

# Edexcel Economics (A) A-level






## **Theme 1: Introduction to Markets and Market Failure**

### **1.2 How Markets Work**

#### **Summary Notes**




## 1.2.1 Rational Decision Making

-  This is an area of behavioural economics.
-  When making economic decisions, consumers aim to maximise their utility and firms aim to maximise profits.
-  A consumer's utility is the total satisfaction received from consuming a good or service.
-  Daniel Kahneman is a Nobel Prize winner in Economic Sciences, which he won for his work on behavioural economics. He devised a two-system model which explains how decisions are made.
  - The first system is based on common sense estimates and emotional responses to the choice made. It uses short cuts and quick decisions are made. This is the dominant system, but the bias and potential for error in the system can mean irrational decisions could be made.
  - The second system takes longer than the first. It uses thoughts and reflections, and avoids the bias and errors from the first system. However, because of how easily the system is manipulated, the decisions made could be harmful to the consumer or others around them.
-  A firm or an individual can make decisions using intuition or rationally. Intuition uses the feelings or instincts of the consumer and does not use facts. Businesses use this when they do not have access to facts or when making the decision is difficult. A rational decision is made using several steps, and it involves analysis and facts.




- 1) **Identify the problem:** For a firm, this might be falling profits.
- 2) **Find and identify the decision criteria:** The firm might have to find information or criteria that will increase their profits. The firm's criteria might include, for example, keep a certain number of employees or to not change the price of their goods. The criteria might include how the decision will affect stakeholders (the customer and the staff, for instance), and how the quality might be affected.
- 3) **Weigh the criteria:** The firm will have to rank the criteria based on their relative importance. They might think keeping all of their employees is the most important, for example.
- 4) **Generate alternatives:** The firm might consider some alternative options. For instance, they might think that moving their premises somewhere else will reduce costs and hence increase profits. Perhaps they will consider a loyalty scheme or a promotion for the consumer. Alternatively, they might decide to reduce the size of their workforce.
- 5) **Evaluate alternative options:** The firm might now consider which of the alternatives meet their criteria the best, and help them increase their profits the most.
- 6) **Choose the best alternative:** Now the firm will choose the alternative they think meets their criteria.
- 7) **Carry out the decision:** The firm can now see what the consequences of the decision are.
- 8) **Evaluate the decision:** After seeing what effect the decision has on the firm, they can consider whether this was the best option or not.

#### **Limitations:**

-  This is not always the best or most realistic way for firms to make decisions. Although it might be fairer than making an intuitive decision, it takes significantly longer to decide, which is not practical in a firm with strict time constraints.



#### **The Administrative Man:**

-  Herbert Simon recognised these limitations, so he devised the **bounded rationality model**, which is also known as the administrative man theory.

-  The assumptions of this model are:



- The first alternative that is satisfactory is selected
- The decision maker recognises that they perceive the world as simple
- The decision maker recognises the need to be comfortable making decisions without considering every alternative
- Decisions could be made by heuristics.



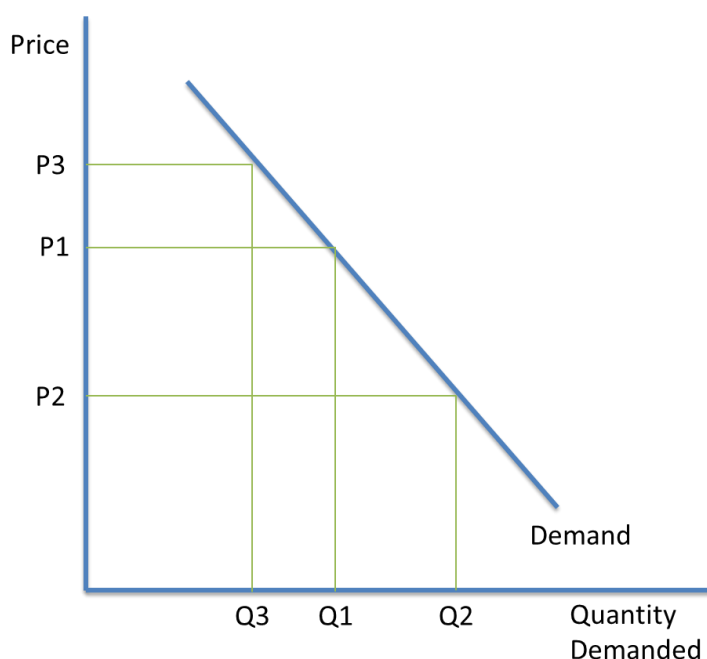
-  Heuristics simplify the decision making process to come to a reasonable decision. They are shortcuts to avoid taking too long to make the decision, and they avoid the problem of having imperfect information or limited time.
-  For example, the consumer might use common sense or intuition. They might consider how it is cheaper to buy goods in the sale. They might have pre-decided criteria, or a rule-of-thumb, and only buy the good if it is in a sale. This could lead to irrational decisions being made.




## 1.2.2 Demand

-  Demand is the **quantity of a good or service that consumers are able and willing to buy at a given price during a given period of time.**
-  Demand varies with price. Generally, the lower the price, the more affordable the good and so consumer demand increases. This can be illustrated with the demand curve.

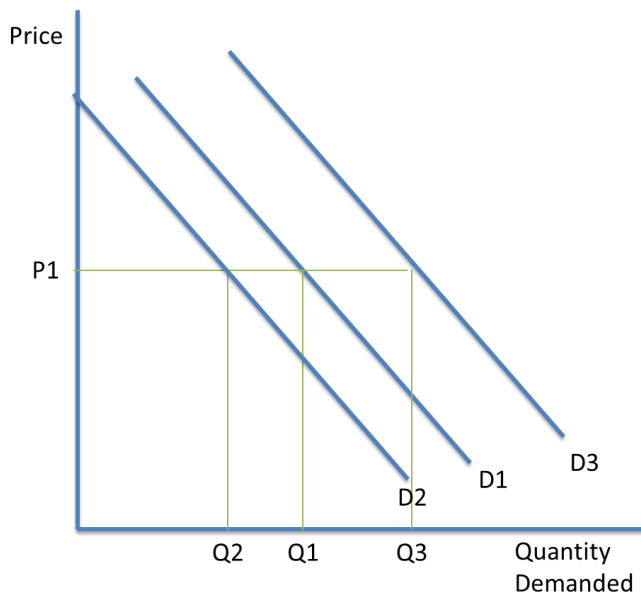
### **Movements along the demand curve:**





-  At price P1, a quantity of Q1 is demanded. At the lower price of P2, a larger quantity of Q2 is demanded. This is an **expansion** of demand. At the higher price of P3, a lower quantity of Q3 is demanded. This is a **contraction** of demand. Only changes in price will cause these movements along the demand curve.



### Shifting the demand curve:



 Price changes do not shift the demand curve. A shift from D1 to D2 is an inward shift in demand, so a lower quantity of goods is demanded at the market price of P1. A shift from D1 to D3 is an outward shift in demand. More goods are demanded at the market price of P1.


 The factors that shift the demand curve can be remembered using the mnemonic PIRATES:


- **P- Population.** The larger the population, the higher the demand. Changing the structure of the population also affects demand, such as the distribution of different age groups.
- **I- Income.** If consumers have more disposable income, they are able to afford more goods, so demand increases.
- **R- Related goods.** Related goods are **substitutes** or **complements**. A substitute can replace another good, such as two different brands of TV. If the price of the substitute falls, the quantity demanded of the original good will fall because consumers will switch to the cheaper option. A complement goes with another good, such as strawberries and cream. If the price of strawberries increases, the demand for cream will fall because fewer people will be buying strawberries, and hence fewer people will be buying cream.
- **A- Advertising.** This will increase consumer loyalty to the good and increase demand.
- **T- Tastes and fashions.** The demand curve will also shift if consumer tastes change. For example, the demand for physical books might fall, if consumers start preferring to read e-books.




- **E- Expectations.** This is of future price changes. If speculators expect the price of shares in a company to increase in the future, demand is likely to increase in the present.
- **S- Seasons.** Demand changes according to the season. For example, in the summer, the demand for ice cream and sun lotions increases.


### **Types of demand:**


 **Derived demand:** This is when the demand for one good is linked to the demand for a related good. For example, the demand for bricks is derived from the demand for the building of new houses. The demand for labour is derived from the goods the labour produces. For example, if the demand for cars increases, the demand for the labour to produce those cars will increase.


 **Composite demand:** This is when the good demanded has more than one use. An example could be milk. Assuming there is a fixed supply of milk, an increase in the demand for cheese will mean that more cheese is supplied, and therefore less butter can be supplied.

 **Joint demand:** This is when goods are bought together, such as a camera and a memory card.

### **Diminishing marginal utility:**

 The demand curve is downward sloping, showing the inverse relationship between price and quantity.


 The law of diminishing marginal utility states that as an extra unit of the good is consumed, the marginal utility, i.e. the benefit derived from consuming the good, falls. Therefore, consumers are willing to pay less for the good.

 This can be explained using the example of chocolate. The first chocolate bar will benefit the consumer more, because it satisfies more of their needs, and so the consumer is willing to pay more for it. The second bar will satisfy the consumer less, because they have less need for it, and the consumer will be willing to pay less for it. Eventually the utility derived will become zero.




