**The following points highlight the ten practical uses of concept of price elasticity of demand.**

**Use # 1. Wage Bargaining:**

The capacity of trade unions to raise wages depends on the elasticity of demand for the product in which labour is used as a major input. If wages are permitted to rise cost and prices will also rise.

A portion of the cost or even the whole of it may be passed of the cost or even the whole of it may be passed on to the consumer if the demand for the product is inelastic. If demand in inelastic. If demand in inelastic sales will not fall much due to price rise. Thus a wage rise is economically feasible in the food industry than in the automobile sector.

**Use # 2. Bumper Crops:**

Everyone knows that the demand for most agricultural commodities is highly inelastic. As a result, an increase in the output of wheat or jute due to good harvest (or productivity rise due to technological progress) may lead to a sharp fall in their prices. This will lead to a fall in the revenue of the farmers. So to help the farmers the government will have to impose restriction of agricultural out-put.

#### Use # 3. Automation:

The effect of the use of machinery or employ­ment largely depends on the elasticity of demand for the commodity produced by the firm under con­sideration. Suppose a firm introduces a labour- saving machine. This may make 100 workers unem­ployed.

However, a part of the cost reduction due to the impact of automation (i.e., rapid technological advance) is passed on the consumers in the form of lower price of the product.

If the demand for the product is elastic, a small price cut will lead to more than proportionate increase in demand. As a result output may increase to such an extent that 100 unemployed workers or even more are reab­sorbed by the firm. If demand is inelastic, few, if any, workers can be reemployed, because the increase in the volume of firm’s business will be small.

#### Use # 4. Airline Deregulation:

In the USA there was regulation of airlines in the 1970s. The basic object was to increase the prof­its of many carriers. The reason was simple. It was felt that deregulation increased competition among the airlines, thereby lowering air fares.

Since the demand for air travel is elastic, lower fares will surely increase total revenue. When airlines are flying with many empty seats the additional costs of carrying extra passengers is very little. So reve­nue increases faster than costs and profits rise.

A simple example may make the point clear. Suppose Indian Airlines is capable of carrying 10,000 passengers per month on a particular route (say, Calcutta to Bagdogra) at a fixed cost of Rs. 3 lakhs. The variable cost per passenger is Rs. 10 and the fare is Rs. 50 per trip. Suppose at present it is able to carry 8,000 passengers. In other words, 20% of its capacity is idle.

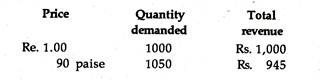
At present its total earning is Rs. 50 x 8,000 = Rs. 4 lacs. Its total cost is Rs. 3 lakhs + Rs. 10 x 80,000 = Rs. 380,000. So its net profit is Rs. 20,000. Now suppose it reduces its fare to Rs. 45. As a result it is able to carry all the 10,000 passengers and thus fly to full capacity.

Now its total revenue will be Rs. 45 x 10,000 = Rs. 4.5 lakhs. Its total cost will be Rs. 3 lakhs + Rs. 10 x 10,000 = Rs. 4 lakhs. So its net profit will be Rs. 50,000 which is an increase of Rs. 30,000.

#### Use # 5. Pricing Policy:

As a corollary of 4 one can show that the concept of price elasticity has great practical relevance for business pricing policy. When a firm considers changing the prices of its product, it has to take ac­count of the effect of the proposed price change on consumer’s spending. For example, a reduced selling price may result in a lower total revenue because demand is inelastic.

**The price reduction causes a less than proportionate change in the quantity de­manded, as illustrated below:**

**[](http://cdn.economicsdiscussion.net/wp-content/uploads/2016/04/clip_image004-9.jpg)**

On the other hand, if demand is elastic a fall in price should result in a greater total revenue, be­cause the price-cut causes a greater than propor­tionate change in the quantity demanded, as illus­trated below:

**[](http://cdn.economicsdiscussion.net/wp-content/uploads/2016/04/clip_image006-6.jpg)**

Similar considerations arise when a firm contem­plates an increase in its selling price. If demand is inelastic, consumers will continue to buy as must as before the price rise, and so revenue will increase. However, if demand is elastic, consumer’s demand will fall and total revenue will also fall.

