KUNTHAVAI NAACCHIYAR GOVERNMENT ARTS COLLEGE FOR WOMEN(A), THANJAVUR.

Department of Business Administration

Sub: Managerial Economics

Code:18K3BB06

Unit-I

Definition-scope-significance of managerial economics-Firms objectives and the role of managerial economist. Relationship of managerial economics with other discipline. Law of diminishing marginal utility.

INTRODUCTION

Managerial Economics is constituted of economic theory and analytical tools the severely applied to business decision making. Economics is a social science which studies human behaviour in relation to optimising allocation of available resources to achieve the given ends.

DEFINITION

According to Milton Spencer and Louis siegelman Managerial Economics is the integration of economic theory with business practice for the purpose of facilitating decision making and forward planning by management.

Hague on the other hand, considers managerial economics as "a fundamental academic subject which seeks to understand and to analyse the problems of business decision-making."

SCOPE-SIGNIFICANCE OF MANAGERIAL ECONOMICS

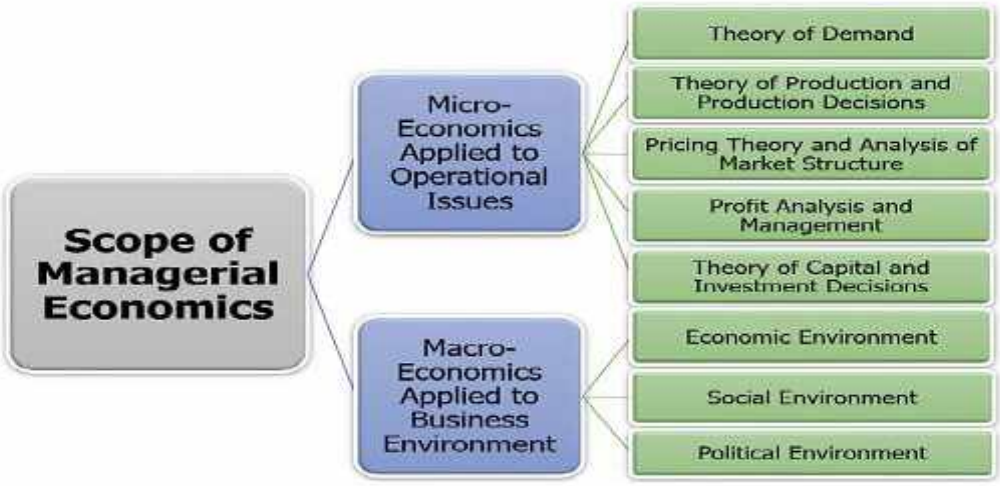


Figure:1-Scope of Managerial Economics

Managerial economics is widely applied in organizations to deal with different business issues. Both the micro and macroeconomics equally impact the business and its functioning. Managerial economics covers both macroeconomics as well as microeconomics, as both are equally important for decision making and business analysis.

Macroeconomics deals with the study of entire economy. It considers all the factors such as government policies, business cycles, national income, etc.

Microeconomics includes the analysis of small individual units of economy such as individual firms, individual industry, or a single individual consumer.

Micro-Economics Applied to Operational Issues

To resolve the organisation's internal issues arising in business operations, the various theories or principles of microeconomics applied are as follows:

- **Theory of Demand**: The demand theory emphasises on the consumer's behaviour towards a product or service. It takes into consideration the needs, wants, preferences and requirement of the consumers to enhance the production process.
- **Theory of Production and Production Decisions**: This theory is majorly concerned with the volume of production, process, capital and labour required, cost involved, etc. It aims at maximising the output to meet the customer's demand.
- **Pricing Theory and Analysis of** Market Structure: It focuses on the price determination of a product keeping in mind the competitors, market conditions, cost of production, maximising sales volume, etc.
- **Profit Analysis and Management**: The organisations work for a profit. Therefore they always aim at profit maximisation. It depends upon the market demand, cost of input, competition level, etc.
- **Theory of Capital and Investment Decisions**: Capital is the most critical factor of business. This theory prevails the proper allocation of the organisation's capital and making investments in profitable projects or venture to improve organisational efficiency.

Macro-Economics Applied to Business Environment

Any organisation is much affected by the environment it operates in. The business environment can be classified as follows:

- **Economic Environment**: The economic conditions of a country, GDP, economic policies, etc. indirectly impacts the business and its operations.
- **Social Environment**: The society in which the organisation functions also affects it like employment conditions, trade unions, consumer cooperatives, etc.
- **Political Environment**: The political structure of a country, whether authoritarian or democratic; political stability; and attitude towards the private sector, influence organizational growth and development.