## 1.2.3 Price, Income and Cross Elasticities of Demand


### Price elasticity of demand

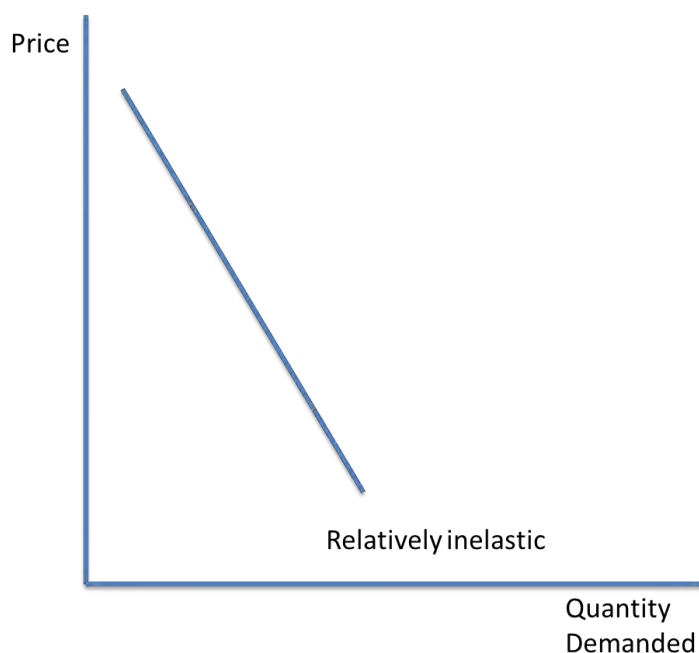
 The price elasticity of demand is the responsiveness of a change in demand to a change in price. The formula for this is:

$$PED = \frac{\% \Delta QD}{\% \Delta P}$$


 A price elastic good is very responsive to a change in price. In other words, the change in price leads to an even bigger change in demand. The numerical value for PED is  $|PED| > 1$ .

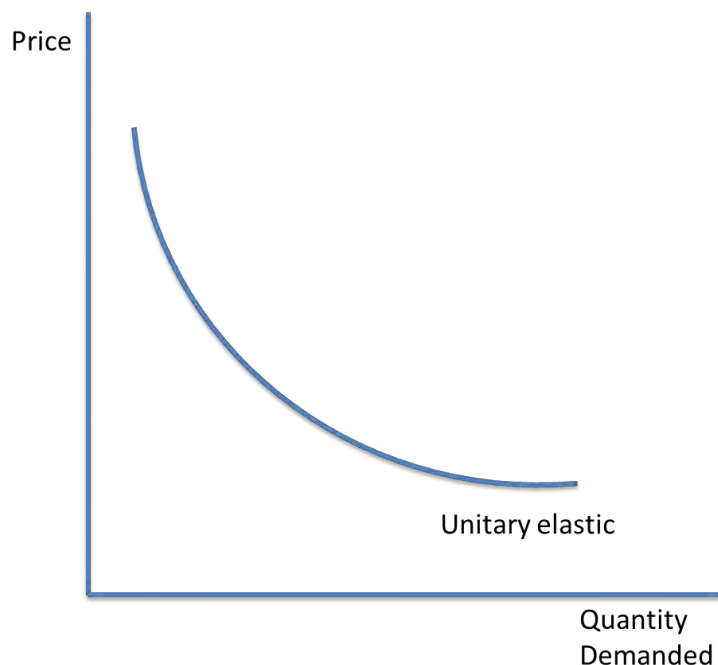



 A price inelastic good has a demand that is relatively unresponsive to a change in price. PED is  $|PED| < 1$ .






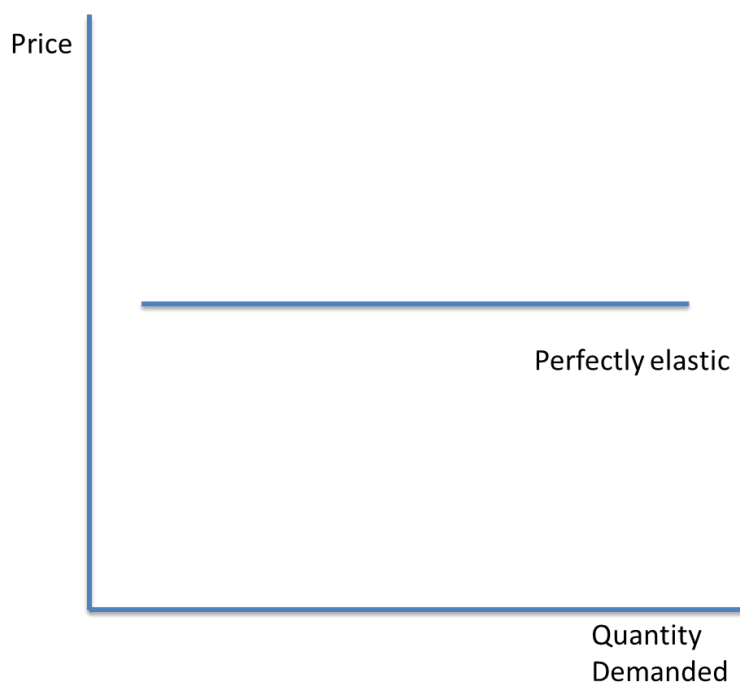
-  A unitary elastic good has a change in demand which is equal to the change in price.  $PED = 1$ . The demand curve for a good with a  $PED$  of 1 is a curve because for a 1% decrease in the price there is a 1% increase in the quantity demanded. This relationship between price and quantity demanded forms the curve seen below.




-  A perfectly inelastic good has a demand which does not change when price changes.  $PED = 0$ .



-  A perfectly elastic good has a demand which falls to zero when price changes.  $PED = \infty$ .



-  If the price of bread increased by 20%, and the quantity demanded decreased by 15%, the PED of bread is:  $-15\% / 20\% = -0.75$ . Since the modulus of the value is less than 1, bread is relatively price inelastic.

 **Factors influencing PED:**


**1) Necessity:**

A necessary good, such as bread or electricity, will have a relatively inelastic demand. In other words, even if the price increases significantly, consumers will still demand bread and electricity, because they need it. Luxury goods, such as holidays, are more elastic. If the price of flights increases, the demand is likely to fall significantly.

**2) Substitutes:**

If the good has several substitutes, such as Android phones instead of iPhones, then the demand is more price elastic. The elasticity can also change within markets. For example, the market for bread is less elastic than the market for white bread. This is because there are fewer substitutes for bread in general, but there are several substitutes for white bread. Hence, white bread is more price elastic. The closer and more available the substitutes are, the more price elastic the demand.



 Elasticity also changes in the long and short run. In the long run, consumers have time to respond and find a substitute, so demand becomes more price elastic. In the short run, consumers do not have this time, so demand is more inelastic.

**3) Addictiveness or habitual consumption:**

The demand for goods such as cigarettes is not sensitive to a change in price because consumers become addicted to them, and therefore continue demanding the cigarettes, even if the price increases.

**4) Proportion of income spent on the good:**

If the good only takes up a small proportion of income, such as a magazine which increases in price from £1.50 to £2, demand is likely to be relatively price inelastic. If the good takes up a significant proportion of income, such as a car which increases in price from £15,000 to £20,000, the demand is likely to be more price elastic.


**5) Durability of the good:**


A good which lasts a long time, such a washing machine, has a more elastic demand because consumers wait to buy another one.

**6) Peak and off-peak demand:**

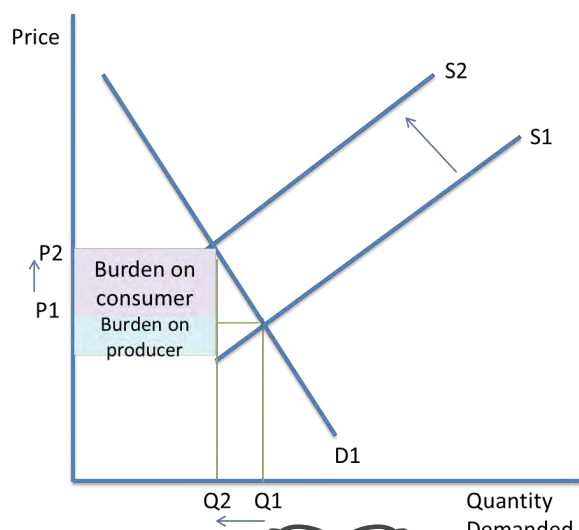
During peak times, such as 9am and 5pm for trains, the demand for tickets is more price inelastic.



 **Elasticity of demand and tax revenue:**

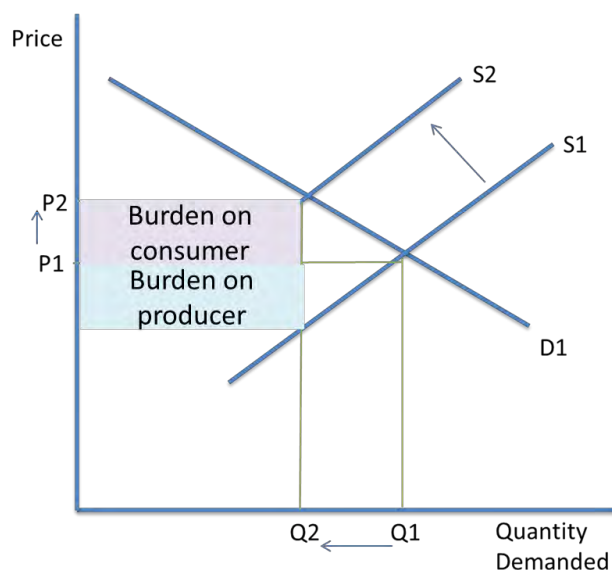
 The burden, or incidence, of an indirect tax will fall differently on consumers and firms, depending on if the good has an elastic or inelastic demand. It is important to note, however, that taxes shift the supply curve, not the demand curve.

