Chapter

2

The price mechanism

Syllabus Content

B - The market system and the competitive process – 40 %

The price mechanism: the demand and supply model and its applications.

2.1 A market

Buyers and sellers for a good or service come into contact for the purpose of exchange, normally for money.

Demand

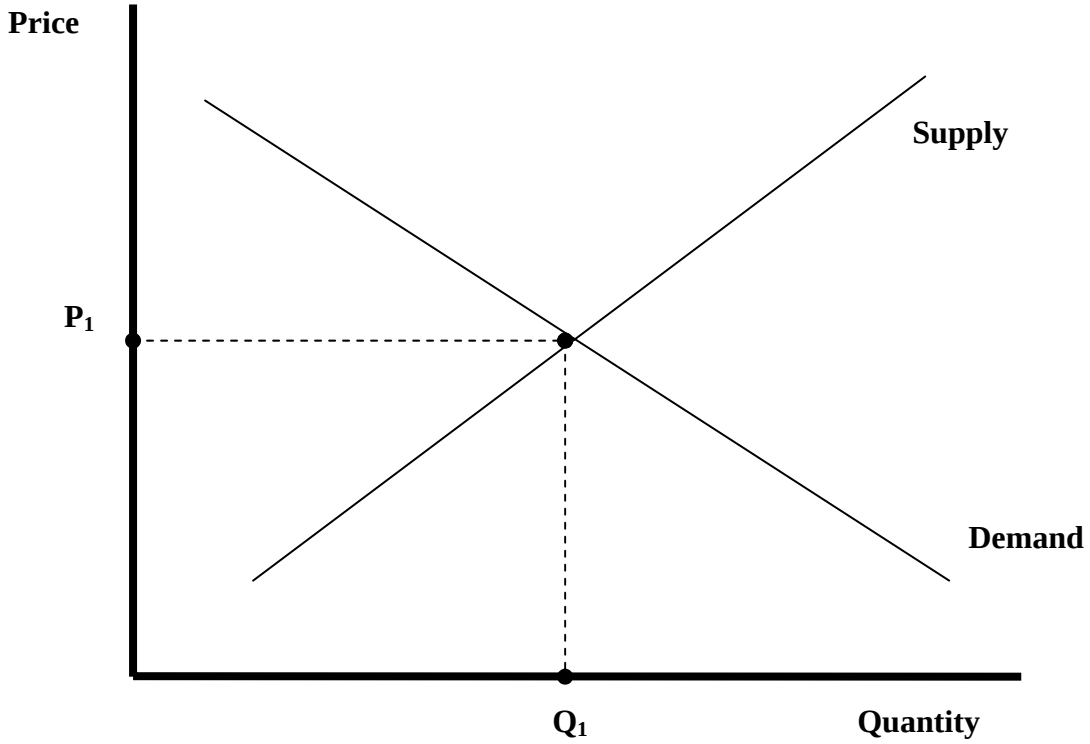
Potential buyers **(consumers, customers or households)** of a good or service within a market, normally a demand curve is used to represent the different quantities that buyers would be willing and able to purchase at different prices.

Supply

Potential **businesses or firms** within the market that are willing and able to supply different quantities of a good or service at different prices, this can be represented in aggregate by a supply curve for the industry or market.

2.2 The price mechanism or supply and demand

The price mechanism or supply and demand is concerned with how buyers and sellers interact together in order to arrive at a market price. Where demand equals supply this would be at the 'equilibrium price and quantity', always found automatically within a perfectly competitive market when buyers and sellers interact. **The price mechanism is used also to explain how a free market economy or the private sector allocates resources and determines a market price within an industry.**



