Higher

Economics

HSN80012
Unit 1 Topic 2

Contents

Demand 1

Economic Objectives of Consumers 1
Law of Diminishing Marginal Utility 1
Theory of Demand 1
The Demand Curve 2
Income and Substitution Effects 2
Movements along the Demand Curve 3
Shifts of the Demand Curve 4
Exceptions to the Law of Demand 6
Price Elasticity of Demand (PED) 6
Price Elasticity of Demand and Sales Revenue 8
Factors Influencing Price Elasticity of Demand 9
Uses of Price Elasticity of Demand 9
Income Elasticity of Demand (YED) 10
Uses of Income Elasticity of Demand 10

This document was produced specially for the HSN.uk.net website, and we require that any copies or derivative works attribute the work to us.

For more details about the copyright on these notes, please see http://creativecommons.org/licenses/by-nc-sa/2.0/

Topic 2 – Demand

Economic Objectives of Consumers

A consumer is any individual or group of individuals (e.g. a firm) who purchase and consume goods and services. Consumers are said to gain satisfaction from any goods and services they consume; in economics, this satisfaction is known as *utility*. It is assumed that consumers act rationally to spend their money in a way that will maximise their utility. This means they will spend their income in a way that brings them the greatest level of satisfaction. In other words this could mean they buy goods and services which given them the 'best value for money'.

Utility can be split into two types:

- marginal utility i.e. the satisfaction gained from consuming one more unit of a good
- total utility i.e. the satisfaction gained from all the units of a good consumed over a period of time

Law of Diminishing Marginal Utility

This law states that as a person consumes one extra unit of a commodity to satisfy their wants, the satisfaction gained from each additional unit consumed will decrease. Basically this means that successive consumption of a good leads to lower levels of satisfaction from consuming them.

For example, say a person buys a bar of chocolate for £0.30. The utility gained from this is 5 units. Depending on how hungry the person is they may buy another chocolate bar for the same price and gain the same amount of satisfaction from it. However, soon afterwards the person begins to feel unwell. Consequently they would not be willing to pay as much for another bar of chocolate as the utility they would gain from it would be less.

Theory of Demand

Demand can be defined as the quantity of goods and services consumers are willing to buy. There are two types of demand:

- latent demand – the desire for goods and services cannot be met by the ability to pay for them
- effective demand – the desire for goods and services is backed by the ability to pay for them

In the Higher course, the word 'demand' refers to 'effective demand', unless otherwise stated.

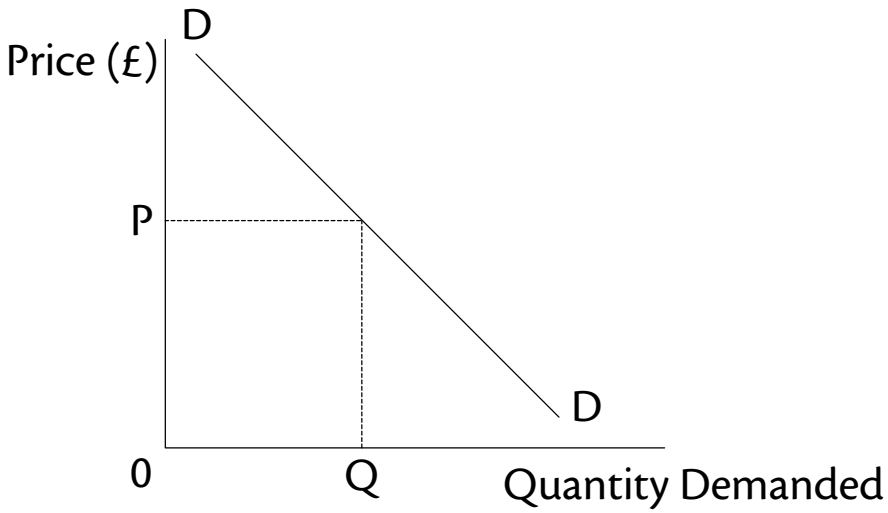
Demand can also be categorised into either:

- individual demand – the demand of a single consumer for a product
- market demand – the sum of all demand for products by all individuals

A *demand schedule* is used to illustrate all the quantities demanded of a particular good at different prices. It is shown in a table format. More commonly, this is shown using a demand curve.

