BBA (General) Semester: III

Economic Analysis – I (UM03GBBA51)

Dr. J. P. Parmar (25th June, 2020)

Unit: 01: Elasticity of Demand

Price elasticity – Methods, types and Uses–Income elasticity – concept and uses- Cross elasticity –Concept, Types and Uses, Promotional Elasticity and its Uses.

Price elasticity – Definitions, types, Methods and Uses

Elasticity = responsiveness of consumer due to the price change of any commodity

Definitions

- According to **Alfred Marshall:** "Elasticity of demand may be defined as the percentage change in quantity demanded to the percentage change in price."
- According to **A.K. Cairncross :** "The elasticity of demand for a commodity is the rate at which quantity bought changes as the price changes."
- According to **J.M. Keynes :** "The elasticity of demand is a measure of the relative change in quantity to a relative change in price."
- According to **Kenneth Boulding :** "Elasticity of demand measures the responsiveness of demand to changes in price."

The law of demand tells us that consumers will respond to a price decrease by buying more of a product (other things remaining constant), but it does not tell us how much more.

The degree of responsiveness or sensitivity of consumers to a change in price is measured by the concept of price elasticity of demand.

If a small change in price is accompanied by a large change in quantity demanded, the product is said to be elastic (or responsive to price changes). The opposite also applies; a product is inelastic if a large change in price is accompanied by a small amount of change in demand.

Business know that they face demand curves, but rarely do they know what these curves look like. Yet sometimes a business needs to have a good idea of what part of a demand curve looks like if it is to make good decisions. If Rick's Pizza raises its prices by ten percent, what will happen to its revenues? The answer depends on how consumers will respond. Will they cut back purchases a little or a lot? This question of how responsive consumers are to price changes involves the economic concept of elasticity.

Types of Price Elasticity of Demand:-

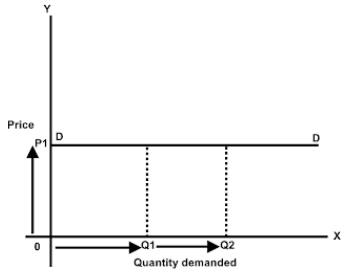
Different commodities have different price elasticities. Some commodities have more elastic demand while others have relative elastic demand. Basically, the price elasticity of demand ranges from zero to infinity. It can be equal to zero, less than one, greater than one and equal to unity.

According to **Dr. Marshall :** "The elasticity or responsiveness of demand in a market is great or small according as the amount demanded increases much or little for a given fall in price and diminishes much or little for a given rise in price."

However, some particular values of elasticity of demand have been explained as under ;

1. Perfectly Elastic Demand:

When the percentage change in quantity demanded is **infinite** even if the percentage change in price is zero, the demand is said to be **perfectly elastic**. Endless demand at given price.



Example: Emergency services, drugs and essential food item have perfectly inelastic demand. The price of food item may increase or decrease; there will be no change in the demand for goods

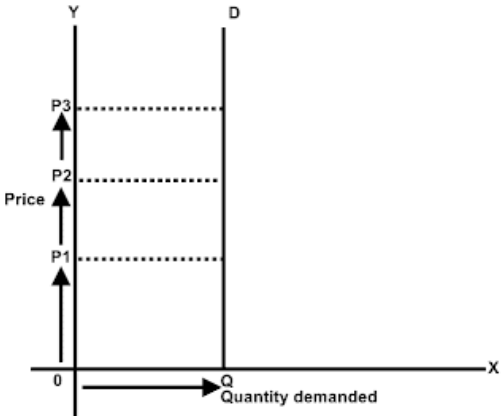
or

An example of perfectly inelastic demand would be a lifesaving drug that people will pay any price to obtain. Even if the price of the drug were to increase dramatically, the quantity demanded would remain the same.

2. Perfectly Inelastic Demand:

When the percentage change in quantity demanded is **zero** no matter how price is changed, the demand is said to be **perfectly inelastic**

Observe the graph, price of the goods changing or raises from P1 to P2 and P3 but there is no change in demand at Q.



