

Unit 2.2Elasticity of Demand & Supply# Elasticity of Demand (ED)

Elasticity of demand refers to the percentage change in quantity demanded of a product resulting from 1% change in its determinant. It can be expressed as the ratio of percentage (%) change in quantity demanded to percentage (%) change in its determinant (factor that affects the demand)

$$E.D. = \frac{\% \text{ change in quantity demanded}}{\% \text{ change in its determinant}}$$

There are as many elasticities of demand as the number of factors that affect demand. Here, we study three kinds / types of elasticity of demand :-

1. # Price Elasticity of Demand ( $E_p$ )

Price elasticity of demand refers to the percentage (%) change in quantity demanded of a product resulting from 1% change in its price, other things remaining the same. "

It can be expressed as the ratio of percentage (%) change in quantity demanded to percentage (%) change in price.

$$E_p = \frac{\% \text{ change in qty demanded}}{\% \text{ change in price}}$$

$$= \frac{\Delta Q}{Q} \times 100 \div \frac{\Delta P}{P} \times 100$$

$$= \frac{\Delta Q}{Q} \times \frac{P}{\Delta P}$$

$$\therefore E_p = \frac{\Delta Q}{\Delta P} \times \frac{P}{Q}$$

where,

$\Delta Q$  = Change in qty.

= Final qty - Initial qty

$\Delta P$  = Change in price

= Final price - Initial price

$P$  = Initial Price

$Q$  = Initial Qty

Eg①: When the price of a particular mobile set decreased from Rs 25,000 to Rs 21,000, qty demanded of it increased from 110 sets to 150 sets. Compute  $E_p$  and interpret the result.

Sol:

Here,

$$\Delta Q = 150 - 110 = 40$$

$$\Delta P = 21,000 - 25,000 = \text{Rs } -4,000$$

$$P = \text{Rs } 25,000$$

$$Q = 110$$

Now,

$$E_p = \frac{\Delta Q}{\Delta P} \times \frac{P}{Q}$$

$$= \frac{40}{-4000} \times \frac{25,000}{110}$$

$$= \frac{-25}{11}$$

$$= (-) 2.27$$

Interpretation:

$E_p = (-) 2.27$  means that when the price of mobile decreased by 1%, quantity demanded of it increased by 2.27%. The -ve sign implies inverse relationship between quantity demanded and price.

eg. (2): When price of a product increased from Rs 15 to Rs 20, qty demanded decreased from 90 to 60 units. Compute  $E_p$  and interpret the result.

Sol;

Here,

$$\Delta Q = 60 - 90 = -30$$

$$\Delta P = 20 - 15 = 5$$

$$Q = 90$$

$$P = 15$$

We have,

$$E_p = \frac{\Delta Q}{\Delta P} \times \frac{P}{Q}$$

$$= \frac{-30}{5} \times \frac{15}{90}$$

$$= -1$$

Interpretation:

$E_p = -1$  means when the price of

product increases by 1%, quantity demanded of it decreases by 1%. The -ve sign implies inverse relationship between quantity demanded and price.

Eg. (3) Given the following information:

| P  | Q | Combination |
|----|---|-------------|
| 10 | 8 | A           |
| 20 | 5 | B           |
| 30 | 3 | C           |

i) Compute  $E_p$  from A to B

Here,

$$\text{Change in quantity } (\Delta Q) = 5 - 8 = -3$$

$$\Delta P = 20 - 10 = 10$$

$$Q = 8$$

$$P = 10$$

So we have,

$$E_p = \frac{\Delta Q}{\Delta P} \times \frac{P}{Q}$$

$$= \frac{-3}{10} \times \frac{10}{8}$$

$$= \frac{-3}{8}$$

$$= (-) 0.37$$

Interpretation:

$E_p = -0.37$  means when price of product increases by 1%, quantity demanded of it decreases by ~~1%~~ 0.37%.

ii) Compute  $E_p$  from C to A.

Here,

$$\Delta Q = 8 - 3 = 5$$

$$\Delta P = 10 - 30 = -20$$

$$Q = 3$$

$$P = 30$$

$$\epsilon_p = \frac{\Delta Q}{\Delta P} \times \frac{P}{Q}$$

$$= \frac{5}{-20} \times \frac{30}{3}$$

$$= (-) 2.5$$

Interpretation:

$\epsilon_p = -2.5$  means when the price reduces by 1%, quantity demanded increases by 2.5%.