 If a firm sells a good with an inelastic demand, they are likely to put most of the tax burden on the consumer, because they know a price increase will not cause demand to fall significantly. An increase in tax will decrease supply from  $S_1$  to  $S_2$ , which increases price from  $P_1$  to  $P_2$ , and therefore demand contracts from  $Q_1$  to  $Q_2$ .

This is most effective for raising government revenue.

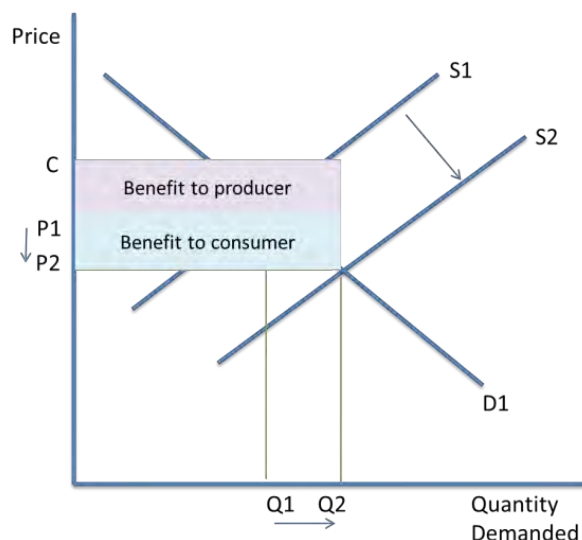


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 If a firm sells a good with an elastic demand, they are likely to take most of the tax burden upon themselves. This is because they know if the price of the good increases, demand is likely to fall, which will lower their overall revenue.
- 
 This is not as effective for raising government revenue, but if a government wants to reduce the demand of a particular good, it is effective. Demand will fall significantly, from  $Q_1$  to  $Q_2$ .







**Elasticity of demand and subsidies:**

A subsidy is a payment from the government to firms to encourage the production of a good and to lower their average costs. It has the opposite effect of a tax because it increases supply. The benefit of the subsidy can go to both the producer, in the form of increased revenue ( $C-P_1$ ), or to the consumer, in the form of lower prices ( $P_1-P_2$ ).






### **PED and total revenue:**

-  Total revenue is equal to average price times quantity sold.  $TR = P \times Q$
-  If a good has an inelastic demand, the firm can raise its price, and quantity sold will not fall significantly. This will increase total revenue.
-  If a good has an elastic demand and the firm raises its price, quantity sold will fall. This will reduce total revenue.







### **Income elasticity of demand**

-  Income elasticity of demand is the responsiveness of a change in demand to a change in income. The formula for this is:

$$YED = \frac{\% \Delta QD}{\% \Delta Y}$$




### **Inferior, normal and luxury goods:**

-  Inferior goods are those which see a fall in demand as income increases. For example, the 'value' options at supermarkets could be seen as inferior. As income increases, consumers switch to branded goods.  $YED < 0$ .
-  With normal goods, demand increases as income increases.  $YED > 0$ .
-  With luxury goods, an increase in income causes an even bigger increase in demand.  $YED > 1$ . For example, a holiday is a luxury good. Luxury goods are also normal goods, and they have an elastic income.
-  During periods of prosperity, such as economic growth when real incomes are rising, firms might switch to producing more luxury goods and fewer inferior goods, because demand for luxury goods will be increasing.




### **Cross elasticity of demand**

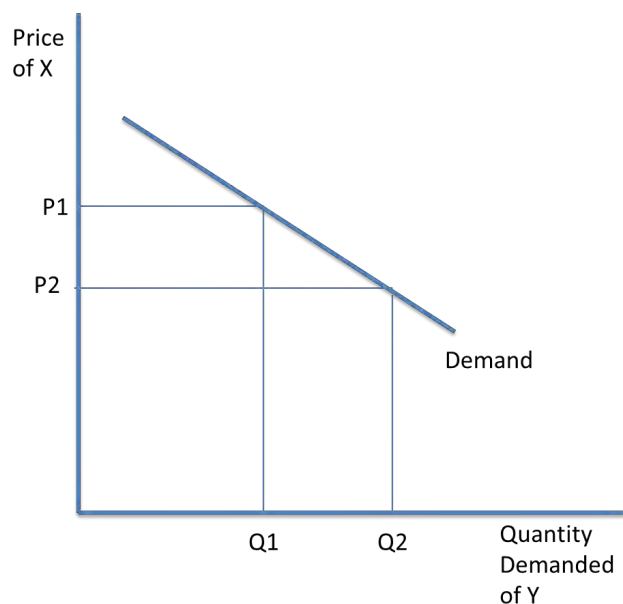
-  Cross elasticity of demand is the responsiveness of a change in demand of one good, X, to a change in price of another good, Y. The formula for this is:

$$XED = \frac{\% \Delta QD \text{ of } X}{\% \Delta P \text{ of } Y}$$

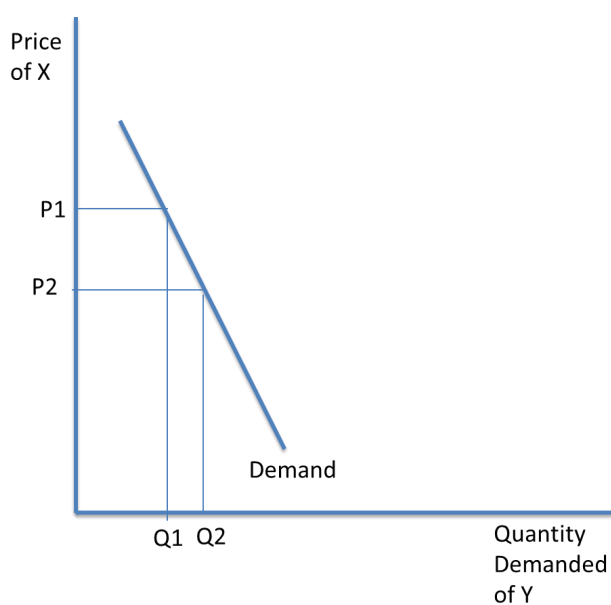


## Complements, substitutes and unrelated goods:

-  Complementary goods have a negative XED. If one good becomes more expensive, the quantity demanded for both goods will fall.
  - Close complements: a small fall in the price of good X leads to a large increase in QD of Y.

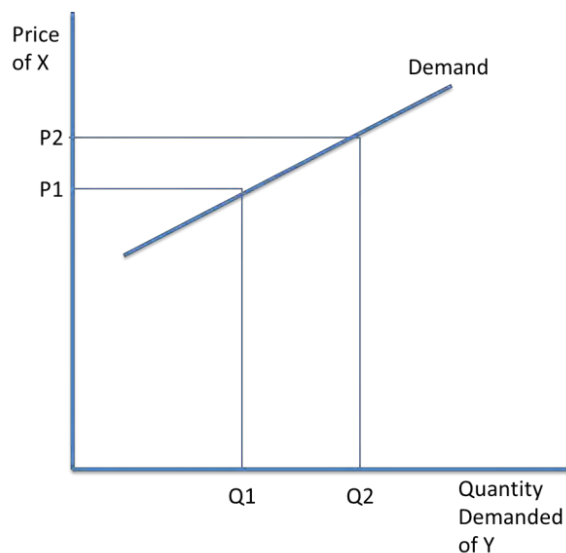


- Weak complements: a large fall in the price of good X leads to only a small increase in QD of Y.



Substitutes can replace another good, so the XED is positive and the demand curve is upward sloping. If the price of one brand of TV increases, consumers might switch to another brand.

- Close substitutes: a small increase in the price of good X leads to a large increase in QD of Y.



- Weak substitutes: a large increase in the price of good X leads to a smaller increase in QD of Y.




Unrelated goods have a XED equal to zero. For example, the price of a bus journey has no effect on the demand for tables.


Firms are interested in XED because it allows them to see how many competitors they have. Therefore, they are less likely to be affected by price changes by other firms, if they are selling complementary goods or substitutes.



## 1.2.4 Supply

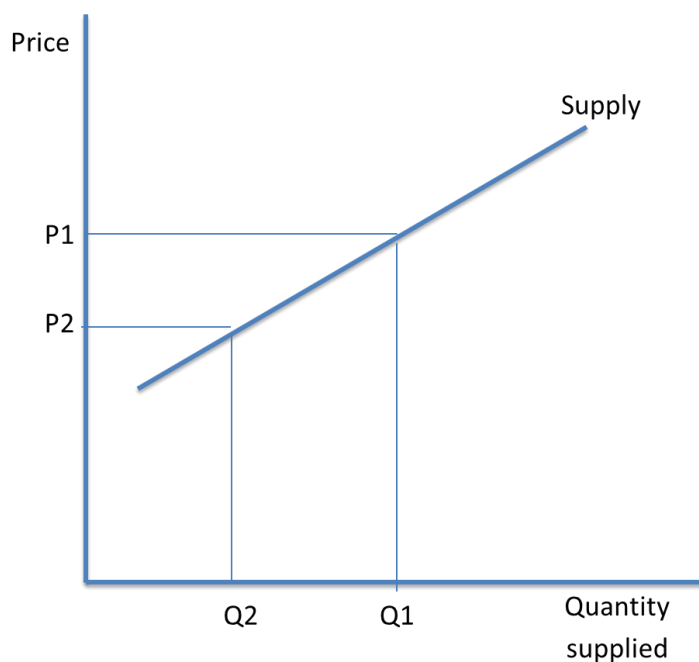
### Supply curve:


 Supply is the **quantity of a good or service that a producer is able and willing to supply at a given price during a given period of time.**

 Supply curves are upward sloping because:

- If price increases, it is more profitable for firms to supply the good, so supply increases.
- High prices encourage new firms to enter the market, because it seems profitable, so supply increases.
- With larger outputs, firm's costs increase, so they need to charge a higher price to cover the costs.