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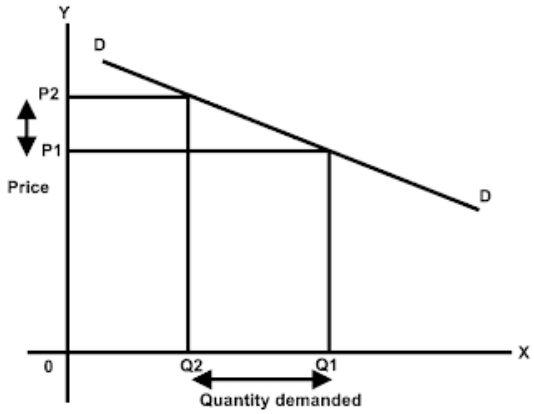
3. Relatively Elastic Demand

When the percentage change in quantity demanded is greater than the percentage change in price, the demand is said to be elastic.

or

In other words, relatively small changes in price cause relatively large changes in quantity.

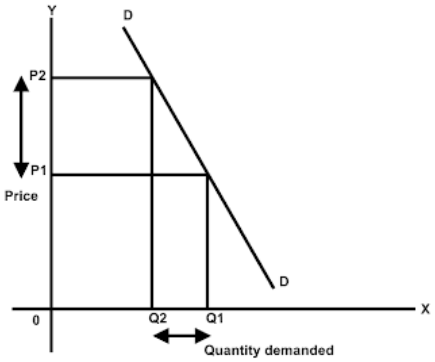
Observe the graph, price of the goods increased from P1 to P2 and eventually the demand for the goods decreases from Q1 to Q2. But the proportionate change in price is less than the proportionate change in demand



Example: - there are commodities for which a small change in price will drastically reduce the amount of the commodity demanded. For example, air-travel for vacationers is very sensitive to price. An increase in the air fare will lead the vacationer to choose another mode of transportation like car or lead him to postpone the vacation plan for the time being. Thus for a rise in air fare for the vacationers we will see a relatively more drastic reduction in quantity demanded and hence high price elasticity of demand.

4. Relatively Inelastic Demand:

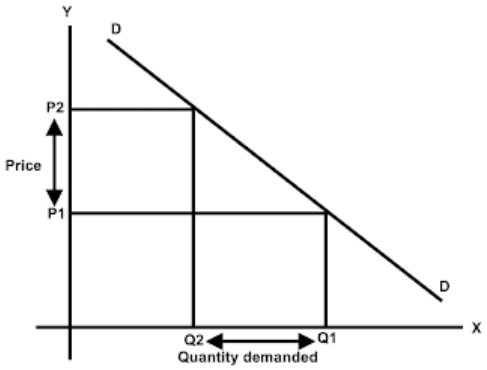
More change in the price of the goods but less change in demand for the goods. Observe the graph, price of the goods increased from P1 to P2 and eventually the demand for the goods decreases from Q1 to Q2. The proportionate change in price is **more than** the proportionate change in demand.



Example: if we observe the prices of petrol and comparing its demand change with the change in price levels of petrol (even though the price changes to great extent, there will not be much change in demand)

5.Unitary Elastic Demand:

The proportion of change in demand is equal to proportion of change in price.



Observe the graph, price of the goods increased from P1 to P2 and eventually the demand for the goods decreases from Q1 to Q2. The proportionate change in price is **equal** the proportionate change in demand

Example: The price of digital cameras increases by 10%, the quantity of digital cameras demanded decreases by 10%. The price elasticity of demand is (unitary elastic demand).

MEASUREMENT OF PRICE ELASTICITY OF DEMAND

There are five methods to measure the price elasticity of demand.

1. Total Expenditure Method.
2. Proportionate Method.
3. Point Elasticity of Demand.
4. Arc Elasticity of Demand.
5. Revenue Method.

1. Total Expenditure Method:

Dr. Marshall has evolved the total expenditure method to measure the price elasticity of demand. According to this method, elasticity of demand can be measured by considering the change in price and the subsequent change in the total quantity of goods purchased and the total amount of money spend on it.

Total Outlay = Price X Quantity Demanded

There are three possibilities:
(i) If with a fall in price (demand increases) the total expenditure increases or with a rise in price (demand falls), the total expenditure falls, in that case the elasticity of demand is greater than one i.e. ED > 1.

(ii) If with a rise or fall in the price (demand falls or rises respectively), the total expenditure remains the same, the demand will be unitary elastic or ED = 1.

(iii) If with a fall in price (Demand rises), the total expenditure also falls, and with a rise in price (Demand falls) the total expenditure also rises, the demand is said to be less classic or elasticity of demand is less than one (ED < 1).