## # Degrees/Types of Price Elasticity #

### 1) Relatively Elastic

$$\epsilon_p = \frac{\Delta Q}{Q} \div \frac{\Delta P}{P}$$

$$\text{When } \frac{\Delta Q}{Q} > \frac{\Delta P}{P} \Rightarrow \epsilon_p > 1$$

### 2) Unitary Elastic

$$\epsilon_p = \frac{\Delta Q}{Q} \div \frac{\Delta P}{P}$$

$$\text{When } \frac{\Delta Q}{Q} = \frac{\Delta P}{P} \Rightarrow \epsilon_p = 1$$

### 3) Relatively Inelastic

$$\epsilon_p = \frac{\Delta Q}{Q} \div \frac{\Delta P}{P}$$

$$\text{when } \frac{\Delta Q}{Q} < \frac{\Delta P}{P} \Rightarrow \epsilon_p < 1$$

4) Perfectly Inelastic

$$\epsilon_p = \frac{\Delta Q}{Q} \div \frac{\Delta P}{P}$$

$$\text{when } \Delta Q = 0 \Rightarrow \epsilon_p = 0$$

5) Perfectly elastic

$$\epsilon_p = \frac{\Delta Q}{Q} \div \frac{\Delta P}{P}$$

$$\text{when } \Delta P = 0 \Rightarrow \epsilon_p = \infty$$

## II Their explanation

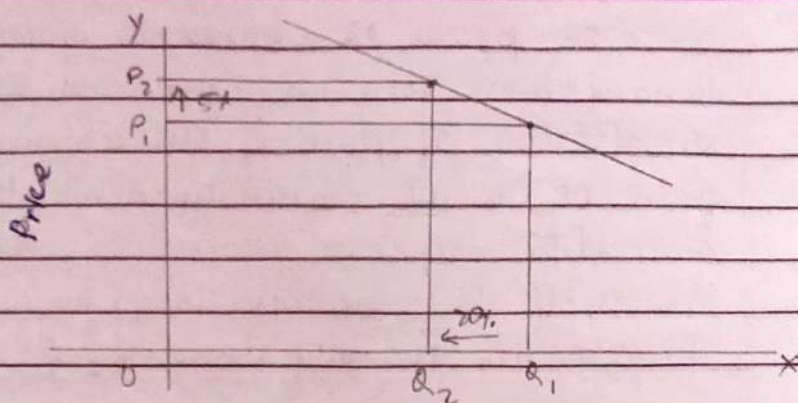
On the basis of value of elasticity coefficient,  $\epsilon_p$ , price elasticity of demand has following types:

- 1) Relatively Elastic ( $\epsilon_p > 1$ ): Demand is relatively elastic (price elasticity is greater than one). When percentage (%) change in quantity demand is greater than percentage (%) change in price. That is, a smaller percentage (%) in price brings a greater percentage (%) change in quantity demanded.

We know,

$$\epsilon_p = \frac{\Delta Q}{Q} \div \frac{\Delta P}{P}$$

$$\epsilon_p > 1 \text{ when } \frac{\Delta Q}{Q} > \frac{\Delta P}{P}$$



~~Qty~~: Qty demanded

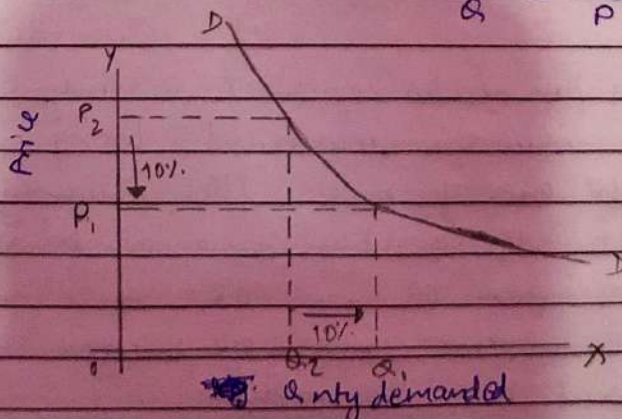
In figure, when price increases from  $P_1$  to  $P_2$  by 5%, quantity demanded decreases from  $Q_1$  to  $Q_2$  by 20%. Here,  $E_p = \frac{20\%}{5\%} = 4 > 1$ . The demand curve,  $D$  is relatively flat.

- 2) Unitary elastic, ( $E_p = 1$ ): Demand is unitary elastic when percentage(%) change in quantity demanded is equal to percentage(%) change in price.

We know,

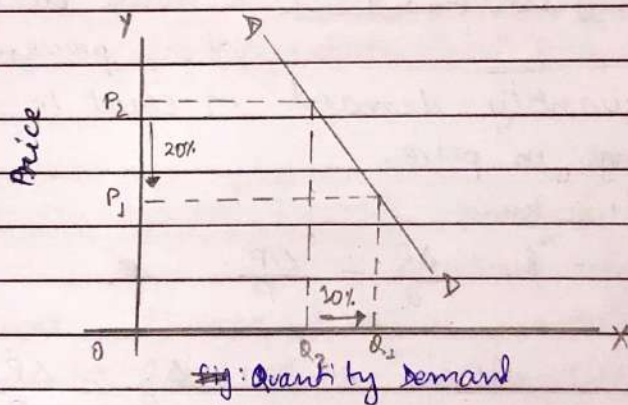
$$E_p = \frac{\Delta Q}{Q} \div \frac{\Delta P}{P}$$