The Demand Curve

A demand curve shows the relationship between the quantities demanded of a product and their price.



The demand curve is based on the *law of demand*. This states that there is an inverse relationship between quantity demanded and the price of a good. For *normal goods*, more is demanded as price falls, and less is demanded as price rises, *ceteris paribus*. This fits in with the law of demand.

Ceteris paribus is a Latin phrase meaning 'other things remaining unchanged'. In this context it means more of a good will be demanded when its price falls, only where no other variables have changed. Factors other than price which determine demand are outlined later.

Income and Substitution Effects

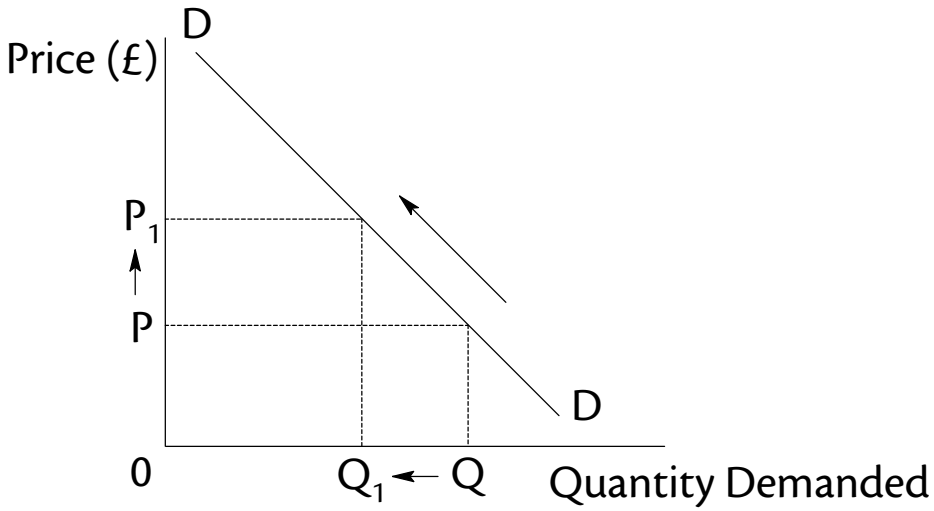
The law of demand is based on these two effects:

- income effect – as we earn more income we have more money available to spend and therefore our purchasing power increases; as a result we buy more goods and services as we have the ability to do so; the more money we have, the more we buy, hence the law of demand
- substitution effect – as a good rises in price less people will buy it as it is more expensive; more people will begin buying a similar good as it is cheaper, hence the law of demand e.g. if the price of tea rises, consumers may switch to the cheaper substitute coffee

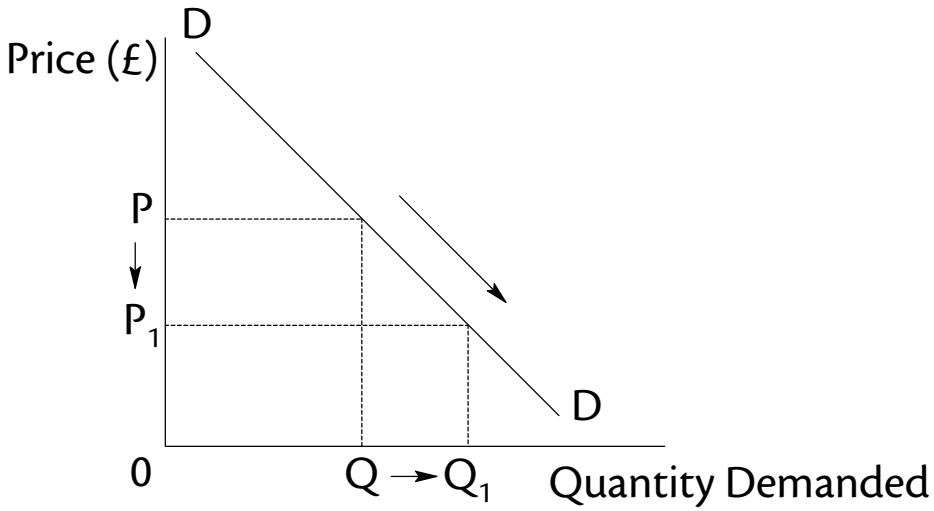
Movements along the Demand Curve

A movement along the demand curve shows demand changing when price changes.

