

Meta data of E- Content (Pre production)

S. N.	AREA OF META DATA	TO BE FILLED BY CONTENT GENERATOR(S)
1	Topic	Price Elasticity of Demand
2	Subject	Economics
3	Topic connected which area of subject?	Consumer Behaviour and Demand
4	Class/ Level	XII
5	Objectives	<p>This content is intended to familiarize the students:</p> <ul style="list-style-type: none"> • with the meaning of the term elasticity of demand and its different variants. • with a detailed explanation of various degrees of price elasticity of demand.
6	Summary	<p>Price elasticity is a measure of responsiveness of demand for a commodity to change in price of the commodity. Demand can be slightly responsive, highly responsive or highly unresponsive to a change in price. Depending on this, there are five degrees of price elasticity of demand. We have perfectly elastic demand ($e_p = \infty$), elastic demand ($e_p > 1$), unitary elastic demand ($e_p = 1$), inelastic demand ($e_p < 1$), and perfectly inelastic demand ($e_p = 0$).</p>
7	Key Words	Elasticity of demand, price elasticity of demand, perfectly elastic demand, elastic demand, unitary

		elastic demand, inelastic demand, perfectly inelastic demand.
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Price Elasticity of Demand:

Before explaining price elasticity of demand, it would be a good idea to know what elasticity of demand is.

There are various factors which can cause change in demand. Change in any of these factors can lead to change in demand. So elasticity of demand is just a measure of how sensitive is demand for a commodity to change in any of its determinants. If change in a determinant causes a huge change in demand for a commodity, we say, that demand for that commodity is highly elastic to change in that particular determinant.

If we are measuring responsiveness or sensitivity of demand for a commodity to change in its price, we say that we are measuring price elasticity of demand. If we are measuring responsiveness of demand to change in income of the consumer, we say that we are measuring income elasticity of demand. So for each factor affecting demand, we have a different type of elasticity of demand. However, while dealing with the concept of elasticity of demand, we usually take three types of elasticity of demand- price elasticity of demand, income elasticity of demand, and cross elasticity of demand.

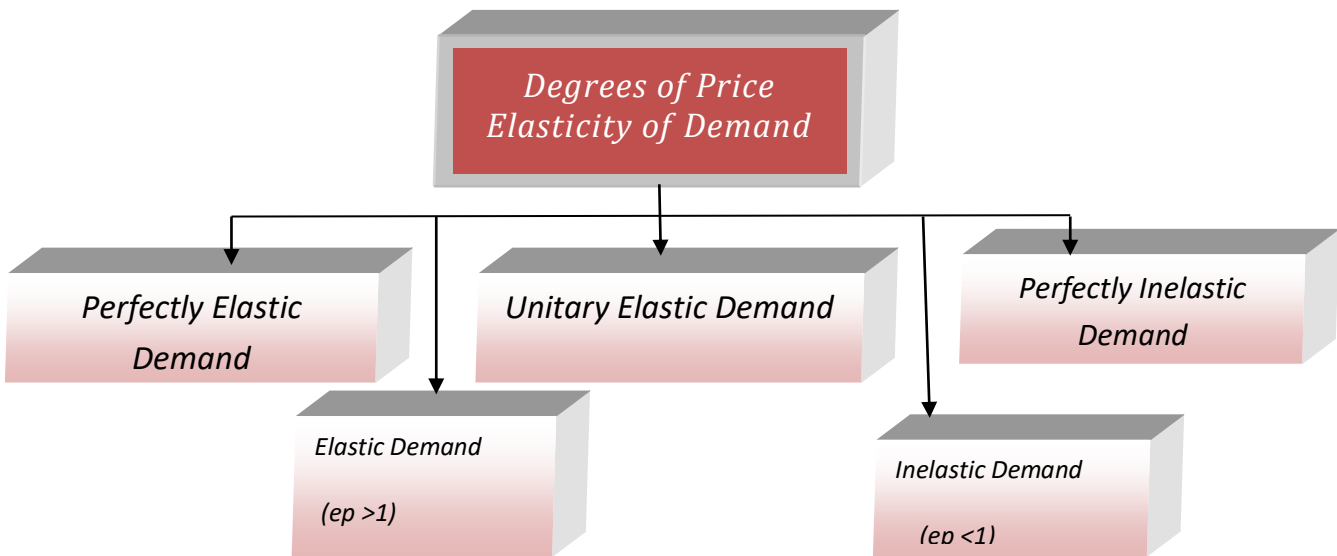
In this e-resource, we will deal with degrees of price elasticity of demand. Remember that price elasticity of demand is just an indicator of the sensitivity of demand for a given change in price. If the relative change in demand is high, we say that price elasticity of demand is very high.