$$E_p = 1 \quad \text{when} \quad \frac{\Delta Q}{Q} = \frac{\Delta P}{P}$$



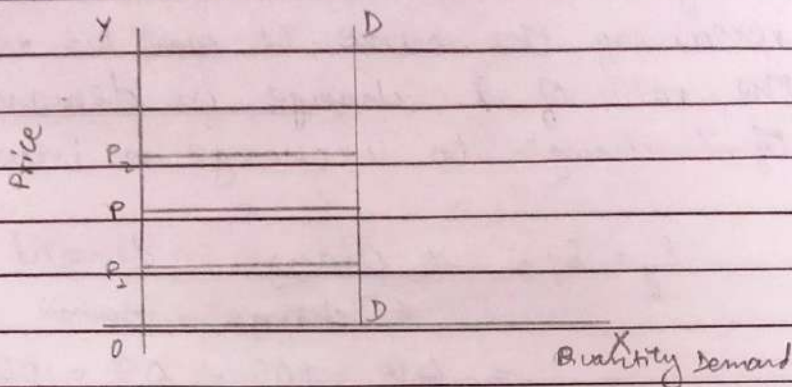
In figure, DD represents unitary elastic demand curve which is downward sloping and straight line. If price of the commodity decreases from  $OP_2$  to  $OP_1$ , quantity demanded for a commodity increases from  $OQ_2$  and  $OQ_1$ . It means, if 10% decrease in price results 10% increase in quantity demanded for a commodity.

- 3) Relatively Inelastic Demand ( $E_p < 1$ ): If the percentage change in quantity demanded for a commodity is less than the percentage change in price of the commodity is known as relatively inelastic demand. If 10% change in price of the commodity less than 10% change in quantity demanded for a commodity.



In figure, DD represents relatively inelastic demand curve which is downward sloping and steeper straight line. If price of the commodity decreases from  $OP_2$  to  $OP_1$ , quantity demanded for a commodity increases from  $OQ_2$  and  $OQ_1$ . It means if 20% decreases in price resulting 10% increase in quantity demand for a commodity.

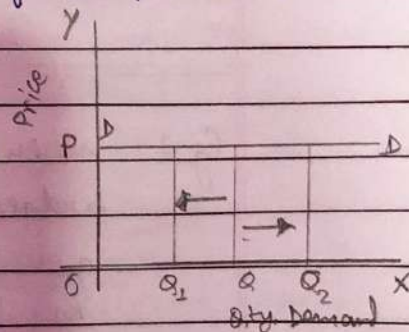
- 4) Perfectly Inelastic demand ( $E_p = 0$ ): When quantity demanded for a commodity does not change with the change in price of the commodity is known as perfectly inelastic demand.



In figure, DD represents perfectly inelastic demand curve which is vertical straight line and parallel to Y-axis. It means, any change in price from  $OP$  to  $OP_1$ ,  $OP_2$ , no change in quantity demand for a community.

- 5) Perfectly Elastic Demand ( $E_p = \infty$ ): When negligible or small change in price of the commodity leads to infinite change in demand for a commodity is known as perfectly elastic demand. It is hardly found in practical life or no example of this demand.

In figure, DD represents perfectly elastic demand curve which is horizontal straight line and parallel to X-axis. It means, any change in quantity demand for a commodity from  $OQ_1$  to  $OQ_2$ , no change in price of the commodity i.e.  $OP$ .



## 2# Income Elasticity of Demand

Income elasticity of demand refers to the % change in demand resulting from 1% change in consumer's income, other things remaining the same. It can be expressed as the ratio of % change in demand / qty of % change to % change in income.

$$\begin{aligned}
 E_y = E_i &= \frac{\% \text{ change in demand}}{\% \text{ change in income}} \\
 &= \frac{\frac{\Delta Q}{Q} \times 100}{\frac{\Delta I}{I} \times 100} \\
 &= \frac{\Delta Q}{Q} \times \frac{I}{\Delta I} \\
 &= \frac{\Delta Q}{\Delta I} \times \frac{I}{Q}
 \end{aligned}$$

where,

$\Delta Q$  = Change in demand  
= final - initial

$\Delta I$  = Change in Income  
= Final - initial

$Q$  = Initial Demand

$I$  = Initial Income.

Eg 1: When the finance minister, through his budget speech, announced that salary of govt officers increased from Rs 25,000 to Rs 40,000/month. Demand for meat by a family increased from 10 kg. to 15 kg per month. Compute  $E_i$  & interpret the result.

Sol: Here,

$$\Delta Q = 15 - 10 = 5$$

$$Q = 10$$

$$\Delta I = 40,000 - 35,000 = 5,000$$

$$I = 35,000$$

Now,

$$E_i = \frac{\Delta Q}{\Delta P} \times \frac{I}{Q}$$

$$= \frac{5}{5000} \times \frac{35000}{10}$$

$$= 3.5$$

Interpretation:

~~increased~~  $E_i = 3.5$  means that when the income increases by 1%, the demand increases by 3.5% and vice versa.