Managerial economics provides an essential tool for determining the business goals and targets, the actual position of the organization, and what the management should do fill the gap between the two.

(Source: https://theinvestorsbook.com/managerial-economics.html)

FIRMS OBJECTIVES

Figure:2- The main objectives of firms

Profit Maximisation

Usually, in economics, we assume firms are concerned with maximising profit. Higher profit means:

- Higher dividends for shareholders.
- More profit can be used to finance research and development.
- Higher profit makes the firm less vulnerable to takeover.
- Higher profit enables higher salaries for workers

However, in the real world, firms may pursue other objectives apart from profit maximisation.

1. Profit Satisficing

In many firms, there is a separation of ownership and control. Those who own the company (shareholders) often do not get involved in the day to day running of the company.This is a problem because although the owners may want to maximise profits, the managers have much less incentive to maximise profits because they do not get the same rewards, (share dividends)

Therefore managers may create a minimum level of profit to keep the shareholders happy, but then maximise other objectives, such as enjoying work, getting on with other workers. (e.g. not sacking them) This is the problem of separation between owners and managers.This 'principal-agent' problem can be overcome, to some extent, by giving managers share options and performance related pay although in some industries it is difficult to measure performance.

2. Sales maximisation

Firms often seek to increase their market share – even if it means less profit. This could occur for various reasons:

Increased market share increases monopoly power and may enable the firm to put up prices and make more profit in the long run.Managers prefer to work for bigger companies as it leads to greater prestige and higher salaries.

Increasing market share may force rivals out of business. E.g. the growth of supermarkets have lead to the demise of many local shops. Some firms may actually engage in predatory pricing which involves making a loss to force a rival out of business.

3. Growth maximisation

This is similar to sales maximisation and may involve mergers and takeovers. With this objective, the firm may be willing to make lower levels of profit in order to increase in size and gain more market share. More market share increases its monopoly power and ability to be a price setter.

4. Long run profit maximisation

In some cases, firms may sacrifice profits in the short term to increase profits in the long run. For example, by investing heavily in new capacity, firms may make a loss in the short run but enable higher profits in the future.

5. Social/environmental concerns

A firm may incur extra expense to choose products which don't harm the environment or products not tested on animals. Alternatively, firms may be concerned about local community / charitable concerns.

Some firms may adopt social/environmental concerns as part of their branding. This can ultimately help profitability as the brand becomes more attractive to consumers.Some firms may adopt social/environmental concerns on principal alone – even if it does little to improve sales/brand image.

6. Co-operatives

Co-operatives may have completely different objectives to a typical PLC. A co-operative is run to maximise the welfare of all stakeholders – especially workers. Any profit the co-operative makes will be shared amongst all members.

(Source: https://www.economicshelp.org/microessays/costs/objectives-firms/)

THE ROLE OF MANAGERIAL ECONOMIST

- Studies the economic patterns at macro-level and analysis it's significance to the specific firm he is working in.
- Has to consistently examine the probabilities of transforming an ever-changing economic environment into profitable business avenues.
- Assists the business planning process of a firm.
- Also carries cost-benefit analysis.
- Assists the management in the decisions pertaining to internal functioning of a firm such as changes in price, investment plans, type of goods /services to be produced,

inputs to be used, techniques of production to be employed, expansion/ contraction of firm, allocation of capital, location of new plants, quantity of output to be produced, replacement of plant equipment, sales forecasting, inventory forecasting, etc.

- In addition, a managerial economist has to analyze changes in macro- economic indicators such as national income, population, business cycles, and their possible effect on the firm's functioning.