Thus it is necessary for manufacturers to know something about the elasticity of demand for their products. If a manufacturer is considering increasing his output, he knows that in order to sell the in­creased output he must reduce the price.

But if de­mand is inelastic, the quantity demanded will not rise much. So the manufacturer will find that his total revenue from the sale of the product will fall. It will be better for him to leave things as they originally are.

As Pappas has rightly put it: **“a profit maximising firm would never choose to low­er its price in the inelastic range of its demand curve, as such a price decrease would decrease total revenue and at the same time increase costs, since output would be rising. The result would be a dra­matic decrease in profits.”**

This explains why the monopolist — who is a price-maker — never oper­ates on the inelastic part of his demand or average revenue curve.

If, on the other hand, demand is highly elastic a reduction in price may cause total revenue to inmates on the inelastic part of his demand or average revenue curve. If, on the other hand, demand is highly elastic a reduction in price may cause total revenue to in­crease.

So the manufacturers may decide to increase his output. In the words of Pappas again, “Even over the range where demand is elastic, a firm would not necessarily find it profitable to cut price; but profitability of such an action depends on whether the marginal revenues generated by the price reduction exceed the marginal cost of the add­ed production”.

**In fact, the practicing manager can make use of the concept of price elasticity of de­mand in answering the following questions:**

1. What will be the impact on sales of a 5% in­crease in price?

2. How large a price reduction is necessary to increase sales by 10%?

3. Given marginal cost and price elasticity in­formation, what is the profit maximizing price?

#### Use # 6. Excise Duty:

The government takes account of elasticity when selecting goods and services upon which to impose excise duty.

**The main purpose of a tax on a commodity may be either:**

(a) To raise its price in or­der to reduce consumer’s demand or

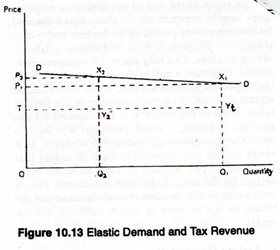
(b) To raise reve­nue.

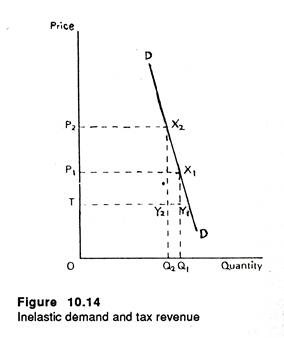
The first objective is likely to be fulfilled if demand for the commodity is elastic. A simple ex­ample may make the point clear. Suppose a tax of Re. 1 is imposed on a product and 10,000 units are sold. Tax revenue is Rs. 10,000. Now suppose the tax is raised to Rs. 1.50 and sales fall to 5,000 units be­cause demand is elastic. In this case the tax revenue will decline to Rs. 7,500.

Thus a higher tax on a product, the demand for which is elastic, will re­duce the tax revenue of the government. However, the usual objective of taxation is to raise revenue.

This objective is achieved by imposing a tax on such commodities as oil, cigarettes and liquor. The de­mand for those goods is inelastic and the govern­ment known that an increase in the taxes on these goods will not result in large fall in demand and consequently tax revenue.

Thus two points are illustrated in the diagrams below. In Fig. 10.13 the original price of the product is OP1, of which TP1 is tax. The quantity de­manded at this price is OQ1.

**[](http://cdn.economicsdiscussion.net/wp-content/uploads/2016/04/image.png)**

**[](http://cdn.economicsdiscussion.net/wp-content/uploads/2016/04/clip_image010-6.jpg)**

Where the tax is increased to TP2, the quantity demanded falls to OQ2. As a result the tax revenue of the government falls from TP1X1Y1 to TP2X2Y2.

revenue has increased from TP1X1Y1 to TP2X2Y2.