Eg2:

| Income | Demand | Combination |
|--------|--------|-------------|
| 1000   | 5      | A           |
| 1200   | 6      | B           |

To-Do later

## # Types of Income Elasticity of Demand

On the basis of value of  $E_i$ , income elasticity has the following types/degrees:

1. Income elastic

1. Positive Income Elasticity ( $E_i > 0$ )

Income elasticity is positive when there is direct relationship between consumer's income and demand. It has the follo

wing types:

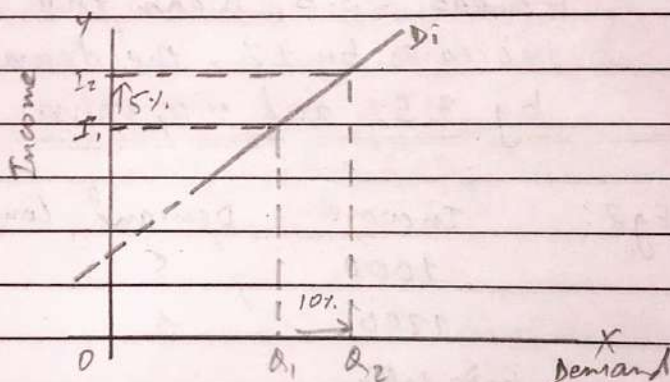
i) Income elasticity greater than one ( $E_i > 1$ ): Income Elasticity is greater than one when % change in demand is greater than % change in income.

we have,

$$E_i = \frac{\Delta Q}{Q} \div \frac{\Delta I}{I}$$

$$E_i > 1 \text{ when } \frac{\Delta Q}{Q} > \frac{\Delta I}{I}$$

$$E_i > 1 \text{ when } \frac{\Delta Q}{Q} > \frac{\Delta I}{I}$$



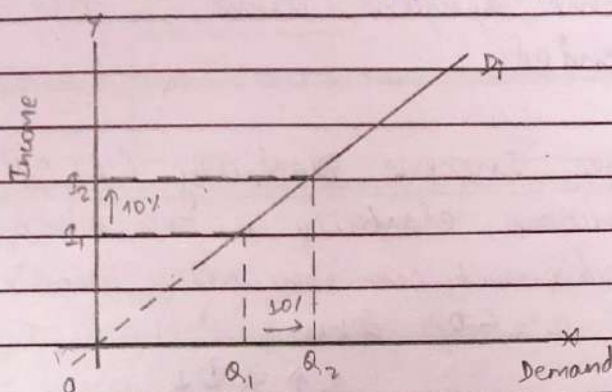
In figure, when income increases by 5% from  $I_1$  to  $I_2$ , demand increases by 10% from  $Q_1$  to  $Q_2$ . Here,  $E_i = \frac{10\%}{5\%} = 2 > 1$ . The income demand curve,  $D_i$ , cuts +ve y-axis when extended.

ii) Income elasticity equal to one ( $E_i = 1$ ): Income elasticity is equal to one when % change in demand is equal to the % change in income.

we have,

$$E_i = \frac{\Delta Q}{Q} \div \frac{\Delta I}{I}$$

$$E_i = 1 \text{ when } \frac{\Delta Q}{Q} = \frac{\Delta I}{I}$$



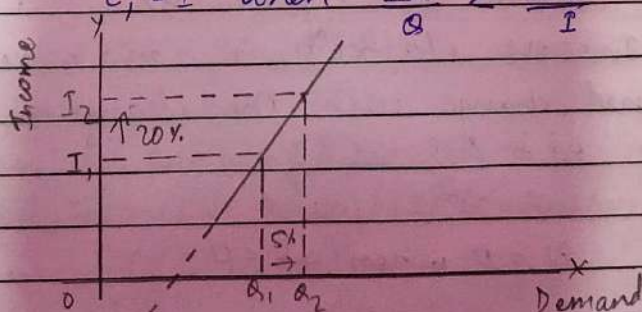
In diagram, when income increases by 10% from  $I_1$  to  $I_2$ , the demand also increases from  $Q_1$  to  $Q_2$  by 10%. Here  $E_i = \frac{10\%}{10\%} = 1 = 1$ . The income demand curve,  $D_i$ , cuts origin when extended.

iii) Income elasticity less than one ( $E_i < 1$ ): Income elasticity is less than one when % change in demand is less than the % change in income.

we have,

$$E_i = \frac{\Delta Q}{Q} \div \frac{\Delta I}{I}$$

$$E_i < 1 \text{ when } \frac{\Delta Q}{Q} < \frac{\Delta I}{I}$$



In diagram, when income increases by 20% from  $I_1$  to  $I_2$ , the demand also increases but only by 5%. Here,  $E_i = 5/20 = 0.4 < 1$ . The income demand curve,  $D_i$ , cuts X-axis when extended.

## 2. Negative Income Elasticity ( $E_i < 0$ )

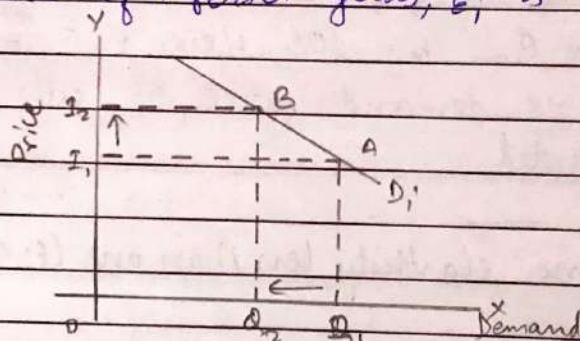
Income elasticity is -ve when there is inverse relationship between consumer's income and demand.

