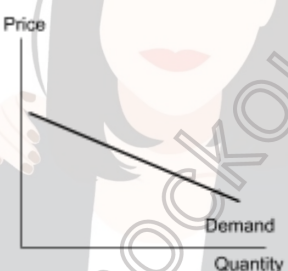



Price elasticities of demand

1. Definition of price elasticity of demand

: Price elasticity of demand(PED) measures the responsiveness of quantity demanded to changes in price.

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

	Price elastic demand	Price inelastic demand
Definition	The percentage change in quantity of demand is greater than the percentage change in price	The percentage change in quantity of demand is lesser than the percentage change in price
Value of PED	$PED > 1$	$0 < PED < 1$
Curve		

2. Determinants of price elasticity of demand

2.1) The number of substitute product

: The large number of substitute product \Rightarrow Elastic PED

: The lack of substitute product \Rightarrow Inelastic PED

2.2) The period of time

: In the short run and peak time \Rightarrow Inelastic PED

: In the long run and off peak time \Rightarrow Elastic PED

2.3) The proportion of income spent on the product

: The large proportion of income spent on the product \Rightarrow Elastic PED

: The small proportion of income spent on the product \Rightarrow Inelastic PED

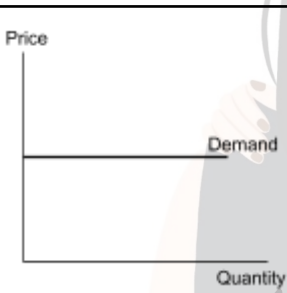
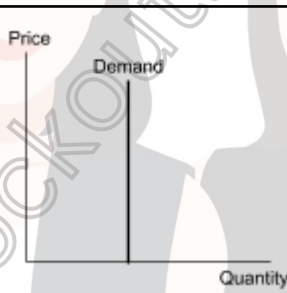

2.4) Type of products

- : Luxury goods ⇒ Elastic PED
- : Necessity, Brand loyalty, Addictive products ⇒ Inelastic PED

2.5) Durability of products

- : Durable product ⇒ Inelastic PED

3. Special demand curve

Perfectly price elastic	Perfectly price inelastic	Unitary price elastic
when a change in price causes a complete change in the quantity demand.	when a change in price has no effect on the quantity demand.	when a change in price causes an equal change in the quantity demanded, leaving total revenue unchanged.
		
PED = ∞	PED = 0	PED = 1

4. PED and total revenue

Type of PED	Price	Quantity	Total Revenue
1. PED elastic	↑	Demand decreases by a larger proportion.	TR decreased
2. PED elastic	↓	Demand increases by a larger proportion.	TR increased
3. PED inelastic	↑	Demand decreases by a smaller proportion.	TR increased
4. PED inelastic	↓	Demand increases by a smaller proportion.	TR decreased
5. PED unitary	Price ↑ 10%	Quantity decreases by 10%	TR unchanged
6. PED unitary	Price ↓ 10%	Quantity increases by 10%	TR unchanged

5. Limitation of PED

1. It is difficult to calculate PED.
2. It has time consuming.
3. The value of PED changes over time.

6. Value of PED changes along the demand curve