### Movements along the supply curve:

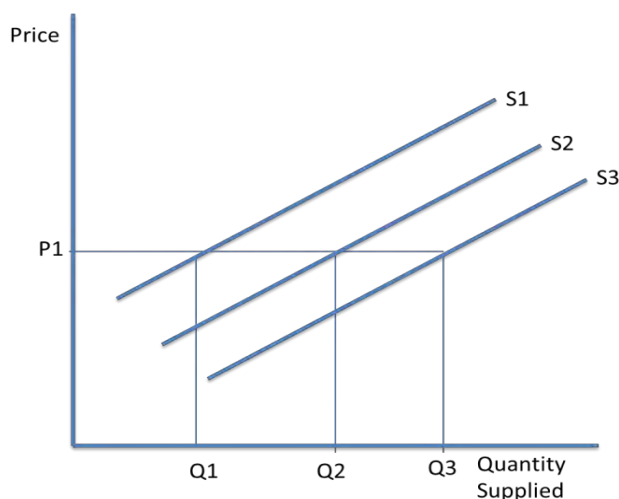




 At price P1, a quantity of Q1 is supplied. At the lower price of P2, Q2 is supplied. This is a **contraction** of supply. If price increases from P2 to P1, QS increases from Q2 to Q1. This is an **expansion** of supply. Only changes in price will cause these movements along the supply curve. This is based on the theory of the **profit motive**. Firms are driven by the desire to make large profits.






## Shifting the supply curve:



-  Price changes do not shift the supply curve. A shift from S1 to S2 is an outward shift in supply, so a larger quantity of goods is supplied at the market price of P1. A shift from S3 to S1 is an inward shift in supply. More goods are supplied at the market price of P1.
-  The factors that shift the supply curve can be remembered using the mnemonic PINTSWC:
  - **P- Productivity.** Higher productivity causes an outward shift in supply, because average costs for the firm fall.
  - **I- Indirect taxes.** Inward shift in supply.
  - **N- Number of firms.** The more firms there are, the larger the supply.
  - **T- Technology.** More advanced the technology causes an outward shift in supply.
  - **S- Subsidies.** Subsidies cause an outward shift in supply.
  - **W- Weather.** This is particularly for agricultural produce. Favourable conditions will increase supply.
  - **C- Costs of production.** If costs of production fall, the firm can afford to supply more. If costs rise, such as with higher wages, there will be an inward shift in supply.
  - Also, a depreciation in the exchange rate will increase the cost of imports, which will cause an inward shift in supply. A depreciation in the pound against the US dollar causes a reduction in the purchasing power of the pound when buying goods in dollars. This makes it more expensive for firms to import raw materials from the USA.


## Types of supply:

-  **Joint supply:** This is when increasing the supply of one good causes an increase or decrease in the supply of another good. For example, producing more lamb will increase the supply of wool.




## 1.2.5 Elasticity of Supply


### Price elasticity of supply

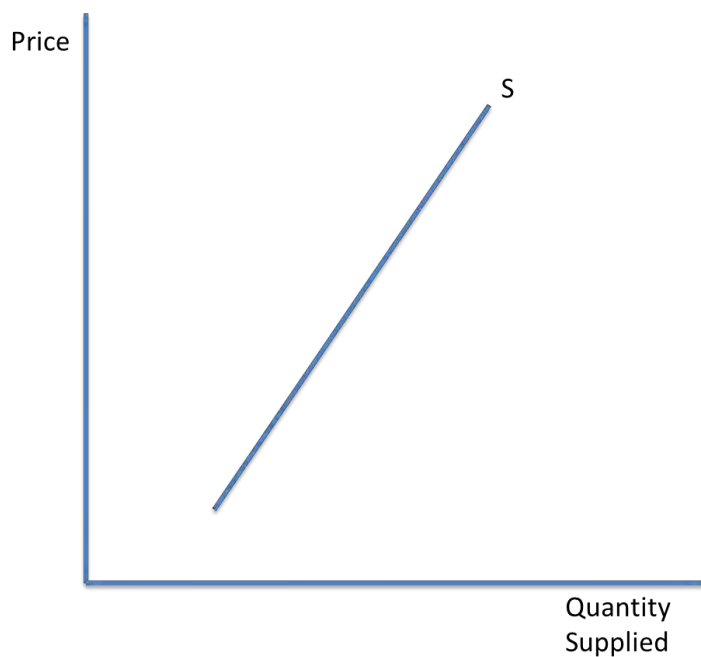
-  The price elasticity of supply is the responsiveness of a change in supply to a change in price. The formula for this is:


$$PES = \frac{\% \Delta QS}{\% \Delta P}$$

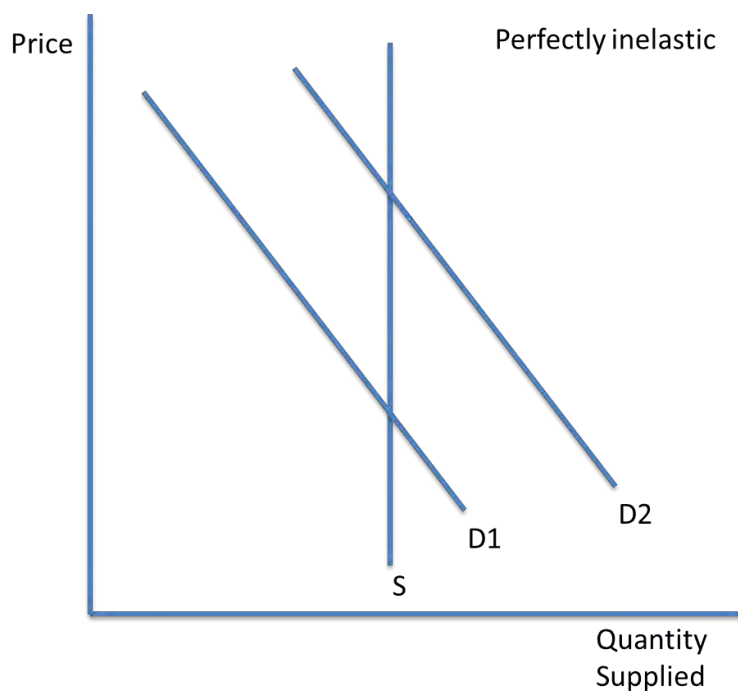
-  If supply is elastic, firms can increase supply quickly at little cost. The numerical value for PES is  $>1$ .




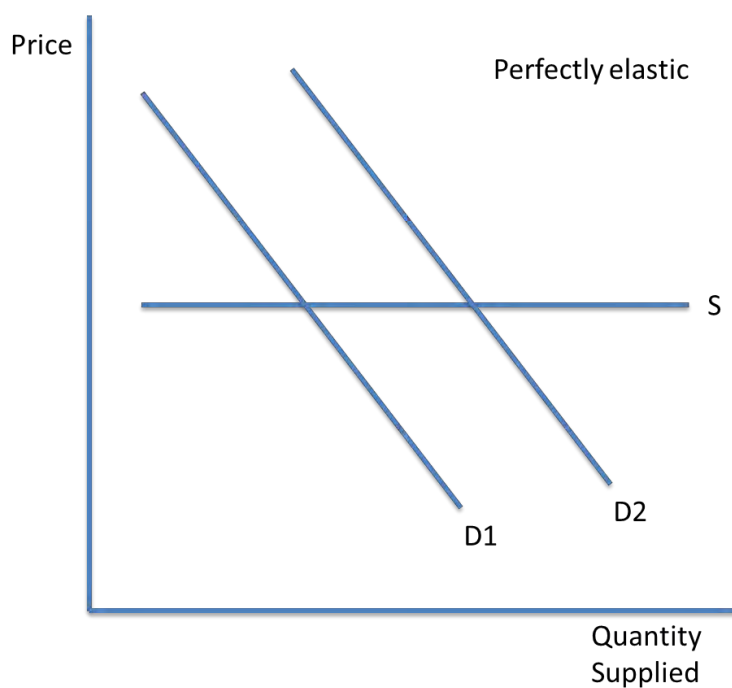
-  If supply is inelastic, an increase in supply will be expensive for firms and take a long time. PES is  $<1$ .




-  A perfectly inelastic supply has  $PES = 0$ . Supply is fixed, so if there is a change in demand, it cannot be met easily.



-  Supply is perfectly elastic when  $PES = \text{infinity}$ . Any quantity demanded can be met without changing price.



 If the price of producing wheat increased by 15%, and the quantity supplied decreased by 20%, the PES of wheat is:  $-20\% / 15\% = -1.33$ . Since the value is negative, the supply of wheat is relatively price inelastic.