$E_i < 0$  when

$I \uparrow \Rightarrow D \downarrow$

$I \downarrow \Rightarrow D \uparrow$

In case of inferior goods,  $E_i$  is -ve.



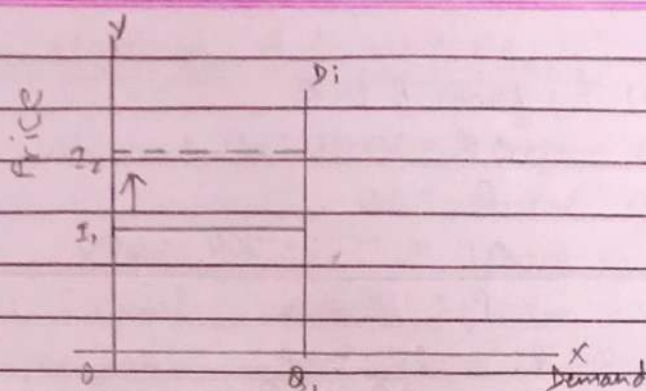
In diagram, when income increases from  $I_1$  to  $I_2$ , demand decreases from  $Q_1$  to  $Q_2$ . The income demand curve slopes downward.

## 3. Zero Income Elasticity ( $E_i = 0$ )

Income elasticity is zero when demand does not change with the change in income.

$$E_i = \frac{\Delta Q}{Q} \div \frac{\Delta I}{I}$$

$$E_i = 0 \text{ when } \Delta Q = 0$$



In diagram, when income changes, demand remains constant at  $Q_1$ . The income demand curve is vertical.

### Examples.

- ① If % change in income = 30%, % change in demand = 40, find  $E_i$ .

Ans: Here,

$$\Delta Q = 40$$

$$\Delta I = 30$$

We have,

$$E_i = \frac{\Delta Q}{\Delta I} = \frac{40}{30}$$

$$= 1.33$$

### Interpretation

$E_i = 1.33$  means that when the income increases by 1%, the demand increases by 1.33%.

- ② Given the following table: Find  $E_i$  (a) from A to B, (b) from B to A

Income (I) Demand (Q) Combination

|      |    |   |
|------|----|---|
| 1000 | 10 | A |
| 1500 | 20 | B |

SA:

(a)  $E_i$  from A to B

$$\Delta Q = 20 - 10 = 10$$

$$Q = 10$$

$$\Delta P = 1500 - 1000 = 500$$

$$P = 1000$$

$$\therefore E_i = \frac{\Delta Q}{\Delta P} \times \frac{P}{Q}$$

$$= \frac{10}{500} \times \frac{1000}{10}$$

$$= 2$$

Interpretation

$E_i = 2$  means that when income increases by 1%, demand increases by 2%.

(b)  $E_i$  from B to A

$$\Delta Q = 10 - 20 = -10$$

$$\Delta P = 1000 - 1500 = -500$$

$$Q = 20$$

$$P = 1500$$

$$\therefore E_i = \frac{\Delta Q}{\Delta P} \times \frac{P}{Q}$$

$$= \frac{-10}{-500} \times \frac{1500}{20}$$

$$= 1.5$$

Interpretation

$E_i = 1.5$  means that when income increases by 1%, demand increases by 1.5%.

### 3# Cross elasticity of Demand ( $\epsilon_c$ )

Cross elasticity of demand refers to the % change in quantity demanded of X resulting from 1% change in the price of Y; X and Y being related product. It can be expressed as the ratio of % change in  $Q_x$  to % change in  $P_y$ .

$$\epsilon_c = \frac{\% \text{ change in } Q_x}{\% \text{ change in } P_y}$$

$$= \frac{\% \text{ change in demand for X}}{\% \text{ change in price of Y}}$$

$$= \frac{\Delta Q_x}{Q_x} \times 100 \div \frac{\Delta P_y}{P_y} \times 100$$

$$= \frac{\Delta Q_x}{\Delta P_y} \times \frac{P_y}{Q_x}$$

where,

$\Delta Q_x \rightarrow$  Change in qty of X

$\Delta P_y \rightarrow$  Change in price of Y

$Q_x \rightarrow$  Initial qty of X

$P_y \rightarrow$  Initial price of Y

eg① When the price of Pepsi increased from Rs 40 to Rs 50 per bottle, demand for Coke increased from 110 bottles per day to 120 bottles per day.

Sol: we have,

$$\epsilon_c = \frac{\Delta Q_x}{\Delta P_y} \times \frac{P_y}{Q_x}$$

$$= \frac{10}{10} \times \frac{40}{110} = 0.36$$

Interpretation

~~we know~~ X and Y are substitutes. If  $E_c = 0.36$  means that when the price of Pepsi increases by ~~1%~~ <sup>1%</sup> per bottle, the demand of coke increases by 0.36%.

eg② When price of a particular PC set increases from Rs 30,000 to Rs 40,000, demand for a particular software decreased from 150 units to 130 units. Compute  $E_c$ .