Algebraically, $e_p = (-) \frac{\text{Proportionate Change in Demand for a Commodity}}{\text{Proportionate change in price of the Commodity}}$

Why is there a minus sign before this formula

It simply indicates the usual negative relation between demand for a commodity and its price. You know that for normal goods, which is the usual case, an increase in price of a commodity is followed by a fall in demand for it. So, if proportionate change in price of the commodity is positive, proportionate change in demand will be negative, and therefore, the value of fraction representing e_p will have this negative sign. However, while making conclusions, we ignore this negative sign otherwise we may arrive at absurd results.

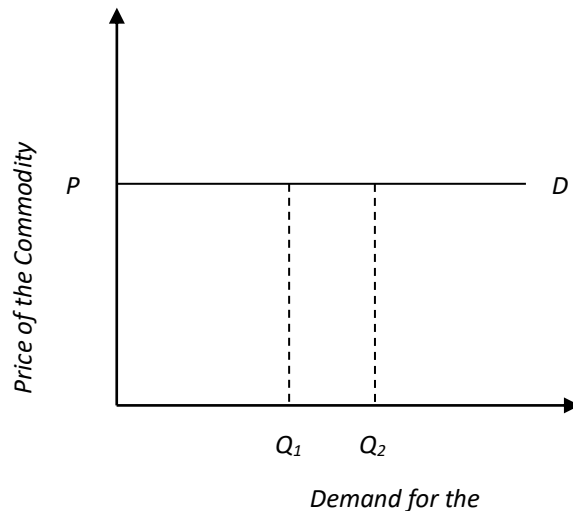
Degrees of Price Elasticity of Demand



a) Perfectly Elastic Demand

In case of perfectly elastic demand, demand for the commodity is extremely sensitive to even a very small change in price of the commodity. This kind of demand curve is usually found in case of Perfectly Competitive Markets. But at the existing price, the seller can sell any quantity.

$$e_p = \alpha$$



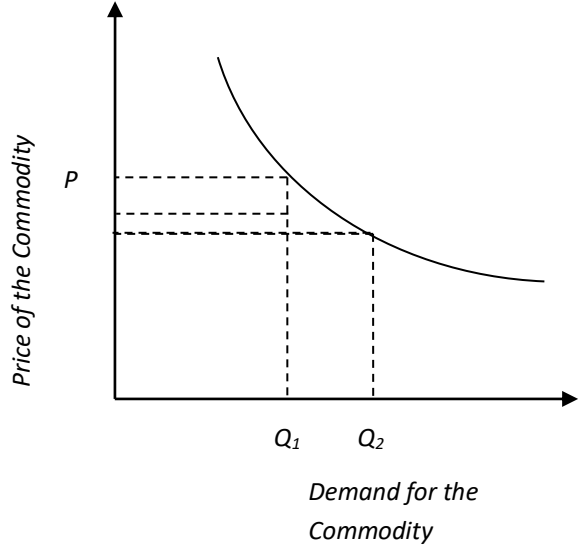
b) Elastic Demand

In this case, demand is highly elastic to change in price. We say that proportionate change in demand is greater than proportionate change in price.

$$e_d > 1$$

Here, in the figure, it is clear that even a slight change in price (P_1P_2) leads to a significant change in quantity demanded (Q_1Q_2). So, we say that demand is highly responsive to change in price of the commodity.

This kind of demand curve is found in case of luxury items. For example, demand for high end mobile phones, luxury cars etc. is highly elastic.



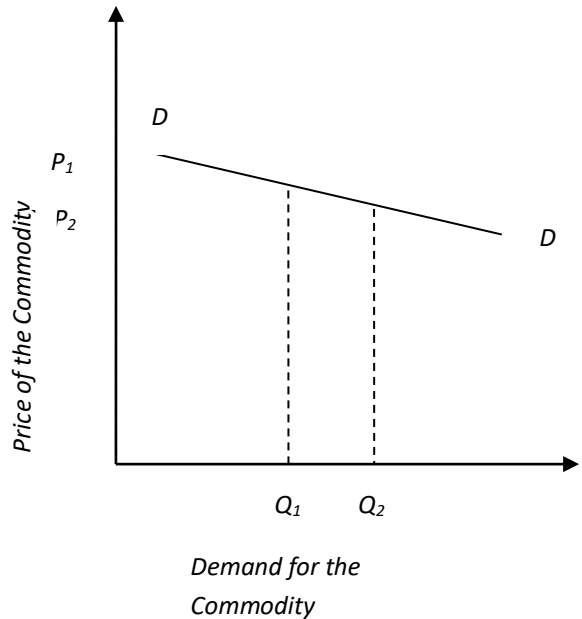
c) Unitary Elastic Demand

In case of unitary demand, whatever be the change in price of the commodity, total expenditure incurred on the commodity remains constant. This expenditure is indicated by the rectangle below a point on the demand curve.

$$e_d = 1$$

Percentage change in price = Percentage change in demand

Here, the shape of the demand curve is rectangular hyperbola.