(N.B. To find out the total effect of the imposition of an indirect tax like a sales tax or excise duty, supply curves should be used. So we shall again ex­amine indirect taxes when we consider applications of price theory by using both demand and supply curves.

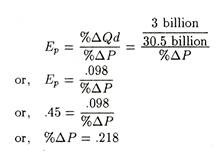
However, manufacturers and governments do not actually draw demand curves and work out the for­mula for elasticity. They, of course, make use of market research and past experience to gain an in­sight into the effects of various policies on the de­mand for different products and in this way make use of the concept of elasticity.

#### Use # 7. Optimal Tax on Petroleum:

The concept of price elasticity of demand may be used to find out the optimal tax on petroleum. Suppose the government of India decides to reduce consumption of petroleum by 3 billion gallons a year by imposing an excise duty. The question here is : What should be the optimal tax on petrol which will reduce consumption by the desired amount?

Suppose the present level of consumption of pet­rol in the country is 30.5 billion gallons per year. Also suppose that the long run price elasticity of demand for petroleum is 0.45.

We can now easily calculate the rate of tax ne­cessary to have the desired effect on consumption. For simplicity let us assume that the correct price is Rs. 100 per gallon. If the Ep = .45 and if the objec­tive is to decrease consumption by 3 billion gallons in the long run, ceteris paribus, one has to simply use the elasticity formula to determinex the tax.

**[](http://cdn.economicsdiscussion.net/wp-content/uploads/2016/04/clip_image012-5.jpg)**

Thus in order to reduce the consumption of petrol by 9.8%, it is necessary to raise its price by 21.8%. The required additional excise duty would, there­fore, be Rs. 21,8 per gallon of petrol (Rs. 100 x 21.8%), making the price of petrol Rs. 122 (approx.) per gallon.

So a simple economic tool (viz. elasticity) can be used to give policy advice to the government. Government economists often use this concept in con­tingency planning exercises during recent oil crisis. Such examples could be multiplied. But the bas­ic point is clear: the concept of price elasticity of demand is vitally important to business, people, farmers, labourers, and government planners and policy makers.

#### Use # 8. Minimum Wage:

In some countries the government has imposed minimum wage above the equilibrium level. It is felt that this will cause unemployment particular­ly of the child workers. This is because employers will move back to the left along this downward sloping demand curve for labour.

On the other hand those who remain employed at the minimum wage surely get higher incomes than otherwise. The amount of income lost by the unemployed and the income gained by those that remain employed de­pends on the elasticity of demand for child labour.

If the demand for child labour is inelastic, mini­mum wage will raise workers’ welfare: the income gain associated with the minimum wage exceeds the income losses. If, on the other hand, the de­mand for child labour is elastic, the case against minimum wage would be stronger.

#### Use # 9. Heroin and Street Crime:

We know that demand for heroin by addicts is highly inelastic. This creates a problem in the area of law enforcement. The government usually seeks to solve the problem by reducing heroin ad­diction. This is sought to be achieved by making the drug less readily available to the addicts. If price is raised to restrict its consumption, hardly anything will happen.

Since the demand is highly inelastic, consumption will fall only slightly even if price rises very high. For those involved in drug trade this means increased revenues and profits. From the addicts’ point of view it means greater to­tal expenditure on heroin.

In the U.S.A. and other countries a major portion of money which addicts spend on heroin is actually derived from crime (or immoral activities) such as shoplifting, smuggling, robbery, etc.

So these kinds of crime are likely to in­crease as addicts increase their total expenditures for heroin. And, as C. R. McConnell has rightly pointed out in this context, “the efforts of law- enforcement authorities to control the spread of from the addicts’ point of view it means greater to­tal expenditure on heroin.

In the U.S.A. and other countries a major portion of money which addicts spend on heroin is actually derived from crime (or immoral activities) such as shoplifting, smuggling, robbery, etc.