Increasing prices leads to a fall in the quantity demanded. This is known as a *contraction* of demand, as shown below.



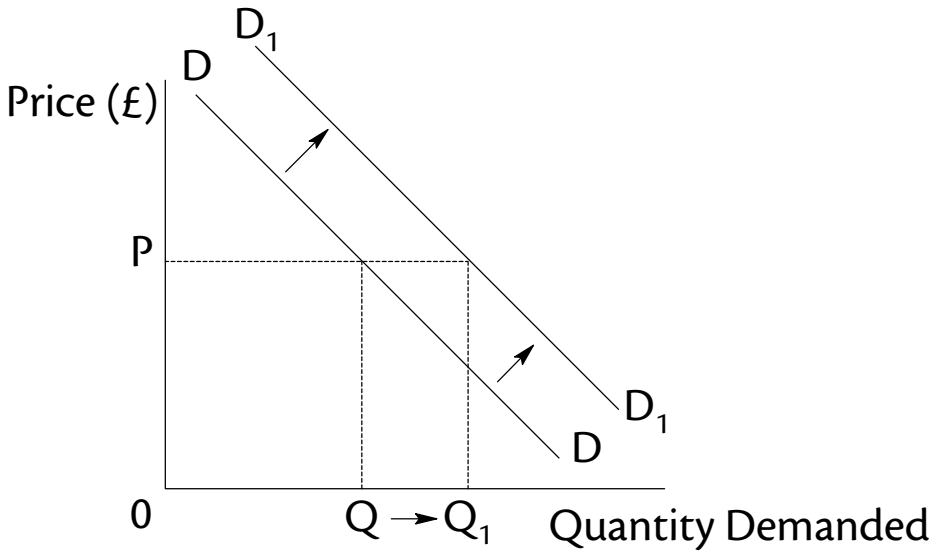
Decreasing prices leads to a rise in the quantity demanded. This is known as an *extension* of demand, as shown below.



Shifts of the Demand Curve

Factors which determine demand, other than price, can be shown by a shift in the demand curve. This means that at every price there will be an increase or decrease in the quantity demanded.

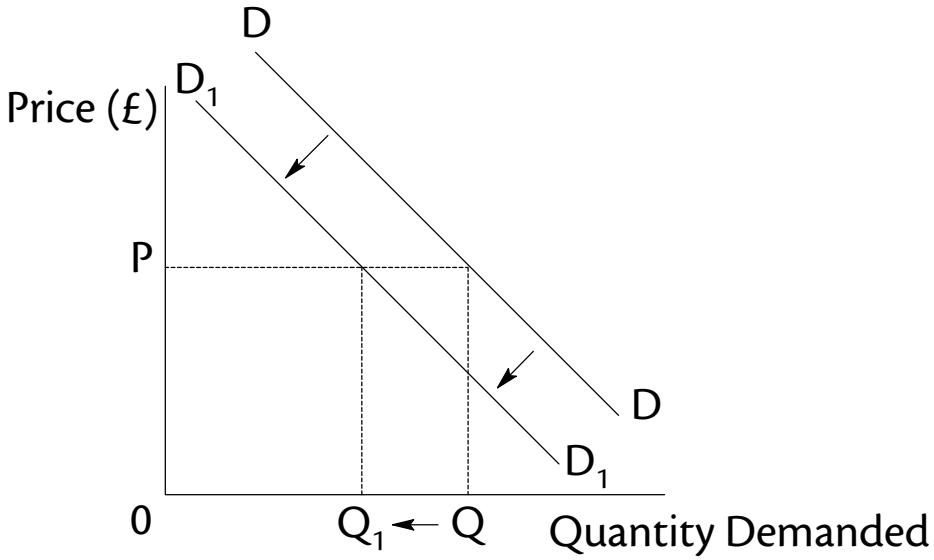
When demand increases the demand curve shifts outwards from left to right (DD to D_1D_1), as shown below.