Sol: We have,

$$\begin{aligned} E_c &= \frac{\Delta Q_x}{\Delta P_x} \times \frac{P_x}{Q_x} \\ &= \frac{(130 - 150)}{(40,000 - 30,000)} \times \frac{30,000}{150} \\ &= \frac{-20}{10,000} \times \frac{30,000}{150} \\ &= -0.4 \end{aligned}$$

Interpretation

$E_c = -0.4$  means that when the price of PC increases by 1%, demand for software decreases by 0.4%. -ve sign implies that they are complementary in nature.

## # Types of Cross Elasticity of Demand.

On the basis of the nature of relationship between two products, X and Y, cross elasticity has two types:

### 1. Positive Cross Elasticity ( $E_c > 0$ ): ~~Cross~~

Cross elasticity is +ve when there is

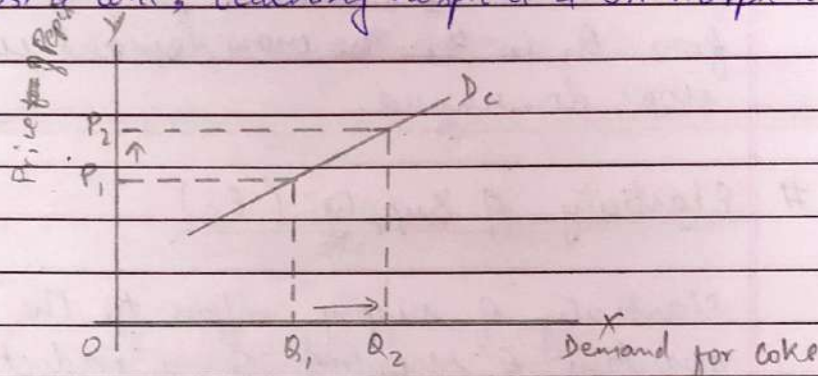
direct relationship between price of Y and demand for X.

$E_c > 0$  when

$$P_Y \uparrow \Rightarrow D_X \uparrow$$

$$P_Y \downarrow \Rightarrow D_X \downarrow$$

When two goods, X and Y are substitutes,  $E_c$  is +ve. ~~Two~~ Two goods, X and Y, are substitutes when either of the goods can be used to fulfill a particular want. For example, Pepsi & Coke, teaching hospital & Bir Hospital.



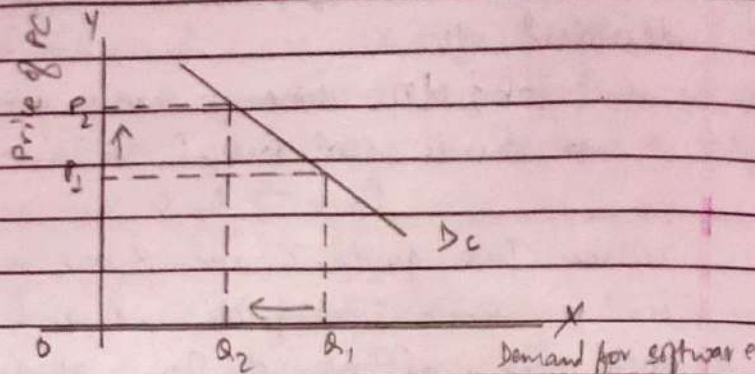
In figure, when price of Pepsi increases from  $P_1$  to  $P_2$ , demand for coke increases from  $Q_1$  to  $Q_2$ . The cross demand curve,  $D_c$ , slopes upward.

## 2. Negative Cross Elasticity ( $E_c < 0$ )

Cross elasticity is -ve when there is inverse relationship between price of Y and demand for X. In case of complementary goods, cross elasticity is -ve. Two goods X and Y are complements if satisfaction from X is enhanced by the use of Y. For eg. computer and software, cricket ball & bat.

$$E_c < 0 \text{ when, } P_Y \uparrow \Rightarrow D_X \downarrow$$

$$P_Y \downarrow \Rightarrow D_X \uparrow$$



In diagram, when price of PC increases from  $P_1$  to  $P_2$ , demand for software decreases from  $Q_2$  to  $Q_1$ . The down demand curve,  $D_c$ , slopes downward.

#### 4 # Elasticity of Supply ( $E_s$ )

Elasticity of supply refers to the % change in quantity supplied of a product resulting from 1% change in its price, other things remaining the same. It can be expressed as the ratio of % change in qty supplied to % change in price.

$$E_s = \frac{\% \text{ change in qty supplied}}{\% \text{ change in price}}$$

$$= \frac{\Delta Q}{Q} \times 100 \div \frac{\Delta P}{P} \times 100$$

$$= \frac{\Delta Q}{\Delta P} \times \frac{P}{Q}$$

where,  $\Delta Q$  = change in qty supplied

$\Delta P$  = change in price

$P$  = Initial Price

$Q$  = Initial qty.

Eg ①: When market price of product increased from Rs 110 to Rs 140, qty supplied (qty offered for sale) increases from 50 units to 80 units. Compute the  $E_s$  & interpret the result.