This can be expressed with the help of a Chart.

Leibhafasky has given the following formula to measure elasticity of demand:

$$Ed = 1 - \frac{\Delta Exp}{X \Delta P}$$

Where ED = Elasticity of demand

ΔExp = Change in Expenditure

X = Initial demand

ΔP = Change in price.

Table Representation : The method of total expenditure has been explained with the help of Table 1.

Table 1.

Price (P)	Quantity Demanded (Q)	Total Outlay (PQ)	Elasticity of demand (Ed)
10	1	10	
9	2	18	
8	3	24	$Ed > 1$
7	4	28	
6	5	30	
5	6	30	$Ed = 1$
4	7	28	
3	8	24	
2	9	18	
1	10	10	$Ed < 1$

In the Table we find three possibilities:

A. More Elastic Demand:

When price is Rs. 10 the quantity demanded is 1 unit and total expenditure is 10. Now price falls from Rs. 10 to Rs. 6, the quantity demanded increases from 1 to 5 units and correspondingly the total expenditure increases from Rs. 10 to Rs. 30. Thus it is clear that with the fall in price, the total expenditure increases and vice-versa. So elasticity of demand is greater than one or ED >1.

B. Unitary Elastic Demand:

If price is Rs. 6, demand is 5 units so the total outlay is Rs. 30. Now price falls to Rs. 5, the demand increases to 6 units but the total expenditure remains the same i.e., Rs. 30. Thus it is clear that with the rise or fall in price, the total expenditure remains the same. The elasticity of demand in this case is equal to one or

ED = 1.

C. Less Elastic Demand:

If price is Rs. 5, demand is 6 and total outlay is Rs. 30. Now price falls from Rs. 5 to Re. 1. The demand increases from 6 units to 10 units and hence the total expenditure falls from Rs. 30 to Rs. 10. Thus it is clear that with the fall in

price, the total expenditure also falls and vice-versa. In this case, the elasticity of demand is less than one or ED <1.

Diagrammatic Representation:

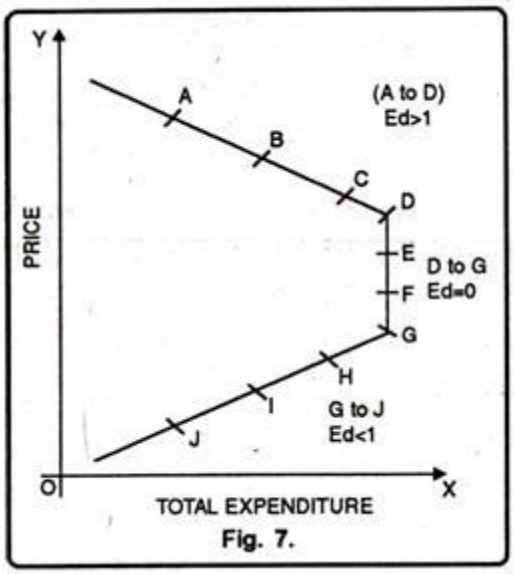


Fig. 7.

The total expenditure can be explained with the help of Fig. 7.

In the fig., there are three phases of the total expenditure curve.

Downward sloping (from A to D), (ii) Vertical (from D to G), (iii) Upward sloping (G to J).

(i) Downward Sloping Curve:

If the price- total expenditure curve slopes downward from left to right, it means the elasticity of demand is greater than one. As we see in the diagram that when price falls from Rs. 10 to Rs. 5 the total expenditure increases from Rs. 10 to Rs. 30. It means, there is opposite relationship between price and total expenditure. The elasticity of demand in this case is greater than one. Thus the curve from A to D represents the elasticity greater than one or ED >1.

(ii) Vertical Curve.

If price-total expenditure curve is vertical or parallel to 7-axis, it means that with fall in price from Rs. 6 to Rs. 5 the total expenditure remains the same. Thus if total expenditure does not change with the rise or fall in price, the elasticity of demand will be equal to one. Thus by joining points D and G we get vertical curve showing elasticity of demand equal to one or Ed =1.