The factors which could cause the demand curve to shift outwards are:

- real incomes have risen meaning individuals have greater purchasing power and can therefore afford more goods and services
- income tax may have fallen meaning consumers have more disposable income and can therefore buy more commodities
- a rise in population meaning there are more consumers interested in buying goods and services
- changes in weather e.g. cold weather increases the demand for gloves and scarves; hot weather increases the demand for ice cream and cold drinks
- changes in tastes in favour of a good; if a good is more fashionable more people will be interested in buying it
- increased prices of substitutes (substitution effect) e.g. increasing coffee prices can lead to an increase in demand for the relatively cheaper tea
- deceasing prices of compliment goods i.e. goods that go together, e.g. falling prices of cars may lead to increased demand for petrol
- effective advertising campaigns so new consumers join the market as they hear about these goods and services
- falling interest rates means consumers find it cheaper to borrow so they have more money to spend on goods and services
- government legislation e.g. increasing airport security following terrorist threats leads to increased demand for metal detecting machinery and security features at airports

When demand decreases the demand curve shifts inwards from right to left (DD to D_1D_1), as shown below.

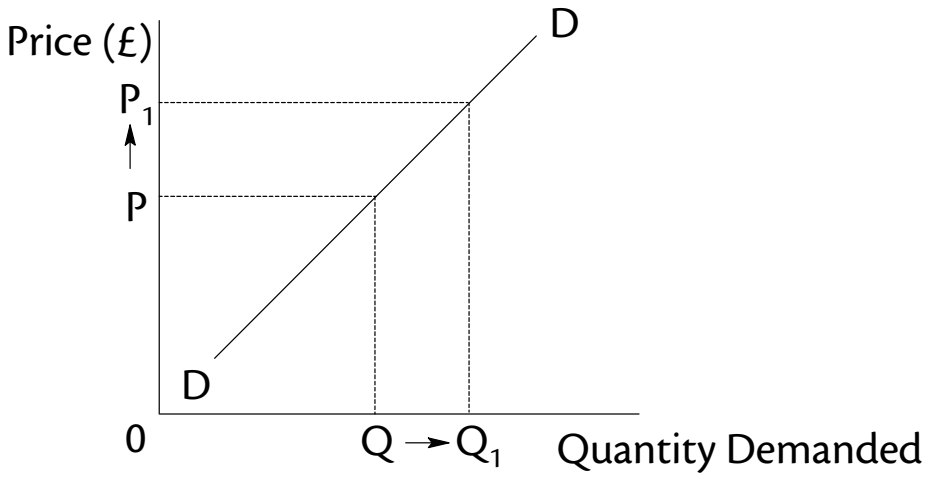


The factors which could cause the demand curve to shift inwards are:

- real incomes have fallen meaning individuals have less purchasing power and can therefore afford less goods and services
- income tax may have risen meaning consumers have less disposable income and can therefore buy less commodities
- a fall in population means there are less consumers interested in buying goods and services
- changes in weather e.g. hot weather decreases the demand for gloves and scarves; cold weather decreases the demand for ice cream and cold drinks
- changes in tastes against a good; if a good is less fashionable less people will be interested in buying it
- falling prices of substitutes (substitution effect) e.g. falling butter prices can lead to a fall in demand for the relatively dearer margarine
- increasing prices of compliment goods e.g. if the price of cars increases the demand for petrol is likely to fall
- negative advertising campaigns e.g. NHS Scotland produce television adverts in an attempt to warn people of the dangers of smoking, this type of advert can reduce the demand for tobacco
- increasing interest rates means the cost of borrowing is greater and consumers have less money to spend on goods and services
- government legislation e.g. increasing the legal drinking age could lead to a fall in demand for alcohol

Exceptions to the Law of Demand

Some circumstances arise when the demand curve will slope upwards from left to right, rather than downwards. The law of demand applies to 'normal goods', but there are also other types of goods where the law of demand does not apply. In these cases, more is demanded as price increases.