RELATIONSHIP OF MANAGERIAL ECONOMICS WITH OTHER DISCIPLINE

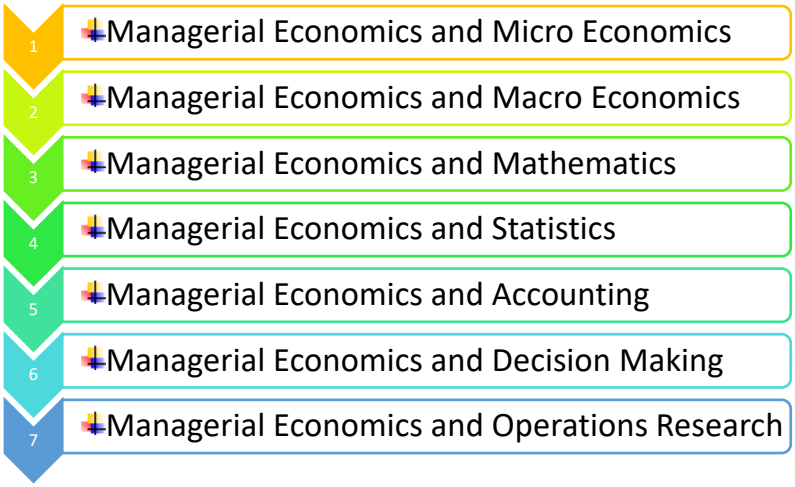


Figure:3-Relationship of Managerial Economics with other Discipline

Managerial Economics and 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. The roots of managerial economics spring from micro-economic theory. In price theory, demand concepts, elasticity of demand, marginal cost marginal revenue, the short and long runs and theories of market structure are sources of the elements of micro-economics which managerial economics draws upon.

Managerial Economics and 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. The environment, in which a business operates, fluctuations in national income, changes in fiscal and monetary measures and variations in the level of business activity have relevance to business decisions. The understanding of the overall operation of the economic system is very useful to the managerial economist in the formulation of his policies.

Managerial Economics and Mathematics

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 mathematical concepts used by the managerial economists are the logarithms and exponential, vectors and determinants, input-out tables.

- **Managerial Economics and Statistics**

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

- **Managerial Economics and Accounting**

  Managerial 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..

- **Managerial Economics and Decision Making**

  Managerial Economics is closely related to the theory of decision making. it is the selection of particular course of action in the background of different alternatives. in order to choose a particular course of action many factors of to taken into consideration. A manager faces a number of problems connected with his/her business such as production, inventory, cost, marketing, pricing, investment and personnel.

- **Managerial Economics and Operations Research**

  Operation research is application of mathematical techniques in solving business problems. 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, Queuing Theory, Game Theory, Decision Theory and Symbolic Logic.

(Source: https://sites.google.com/site/nascpgrdcmanagerialeconomics/home/managerial-economics/unit-i-2/economic-theory/divisions-of-managerial-economics/role-and-responsibilities-of-managerial-economist/value-of-enterprise/managerial-economics-in-relation-with-other-disciplines)

LAW OF DIMINISHING MARGINAL UTILITY.

According to Professor Alfred Marshall, “the additional benefit which a person derives from a given increase of a stock of a thing, diminishes, other thing being equal, with every increase in the stock that he already has”.

The definition reveals that with the increase in the amount of a commodity the additional utility will decline and it applies other things being equal.

The law can be explained with an example that Mr. Mohan consumes additional units of apple and the utility he derives as given in the following table:

Units of Apple	Marginal Utility
1	8
2	6
3	4
4	2
5	0
6	-2

Table:1 Marginal Utility

Table 1 reveals that the utility derived by consumer from additional unit of apple decreases. The marginal utilities from different units are 8, 6, 4 and so on. The marginal utility from the 5th unit of apple is zero and thereafter it is negative.

Three stages of marginal utility as given below:
(i) MU shows a decreasing trend up to 4th unit of apple but it is positive.

(ii) MU is zero from the 5th unit of apple and it is the satiety point. Consumer should not consume after this point.

(iii) MU becomes negative with the consumption of 6th unit of apple.

Causes of the Law of Diminishing Marginal Utility:

(i) Satiety of a Want:
Human wants are unlimited and the resources are scarce with alternative uses. A particular want can be satisfied on a particular point of time. When a consumer consumes different units of a commodity on continuous basis the additional utility derived by him goes on declining and thereafter he gets zero and even negative utility. When he gets zero utility it means a saturation point has reached and after that point he would like to consume additional unit of that commodity. Hence, the law of diminishing utility will operate.

(ii) Intensity of Want Declines:
Utility of a commodity depends not only on the want satisfying power but also on the intensity of the want. As a consumer goes on consuming additional units of a commodity the intensity of this want goes down and consequently the subsequent utility goes on declining.

(iii) No Perfect Substitutes of Goods:
There are substitute goods but they can be substituted to some extent only and there is not perfect substitute of goods. For example, bread and butter are consumed in a ratio and any imbalance in the ratio of the two will give you diminishing marginal utility.

