Determinants of demand

Various factors affect the quantity demanded by a consumer of a good or service. The key determinants of demand are as follows

1. Price of the good: This is the most important determinant of demand. The relationship between price of the good and quantity demanded is generally inverse as we will see later while studying law of demand
2. Price of related goods:

- Substitutes: If the price of a substitute goes down than the quantity demanded of the good also goes down and vice versa.
- Complementary goods: If the price of gasoline goes up the quantity demanded of automobiles will go down. Thus the price of complements have an inverse relationship with the demand of a good

3. Income: Higher the income of the consumer the more will be quantity demanded of the good. The only exception to this will be inferior goods whose demand decreases with an increase in income level

4. Individual tastes and preferences: a preference for a particular good may affect the consumer's choice and he / she may continue to demand the same even in rising prices scenario
5. Expectations about future prices & income: If the consumer expects prices to rise in future he / she may continue to demand higher quantities even in a rising price scenario and vice versa

Exceptions to the law of demand

Unlike other laws, law of demand also has few exceptions i.e. there is no inverse relationship between price and quantity demanded for these goods. Few of them are as follows:

follows:

1. Giffen goods: These are those inferior goods whose quantity demanded decreases with decrease in price of the good. This can be explained using the concept of income effect and substitution effect

2. Commodities which are regarded as status symbols: Expensive commodities like jewellery, AC cars, etc., are used to define status and to display one's wealth. These goods doesn't follow the law of demand and quantity demanded increases with price rise as more expensive these goods become, more will be their worth as a status symbol.
3. Expectation of change in the price of the goods in future: if a consumer expects the price of a good to increase in future, it may start accumulating greater amount of the goods for future consumption even at the presently increased price. The same holds true vice versa

Elasticity of demand – Meaning, elastic and inelastic demand, kinds of elasticity of demand, perfectly elastic, perfectly inelastic, relatively elastic, relatively inelastic, unitary elastic demand-types of elasticity of demand-price elasticity of demand-income elasticity-cross elasticity of demand-factors affecting elasticity of demand-practical importance of elasticity of demand

Elasticity of Demand:

The elasticity of demand measures the responsiveness of quantity demanded to a change in any one of the above factors by keeping other factors constant. When the relative responsiveness or sensitiveness of the quantity demanded is measured to changes in its price, the elasticity is said be price elasticity of demand.

Types of Elasticity of Demand

The quantity of a commodity demanded per unit of time depends upon various factors such as the price of a commodity, the money income of the consumer and prices of related goods, the tastes of the people, etc. Whenever there is a change in any of the variables stated above, it brings about a change in the quantity of the commodity purchased over a specified period of time. The three main types of elasticity are now discussed in brief.

(1) Price Elasticity of Demand:

The concept of price elasticity of demand is commonly used in economic literature. Price elasticity of demand is the degree of responsiveness of quantity demanded of a good to a change in its price. Precisely, it is defined as the ratio of proportionate change in the quantity demanded of a good caused by a given proportionate change in price. The formula for measuring price elasticity of demand is:

$$\text{Price Elasticity} = \frac{\text{Percentage change in quantity demanded}}{\text{Percentage change change in price}}$$

$$= \Delta q / q \div \Delta P / P$$

Example. Let us suppose that price of a good falls from Rs.10 per unit to Rs.9 per unit in a day. The decline in price causes the quantity of the good demanded to increase from 125 units to 150 units per day, The price elasticity using the simplified formula will be:

$E_p = \Delta q / \Delta P \times P / q$

$\Delta q = 150 - 125 = 25$ $\Delta P = 10 - 9 = 1$

Original quantity = 125 Original price = 10

$E_p = 25 / 1 \times 10 / 125 = 2$. The elasticity coefficient is greater than one.

Therefore the demand for the good is elastic.

(2) Income Elasticity of Demand:

Income is an important variable affecting the demand for a good. When there is a change in the level of income of a consumer, there is a change in the quantity demanded of a good, other factors remaining the same. The degree of change or responsiveness of quantity demanded of a good to a change in the income of a consumer is called income elasticity of demand. Income elasticity of demand can be defined as the ratio of percentage change in the quantity of a good purchased, per unit of time to a percentage change in the income of a consumer.

E_y = Percentage change in demand
Percentage change in income

$E_y = \Delta q / \Delta y \times y / q$

Let us assume that the income of a person is Rs.4000 per month and he purchases six CDs per month. Let us assume that the monthly income of the consumer increases to Rs.6000 and the quantity demanded of CD's per month rises to eight .The elasticity of demand for CDs will be calculated as under:

$\Delta q = 8 - 6 = 2$ $\Delta y = 6000 - 4000 = 2000$

Original quantity demanded = 6 Original income 4000

$E_y = \Delta q / \Delta y \times y / q = 2 / 200 \times 4000 / 6 = 0.66$

The income elasticity is 0.66 which is less than one.

(3) Cross Elasticity of Demand:

The concept of cross elasticity of demand is used for measuring the responsiveness of quantity demanded of a good to changes in the price of related goods. Cross elasticity of demand is defined as the percentage change in the demand of one good as a result of the percentage change in the price of another good.. The formula for measuring cross elasticity of demand is:

E_{xy} = % change quantity demanded of good X
% change in price of good Y

The numerical value of cross elasticity depends on whether the two goods in question are substitutes, complements or unrelated.