So these kinds of crime are likely to in­crease as addicts increase their total expenditures for heroin. And, as C. R. McConnell has rightly pointed out in this context, **“the efforts of law- enforcement authorities to control the spread of drug addiction may increase the amount of crime committed by addicts.”**

#### Use # 10. Devaluation:

A country often devalues its currency to improve its balance of trade position. Devaluation refers to the reduction in the external value of a country’s currency in terms of another currency. However, the extent to which devaluation will succeed in im­proving a country’s balance of trade depends on the fulfilment of a condition which is known as the Maschall — Lerner condition.

**The condition may be stated as follows:**

(i) The demand for a country’s imports has to be price elastic (ex >1)

(ii) The demand for a country’s imports has also to be price-elastic > 1)

The success of devaluation thus depends largely on the reaction of import and export volumes to the changer in prices implied by the devaluation.

In such a situation an increase in import prices will re­sult in a more than proportionate fall in import volume, reducing the total amount of foreign curren­cy required to finance the import bill, while the decrease in export prices results in a more than pro­portionate increase in export volume, bringing about an increase in total foreign currency earnings on ex­ports.

In contrast, if trade volumes are relatively ine­lastic to price changes, devaluation will not suc­ceed, that is, an increase in import prices results in a less than proportionate fall in import volume, in­creasing the total amount of foreign currency re­quired to finance the import bill, while the de­crease in export prices results in a less than proportionate increase in export volume, bringing about a fall in total foreign currency earnings on ex­ports.

# Practical Applications of Price Elasticity of Demand

The concept of price elasticity of demand has a significant contribution in the field of industry, trade, and commerce.

The price elasticity of demand not only enables an organization to analyze economic problems, but also helps in solving managerial problems, not related to pricing decisions.

**The importance of price elasticity of demand is explained in the following points:**

#### i. Pricing Decisions:

Refer to one of the major role of price elasticity of demand. The price elasticity of demand helps an organization to determine the price of its products in various circumstances.

**Such situations are as follows:**

**a. Under Monopoly:**

Refers to the fact that under monopolistic market conditions, the price of products is determined only on the basis of price elasticity of demand. In monopolistic market conditions, if the demand is elastic, the price is set very low for per unit of product.

This results in high demand for the product due to low price. On the other hand, if the demand is inelastic, the price is set very high. The high price of a product with demand remaining the constant helps in generating the large revenue for an organization.

**b. Price Discrimination:**

Refers to a situation when different prices are charged from different consumers. For example, a monopolist charges more prices from consumers whose demand for products is inelastic. This implies high prices are charged from consumers whose demand does not change with change in the price of products. On the other hand, a monopolist charges less prices from consumers whose demand is elastic.

For example, the demand for electricity for domestic users is inelastic; therefore, the price of domestic electricity is high, whereas the demand for industrial electricity is inelastic. This is because the use of electricity for industrial purposes can be replaced with other fuels. Thus, price of industrial electricity is low as compared to domestic electricity.

#### ii. Formulation of Government Policies:

Refers to an important significance of the concept of price elasticity of demand. The government takes into consideration the price elasticity of demand while planning taxes. For example, tax on products having elastic demand generate less revenue for the government as the taxes increase the price of products, which results in decrease in demand.

On the contrary, a high rate of tax is levied on products having inelastic demand. Apart from this, the government also considers the price elasticity of demand before implementing any price control policy.

# Price Elasticity of Demand (Practical Applications) | Commodity

The following points highlight the nine main practical applications of the concept of price elasticity of demand. The uses are: 1. Effects of changes in price upon demand 2. Effects of changes in price on revenue 3. Monopoly pricing 4. Price discrimination 5. Wage bargaining by trade unions 6. Importance in taxation 7. Importance in determining the incidence of taxation and few others.

#### Practical Application # 1. Effects of Changes in Price Upon Demand:

The concept is very useful to study the reactions of the demand for a commodity to the changes in its price. If the demand is elastic, a small change in the price brings about a considerable change in the quantity demanded, but in the case of inelastic demand this consequential change in demand is relatively small. So, the concept is relevant to the decisions relating to business pricing and profits.