 **Factors influencing PES:**

**1) Time scale:**

In the short run, supply is more price inelastic, because producers cannot quickly increase supply. In the long run, supply becomes more price elastic. The short run is the period of time in which at least one factor of production is fixed. The long run is the period of time in which all factors of production are variable.

**2) Spare capacity:**

If the firm is operating at full capacity, there is no space left to increase supply. If there are spare resources, for example in a recession there are lots of spare and unemployed resources, supply can be increased quickly.

**3) Level of stocks:**

If goods can be stored, such as CDs, firms can stock them and increase market supply easily. If the goods are perishable, such as apples, firms cannot stock them for long so supply is more inelastic.

**4) How substitutable factors are:**

If labour and capital are mobile, supply is more price elastic because resources can be allocated to where extra supply is needed. For example, if workers have transferable skills, they can be reallocated to produce a different good and increase the supply of it.



**5) Barriers to entry to the market:**

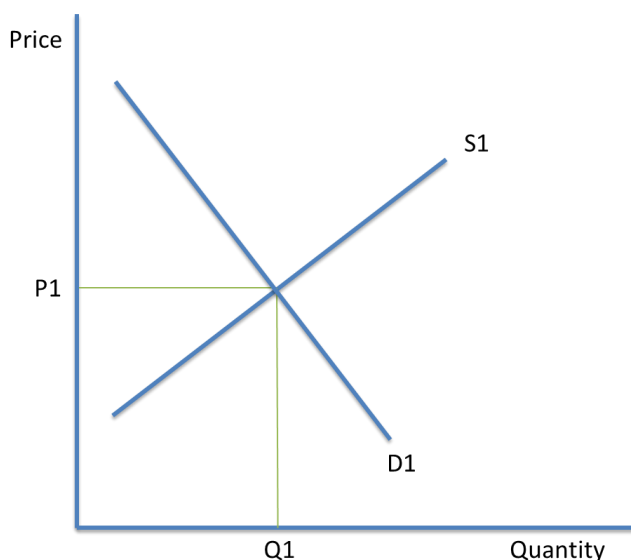
Higher barriers to entry means supply is more price inelastic, because it is difficult for new firms to enter and supply the market.



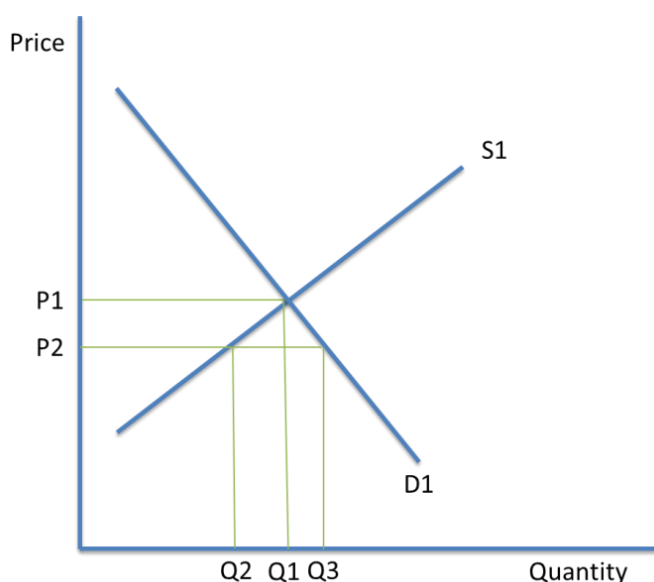
## 1.2.6 Price Determination


### Equilibrium price and quantity

-  This is when supply meets demand. On the diagram, this is shown by P1 and Q1.
-  At market equilibrium, price has no tendency to change, and it is known as the **market clearing price**.




### Excess demand




-  At Q2, price is at P2 which is below market equilibrium. Demand is now greater than supply, which can be calculated by Q3-Q2.

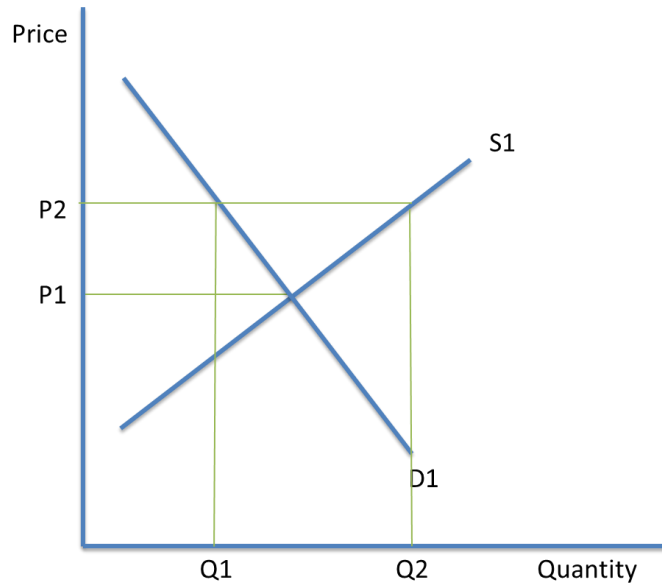



 This is a **shortage** in the market. This pushes prices up and causes firms to supply more. Since prices increase, demand will contract.

 Once supply meets demand again, price will reach the market clearing price,  $P_1$ .


### Excess supply

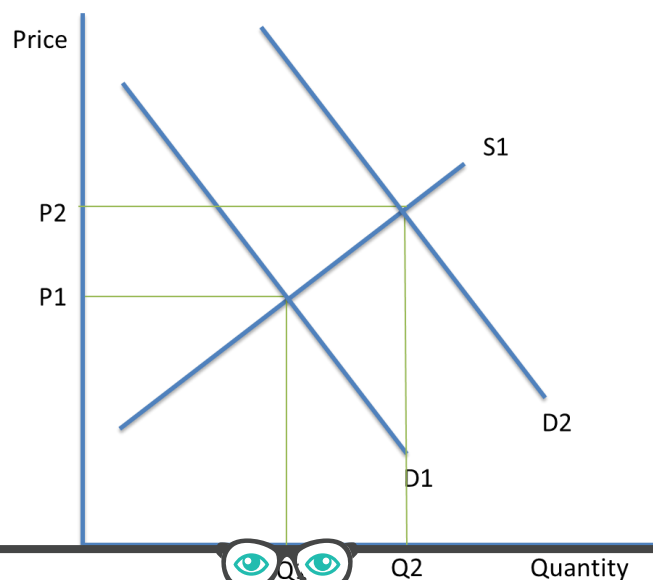
 This is when price is above  $P_1$ .





 Supply is now at  $Q_2$  and demand is at  $Q_1$ . There is a **surplus** of  $Q_2 - Q_1$ . Price will fall back to  $P_1$  as firms lower their prices and try to sell their goods. The market will clear and return to equilibrium.

### New market equilibriums

 When the demand or supply curves shift due to the PIRATES or PINTSWC reasons, new market equilibriums are established.






-  For example, if there was an increase in the size of the population, demand would shift from D1 to D2.
-  Price would increase to P2 and suppliers would supply a larger quantity of Q2. A new market equilibrium is established at P2 Q2.



## 1.2.7 Price Mechanism

### Functions

-  The price mechanism determines the market price. Adam Smith called this ‘the invisible hand of the market’.
-  Resources are allocated through the price mechanism in a free market economy. The economic problem of scarce resources is solved through this mechanism. The price moves resources to where they are demanded or where there is a shortage, and removes resources from where there is a surplus.
-  The price mechanism uses three main functions to allocate resources:
  - **Rationing**

When there are scarce resources, price increases due to the excess of demand. The increase in price discourages demand and consequently **ration**s resources. For example, plane tickets might rise as seats are sold, because spaces are running out. This is a disincentive to some consumers to purchase the tickets, which rations the tickets.
  - **Incentive**

This encourages a change in behaviour of a consumer or producer. For example, a high price would encourage firms to supply more to the market, because it is more profitable to do so.
  - **Signalling**

The price acts as a signal to consumers and new firms entering the market. The price changes show where resources are needed in the market. A high price **signals** firms to enter the market because it is profitable. However, this encourages consumers to reduce demand and therefore leave the market. This shifts the demand and supply curves.





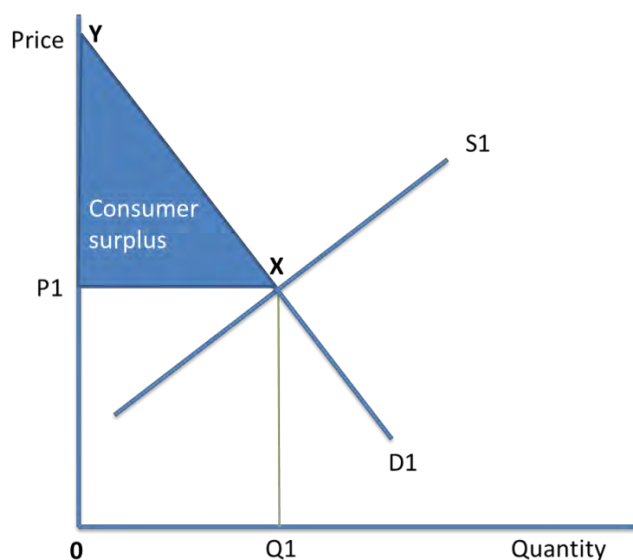
## 1.2.8 Consumer and Producer Surplus



### Consumer Surplus



This is the difference between the price the consumer is willing and able to pay and the price they actually pay. This is based on what the consumer perceives their **private benefit** will be from consuming the good.