(iii) Upward Sloping Curve:

If price-total expenditure curve rises upward from left to right, it means the elasticity of demand is less than one. In the diagram, we find that when price falls from Rs. 5 to Re. 1the total expenditure also falls from Rs. 30 to Rs. 10. It means by joining G, H, I, J we get an upward sloping curve showing elasticity of demand less than one or ED < 1. Thus it is clear that the changes in total expenditure due to changes in price also affect the elasticity of demand.

2. Proportionate Method:

This method is also associated with the name of Dr. Marshall. According to this method, "price elasticity of demand is the ratio of percentage change in the amount demanded to the percentage change in price of the commodity." It is also known as the Percentage Method, Flux Method, Ratio Method, and Arithmetic Method.

E_d = Proportionate change in Quantity Demanded
proportionate change in price

$$Ed = \frac{\text{Proportionate change in quantity demanded}}{\text{Proportionate change in price}}$$

$$= \frac{\dfrac{\text{Change in quantity demanded}}{\text{Amount demanded before change}}}{\dfrac{\text{Change in Price}}{\text{Price before change}}}$$

Implications:

(a) This method should be used when there is a very small change in price and quantity demanded.

(b) The coefficient of price elasticity of demand is always negative. It is because when price changes, demand changes in the opposite direction. But by convention, we ignore negative sign.

(c) The elasticity of demand is relative. It is not expressed in any unit rather expressed in percentage or infractions.

3. Arc Elasticity of Demand:

- According to Prof. Baumol: "Arc elasticity is a measure of the average responsiveness to price change exhibited by a demand curve over some finite stretch of the curve".

- According to Leftwitch : "When elasticity is computed between two separate points on a demand curve, the concept is called Are elasticity."

This method of measuring elasticity of demand is also known as "**Average Elasticity**". In this method, we use $\frac{P_1 + P_2}{2}$ rather than P. Thus, we apply $\frac{Q_1 + Q_2}{2}$ rather than q. The formula for arc elasticity of demand is as follows.

$$\text{Arc. Elasticity of Demand } (E_A) = \frac{\frac{\text{Change in Demand}}{\text{Original Demand + New Demand}}}{\frac{\text{Change in Price}}{\text{Original Price + New Price}}}$$

Arc. Elasticity of Demand in notational form can be expressed as :

$$E = \frac{Q - Q_1}{Q + Q_1} \div \frac{P - P_1}{P + P_1}$$

where Q = Original quantity demanded

Q_1 = New quantity demanded

P_1 = Original price

P_2 = New Price

This can be shown with the help of a diagram 11.

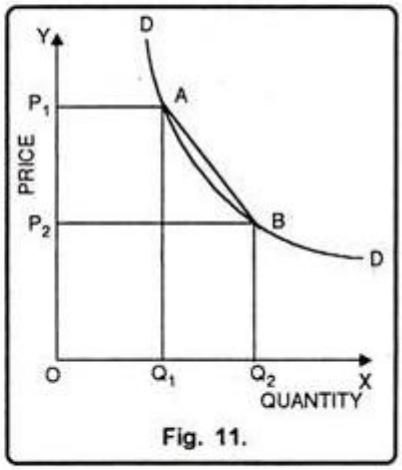


Fig. 11.

In figure 11 quantity is measured on X-axis while price on Y- axis. DD is the demand curve. Now if we want to measure the arc elasticity between A and B on the demand curve DD, we will have to take the average of prices OP_1 and OP_2 as well as of quantities *viz;* Q_1 and Q_2.

$$\therefore \quad E_A = \frac{[P + (P + \Delta P)]}{(Q + (Q + \Delta Q)]} \times \frac{\Delta Q}{\Delta P}$$

4.Revenue Method:

Mrs. Joan Robinson has given this method. She says that elasticity of demand can be measured with the help of average revenue and marginal revenue. Therefore, a sale proceeds that a firm obtains by selling its products is called its revenue. However, when total revenue is divided by the number of units sold, we get average revenue. On the contrary, when addition is made to the total revenue by the sale of one more unit of the commodity is called marginal revenue.

Formula:

$$E_d = \frac{A}{A-M}$$

where, Ed represents elasticity of demand, A = average revenue and M = marginal revenue. This method can be explained with the help of a diagram 12.