Sol: Here,

$$\Delta Q = 80 - 50 = 30$$

$$Q = 50$$

$$\Delta P = 140 - 110 = 30$$

$$P = 110$$

So,

$$\begin{aligned} E_s &= \frac{\Delta Q}{\Delta P} \times \frac{P}{Q} \\ &= \frac{30}{30} \times \frac{110}{50} \\ &= 2.2 \end{aligned}$$

Interpretation

$E_s = 2.2$  means when the price of a product increases by 1%, supply increases by 2.2%. They have a direct relationship.

| Eg ② | Combination | P  | Q  |
|------|-------------|----|----|
|      | A           | 40 | 10 |
|      | B           | 70 | 15 |

Find  $E_s$

a) From A to B

b) From B to A

## # Types / Degrees of $\epsilon_s$

On the basis of value of elasticity coefficient,  $\epsilon_s$ , elasticity of supply has following types:

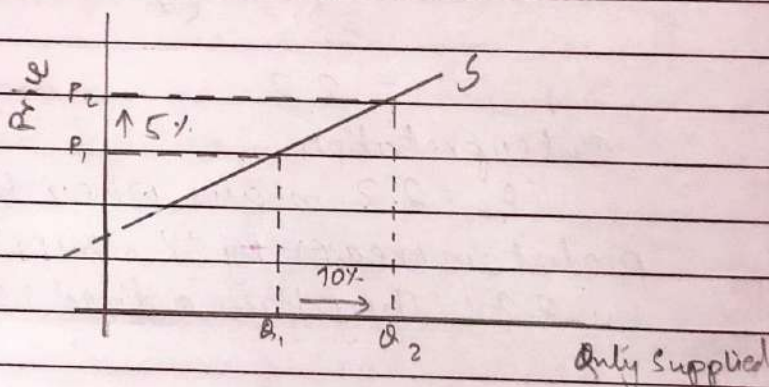
### 1. Relatively elastic ( $\epsilon_s > 1$ )

Supply is relatively elastic when a smaller % change in price leads to a greater % change in qty supplied.

We have,

$$\epsilon_s = \frac{\Delta Q}{Q} \div \frac{\Delta P}{P}$$

$$\epsilon_s > 1 \text{ when } \frac{\Delta Q}{Q} > \frac{\Delta P}{P}$$



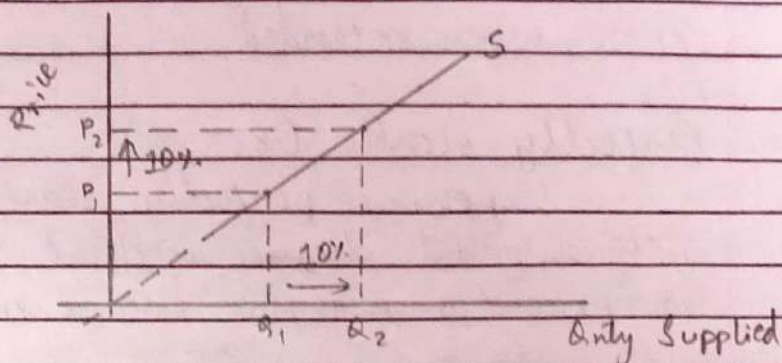
In diagram, when the price increases by 5% from  $P_1$  to  $P_2$ , quantity supplied increases from  $Q_1$  to  $Q_2$  by 10%. And the supply curve,  $S$ , cuts +ve y-axis when extended.

### 2. Unitary Elastic ( $\epsilon_s = 1$ )

Price is unitary elastic when % change in qty supplied is equal to % change in price.

$$\epsilon_s = \frac{\Delta Q}{Q} \div \frac{\Delta P}{P}$$

$$E_s = 1 \text{ when } \frac{\Delta Q}{Q} = \frac{\Delta P}{P}$$



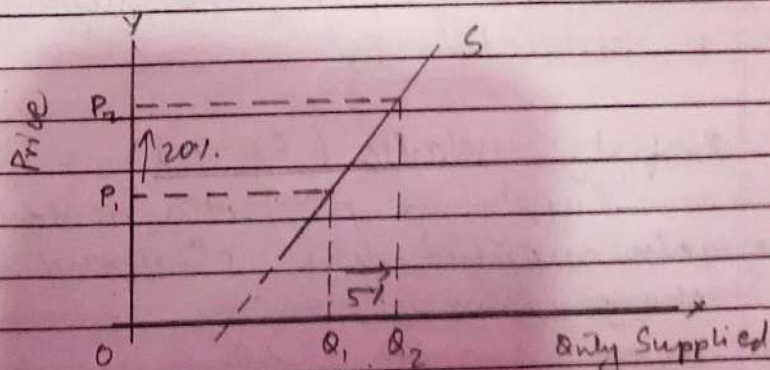
In diagram, when the price increases by 10% from  $P_1$  to  $P_2$ , the supply quantity supplied also increases from  $Q_1$  to  $Q_2$  by 10. The supply curve,  $S$ , into the origin when extended.