Consumers pay price  $P_1$  and demand a quantity of  $Q_1$ . This is shown by area  $P_1OQ_1X$ . The total benefit to the consumer is area  $OQ_1XY$ , but because they pay price  $P_1OQ_1X$ , the net gain to the consumer  $P_1XY$ , the shaded triangle. This is consumer surplus.



It is always the area above market price and below the demand curve.



Due to the law of diminishing marginal utility, consumer surplus generally declines with extra units consumed. This is because the extra unit generates less utility than the one already consumed. Therefore, consumers are willing to pay less for extra units.



Inelastic demand curves give a larger consumer surplus. This is because consumers are willing to pay a much higher price to consume the good.





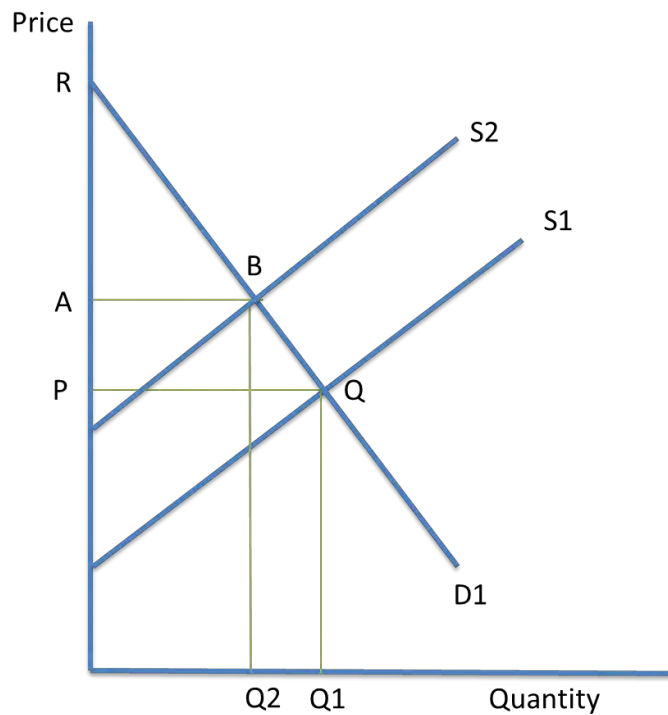
### Increasing consumer surplus:




An increase in demand from  $D_1$  to  $D_2$  increases consumer surplus from  $PQR$  to  $ABC$ .




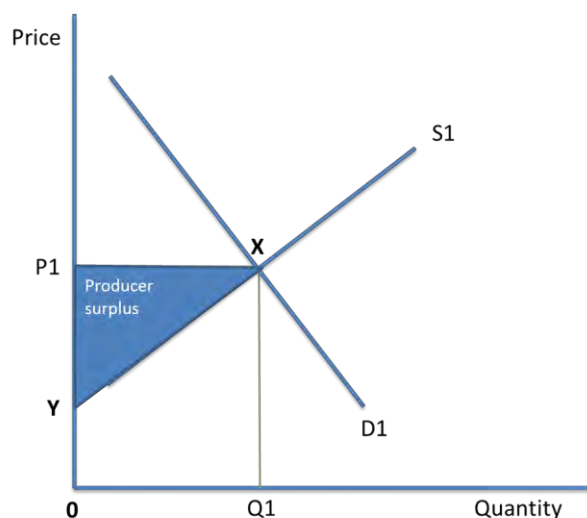
### Decreasing consumer surplus:




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 Supply has shifted to the left, which could be due to higher costs of production. This causes market price to increase, and consumer surplus decreases from PQR to ABR.

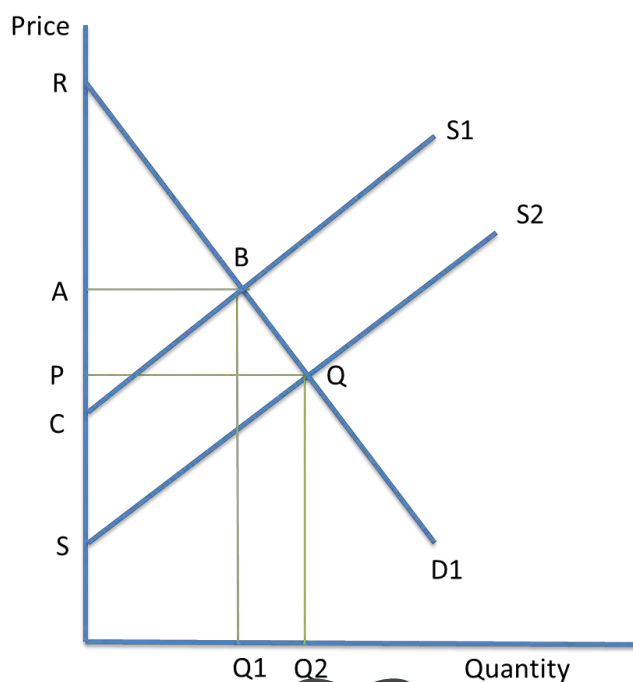
## **Producer Surplus**




- 
 This is the difference between the price the producer is willing to charge and the price they actually charge. In other words, it is the private benefit gained by the producer that covers their costs, and is measured by profit.




- 
 This is always the area below the market price and above the supply curve.

## **Increasing producer surplus:**

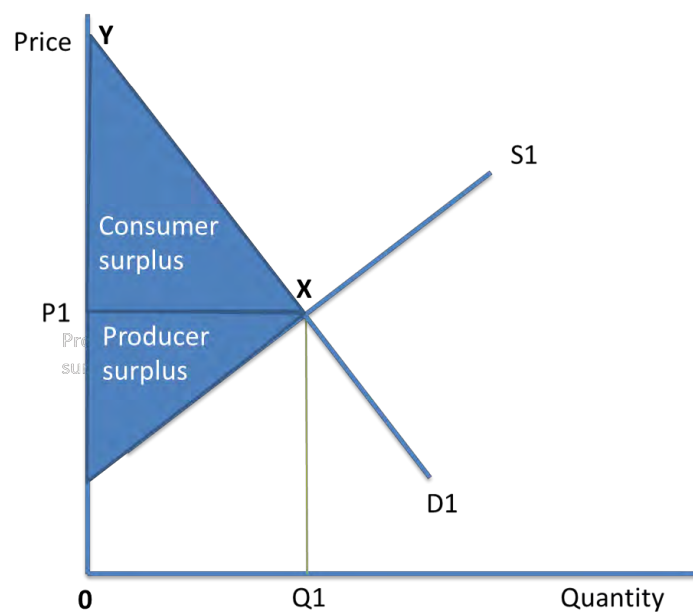





-  This is caused by a shift in the supply curve from  $S_1$  to  $S_2$ , which could be due to lower average production costs, for example. Therefore market price decreases and producer surplus increases.
-  Producer surplus increases from  $ABC$  to  $PQS$ .
-  This could also be due to an increase in demand which causes price to increase.




-  Producer surplus increases from area  $PQD$  to  $ABD$ .

## Economic Welfare



-  This is the total benefit society receives from an economic transaction.
-  It is calculated by the area of producer surplus and consumer surplus added together.
-  The sum of the consumer surplus and producer surplus is the community surplus.


 **Synoptic point:**

-  Macroeconomic policies can be assessed by considering their effect on producer and consumer surplus. For example, the use of tariffs leads to a loss of consumer surplus.



## 1.2.9 Indirect Taxes and Subsidies


### Indirect Taxes

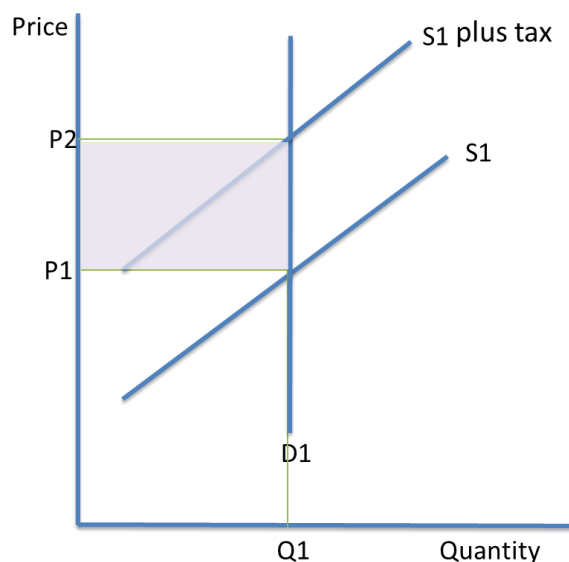
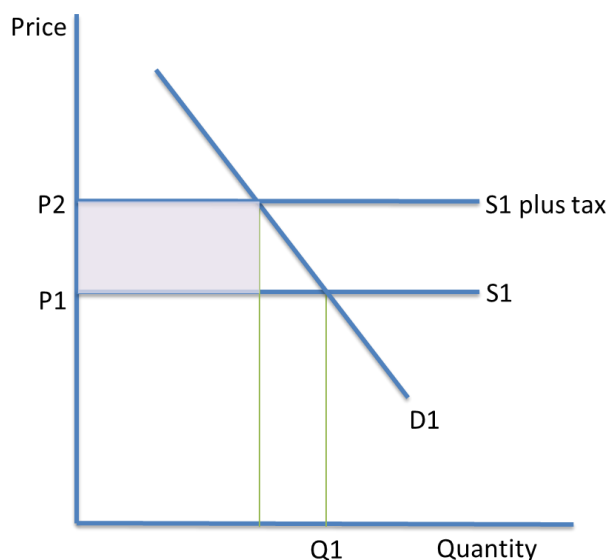
 Indirect taxes are imposed by the government and they increase production costs for producers. Therefore, producers supply less. This increases market price and demand contracts.

