to rise in the prices of petroleum and these price changes affect the utility of CNG.

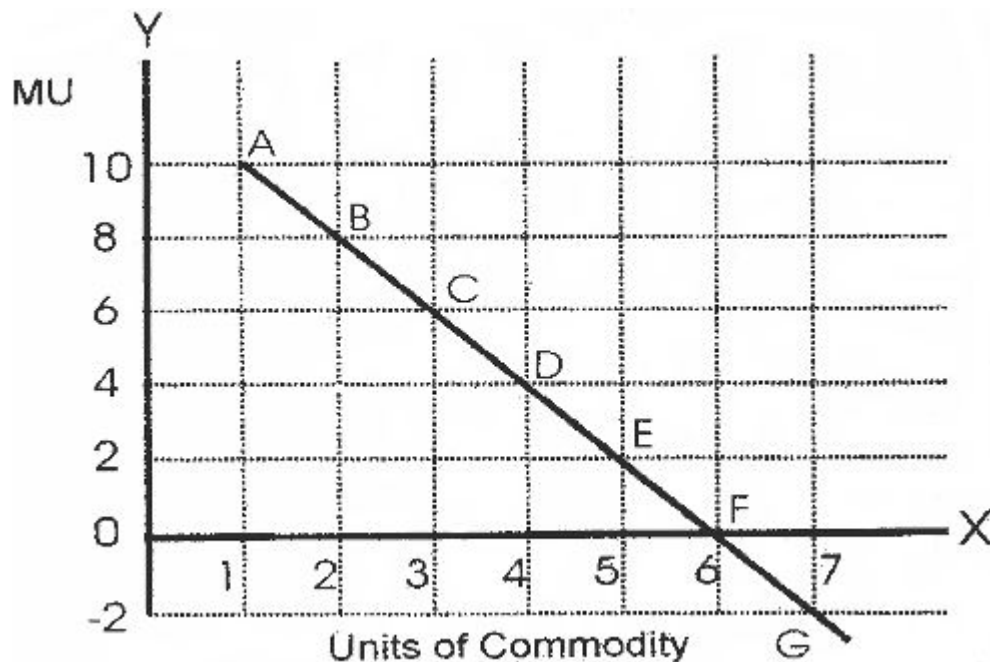
Explanation With Schedule and Diagram:

We assume that a man is very thirsty. He takes the glasses of water successively. The marginal utility of the successive glasses of water decreases, ultimately, he reaches the point of satiety. After this point the marginal utility becomes negative, if he is forced further to take a glass of water. The behavior of the consumer is indicated in the following schedule:

<u>Units of commodity</u>	<u>Marginal utility</u>	<u>Total utility</u>
1st glass	10	10
2nd glass	8	18
3rd glass	6	24
4th glass	4	28
5th glass	2	30
6th glass	0	30
7th glass	-2	28

On taking the 1st glass of water, the consumer gets 10 units of utility, because he is very thirsty. When he takes 2nd glass of water, his marginal utility goes down to 8 units because his thirst has been partly satisfied. This process continues until the marginal utility drops down to zero which is the saturation point. By taking the seventh glass of water, the marginal utility becomes negative because the thirst of the consumer has already been fully satisfied.

The law of diminishing marginal utility can be explained by the following diagram drawn with the help of above schedule:



In the above figure, the marginal utility of different glasses of water is measured on the y-axis and the units (glasses of water) on X-axis. With the help of the schedule, the points A, B, C, D, E, F and G are derived by the different combinations of units of the commodity (glasses of water) and the marginal utility gained by different units of commodity. By joining these points, we get the marginal utility curve. The marginal utility curve has the downward negative slope. It intersects the X-axis at the point of 6th unit of the commodity. At this point "F" the marginal utility becomes zero. When the MU curve goes beyond this point, the MU becomes negative. So there is an inverse functional relationship between the units of a commodity and the marginal utility of that commodity.