This can occur with:

- ostentatious goods – in these cases people want to be seen as rich by buying more expensive goods; these goods have 'snob-appeal' e.g. branded clothing
- the belief that higher prices means higher quality
- inferior/giffen goods – these goods are bought by people that are so poor that they cannot afford to buy anything else, and therefore spend all their income on such goods even if they are becoming more expensive

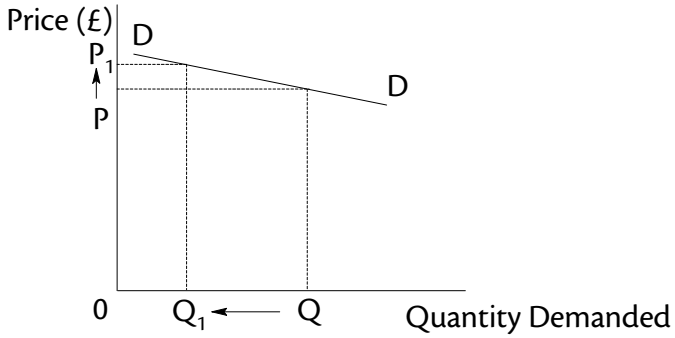
Price Elasticity of Demand (PED)

This is a measure of how responsive demand is to a change in the price of a good. It is measured using the formula:

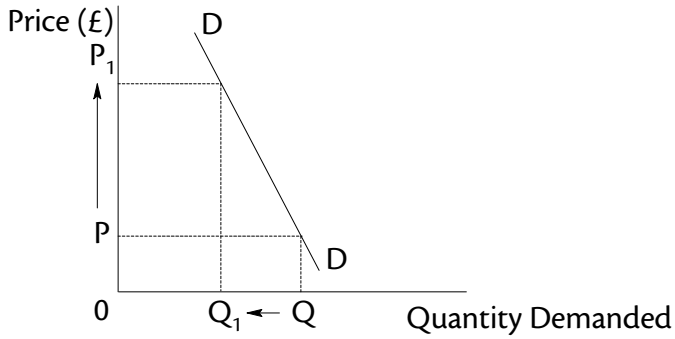
$$\text{PED} = \frac{\text{percentage change in demand}}{\text{percentage change in price}}$$

There are five possible types of price elasticity of demand based on the result of this formula:

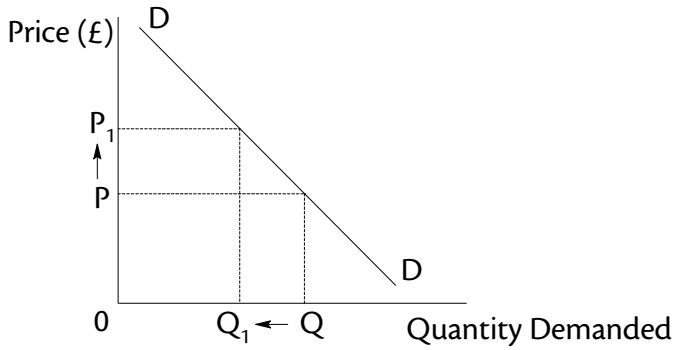
- demand is price elastic when PED > 1; the percentage change in demand is greater than the percentage change in price e.g. holidays, cars, TVs



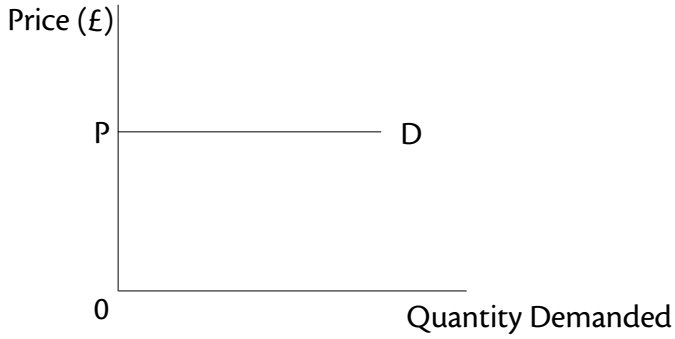
- demand is price inelastic when PED < 1; the percentage change in demand is less than the percentage change in price e.g. newspapers, bread, petrol



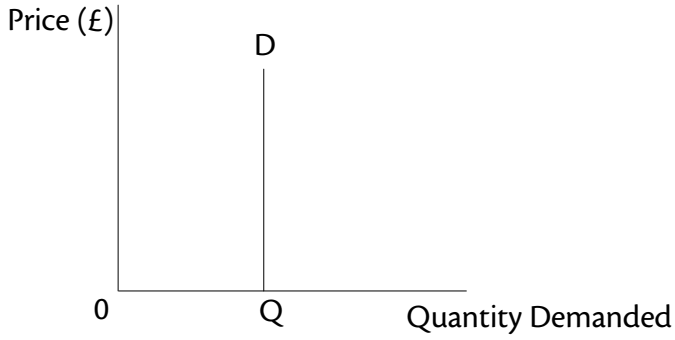
- demand is price unit elastic when PED = 1; the percentage change in demand is equal to the percentage change in price