Thus, the fixing of price of a commodity is crucially based on the elasticity of demand of the commodity. As Bates and Parkinson put it: “When costs are rising, it is tempting to pass on the cost increases by increasing price to the consumer, and if demand for the product is relatively inelastic, this measure may well succeed; and when, as for example in the case of rail transport, there are many substitutes and the demand is relatively elastic, increasing prices may well lead to a reduction of total revenue rather than an increase.”

#### Practical Application # 2. Effects of Changes in Price on Revenue:

The concept enables us to determine the condition of equilibrium of a firm. And a profit-maximising firm reaches equilibrium when revenue = marginal cost.

**And, the value assumed by MR depends on price elasticity of demand:**

MR = P (1 – 1/Ep) where Ep is coefficient of price elasticity.

Thus, we could easily assert from this relationship that

(i) When Ep = 1 (unit elasticity of demand),

MR = AR x (1 -1) = 0. It means that a change in price will not affect total revenue.

(ii) When Ep → α (perfectly elastic demand),

ADVERTISEMENTS:

MR = AR x (1 – 0) = AR, as under perfect competition.

So, a firm may raise the price of its product(s) if demand is inelastic, in which case sales and profits would not be affected. In case of a commodity with elastic demand, a reduction in price alone can raise the sales volume and, consequently, profit.

#### Practical Application # 3. Monopoly Pricing:

The concept is useful in monopoly price- decisions. The monopolist, being the sole supplier of a particular commodity, can raise price but cannot affect demand pattern of consumers. So, in fixing the price the monopolist will have, of necessity, to take note of the elasticity of demand for his product. He will fix the price at a low level when the demand is elastic and at a high level when it is inelastic.

Moreover, a profit-maximis­ing monopolist will always operate on the elastic part of his demand curve or his average revenue curve. Neither too high nor too low a price may enable him to realise his objective: profit maximisation. What will be the profit- maximising price will be dictated by elasticity of demand; and it will enable the monopolist to know exactly at what price sales proceeds or total revenue will be the highest.

#### Practical Application # 4. Price Discrimination:

In perfect competition, the same price is charged from all the buyers. But, the downward slope of the demand curve of the monopolist gives scope for price discrimination. Price discrimination refers to the practice of charging different prices for the same product from different buyers at the same time. It can be profitably practised only when price elasticity of demand differs from market to market or from one segment of the market to another.

#### Practical Application # 5. Wage Bargaining by Trade Unions:

The bargaining power of the trade unions in raising the wages of a group of labour in a particular industry also depends, among other things, on the elasticity of demand for their services to the employer. A trade union usually succeeds in raising wages when the demand for the services of labour to the employer is inelastic: because, in such a case the employer cannot easily dispense with their services. On the other hand, it may not succeed when demand for labour is elastic.

#### Practical Application # 6. Importance in Taxation:

Furthermore, the concept is a useful tool in taxation. A finance minister is to consider the elasticity of demand of the different commodities for the purpose of taxation. If he pushes commodity tax (excise duty) rates up too much the consequent increase in price may make the total tax yield even lower than before. On the other hand, a small tax reduction may result in an increase in the tax yield.

Firstly, the total expenditure by the consumers will determine the size of the tax yield. And, the total expenditure is the measure of elasticity of demand. If, however, the government simply wishes to discourage the consumption of a commodity which happens to have a highly inelastic demand—e.g., in case of cigarettes — the imposition of a tax may have very little effect on demand and tax collections may rise.

So, before imposing a tax or raising the existing rate of a tax, the government will have to consider the elasticity of demand of the commodity concerned. It can get more revenue from the taxes imposed on commodities with inelastic demand (like sugar, clothes, kerosene oil, etc.) than what is possible from the taxation of those with elastic demand (like refrigerators, motor cars, steel furniture’s, etc.). It so happens because in the former case taxes may raise their prices but their demand and sales will not fall very much; but, in the latter case taxes, by raising the prices, reduce the demand and sales considerably.