(iv) Nature of Human Behaviour:
It is the nature of human behaviour that a consumer will consume more of those goods which he has not consumed and less of those goods he has already consumed. Such nature of human behaviour is the cause of operating the law.

(v) Variety of Uses:

There are several commodities having a variety of uses or alternative uses in our daily life. The use of a commodity depends on the basis of priority for a particular use. For example, use of electricity depends upon the priority of a particular use. As we move from more important use of a commodity to less use of it the marginal utility of that commodity will decline.

Assumptions of the Law of Diminishing Marginal Utility:
The law of diminishing marginal utility operates only when other things remain same.

In other words, the law will operate when the following assumptions are in existence:

(i) All the Units of the Commodity should be Homogenous
(ii) Adequate and Suitable Quantity of Consumption
(iii) Continuity in Consumption
(iv) No Change in the Mental State of Consumer
(v) Income, Habit, Taste and Preference of the Consumer do not Change
(vi) Price of the Commodity and its Related Goods Remain Constant
(vii) Want Should be a Single One and not Multiple Want
(viii) Applies to Pleasure Economy Only
(ix) Marginal Utility of Money Remains Constant

(Source: https://www.microeconomicsnotes.com/marginal-utility/law-of-diminishing-marginal-utility-microeconomics/14639)

Unit-II

Demand determinants-law of demand, exception to law of demand. Price elasticity of demand, Income elasticity of demand. Income demand curve of normal commodity and inferior commodity. Price of related goods and demand. Demand distinction.

DEMAND DETERMINANTS

Demand in terms of economics may be explained as the consumers' willingness and ability to purchase or consume a given item/good. Furthermore, the determinants of demand go a long way in explaining the demand for a particular good. For instance, an increase in the price of a good will lead to a decrease in the quantity that may be demanded by consumers. Similarly, a decrease in the cost or selling price of a good will most likely lead to an increase in the demanded quantity of the goods. This indicates the existence of an inverse relationship between the price of the article and the quantity demanded by consumers. This is commonly known as the law of demand.Some of the important determinants of demand are as follows,

1] Price of the Product

People use price as a parameter to make decisions if all other factors remain constant or equal. According to the law of demand, this implies an increase in demand follows a reduction in price and a decrease in demand follows an increase in the price of similar goods.

The demand curve and the demand schedule help determine the demand quantity at a price level. An elastic demand implies a robust change quantity accompanied by a change in

price. Similarly, an inelastic demand implies that volume does not change much even when there is a change in price.

2] Income of the Consumers

Rising incomes lead to a rise in the number of goods demanded by consumers. Similarly, a drop in income is accompanied by reduced consumption levels. This relationship between income and demand is not linear in nature. Marginal utility determines the proportion of change in the demand levels.

3] Prices of related goods or services

- *Complementary products* – An increase in the price of one product will cause a decrease in the quantity demanded of a complementary product. Example: Rise in the price of bread will reduce the demand for butter. This arises because the products are complementary in nature.

- *Substitute Product* – An increase in the price of one product will cause an increase in the demand for a substitute product. Example: Rise in price of tea will increase the demand for coffee and decrease the demand for tea.

4] Consumer Expectations

Expectations of a higher income or expecting an increase in prices of goods will lead to an increase the quantity demanded. Similarly, expectations of a reduced income or a lowering in prices of goods will decrease the quantity demanded.

5] Number of Buyers in the Market

The number of buyers has a major effect on the total or net demand. As the number increases, the demand rises. Furthermore, this is true irrespective of changes in the price of commodities.

(Source: https://www.toppr.com/guides/business-economics/theory-of-demand/meaning-and-determinants-of-demand/)

LAW OF DEMAND

The **law of demand states** that other factors being constant ,price and quantity **demand** of any good and service are inversely related to each other. When the price of a product increases, the **demand** for the same product will fall.

Demand Schedule

The demand schedule illustrates the relationship between price and quantity demanded by using a table of figures. The demand schedule generally consists of two columns: one for the price of a product and one for the quantity demanded at that price. The price column displays different price levels, arrayed from lowest to highest, or vice versa, while the quantity demanded column displays the quantity of that good or service

demanded at each price level. The demand schedule for most products will show a reduction in quantity demanded as the price increases.