In this diagram 12, revenue has been shown on OY- axis while quantity of goods on OX-axis. AB is the average revenue or demand curve and AN is the marginal revenue curve. At point P on demand curve, elasticity of demand is calculated with the formula,

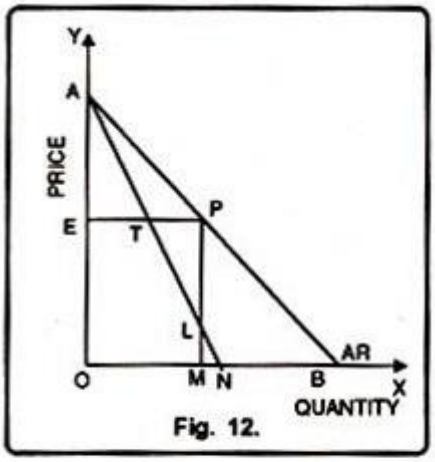


Fig. 12.

$$Ep = \frac{\text{Lower Portion}}{\text{Upper Portion}} \text{ OR } \frac{PB}{PA}$$

We see in the figure that ΔAEP and ΔPMB are similar, thus ratio of their sides is also equal.

$$Ep = \frac{PB}{PA} = \frac{PM}{AE}$$

and; ΔAET > and ΔTPL are congruent triangles, therefore PL=AE. Putting PL in place of AE in the above equation, we shall get

$$Ep = \frac{PB}{PA} = \frac{PM}{AE} \text{ (because PL = PM – LM)}$$

$$\therefore \quad Ep = \frac{PM}{PM - LM} \text{ (where PM = AR and LM = MR)}$$

$$\text{Therefore,} \quad Ep = \frac{PM}{PM - LM} = \frac{AR}{AR - MR} \text{ or } \frac{A}{A - M}$$

5. Point Elasticity on a Linear Demand Curve:

Point elasticity is the ratio of an infinitesimally small relative change in quantity to an infinitesimally small change in price. If a price range is made as small as

possible, that is, shrunk to a point- then the relative changes must be made as small as possible- infinitesimally small.

Point elasticity is the ratio of an infinitesimally small relative change in quantity to an infinitesimally small change in price. Point elasticity of demand is defined as the -proportionate change in the quantity demanded resulting from a very small proportionate change in price. Fig. 1.2 shows how to find the elasticity at a point on a demand curve.

Let us take a point such as R on the demand curve DD. For measuring elasticity at a point the following formula may be used.

$$e_p = \frac{\Delta Q}{Q} \cdot \frac{P}{\Delta P} \qquad \ldots(1.7)$$

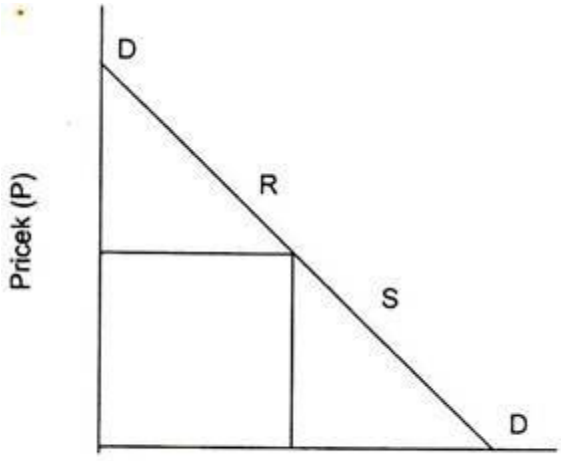


Fig. 1.2 Linear Demand Curve

Point elasticity is the product of price-quantity ratio (P/Q) at a particular point (R) on the demand curve (DD) and the reciprocal of the slope of the demand line. The slope of the demand slope is defined by RQ/QD. The reciprocal of the slope of the demand line is QD/RQ.

$$e_p = \frac{\partial Q}{\partial P} = \frac{QD}{RQ} \qquad \ldots(1.8)$$

At point R, price P = RQ and Q = OQ

If we substitute these values in equation 1.8, what we get is

$$e_p = \frac{RQ}{OQ} \cdot \frac{QD}{RQ} = \frac{QD}{OQ} \qquad \ldots(1.9)$$

If the numerical values for QD and OQ are available, elasticity at point R can be calculated.

Uses of Price elasticity of demand:

1. Price elasticity of demand allows a firm or business to predict the change in total revenue using a projected change in price.

2. It provides a useful marker by which firms can find out whether or not any of the determinants listed above are present, e.g. whether or not there are substitutes in the market for a certain product.