#### Practical Application # 7. Importance in Determining the Incidence of Taxation:

The concept of the elasticity of demand, along with that of supply, is used to determine the shifting and incidence of a tax. When a tax is imposed on a commodity of inelastic demand, the seller can generally transfer the burden of the tax upon the consumers by raising the price, and so the incidence of tax falls upon the buyers.

But, in the case of a tax on a commodity with elastic demand, such a shifting of tax is not an easy task. Similarly, in the case of import and export duties on commodities the inelasticity of demand can be used to determine the incidence of such duties.

#### Practical Application # 8. Price Determination of Joint-cost Products:

Again, in the case of the joint-cost products (e.g., cotton fibre and cotton seeds) where the cost of each cannot be separately determined, the criterion of demand elasticity is ap­plied in determining their individual prices.

#### Practical Application # 9. Economic Policy:

The knowledge of elasticity is also valuable in the formation of economic policies, too. This point may now be illustrated. A country suffering from balance of payments problems may try to tackle the imbalance by devaluing its currency.

But, whether devaluation will be successful or not crucially depends upon other countries, i.e., the rest of the world’s demand for the devaluing country’s products. If the demand for its products is inelastic there will be no increase in volume sold after devalu­ation, and consequently export earnings will fail due to lower unit price of its product (sales remaining constant).

## 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.

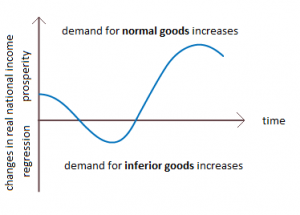
### 2. To know about stage of trade cycle

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.

**Figure: Trade cycle**



### 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.

# What are the various uses of elasticity of demand?

Elasticity of demand (and for that purpose, even elasticity of supply) plays an indispensable role in economic decisions of the community. This is because whether an economic decision is beneficial or not to the decision-maker unit depends, to a large extent, upon the elasticity of demand of the good concerned. As a result, all economic decisions (by the government, business firms, investors, and consumers, etc.) take into account the elasticity of demand of the relevant good. This fact is elaborated below with the help of some leading areas in which elasticity of demand is used.

**1. The Government:**

The concept of elasticity demand is of great use to the government in formulating its revenue-collecting and welfare policies. The government needs resources for financing its own activities and for providing several goods and services, which are collectively needed by the society. It raises most of its finance through taxation and supplements it, where the need be, by borrowings.

However, while levying and collecting taxes, the government has to keep in mind the response of the market. For example, basic necessities of life have a very low elasticity of demand and the government, by taxing them, can collect a large amount of tax revenue without reducing their demand by the consumers. However, while taxing such goods, it has also to think of the fact that this may lead to an undue burden upon the consumers. They may reduce their consumption of some other (non-taxed or taxed at lower rates) goods which happen to be health giving and nutritious, such as milk, cereals and vegetables. However, if the good in question is considered a harmful one and has an elastic demand, then the government can deliberately levy a huge tax on it with the objective of reducing its consumption.

**2. Business Sector:**

It may be assumed that a business firm pursues the objective of profit maximization. Its profit is the excess of its revenue receipts over its total cost. The former, in turn, is determined by the product of per unit price of the good (Px) and the quantity of its demand (Dx).

When a firm changes Px, its total revenue changes both on account of the change in Px and the resultant change in Dx. Therefore, a firm finds that while determining the price of its product, it should take into account its elasticity of demand as well. This point may be further elaborated by noting that elasticity of demand itself differs from one market structure to another.

Thus in perfect competition, the firm is a price taker. Its product has perfect elasticity of demand, and it cannot increase its price.