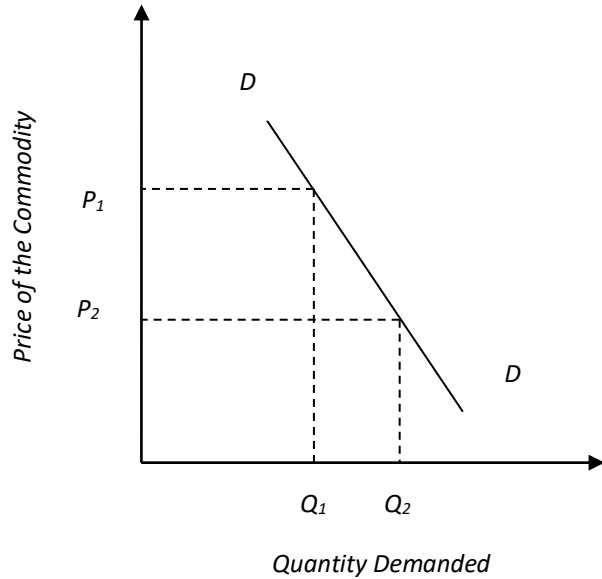


d) Inelastic Demand

Inelastic demand refers to a situation where percentage change in demand is less than percentage change in price.

$$e_d < 1$$

As is clear from the figure, even a relatively huge change in price of the commodity, produces a relatively mild change in demand for the commodity.

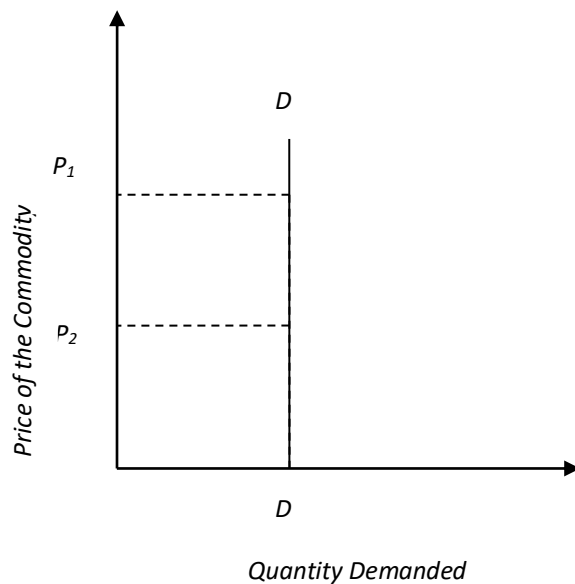


e) Perfectly Inelastic Demand

In case of perfectly inelastic demand, price ceases to matter in influencing demand. An increase or decrease in price of the commodity produces no change in demand. That is why demand curve in case of perfectly inelastic demand is vertical.

$$e_d = 0$$

As shown in the figure, in spite of change in price of the commodity, demand remains constant.



Student Activity

1. Match the following

- | | |
|-------------------------------|-------------------------------------|
| a) Perfectly Elastic Demand | Necessities |
| b) Inelastic Demand | Luxuries |
| c) Elastic Demand | Perfect Competition |
| d) Unitary Elastic Demand | Vertical Demand curve |
| e) Perfectly Inelastic Demand | Rectangular Hyperbolic Demand Curve |

2. Fill in the blanks

- a) Price elasticity of demand is _____
- b) If the relative change in demand is low, then the price elasticity of demand is _____
- c) The types of elasticity of demand are three namely

3. State whether True or False

- a) Price Elasticity of demand is not a pure number and depends on the units in which price and quantity are measured.
- b) A horizontal demand curve is perfectly inelastic.

Key

1. a) Perfect Competition
b) Necessities
c) Luxuries

d) Rectangular Hyperbolic Demand Curve

e) Vertical Demand Curve

2. a) a measure of degree of responsiveness of demand for the commodity to change in price of the commodity.

b) low

c) price elasticity of demand, income elasticity of demand, cross elasticity of demand

3. a) False

b) False