

Price elasticity of demand formula

$$\frac{\% \text{ Change in Quantity demanded}}{\% \text{ Change in price}}$$

Factors influencing Ped

The number of close substitutes

The cost of switching between products

The degree of necessity or whether the good is a luxury

The proportion of a consumer's income allocated to spending on the good

The time period allowed following a price change

Whether the good is subject to habitual consumption

Peak and off-peak demand

Price elasticity of demand

PED measures the responsiveness of quantity demanded to changes in price

If $Ped = 0$ demand is perfectly inelastic - demand does not change at all when the price changes – the demand curve will be vertical.

If Ped is between 0 and 1 (i.e. the % change in demand from A to B is smaller than the percentage change in price), then demand is inelastic.

If $Ped = 1$ (i.e. the % change in demand is exactly the same as the % change in price), then demand is unit elastic. A 15% rise in price would lead to a 15% contraction in demand leaving total spending the same at each price level.

If $Ped > 1$, then demand responds more than proportionately to a change in price i.e. demand is elastic. For example if a 10% increase in the price of a good leads to a 30% drop in demand. The price elasticity of demand for this price change is -3×10^{-1}

Ped and revenue

Knowledge of price elasticity of demand is useful for businesses to help them decide whether a change in price will affect their revenue in a positive or negative way. The table below summarises the main impacts

Change in the market	What happens to total revenue?
Ped is inelastic and a firm raises its price.	Total revenue increases
Ped is elastic and a firm lowers its price.	Total revenue increases
Ped is elastic and a firm raises price.	Total revenue decreases
Ped is -1.5 and the firm raises price by 4%	Total revenue decreases
Ped is -0.4 and the firm raises price by 30%	Total revenue increases
Ped is -0.2 and the firm lowers price by 20%	Total revenue decreases
Ped is -4.0 and the firm lowers price by 15%	Total revenue increases

Pricing strategies

1	cost plus (calculating mark up on unit cost)	The business calculates the cost of making the product and adds a mark-up, either a fixed amount or a percentage.
2	price skimming	When the price is set high at product launch to take advantage of customer anticipation of the new product e.g. a new mobile or games console
3	Penetration	Prices are set low in order for the business to penetrate a new market and quickly win new customers
4	Predatory	when a dominant firm in a sector deliberately sets prices very low in order to restrict, prevent or eliminate competition.
5	Competitive	firms set prices based on those of their competitors. This is often done where the competing products are similar in nature.
6	psychological	tactic designed to appeal to customers' emotional rather than rational responses to the pricing of goods and services. Pricing at £12.99 or £99.99 is often an indication of such a tactic.

Factors that determine the most appropriate pricing strategy for a particular situation

number of USPs/amount of differentiation
price elasticity of demand
amount of competition
strength of brand
stage in the product life cycle
costs and the need to make a profit

Types of non price competition

1	product differentiation
2	advertising and other promotional methods
3	distribution methods

Income elasticity of demand Formula

$$\frac{\% \text{ Change in Quantity Demanded}}{\% \text{ Change in Income}}$$

Income Elasticity: Luxuries and Necessities

Luxuries	Necessities
Income elasticity more than 1	Income elasticity less than 1, but more than 0
As income grows, proportionally more is spent on luxuries	As income grows, proportionally less is spent on necessities
Examples:	Examples:
Consumer goods Expensive holidays Branded goods	Staple groceries (e.g. milk) Own-label goods