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# **Elasticity of Demand**

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# Elasticity of demand

The law of demand says that the demand varies inverse with the price , other things being equal.

The quantity demanded changes because of change in price.

Elasticity of demand is defined as “the relative change in the quantity demanded to the relative change in the price”



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# Types of Elasticity demand

1. **Price Elasticity of demand ( $E_d$ )**
2. **Income Elasticity of Demand ( $E_i$ )**
3. **Cross Elasticity of demand ( $E_{XY}$ )**



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# Price Elasticity of demand ( $E_d$ )

This shows the responsiveness of quantity a commodity, when price of the commodity changes, with other factors being constant

$$E_d = \frac{\% \text{ change in quantity demand}}{\% \text{ change in price}}$$

$$E_d = \frac{\text{proportionate change in quantity demand}}{\text{proportionate change in price}}$$



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# Income Elasticity of Demand ( $E_I$ )

It measures the responsiveness of demand due to change in the income of the consumer in terms of percentage, when the factors influencing demand

$$E_I = \frac{\text{\% change in quantity demand}}{\text{\% change in income}}$$

$$E_I = \frac{\text{proportionate change in quantity demand}}{\text{proportionate change in income}}$$



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# Cross Elasticity of demand ( $E_{XY}$ )

Demand of one good (X) is also influenced by the price of other related good (Y). These may be substitutes or complements. It is the ratio of percentage change in quantity demanded of commodity (X) and percentage change in price of related commodity (Y).

$$E_{xy} = \frac{\text{\% change in quantity demand of commodity (X)}}{\text{\% change in price of related commodity (Y)}}$$

$$E_{xy} = \frac{\text{proportionate change in quantity demand (X)}}{\text{proportionate change in price (Y)}}$$

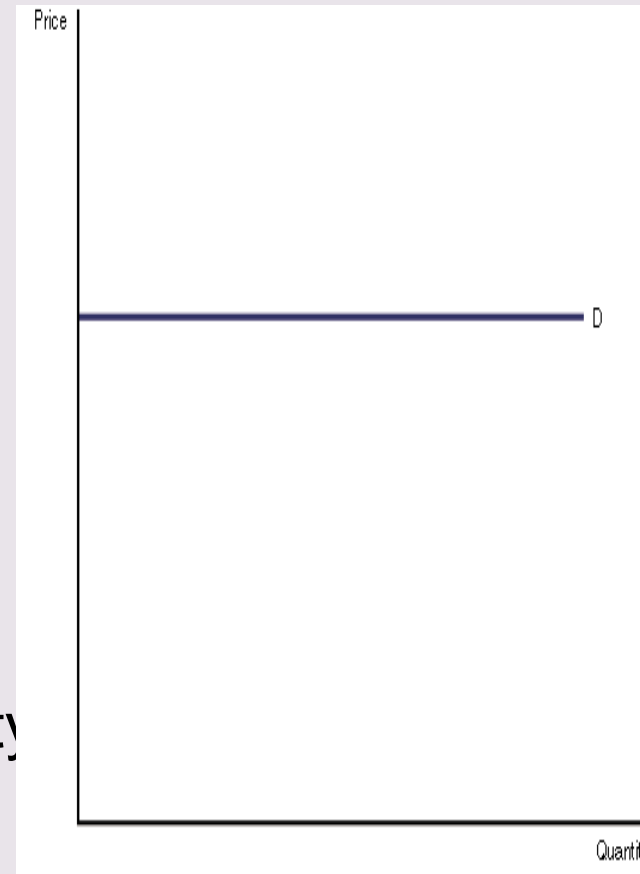


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# Degrees of Elasticity of demand

## Perfectly Elastic Demand

Slight change in price of commodity leads to an infinite change in quantity





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## Perfectly inelastic Demand

Changes in price of commodity leaves the demand unaffected





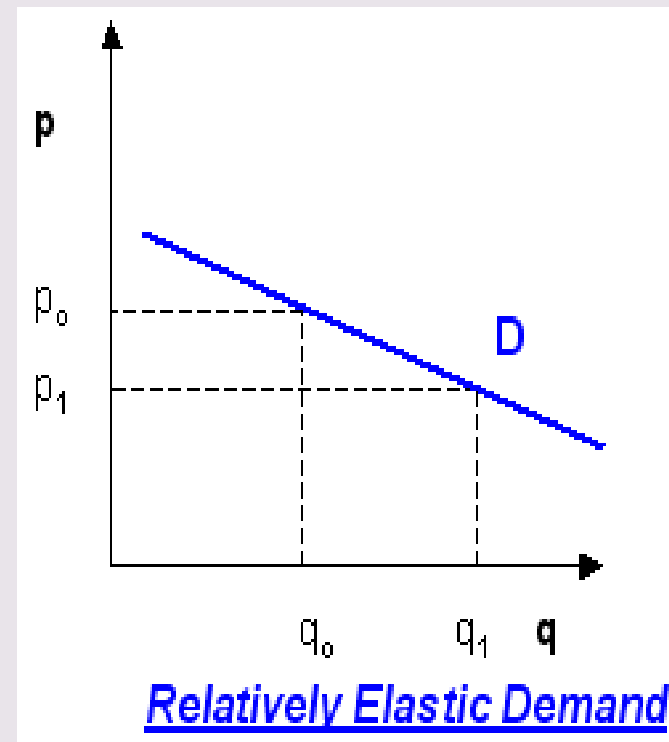


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## Relatively Elastic Demand

