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**Paper - MIC**  
**Topic - Elasticity of demand**

## **Elasticity of demand**

*Elasticity is a measure of a variable's sensitivity to a change in another variable, most commonly this sensitivity is the change in price relative to changes in other factors. In business and economics, elasticity refers to the degree to which individuals, consumers or producers change their demand or the amount supplied in response to price or income changes. It is predominantly used to assess the change in consumer demand as a result of a change in a good or service's price.*

*In other words, it is the percentage change in quantity demanded divided by the percentage in one of the variables on which demand depends.”*

### ***Types of Elasticity of Demand :***

*Based on the variable that affects the demand, the elasticity of demand is of the following types ;*

#### ☐ **Price Elasticity:**

*The price elasticity of demand is the response of the quantity demanded to change in the price of a commodity. It is assumed that the consumer's income, tastes, and prices of all other*

goods are steady. It is measured as a percentage change in the quantity demanded divided by the percentage change in price. Therefore,

$$E_p = \text{change in quantity} / \text{original quantity} \times \text{original price} / \text{change in price}$$

Or ,

$$E_p = dQ / dP \times P / Q$$

#### ☐ **Income Elasticity**

The income elasticity of demand is the degree of responsiveness of the quantity demanded to a change in the consumer's income. Symbolically,

$$E_y = \text{Percentage change in quantity demanded} / \text{Percentage change in income}$$

Or;

$$E_y = dQ / dY \times Y / Q$$

#### ☐ **Cross Elasticity**

The cross elasticity of demand of a commodity X for another commodity Y, is the change in demand of commodity X due to a change in the price of commodity Y.

Symbolically,

$$E_c = \Delta Q_x / \Delta P_y \times P_y / Q_x$$

Where,  $E_c$  = cross elasticity of demand

$$\Delta Q_x = \text{change in quantity demanded of commodity x}$$

$\Delta P_y$  = *change in quantity demanded of commodity y*

$P_y$  = *original price of commodity y*

$Q_x$  = *original quantity of commodity x*

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