Demand Curve

The demand curve is a visual form of the demand schedule. Economists depict the demand schedule on a two-dimensional graph, consisting of a vertical axis representing price and a horizontal axis representing quantity demanded. The vertical axis displays different price levels from highest to lowest, while the horizontal axis displays different levels of demand. The apex of the vertical and horizontal axis has a value of zero for both quantity and price. Mankiw notes that the demand curve for most products slopes downward, indicating an increase in demand as the price declines.

EXCEPTION TO LAW OF DEMAND

There are certain situations where the law of demand does not apply or becomes ineffective, i.e. with a fall in the price the demand falls and with the rise in price the demand rises are called as the **exceptions to the law of demand**.

1. **Giffen Goods:** Giffen goods are the inferior goods whose demand increases with the increase in its prices. Whenever the price of the Giffen goods increases its quantity demanded also increases because, with an increase in the price, and the income remaining the same, the poor people cut the consumption of superior substitute and buy more quantities of Giffen goods to meet their basic needs.
2. **Veblen Goods:** Another exception to the law of demand is given by the economist Thorstein Veblen, who proposed the concept of **"Conspicuous Consumption."** According to Veblen, there are a certain group of people who measure the utility of the commodity purely by its price, which means, they think that higher priced goods and services derive more utility than the lesser priced commodities.
3. **Expectation of Price Change in Future**: When the consumer expects that the price of a commodity is likely to further increase in the future, then he will buy more of it despite its increased price in order to escape himself from the pinch of much higher price in the future.

4. **Ignorance**: Often people are misconceived as high-priced commodities are better than the low-priced commodities and rest their purchase decision on such a notion. They buy those commodities whose price are relatively higher than the substitutes.
5. **Emergencies**: During emergencies such as war, natural calamity- flood, drought, earthquake, etc., the law of demand becomes ineffective. In such situations, people often fear the shortage of the essentials and hence demand more goods and services even at higher prices.
6. **Change in fashion and Tastes & Preferences**: The change in fashion trend and tastes and preferences of the consumers negates the effect of law of demand. The consumer tends to buy those commodities which are very much 'in' in the market even at higher prices.
7. **Conspicuous Necessities**: There are certain commodities which have become essentials of the modern life. These are the goods which consumer buys irrespective of an increase in the price.
8. **Bandwagon Effect**: This is the most common type of exception to the law of demand wherein the consumer tries to purchase those commodities which are bought by his friends, relatives or neighbors. Here, the person tries to emulate the buying behavior and patterns of the group to which he belongs irrespective of the price of the commodity.

(Source: https://businessjargons.com/exceptions-to-the-law-of-demand.html)

PRICE ELASTICITY OF DEMAND

Elasticity of Demand: The degree of responsiveness of demand to the changes in determinants of demand (Price of the commodity, Income of a Consumer, Price of related commodity) is known as elasticity of Demand.

It may be of three types: namely,

(a) Price elasticity of Demand.

(b) Income elasticity of Demand,

(c) Cross elasticity of Demand.

The degree of responsiveness of quantity demanded to changes in price of commodity is known as **price elasticity of Demand.**

The degree of responsiveness of demand to change in income of consumer is known as **income elasticity of demand.**

The degree of responsiveness of demand to change in the price of related goods (substitute goods, complementary goods) is known as **cross elasticity of demand.**

The *price elasticity of demand* measures the magnitude by which consumers change the quantity demanded in response to a change in the price of the product. The more elastic demand is, the more responsive it is to price changes.

$$E=\frac{proportinate\ change\ in\ the\ quantity\ demanded}{Proportinate\ change\ in\ price}$$

E or elasticity of demand in the calculation is also called coefficient of elasticity of demand. if E is greater than 1 the demand is said to be elastic. if E is less than 1 the demand is said to be inelastic. and if E happens to be equal to 1 the demand is unity.
If a 1% rise in prices followed by a contraction of demand of more than one percent the demand is elastic. on the other hand, if one percent change in price is held in less than one percent change in the quantity demanded the demand is inelastic.

Determinants Of Price Elasticity Of Demand

1. Existence of Substitutes: The More Substitutes Available for A Product, The More Elastic Its Demand
2. Luxury or A Necessity: The Demand for Luxuries Is Relatively Elastic
3. Importance of The Product in The Consumer's Total Budget: The Greater the Portion of The Consumer's Budget, The More Elastic the Demand
4. Definition of The Market: The More Widely Defined the Market, The More Inelastic the Demand, E.G. Food Vs. Green Beans
5. Time Period Under Consideration: The Longer the Time Period, The More Elastic

(Source: https://www.toppr.com)

INCOME ELASTICITY OF DEMAND

Income elasticity of demand tells about the responsiveness of the consumer to change and his income.