 There are two types of indirect taxes:


- **Ad valorem** taxes are percentages, such as VAT, which adds 20% of the unit price. This is the main indirect tax in the UK.
- **Specific taxes** are a set tax per unit, such as the 58p per litre fuel duty on unleaded petrol.

 Diagrammatically, it is shown by the vertical distance between two supply curves.

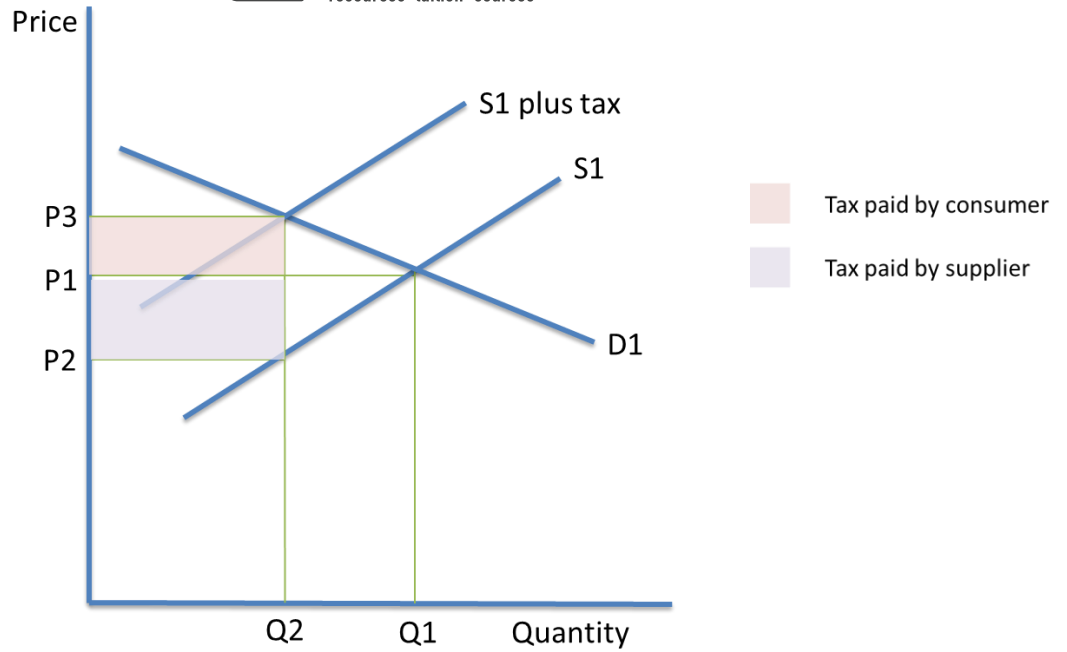
 When demand is perfectly inelastic, or supply is perfectly elastic, the incidence of the tax falls wholly on the consumer. The shaded area shows the size of the tax paid by the consumer.




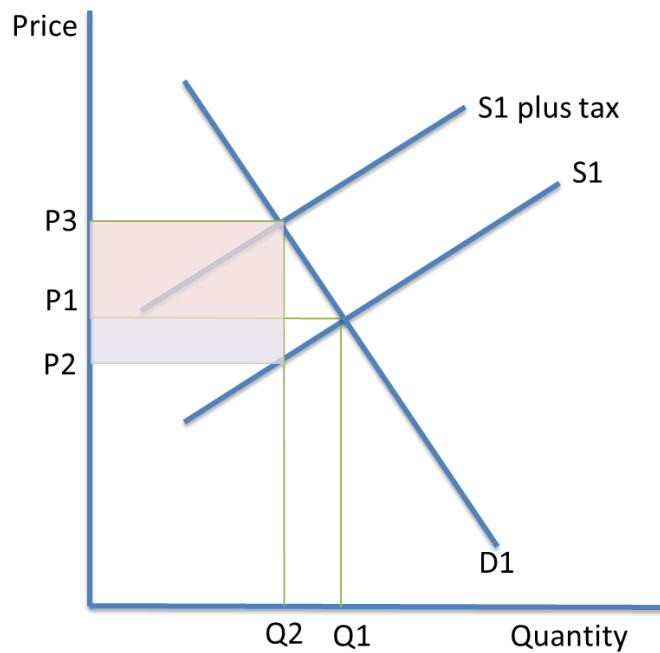
### The burden of tax with different PEDs

 If demand is more elastic ( $PED > 1$ ), the incidence of the tax will fall mainly on the supplier.




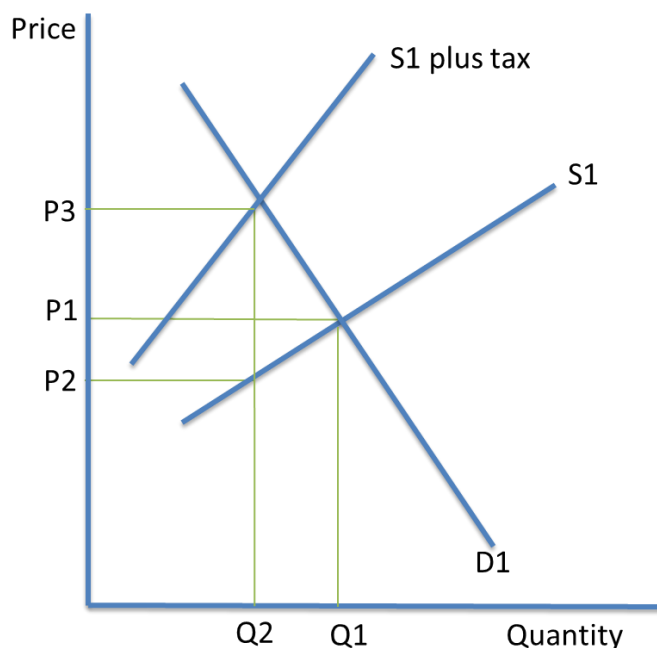









 If demand is more inelastic ( $PED < 1$ ), the incidence of the tax will fall mainly on the consumer.



## Ad Valorem Taxes

-  Since the tax is a percentage of the cost of the good, the absolute value of the tax increases as the price of the good increases. For example, with VAT at 20%, a good costing £10 will have £2 of tax. A good costing £100 will have £20 of tax. This causes the supply curve to pivot.



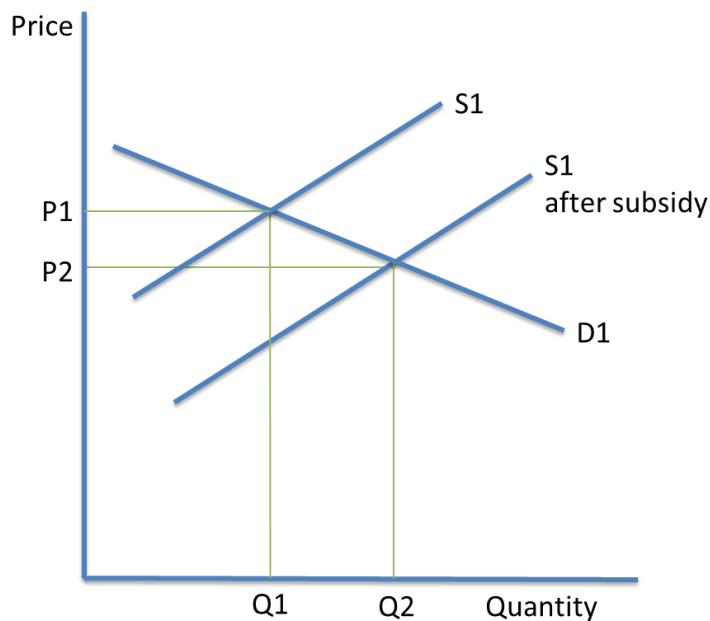
-  If demand is inelastic, government revenue from the tax is higher than if demand is elastic. This is because demand will only fall slightly with the tax.
-  For example, the duty on tobacco and fuel raises a lot of government revenue, because demand for these goods is inelastic.
-  If the tax is implemented with the intention of internalising the externality, it is hard to put a monetary value on the externality.
-  Internalising the externality means the individual or firm which causes the negative externality, for example pollution, pays for the damage.
-  Taxes could be expensive for the government to collect.
-  Some taxes could be regressive, so they impact those on low and fixed incomes the most.
-  Taxes could be inflationary.





## Subsidies

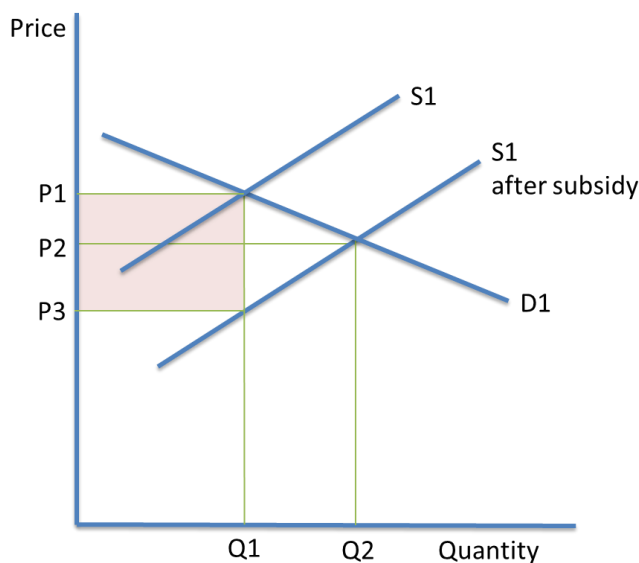
- A subsidy is a payment from the government to a producer to lower their costs of production and encourage them to produce more.
- For example, the government might provide apprenticeship schemes or help farmers by contributing towards their production costs.