- demand is price perfectly elastic when the percentage change in price is 0 and percentage change in demand is infinitive; people will no longer buy if prices increase



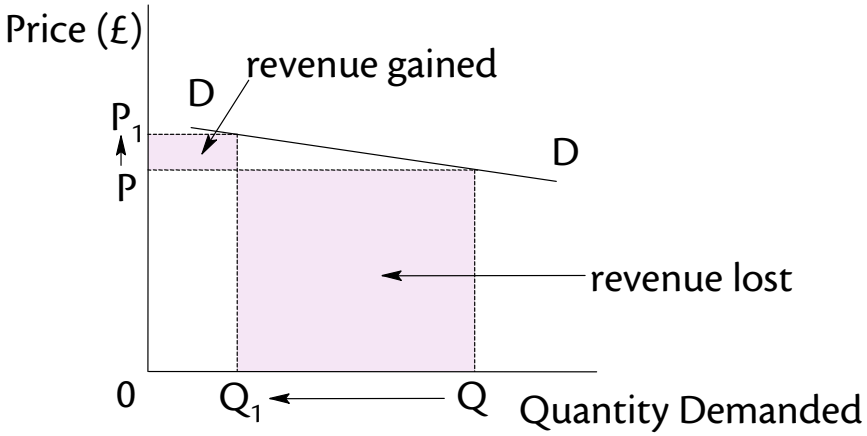
- demand is perfectly inelastic when the percentage change in price is 0; regardless of price consumers demand the exact same quantity of a good or service



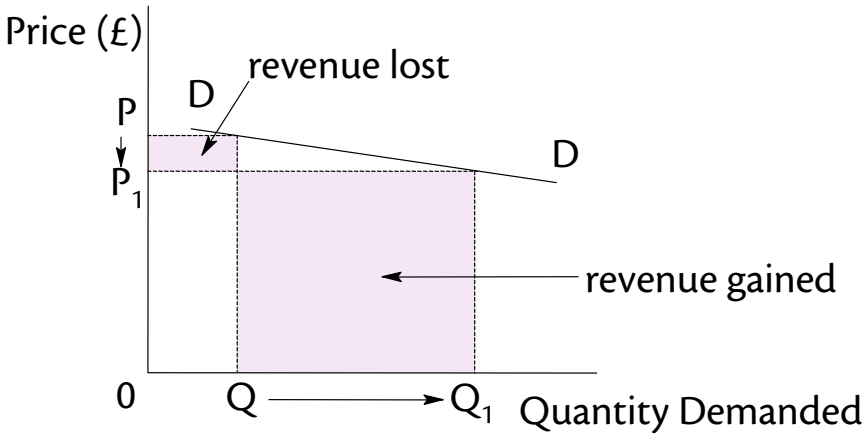
Price Elasticity of Demand and Sales Revenue

Price elasticity of demand can determine a firm's revenue if they change prices.

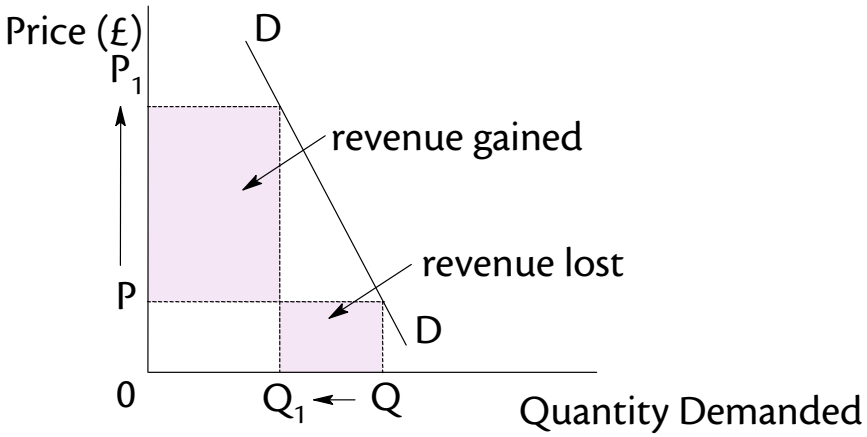
If PED is elastic a rise in price will lead to a more than proportionate fall in demand. The revenue gained from the price increase will be less than the revenue lost from the fall in demand. Revenue will fall overall.