Income elasticity of demand is given by the formula

$$Ei=\frac{\text{proportionate change in quantity demanded}}{\text{proportionate change in income.}}$$

Like price elasticity income elasticity also can be classified on the basis of the value Ei these are

Zero income elasticity of demand

quantity purchased will remain constant irrespective of change in income. In this case the value ei equal to zero.

Negative income elasticity of demand

Increase in money income of consumer will lead to decrease in the quantity purchase of a commodity this is possible for inferior goods.

Unitary income elasticity of demand

Increase in income on the increase in the quantity demand or in equal proportion.

Income elasticity of demand greater than one

When the consumer makes a larger proportion of purchase of commodity over the increase in his income

Income elasticity of demand less than one

When consumers fence lesser proportion of this increased income on the purchase of the commodity. This will be in that case in commodities of necessaries.

INCOME DEMAND CURVE OF NORMAL COMMODITY AND INFERIOR COMMODITY.

Normal Goods:

Most of the commodities that we usually buy are normal (superior) goods. As a general practice, a consumer buys more of such goods, when his income rises and less of it when his income falls. The commodities that follow this rule are called 'Normal Goods'.

Inferior Goods:

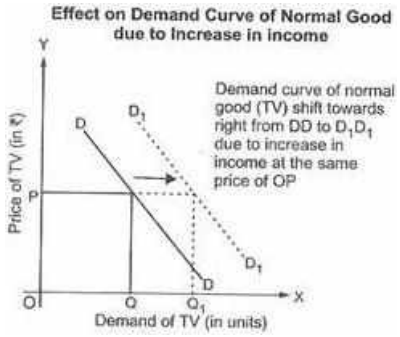
Inferior goods refer to those goods whose demand decreases with an increase in income. It means that there exists an inverse relationship between income and the demand for inferior goods. So, income effect is negative in case of inferior goods.

Change in Income (Normal Goods):

A change (increase or decrease) in the income of consumer directly affects the demand for a given commodity

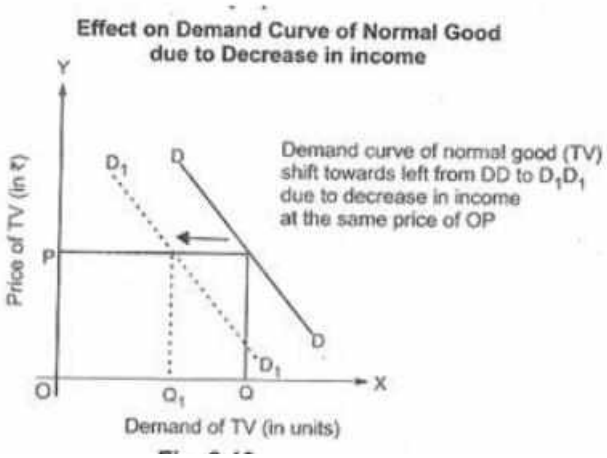
i) Increase in Income:

As income rises, the demand for normal goods (say, TV) also rises from OQ to OQ_1 at the same price of OP. It leads to a rightward shift in the demand curve of normal good from DD to D_1D_1.



(ii) Decrease in Income:

With fall in income, the demand for normal goods (TV) falls from OQ to OQ_1 at the same price of OP. It shifts the demand curve of normal good towards left from DD to D_1D_1.

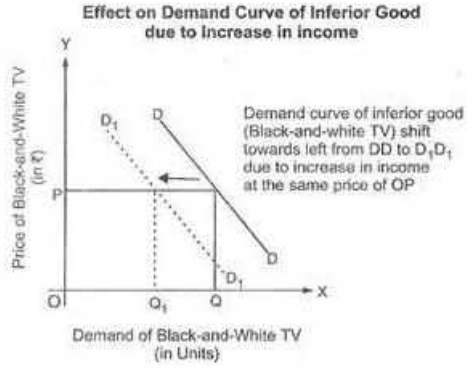


Change in Income (Inferior Goods)

An increase or decrease in income affects the demand inversely, if the given commodity is an inferior good.