3. Firms can charge different prices in different markets if elasticities differ in income groups. This practice is known as price discrimination.

4. For example, airlines have segmented airplane seats into different classes—economy, business, and first-class, in order to charge the less price-sensitive customer a higher price for premium seats.

5. It allows a firm to decide how much tax to pass on to a consumer. If a product is inelastic, then the firm can force the customer to pay the tax.

6. This is a common tactic used by cigarette manufacturers who pass on any health tax directly to the consumer.

7. It also enables the government to predict the impact of taxation policies, or the effect of other policies that may decrease the demand of a certain product

Income Elasticity of Demand:

The responsiveness of quantity demanded to changes in income is called income elasticity of demand. With income elasticity, consumer incomes vary while tastes, the commodity's own price, and the other prices are held constant.

The income elasticity of demand for a good or service may be calculated by the formula:

or $$e_p = \frac{\text{Percentage change in quantity demanded}}{\text{Percentage change in income}}$$

$$e_p = \frac{\text{Relative change in quantity demanded}}{\text{Relative change in the incomes of the buyers}}$$

$$e_y = \frac{\Delta Q}{Q} / \frac{\Delta Y}{Y} = \frac{Y}{Q} \cdot \frac{\Delta Q}{\Delta Y} \quad \ldots(1.16)$$

where- e_y stands for the coefficient of income elasticity, Y for income.
Whereas price-elasticity of demand is always negative, income-elasticity of demand is always positive (except for inferior goods) as the relationship between income and quantity demanded of a product is positive. For inferior goods the income elasticity of demand is negative because as income increases, consumers switch over to the consumption of superior substitutes.

The degree of income elasticity varies in accordance with the nature of commodities:

1. In case of all normal goods, the income elasticity is positive

2. For essential goods, the income elasticity is less than one. This means that quantity demanded increases less than proportionately as income increases. Soap, salt, match, newspapers have low income- elasticity of demand.

3. For goods of comfort, the income-elasticity coefficient is equal to unit which results in proportionate change in quantity demand.

4. Luxury goods have income elasticity greater than unity implying more than proportionate change in quantity demanded. Jewelry, automobiles are goods of this category.

Income elasticity of demand can be useful in the following business decisions:

1. Income-elasticity can be helpful in production planning and management in the long run, particularly during the period of business cycle.

2. It can be used for demand forecasting with given rate of increase in income.

Income Sensitivity:

The income elasticity of demand measures the degree of responsiveness of physical quantities of consumption of a good as income changes. If we measure consumption by consumer expenditures rather than by physical quantities of a good, the phenomena may be described as income sensitivity. An income-sensitivity may be defined as the percentage change in expenditures on a good divided by the percentage change in income of the consumers.

The income sensitivity may be measured with the help of following formula:

$$Y_s = \frac{\text{Percentage change in expenditure}}{\text{Percentage change in income}}$$

$$Y_s = \frac{\Delta R/R}{\Delta Y/R} \qquad \ldots(1.17)$$

where: Y_s measures the income sensitivity, ΔR measures change in consumer expenditure and ΔY measures change in income.

Suppose a 10 percent increase in income causes consumer expenditure on a good to increase by 12 percent, the income sensitivity of that good is 1.2.

Uses of Income Elasticity of Demand

1. To classify normal and inferior goods

Any products that are manufactured by the producers can be classified into two types – normal goods and inferior goods.

Normal goods – Goods whose demand is directly proportional to the income of the consumers are known as normal goods.

Simply, goods whose demand rises with a rise in income and whose demand falls with fall in income is known as normal goods e.g jewelry. The coefficient of income elasticity of these goods is always positive.

Inferior goods – Goods whose demand is inversely proportional to the income of the consumers are known as inferior goods.

In other words, inferior goods are such goods whose demand falls with the rise in income and vice versa e.g. budget smartphones. The coefficient of income elasticity of these goods is always negative.

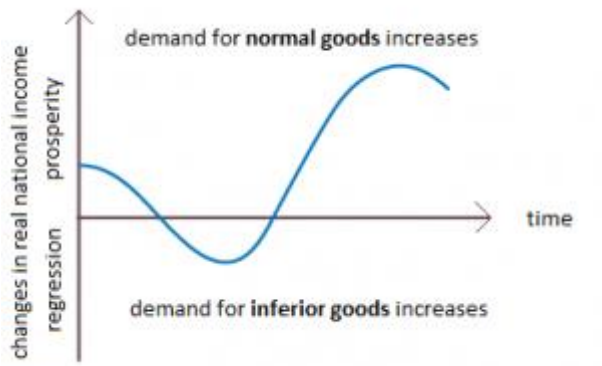
Knowledge about the nature of products is important to any producers in order to make further decisions related to the goods in the right manner.