Lesser proportionate change in price of commodity is followed by larger change in the quantity demanded.



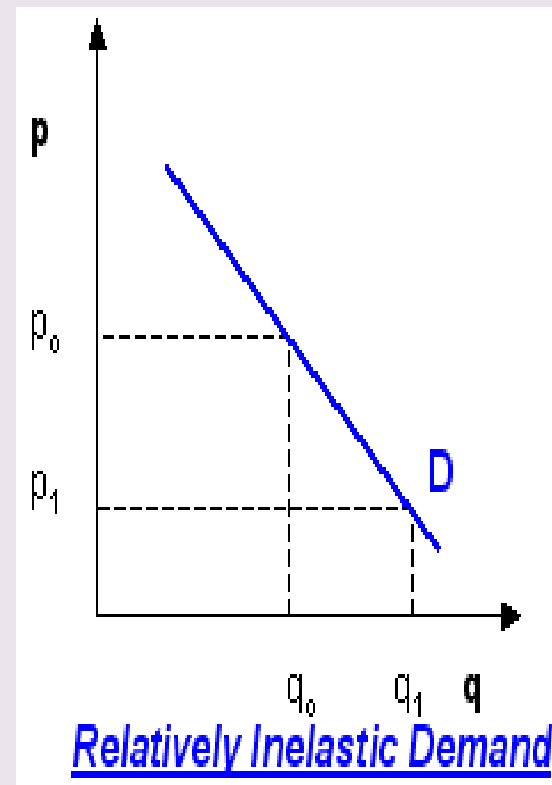


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## Relatively Inelastic Demand

large proportionate change in price  
of commodity is followed by  
smaller change in the quantity  
demanded



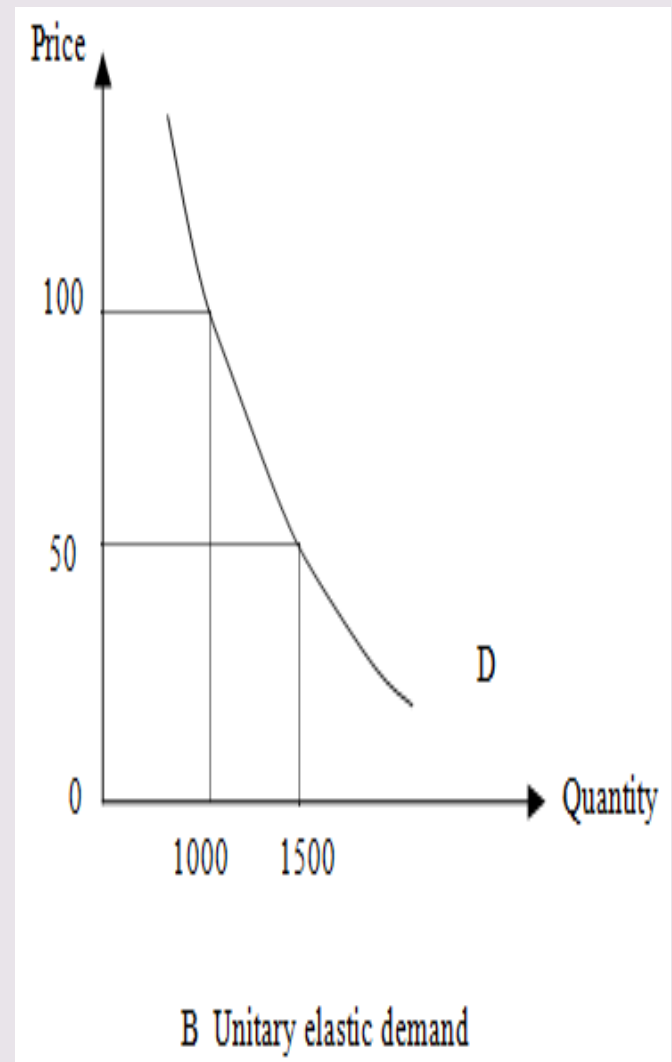


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## Unitary Elastic Demand

When a given proportionate change in price results in the same proportionate change in commodity demanded.





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**THANK YOU**