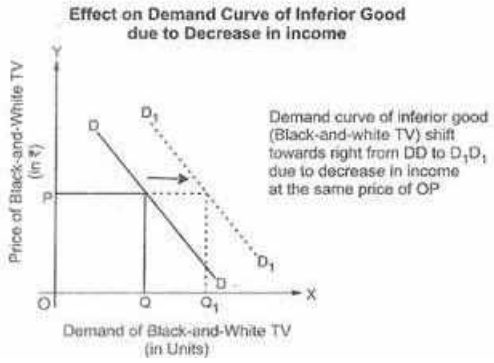
(i) Increase in Income:

As income increases, the demand for inferior goods (say, black-and-white TV) falls from OQ to OQ_1 at the same price of OP. It leads to a leftward shift in the demand curve of inferior good from DD to D_1D_1.



(ii) Decrease in Income:

As income decreases, the demand for inferior goods (say, black-and-white TV) rises from OQ to OQ_1 at the same price of OP. It leads to a rightward shift in the demand curve of inferior good from DD to D_1D_1.



(Source: https://www.yourarticlelibrary.com/economics/effect-of-demand-curve-on-normal-goods-and-inferior-goods-microeconomics/8916)

PRICE OF RELATED GOODS AND DEMAND

Price of related goods: It may be of two types:

1. Substitute goods
2. Complementary goods

Substitute Goods: Substitute goods are those goods which can be used in place of another goods and give the same satisfaction to a consumer. There would always exist a direct relationship between the price of substitute goods and demand for given commodity.
It means with an increase in price of substitute goods, the demand for given commodity also rises and vice-versa. For example, Pepsi and Coke.

Complementary Goods: Complementary goods are those which are useless in the absence of another goods and which are demanded jointly. There would always exist an inverse relationship between price of complementary goods and demand for given commodity.
It means, with a rise in price of complementary goods, the demand for given commodity falls and vice-versa. For example pen and refill.

DEMAND DISTINCTION.

a. Producer's goods and Consumer's goods

B. Durable goods and Non-durable goods

c. Derived demand and Autonomous demand

d. Industry demand and Company demand

e. Short-run demand and Long-run demand

Producer's goods and Consumer's goods

Producer's goods are those which are used for the production of other goods- eithe r consumer goods or producer goods themselves. Examples of such goods are machines, locomotives, ships etc.
Consumer's goods are those which are used for final consumption. Examples of con sumer's goods are readymade clothes, prepared food, residential houses, etc.

Durable goods and Non-durable goods

Non- durable consumer goods are those which cannot be consumed more than once; for example bread, milk etc. These will meet only the current demand. Durable consumer goods are those which can be consumed more than once over a p eriod of time, example, car, refrigeratorThe demand for durable goods is likely to be derived demand.

Derived demand and Autonomous demand

When a product is demanded consequent on the purchase of a parent product, its de mand is called derived demand. For example, the demand for cement is derived dem and, being directly related to building activity. If the demand for a product is independent of the demand for other goods, then it is called autonomous demand. But this distinction is purely arbitrary and it is very difficult to find out which product is entirely independent of other products.

Industry demand and Company demand

The term industry demand is used to denote the total demand for the products of a particular industry, e.g. the total demand for steel in the country. On the other hand, t

he term company demand denotes the demand for the products of a particular company,e.g. demand for steel produced by the Tata Iron and Steel Comp any.

Short –run demand and Long-run demand

Short run demand refers to demand with its immediate reaction to price changes, income fluctuations, etc., whereas long-run demand is that which will ultimately exist as a result of changes in pricing, promotion or product improvement, after enough time is allowed to let the market adjust to the new situation. For example, if electricity rates are reduced, in the short run, the existing users will make greater use of electric appliances. In the long run, more and more people will be induced to use electric appliances.

(Source: https://www.studyduniya.com/app/study_post.php?course=CA%20CPT&subject=General%20Economics&chapter=Theory%20of%20Demand%20and%20Supply&id=1791**)**

Contents were taken from the following resources:

S.Sankaran,Managerial Economics,Margham Publication,Chennai.

https://theinvestorsbook.com/managerial-economics.html

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https://sites.google.com/site/nascpgrdcmanagerialeconomics/home/managerial-economics/unit-i-2/economic-theory/divisions-of-managerial-economics/role-and-responsibilities-of-managerial-economist/value-of-enterprise/managerial-economics-in-relation-with-other-disciplines

https://www.microeconomicsnotes.com/marginal-utility/law-of-diminishing-marginal-utility-microeconomics/14639

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