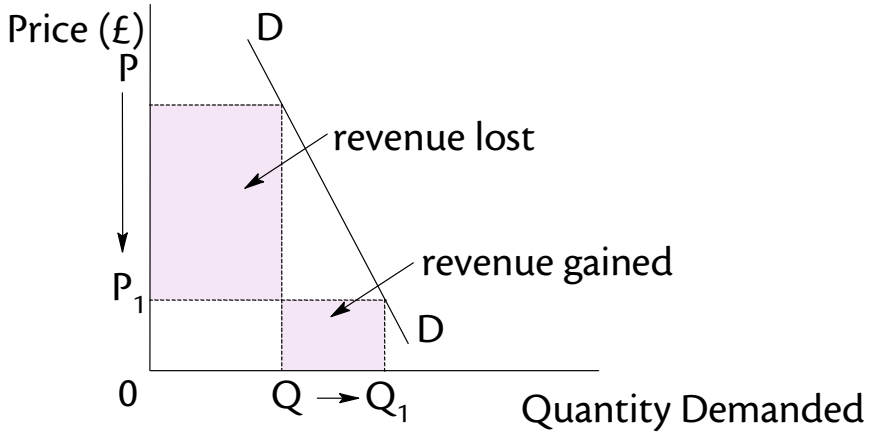
Conversely, a fall in price will lead to increased revenue overall. Demand will increase by a greater percentage than the change in price. The revenue lost from the fall in price will be less than the revenue gained from the rise in demand.



If PED is inelastic a rise in price will lead to a less than proportionate fall in demand. The revenue gained from the price increase will be greater than the revenue lost from the fall in demand. Revenue will rise overall.



Conversely, a fall in price will lead to decreased revenue overall. Demand will increase by a smaller percentage than the change in price. The revenue lost from the fall in price will be more than the revenue gained from the rise in demand.



Factors Influencing Price Elasticity of Demand

There are a number of factors which influence PED:

- availability of substitutes – if a firm increases the price of its goods, consumers can easily switch to a cheaper substitute; PED will be more elastic
- time period – over time consumers are able to find substitutes so PED is elastic; however in the short run substitutes may not be easily obtainable so PED is inelastic
- type of good – habit forming goods and fashionable goods e.g. cigarettes, designer clothes, tend to be price inelastic as people still buy them regardless of their price
- proportion of income spent on the good – goods which consumers do not spend much of their income on tend to be price inelastic e.g. matches; consumers are not very sensitive to these price changes
- frequency of purchase – goods which are bought often and classed as necessities e.g. milk, are price inelastic; goods which can be bought over time such as computers are more price elastic
- whether demand is taken for one type of good or for a particular brand of a good – if we look at the PED for petrol in general it is likely to be inelastic as changes in prices won't result in huge changes in demand as people still require it; if we look at the PED for petrol from BP stations it is likely to be elastic as consumers can easily switch to substitutes e.g. Shell or Esso stations

Uses of Price Elasticity of Demand

There are two key uses of PED:

- firms use it to determine their prices; depending on the PED for their products, they can judge whether rises in prices will lead to increased or decreased revenue
- governments also use it to determine whether changes in taxes will have a positive or negative effect on government revenue

Income Elasticity of Demand (YED)

This is a measure of how responsive demand is to a change in a consumer's income. It is measured using the formula:

$$\text{YED} = \frac{\text{percentage change in demand}}{\text{percentage change in income}}$$

For normal goods, YED will be positive. This is because as income rises, the quantity demanded will also rise. If YED > 1, demand is income elastic e.g. holidays abroad, cars, private education. If YED < 1, demand is income inelastic e.g. bread, salt, milk.

For inferior/giffen goods, YED will be negative. This is because as income rises, the quantity demanded will decrease e.g. fish fingers, poor quality clothing, public transport.

Uses of Income Elasticity of Demand

The two uses of YED are:

- firms can estimate how their revenue will change following a change in income
- the government can estimate how their revenue will change following changes in income tax