2. To know about stage of trade cycle

We have already known that demand for normal goods is directly proportional to the income of consumers while demand for inferior goods is inversely proportional to the income of consumers.

We see people prefer riding the public bus when their income is low, but with comparatively high income, same people start using a cab for transportation. In this situation, public bus is an inferior good while the cab is a normal good.

Demand for normal goods increases during prosperity and decreases during regression. Conversely, demand for inferior goods increases during regression and decreases during prosperity. However, demands for goods that are necessary for our day to day lives are not much affected during prosperity as well as during regression.



3. For forecasting demand

Income elasticity of demand can be used for predicting future demand of any goods and services in a case when manufacturers have knowledge of probable future income of the consumers.

For example: Let us suppose, ‘Wheels’ is a car manufacturing company which manufactures luxury cars as well as small cars. The company has calculated that

income elasticity of luxury car (normal good) is +4 while income elasticity of small car (inferior good) is -5.

Let us also suppose that the company has undertaken a research and has found that consumer income will rise by 3% in an upcoming year.

Through the above information, Wheels can forecast by how much the demand for luxury car and the small car will undergo a change in the upcoming year. This information can save the company a lot of money by preventing overproduction or underproduction.

4.To determine price

Having knowledge of income elasticity of any product is essential in order to correctly price them.

The demand for income elastic goods or goods with positive income elasticity tends to fall with fall in income of the demanding consumers. Thus, a reduction in the price of the commodity may help in increasing the demand and compensate them for the reduction in price by generating more sales and revenue.

Cross Elasticity of Demand:

Demand is also influenced by prices of other goods and services. The cross elasticity measures the responsiveness of quantity demanded to changes in price of other goods and services. Cross elasticity of demand is defined as the percentage change in quantity demanded of one good caused by a 1 percentage change in the price of some other good.

$$e_c = \frac{\%\Delta Q_x}{\%\Delta P_y} \dots (1.18)$$

Cross elasticity is used to classify the relationship between goods. If cross elasticity is greater than zero, an increase in the price of y causes an increase in the quantity demanded of x, and the two products are said to be substitutes. When the cross- elasticity is greater than zero, the goods or services involved are classified as complements Increases in the price of y reduces the quantity demanded of that product. Diminished demand for y causes a reduced demand for x. Bread and butter, cars and tires, and computers and computer programs are examples of pairs of goods that are complements.

The coefficient is positive if A and B are substitutes because the price change and the quantity change are in the same direction. The coefficient is negative if A and B are complements, because changes in the price of one commodity cause opposite changes in the quantity demanded of the other. Other things such as consumer taste for both commodities, consumer incomes and the price of the other commodity are held constant.

Many companies produce several related products. Where a company's products are related, the pricing of one good can influence the demand for other products. Gillette makes both razors and razor blades. Ford sells several competing makes of automobiles. Gillette probably will sell more razor blades if it lowers the price of its razors.

The closer two commodities are as substitutes for each other, the greater is the size of the cross elasticity coefficient. Close substitutes have high cross elasticity of demand; poor substitutes have low cross elasticity.

In general, a rise in the price of a commodity increases the demand for its substitutes and diminishes the demand for its complements.

Types of cross-price elasticity of demand

1: for substitute:

When the cross-price elasticity of demand for product A relative to a change in the price of product B is positive, it means that the quantity demanded of product A has increased in response to a rise in the price of product B. Many consumers have switched from consuming product B to consuming product A. This implies that most consumers perceive products A and B as substitutes that satisfy similar preferences.

Substitutes will always have a positive Cross Price Elasticity or greater than zero.

2: for Complements

When the cross elasticity of demand for product A relative to a change in the price of product B is negative, it means that the quantity demanded of A has decreased relative to a rise in the price of product B. Even though the price of product A is unchanged, many consumers still decreased their consumption of it because the price increase for product B made consuming these products together more expensive. This implies that most consumers perceive products A and B as complements that are more enjoyable consumed together than consumed separately.