- Subsidies shift the supply curve to the right, which lowers the market price.
- The vertical distance between the supply curves shows the value of the subsidy per unit.


### Government spending on subsidy


- This is shown by the shaded area and is calculated by the value of the subsidy per unit times the output.



 The consumer pays  $P_3$  and the producer receives  $P_1$ , which includes the subsidy.


### **Effects of subsidies**


 Subsidies increase output and lower prices for consumers, which could help families on low and fixed incomes.


 They increase the employment rate, by making workers more skilled through apprenticeship schemes and lowering the cost of employing workers.


 They reduce inequality in society, if the subsidy is progressive.


 Subsidies could help control inflation, by keeping costs of production low.


 They could help boost demand during periods of economic decline.


 Subsidies could encourage the consumption of merit goods, which creates positive externalities.

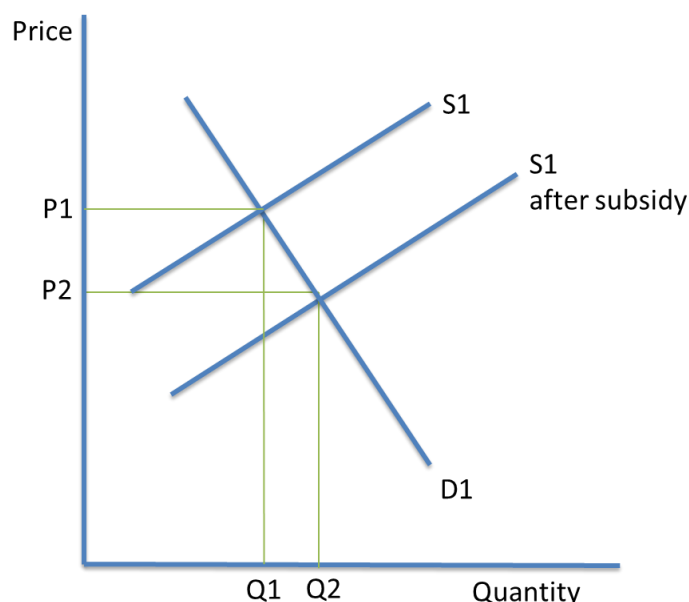
 Long run aggregate supply could increase if the subsidy is aimed towards a capital project.


 There could be government failure, if the government provides an inefficient subsidy or if the subsidy distorts the market price.

 Government revenue could be better spent elsewhere. The opportunity cost of the subsidy should be considered.

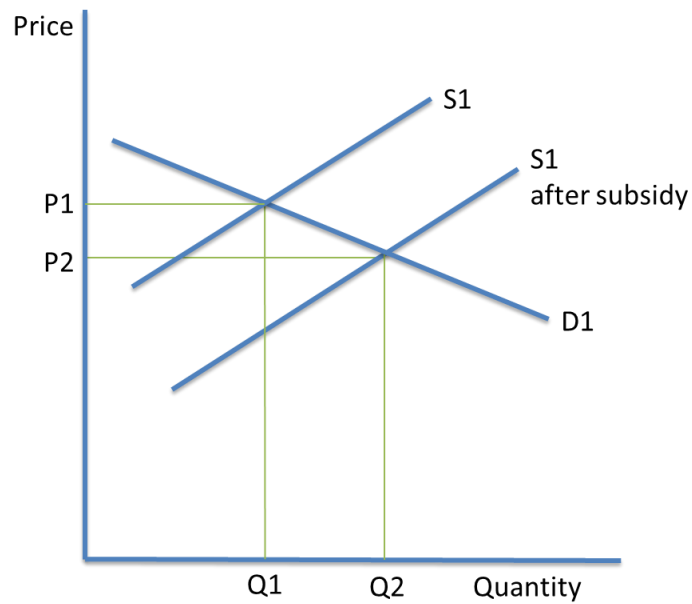
 It is usually the tax payer who pays for the subsidy, and they might not receive any direct benefit from the subsidy.

 If demand is price inelastic, the subsidy will have a large effect on equilibrium price. This gives a greater consumer gain than when demand is elastic.

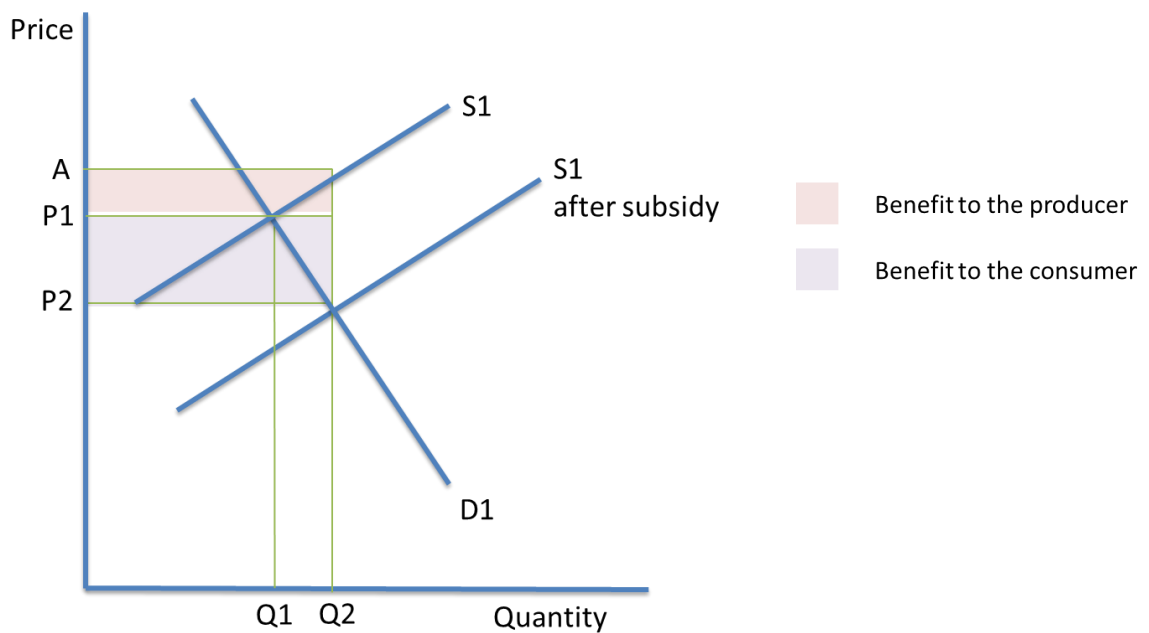





 If demand is price elastic, the subsidy will have a large effect on quantity, and therefore benefit producers more.





### Producer and Consumer Subsidies



-  A consumer subsidy encourages consumers to purchase more of a particular good or service. It could be a direct grant or a loan without interest, for example.
-  Consumer subsidies affect demand and do not shift the supply curve.
-  Producer subsidies lower the cost of production and shift the supply curve.



## 1.2.10 Alternative Views of Consumer Behaviour

- 📖 Consumers do not always act rationally. Acting rationally means making a decision that results in the most optimal level of utility or benefit for the consumer.
- 📖 The rational consumer is *Homo Economicus*, who is a utility maximiser and makes rational decisions.

📖 The reasons for this are:

- **The influence of other people's behaviour**

Assume there are two restaurants; one is empty whilst the other has a long queue. Consumers are more likely to queue for their food than go straight into the other restaurant. The behaviour of other people affects how the consumer acts.

Other people's behaviour creates a bias within the consumer. This social pressure encourages consumers to do things they would not otherwise do, or that they know could be harmful. Consumers become unwilling to change, even if it is of benefit to them, if it goes against the norms of their society.

- **The importance of habitual behaviour**

Habits reduce the amount of time it takes to do something, because consumers no longer have to consciously think about their actions. For example, a commute to work becomes a habit over time. Habits create a barrier to making a decision. They limit or prevent consumers considering an alternative. A commuter who is familiar with one route to work is unlikely to consider an alternative route, because they would have to re-familiarise themselves with it.

For example, it is hard for consumers to give up smoking, even if they know it is good for them, because they are habituated to it.

Similarly, consumers might find it hard to save for the future, such as for a pension, because they have a habit of spending in the present.

Breaking a habit causes withdrawal symptoms in the consumer, which may make them feel uncomfortable, so they continue to commit the irrational action.

- **Consumer weakness at computation**

Consumers are unable to exercise self-control with some decisions. The law of diminishing marginal utility suggests that every extra unit consumed provides a smaller benefit to the consumer. Yet, if the example of food is taken, some consumers will still eat more than gives them optimal benefit.



Another example could use the short term and long term view. Consumers know that it will benefit them in the long run if they save for their pension, but this will limit their spending in the short run. Spending less in the short run instils fear in the consumer, even if they are aware that unless they save, they will not be able to consume as much in the long run. With the long run view, consumers feel as though they 'could always start saving tomorrow'. It is this procrastination which leads to consumers making irrational decisions by not having self-control.