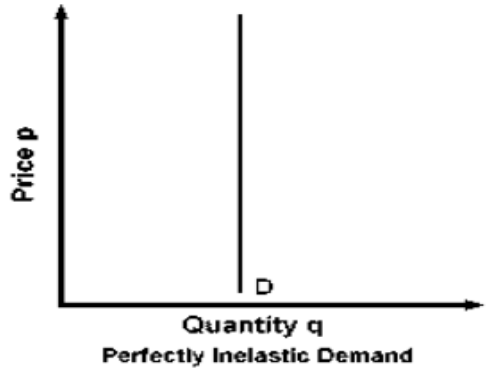
For example: Coke and Pepsi

Degrees of Price Elasticity of Demand:

The economists grouped various degrees of elasticity of demand into five categories. (1) Infinitely elastic, (2) Perfectly inelastic, (3) Unit elasticity, (4) Relatively elastic, and (5) Relatively inelastic demand.

(1) Perfectly inelastic demand: When the quantity demanded of a good does not change at all to whatever change in price, the demand is said to be perfectly inelastic or the elasticity of demand is zero.

(2) Perfectly elastic demand: A perfectly elastic demand curve DD' is a horizontal line which indicates that the quantity demanded is extremely (infinitely) responsive to price. Even a slight rise in price drops the quantity demanded of a good to zero. The curve DD' is infinitely elastic. This elasticity of demand as such is equal to infinity.



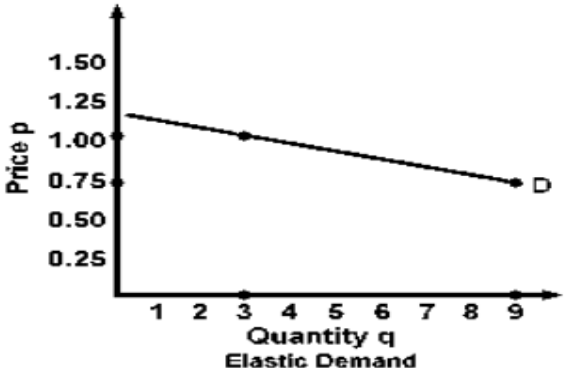
Perfectly Inelastic Demand

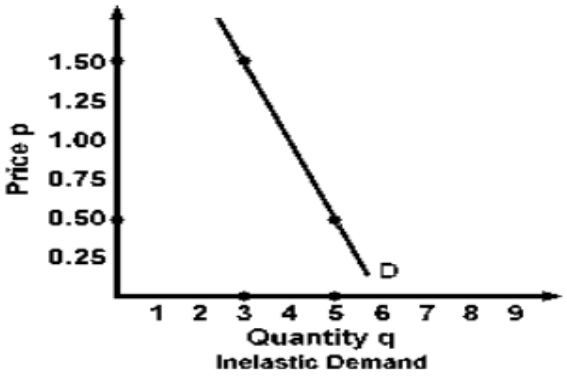
Perfectly Elastic Demand

(3) Unitary elastic demand: When the quantity demanded of a good changes by exactly the same percentage as price, the demand is said to be unitary elastic.

(4) Relatively elastic demand: If a given proportionate change in price causes relatively a greater proportionate change in quantity demanded of a good, the demand is said to be relatively elastic. Alternatively, we can say that the elasticity of demand is greater than I.

(5) Relatively Inelastic demand: When a given proportionate change in price causes a relatively less proportionate change in quantity demand, demand is said to be inelastic. The elasticity of a good here is less than I or less than unity.





Factors Determining Price Elasticity of Demand:

(i) Degree of necessity: If the consumption of the commodity or commodities is essential and necessary, the demand for those commodities is said to be relatively inelastic. In developing countries of the world, the per capital income of the people is generally low. They spend a greater amount of their income on the purchase of necessaries of life such as wheat, milk, course cloth etc. They have to purchase these commodities whatever be their price. The demand for goods of necessities is, therefore, less elastic or inelastic. The demand for luxury goods, on the other hand is greatly elastic whose consumption can be postponed. For example, refrigerators, televisions etc

(ii) Availability of substitutes. If a good has greater number of close substitutes available in the market, the demand for the good will be greatly elastic. For examples, if the price

of Coca Cola rises in the market, people will switch over to the consumption of Pepsi Cola. which is its close cheaper substitute. So the demand for Coca Cola is elastic.

(iii) Proportion of the income spent on the good: If the proportion of income spent on the purchase of a good is very small, the demand for such a good will be inelastic. For example, if the price of a box of matches or salt rises by 50%, it will not affect the consumers' demand for these goods. The demand for salt, match box therefore will be inelastic. On the other hand, if the price of a car rises from Rs.6 lakh to Rs.9 lakh and it takes a greater portion of the income of the consumers, its demand would fall. The demand for car is, therefore, elastic.

(iv) Time. The period of time plays an important role in shaping the demand curve. In the short run, when the consumption of a good cannot be postponed, its demand will be less elastic. In the long run if the rise price persists, people will find out methods to reduce the consumption of goods. For example: if the price of electricity goes up, it is very difficult to cut back its consumption in the short run than in the long run by adoption of available alternatives.

(v) Number of uses of a good. If a good can be put to a number of uses, its demand is more elastic (Ep > 1). For example, if the price of coal falls, its quantity demanded will rise considerably because demand will be coming from households, industries, railways etc.