Complements will always have a negative Cross Price Elasticity or less than zero.

3: for Unrelated

These are goods that show no relationship in consumer consumption patterns. Price changes in one product don't affect the quantity consumed of the other product.

Unrelated goods will always have a Cross Price Elasticity of 0

Uses

Knowing a product's cross price elasticity of demand for other related products allows a firm to better understand the market that it is serving. This firm can better identify how many competitors share the same product space in the eyes of consumers, as well as how sensitive sales revenues are to changes in the marketing strategy of complementary products outside of its own market. This kind of valuable information can reduce the firm's exposure to financial risk. Firms use this information to develop targeted strategies that optimally respond to the price changes of both competing and complementary products.

Advertisement or Promotional Elasticity of Sales:

The advertisement expenditure helps in promoting sales. The impact of advertisement on sales is not uniform at all level of total sales. The concept of advertising elasticity is significant in determining the optimum level of advertisement outlay particularly in view of competitive advertising by rival firms. An advertising elasticity could be defined as the percentage change in quantity demanded for a percentage change in advertising. Advertising might be measured by expenditure.

Advertising elasticity may be measured by the following formula:

$$e_A = \frac{\Delta S}{\Delta A} \cdot \frac{A}{S} \qquad ...(1.19)$$

where: S = sales; ΔS= increase in sales; A = initial advertisement outlay; and ΔA = increased advertising outlay.

The advertising elasticity of sales varies between zero and infinity. If advertising elasticity is zero, sales do not respond to the advertising expenditure. Promotional elasticity coefficient greater than zero but less than 1 (e_A>0<1) indicates that sales increase less than proportionate to the increase in advertisement expenditure. The coefficient of equal to 1 means proportionate increase in sales to the increase in expenditure on advertisement. If $e_A > 1$ it interprets that sales increase at a higher rate than the rate of increase of advertisement expenditure.

Determinants of Advertisement Elasticity:

1. The Level of Sales:

The advertising elasticity of sales, particularly in case of products newly introduced into the market, is greater than unity. Sales increase more than proportionately with the increase in advertisement expenditure. As sales increase elasticity begins to decrease. Now the advertisement is done to create new customers to the product. Therefore, demand now increases less than proportionately to increase in advertisement.

2. Competitive Advertising:

The advertising elasticity of a firm will depend not only on the advertisement expenditure incurred by the firm for its product but also on the effectiveness of the competitive advertising by the rival firms

3. Cumulative Effect of Past Advertisement:

In the initial stages the advertisement outlay is not adequate enough to be effective. Therefore, the elasticity may be very low. But in later stages as the cumulative effect of advertisement gather, the advertising elasticity may increase over time.

Change in product's price, consumer's income, increase in the number of substitutes and their prices are other factors that influence the advertising elasticity of a product.

1. Price elasticity of demand allows a firm or business to predict the change in total revenue using a projected change in price.

2. It provides a useful marker by which firms can find out whether or not any of the determinants listed above are present, e.g. whether or not there are substitutes in the market for a certain product.

3. Firms can charge different prices in different markets if elasticities differ in income groups. This practice is known as price discrimination.

4. For example, airlines have segmented airplane seats into different classes—economy, business, and first-class, in order to charge the less price-sensitive customer a higher price for premium seats.

5. It allows a firm to decide how much tax to pass on to a consumer. If a product is inelastic, then the firm can force the customer to pay the tax.

6. This is a common tactic used by cigarette manufacturers who pass on any health tax directly to the consumer.

7. It also enables the government to predict the impact of taxation policies, or the effect of other policies that may decrease the demand of a certain product
8. The promotional elasticity of demand gives an idea to the firm as to how effective are its promotional measures.

9. The methods of promotion like advertising helps in understanding the effect on sales. With the help of the coefficient of promotional elasticity, the firm can forecast the expenditure on advertising and other promotional measures.

10. Also, not all products take same time to respond to the advertisements. Firms producing products, along different verticals

can understand how each product shows different response to the promotional campaigns. This can be used for further promotional developments. If the promotional elasticity for a particular product is higher, then it indicates that the impact on sales of that product is higher. The firm can thus, accordingly plan to increase its promotional spending on that particular product so that it gets benefits in the form of increased sales.

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