Exceptions or Limitations:

The limitations or exceptions of the law of diminishing marginal utility are as follows:

1. The law does not hold well in the rare collections. For example, collection of ancient coins, stamps etc.
2. The law is not fully applicable to money. The marginal utility of money declines with richness but never falls to zero.
3. It does not apply to the knowledge, art and innovations.
4. The law is not applicable for precious goods.
5. Historical things are also included in exceptions to the law.
6. Law does not operate if consumer behaves in irrational manner. For example, drunkard is said to enjoy each successive peg more than the previous one.
7. Man is fond of beauty and decoration. He gets more satisfaction by getting the above merits of the commodities.
8. If a dress comes in fashion, its utility goes up. On the other hand its utility goes down if it goes out of fashion.
9. The utility increases due to demonstration. It is a natural element.

Importance of the Law of Diminishing Marginal Utility:

The importance or the role of the law of diminishing marginal utility is as follows:

1. By purchasing more of a commodity the marginal utility decreases. Due to this behaviour, the consumer cuts his expenditures to that commodity.
2. In the field of public finance, this law has a practical application, imposing a heavier burden on the rich people.
3. This law is the base of some other economic laws such as law of demand, elasticity of demand, consumer surplus and the law of substitution etc.
4. The value of commodity falls by increasing the supply of a commodity. It forms a basis of the theory of value.

Law of Equi Marginal Utility:

The **law of equi marginal utility** was presented in 19th century by an Australian economists H. H. Gossen. It is also known as law of maximum satisfaction or law of substitution or Gossen's second law. A consumer has number of wants. He tries to spend limited income on different things in such a way that marginal utility of all things is equal. When he buys several things with given money income he equalizes marginal utilities of all such things. The law of equi marginal utility is an extension of the [law of diminishing marginal utility](#). The consumer can get maximum utility by allocating income among commodities in such a way that last dollar spent on each item provides the same marginal utility.

Definition:

"A person can get maximum utility with his given income when it is spent on different commodities in such a way that the marginal utility of money spent on each item is equal".

It is clear that consumer can get maximum utility from the expenditure of his limited income. He should purchase such amount of each commodity that the last unit of money spend on each item provides same marginal utility.

Assumptions of the Law of Equi Marginal Utility:

1. There is no change in the prices of the goods.
2. The income of consumer is fixed.
3. The marginal utility of money is constant.
4. Consumer has perfect knowledge of utility obtained from goods.
5. Consumer is normal person so he tries to seek maximum satisfaction.
6. The utility is measurable in cardinal terms.
7. Consumer has many wants.
8. The goods have substitutes.

Explanation With Schedule and Diagram:

The law of substitution can be explained with the help of an example. Suppose consumer has six dollars that he wants to spend on apples and bananas in order to obtain maximum total utility. The following table shows marginal utility (MU) of spending additional dollars of income on apples and bananas:

<u>Money (Units)</u>	<u>MU of apples</u>	<u>MU of bananas</u>
1	10	8
2	9	7
3	8	6
4	7	5
5	6	4
6	5	3

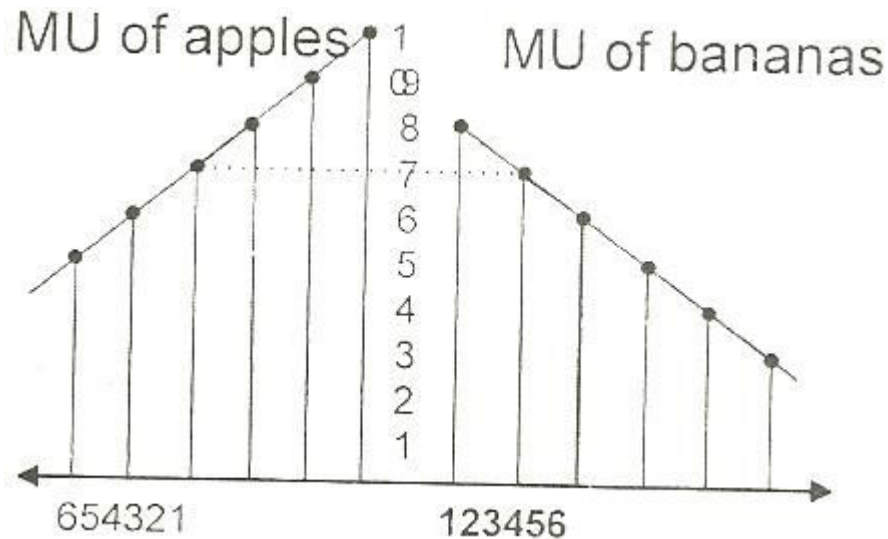
The above schedule shows that consumer can spend six dollars in different ways:

1. \$1 on apples and \$5 on bananas. The total utility he can get is:
 $[(10) + (8+7+6+5+4)] = 40.$
2. \$2 on apples and \$4 on bananas. The total utility he can get is:
 $[(10+9) + (8+7+6+5)] = 45.$
3. \$3 on apples and \$3 on bananas. The total utility he can get is:
 $[(10+9+8) + (8+7+6)] = 48.$

4. \$4 on apples and \$2 on bananas. This way the total utility is:
 $[(10+9+8+7) + (8+7)] = 49.$
5. \$5 on apples and \$1 on bananas. The total utility he can get is:
 $[(10+9+8+7+6) + (8)] = 48.$

Total total utility for consumer is 49 utils that is the highest obtainable with expenditure of \$4 on apples and \$2 on bananas. Here the condition MU of apple = MU of banana i.e 7 = 7 is also satisfied. Any other allocation of the last dollar shall give less total utility to the consumer.

The same information can be used for graphical presentation of this law:



The diagram shows that consumer has income of six dollars. He wants to spend this money on apples and bananas in such a way that there is maximum satisfaction to the consumer.

Limitations:

1. The law is not applicable in case of knowledge. Reading of books provides more satisfaction and knowledge to the scholar. Different books provide variety of knowledge and satisfaction.
2. The law is not applicable in case of indivisible goods. The consumer is unable to divide the goods to adjust units of utility derived from consumption of goods.
3. There is no measurement of utility. It is psychological concept. It is not possible to express it into quantitative form.
4. The law does not hold well in case fashion and customs. The people like to spend money on birthdays, marriages and deaths.
5. The does not hold well in case of very low income. The maximization of utility is not possible due to low income.
6. The law is not applicable in case of durable goods. The calculation of marginal utility of durable goods is impossible.
7. The law fails when goods of choice are not available. The consumer is bound to use commodity, which provides low utility due to non availability of goods having high utility.

8. There are certain lazy consumers. They do not care for maximum utility. The law fails to operate in case of laziness of consumers. They go on consuming goods with comparing utility.
9. It does not work when there are frequent price changes. The consumer is unable to calculate utility of different commodities. Changing price levels create confusion in the minds of consumers.
10. There may be unlimited resources. The law does not work due to unlimited resources. There is no need to change the direction of expenditure from one item to another when there are gifts of nature.

Importance:

1. The law of equi marginal utility is helpful in the field of production. The producer has limited resources. He uses limited resources to purchase production factors. He tries to equalize marginal utility of all factors. He wishes to get maximum output and profit.
2. National income is distributed among factors of production according to this law. An entrepreneur can pay factors of production equal to marginal product measured in money terms. He will substitute one factor for another until marginal productivity of all factors is equal to prices of their services.
3. The law is used in the field of exchange. The people like to exchange a commodity having low utility with a commodity having high utility. There is maximum benefit from exchange of commodities. The law is helpful in exchange of wealth, trade, import and export.
4. The law is applicable in consumption. A rational consumer tries to get maximum satisfaction when he spends his limited resources on various things. He tries to equalize weighted marginal utility of all the things.
5. The law is applicable in public finance. The government can spend its revenue to get maximum social advantage. The marginal utility of each dollar spent in one sector must be equal to marginal utility derived from all other sectors.
6. The law is useful for workers in allocating the time between work and rest. They can compare the marginal utility of work and the marginal utility of rest. They can decide working hours and rest hours.
7. The law holds well in case of saving and spending. The consumer can make choice between present wants and future wants. He can feel that a dollar saved has greater utility than a dollar spent, he can save more and spend less. He will substitute saving and spending till marginal utility of a dollar spent and a dollar saved are equal.
8. The law is helpful in prices. Due to scarcity of commodity its prices go up. The law tells us to use substitute commodity, which is less scarce. The result is that the price of commodity comes down.