

Applications of Elasticity of Demand and Supply to Economic Issues

Concept

- “Elasticity of demand”—concept given to us by Prof. Alfred Marshall
 - Explains the degree of responsiveness of demand to a given change in its determinants such as price, price of related products, income, etc.
 - Types--
 - **Price Elasticity of Demand**—measures the responsiveness of quantity demanded of a commodity to change in its price.
 - **Income Elasticity of Demand**—measures the responsiveness of quantity demanded of a commodity to change in consumer’s income.
 - **Cross Elasticity of Demand**—measures the responsiveness of quantity demanded of a commodity to change in price of the related commodity.
 - **Promotional Elasticity of Demand**—measures the responsiveness of quantity demanded of a commodity to change in advertisement expenditure.

ii) Different Degrees of Price elasticity of Demand

Categories of Elasticity	Coefficient of Elasticity
1. Perfectly Elastic	$e_p = \infty$
2. Relatively Elastic	$e_p > 1$
3. Unitary Elastic	$e_p = 1$
4. Relatively Inelastic	$e_p < 1$
5. Perfectly Inelastic	$e_p = 0$

Factors Affecting Price Elasticity of Demand

- Nature of Commodity
- Availability of Substitutes
- Habits and Customs
- Alternative Uses
- Complementary Goods
- Income Levels of the Household
- Time Period
- Level of price and Extent of Change
- Proportion of income spent
- Postponement of consumption

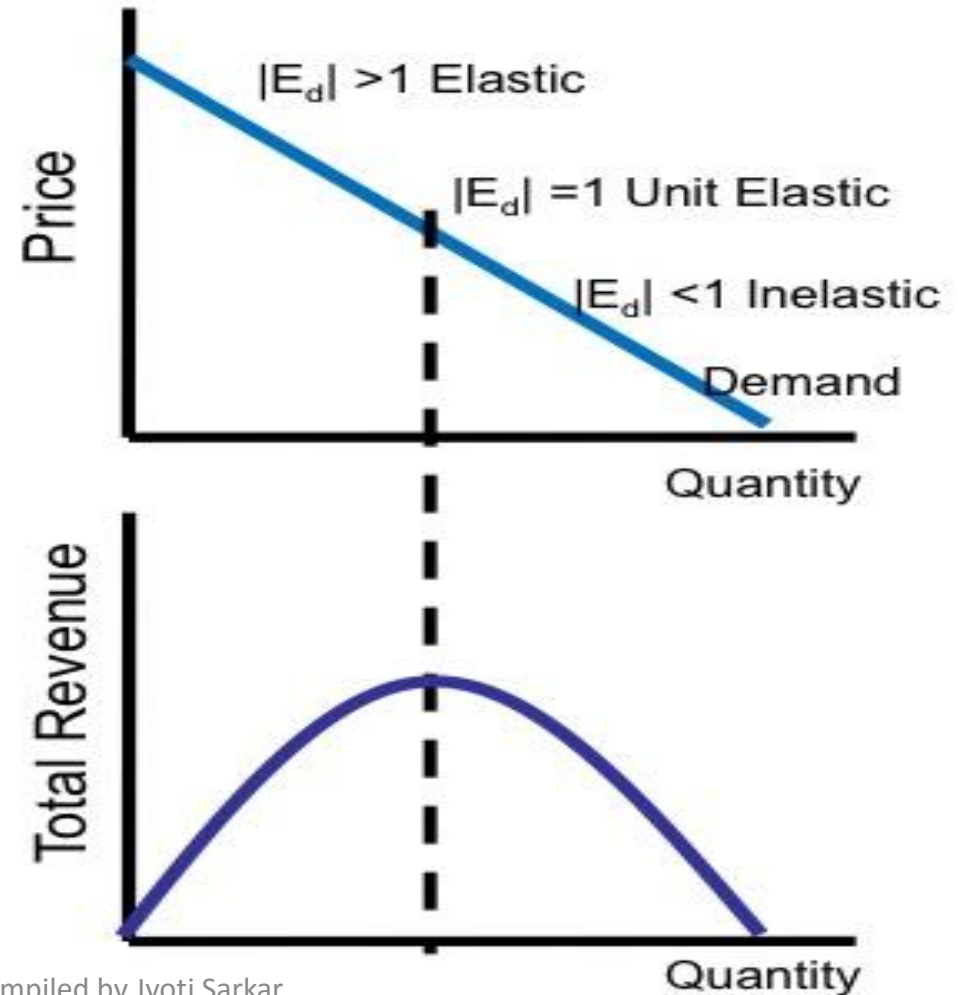
iv) Relationship Between Price Elasticity and Total Revenue

- Total Revenue (TR) = $P \times Q$

Elasticity of Demand	Change in Price	Total Revenue
1) Elastic Demand ($e_p > 1$)	<ul style="list-style-type: none">▪ Fall▪ Rise	<ul style="list-style-type: none">▪ Increase▪ Decrease
2) Inelastic Demand ($e_p < 1$)	<ul style="list-style-type: none">▪ Fall▪ Rise	<ul style="list-style-type: none">▪ Decrease▪ Increase
3) Unitary elastic Demand ($e_p = 1$)	<ul style="list-style-type: none">▪ Fall▪ Rise	<ul style="list-style-type: none">▪ Unchanged▪ Unchanged

Graphical representation

- Elastic
 - P increase decreases TR
 - P decrease increases TR
- Unit elastic
 - Price increase or decrease doesn't change total revenue.
- Inelastic
 - P increase increases TR
 - P decrease decreases TR



Paradox of Bumper Harvest

- Demand for food items such as wheat, rice, etc. is inelastic.
- Percentage change in prices has very little effect on the percentage change in quantity demanded.
- In case of bumper harvest, the supply of food crops products increases which lowers the price.
- The increase in the revenue for selling more goods is less than the fall in the revenue on account of selling at a lower price.
- Thus, farmer's income lower.
- This is good for the consumer as they have to pay less

Income Elasticity of Demand

Types	Classification of Goods
$e_y < 0$	Inferior Goods
$e_y > 0$ <ul style="list-style-type: none">• $e_y < 1$• $e_y = 1$• $e_y > 1$	Normal Goods Necessities Comforts Luxuries
$e_y = 0$	Neutral goods

Cross Elasticity

Nature of Commodity	Cross Elasticity
Substitutes	Positive
Complements	Negative
Unrelated	Zero