Business firms also realize that they can charge higher prices with a limited reduction in demand only in the short run. If faced with persistent high price, the consumers shift their demand to lower priced substitutes in the long run,

**3. Input Prices:**

Distribution of national income between individual members and households of the society is an important matter for the economists and social thinkers. It is commonly believed that it has an important role to play in the total welfare of the society. In a modern economy, the income of a household is determined by two factors, namely,

(i) The productive resources supplied by it to the market

(ii) The rates at which they are paid for. And the latter, in turn, depends, to a large extent, upon the respective elasticities of demand for the productive resources.

**4. Rate of Exchange and Balance of Payments:**

Elasticity of Demand .also plays a central role in determining a country’s rate of exchange and its balance of payments. Rate of exchange is determined by the demand for and supply of domestic currency in the international markets. And these factors are intimately connected with the exports and imports of the country in which elasticities play a central role. If a country’s export goods have a high elasticity of demand in international markets, it finds it easier to increase its exports by reducing their prices. In this case, it can improve its balance of trade without unduly weakening its rate of exchange. But it will be risky for it to raise the export prices if its exports have a low elasticity of demand in the international markets

# Use of Cross Elasticity of Demand in Business Decision Making

Cross elasticity of demand is a measure of degree of change in demand of a commodity due to change in price of another commodity.

Cross elasticity of demand can also be understood as the proportionate change in quantity demanded of commodity ‘X’ due to proportionate change in price of commodity ‘Y’. Cross elasticity of demand is denoted by Exy and is mathematically represented as

Exy

Cross elasticity of demand is one of the major tools that businessmen (producers) take help from in order to make correct business decisions. Described below are its few applications in business sector.

### Determining nature of relationship between any two goods

We have already understood that cross elasticity of demand is the rate of change of demand for one commodity in response to change in price of another commodity. Cross elasticity of demand can only be measured between any two goods at a time, and the outcome is the representation of the relationship shared by those two goods.

Cross elasticity is greater than zero when rise in price of commodity X causes rise in demand of commodity Y. Such type of response can be observed in substitute goods such as Coke and Pepsi. In the same way, cross elasticity is equal to zero when rise in price of commodity X does not cause any effect on the demand of commodity Y. This type of response can be seen in goods that are not related to each other such as sugar and shoe. And, cross elasticity is lesser than zero when rise in price of commodity Y causes fall in demand of commodity X. Such type of response can be seen in complementary goods such as tea and sugar.

### Forecasting change of demand

Cross elasticity can be used by a businessman (producer) to predict the future demand of his product in case when he has the idea of probable future price of substitute or complementary goods. Let us suppose that there’s a company which manufactures Limes (cold drink) and there is another cold drink in the market called Oranges. The cross elasticity of demand between Limes and Oranges is +1.5. Let us also suppose that the manufacturer of Limes received the information that the price of Oranges is about to fall by 10% in the upcoming month.

From the above information, the manufacturer of Limes can predict by how much the demand of its product will fall as a result of fall in price of Oranges, and thus will be able to make necessary decisions to keep up its revenue.

### Classification of market

Cross elasticity of demand is also helpful in classifying the type of market. Higher the value of cross elasticity of demand between the products, greater will be the competition in the market, and lower the value of cross elasticity, the market will be less competitive. In the same way, if cross elasticity is zero or almost zero, there is monopoly or zero competition in the market.

### Pricing policy

Price of one product can directly affect the price of another if they are related to each other. That is why large firms which produce more than one product must evaluate cross price elasticity between each of their products in order to efficiently price them.

For an example: Le t us suppose Oral-D is company which produces toothpaste as well as toothbrush (complementary goods). The rise in price of any one of these products causes fall in demand of that product as well as the other. Therefore, the company must be careful while deciding whether or not to increase the price of any product.

### Determination of boundaries between industries

Concept of cross elasticity helps producers determining boundaries of their industries. Complementary goods belong to different industries. Thus, the negative value of cross elasticity of demand indicates that the products are from different industries. In the same way, substitute goods belong to same industry. Thus, positive value of cross elasticity of demand indicates that the products are from same industry.