

LECTURE 1.5

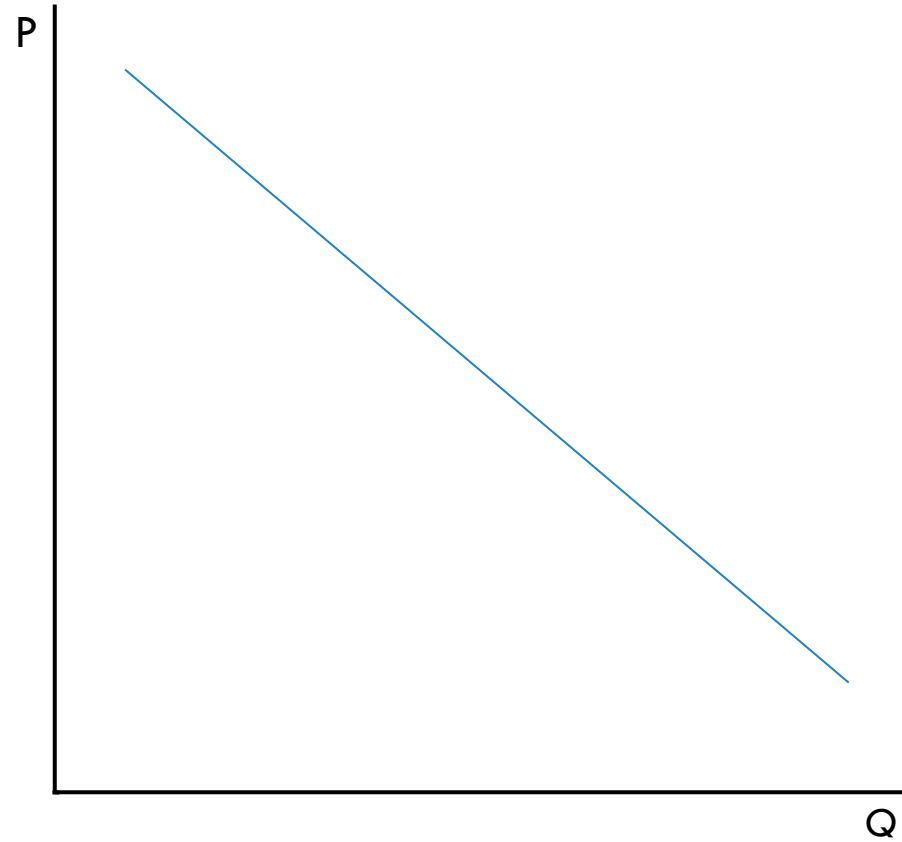
CONCEPTS: DEMAND AND ELASTICITY

DEMAND

Demand follows from the optimisation of economic agents:

- Maximise utility subject to a budget constraint → demand curve
- Relationship between price and quantity: the demand curve shows the quantity of a product consumers will purchase at different prices
- Law of demand: demand curves slope down. The lower the price, the greater the quantity demanded

A DEMAND CURVE



The height of the demand curve measures willingness to pay

ELASTICITY

A firm is considering increasing the price of their product. The law of demand suggests they will lose some sales. The price elasticity of demand is the sensitivity of demand to price.

Own price elasticity of demand:

$$\eta = \frac{dQ}{dP} \frac{P}{Q}$$

$\eta < 1$, demand is inelastic

$\eta > 1$, demand is elastic

This number can be thought of as the percentage change in quantity from a 1% change in price.

Revenue:

$$TR = P(Q)Q$$

$$MR = P(Q) \left[1 - \frac{1}{\eta} \right]$$

If demand is elastic, the marginal revenue is positive. A reduction in price will lead to an increase in demand that will increase total sales revenue. If inelastic, the marginal revenue is negative and a reduction in price will lead to lower sales revenue.