### 3. Relatively inelastic ( $E_s < 1$ )

Supply is relatively inelastic when a greater % change in price leads to a smaller % change in qty supplied.

$$E_s = \frac{\Delta Q}{Q} \div \frac{\Delta P}{P}$$

$$E_s < 1 \text{ when } \frac{\Delta Q}{Q} < \frac{\Delta P}{P}$$



In diagram, when the price increases from  $P_1$  to  $P_2$  by 20%, the qty supplied

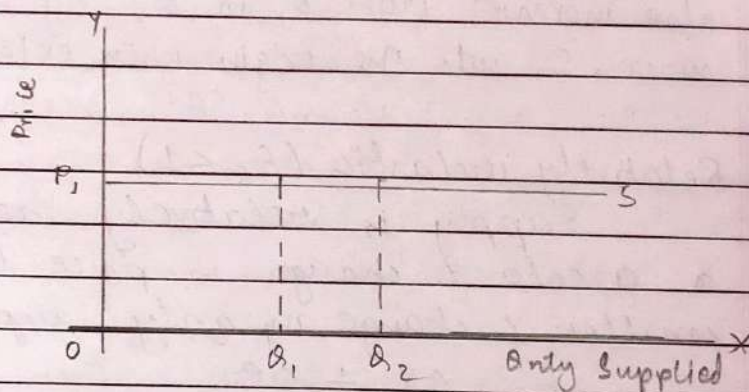
increases from  $Q_1$  to  $Q_2$  by 5%. Here,  $E_s = \frac{5\%}{20\%} = 0.25 < 1$ . The supply curve,  $S$ , cuts +ve x-axis when extended

#### 4. Perfectly elastic ( $E_s = \infty$ )

Supply is perfectly elastic when qty supplied changes without any change in price (or negligible change in price).

$$E_s = \frac{\Delta Q}{Q} \div \frac{\Delta P}{P}$$

$$E_s = \infty \text{ when } \Delta P = 0$$



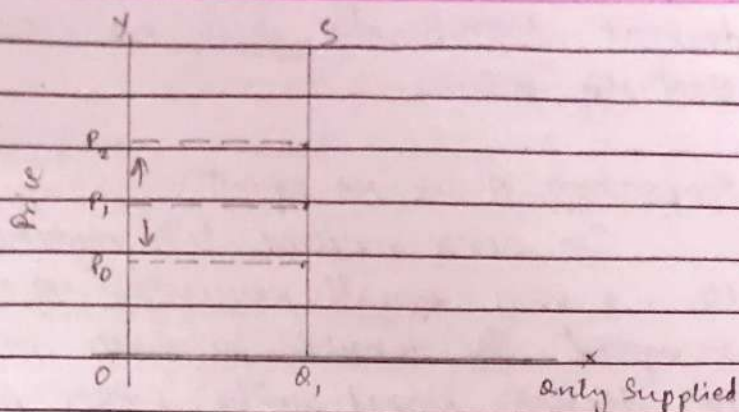
In diagram, qty supplied is different even at same price. The supply curve,  $S$ , is horizontal.

#### 5. Perfectly inelastic ( $E_s = 0$ )

Supply is perfectly inelastic when qty supplied does not change with the change in price.

$$E_s = \frac{\Delta Q}{Q} \div \frac{\Delta P}{P}$$

$$E_s = 0 \text{ when } \Delta Q = 0$$



In diagram, qty supplied remains constant at  $Q_1$  for all prices. The supply curve,  $S$ , is vertical.

## # Factors affecting Elasticity of Demand

The value of elasticity coefficient,  $E_p$ , depends upon different factors. When demand changes significantly with the change in price, demand is highly elastic. When demand does not significantly change with the change in price, demand is less elastic. The major factors that affect elasticity of demand are as follows:

### 1) Availability of substitutes.

If a product has many substitute products available in the market, the demand is highly elastic. When price increases slightly, consumers purchase substitute products and the demand for the product decreases significantly. If the product does not have substitute product available in the market, demand does not

decrease significantly with rise in price. So, elasticity is low.

### 2) Proportion of income spent:

In some products like matchbox, lights, etc., a very small percentage of total income is spent. The demand for such products does not decrease significantly when price increases. So, elasticity of demand for such products is very low.

### 3) Time Period:

In the short term/period of time, consumers face difficulty in finding substitutes product in the market. Demand does not change in a greater proportion when price changes. So, demand is less elastic in short term. But in the long-period of time, consumers find different substitutes in the market. So, elasticity is high in long period of time.

### 4) Nature of Product:

In case of necessary products like rice, bread, oil, etc., demand does not change significantly with the change in price. So, demand is less elastic. In case of luxury products like cars, fridge, etc., demand changes by a greater percentage when price changes. So, price elasticity is high.

5) Habitual goods:

In case of goods like alcohol, tobacco, cigarettes, demand does not change significantly when price changes. So, elasticity is low.

6) Goods of several uses:

Some goods can be put to different uses. In case of goods like electricity, demand is highly elastic. When price decreases slightly, people use it in different sectors. So, demand increases significantly.