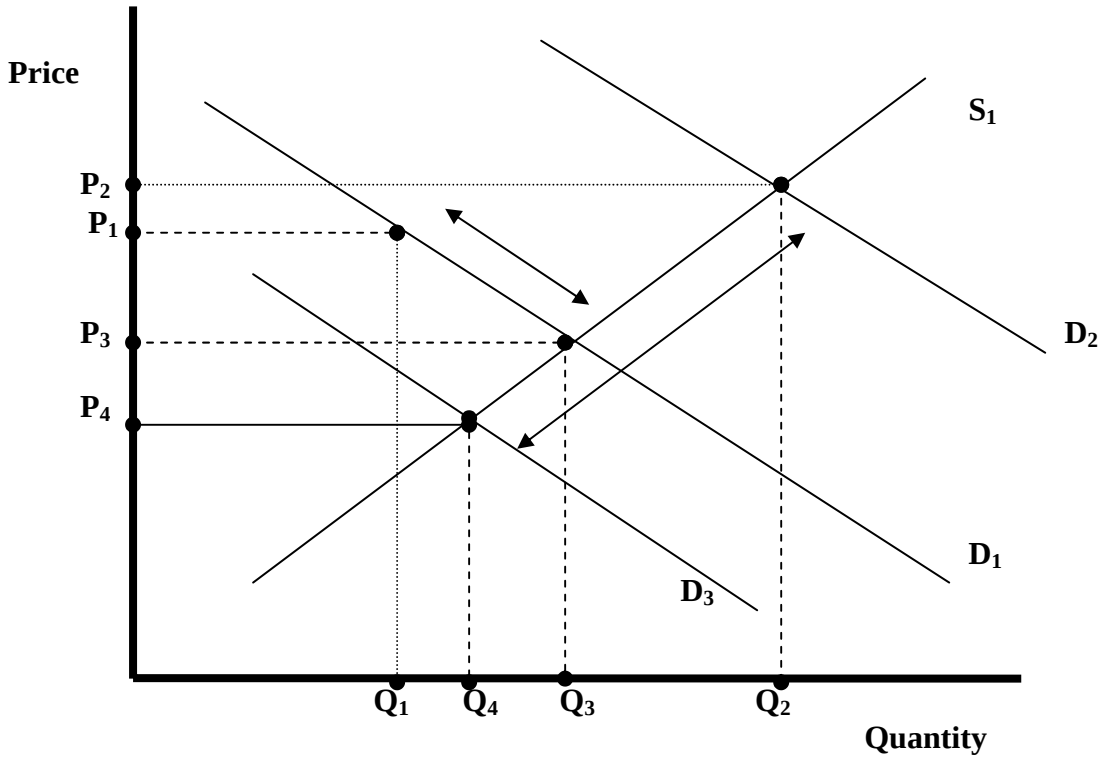
The equilibrium price and quantity P_1 and Q_1 is represented by the diagram above, there is no shortage or surplus within the market (demand equals supply) and therefore the market is in equilibrium (or balance) with no upward or downward pressure for prices to rise or fall respectively.

2.3 Demand

The demand curve or demand schedule represents the total quantity purchased by all buyers, in aggregate, within the market at different prices. The law of demand states that as prices fall the quantity demanded rises and vice versa.

The law or theory of demand states that as consumers we derive satisfaction or 'utility' as a result of consuming a good or service. This varies from consumer to consumer; you may of course have no utility yourself at all if you consumed a certain good or service in which case you would not be a potential buyer. The theory states that as prices fall, the utility or satisfaction rises for the consumer as other substitute goods or services would become relatively more expensive, therefore consumption would rise as price falls and vice versa. As price falls this attracts more consumers into the market as well as causing existing consumers to buy more, because the good or service is now cheaper. The **marginal utility** is the extra utility gained by the consumer, by the consumption of one more unit, it is normally expected to fall when consumption rises and vice versa.

Increases/decreases or 'shifts' in demand



Terminology

Market in equilibrium P_1 Q_1 where demand D_1 equals supply S_1

- If price fell from P_1 to P_3 there would be an **extension** of the demand curve as the quantity demanded would rise from Q_1 to Q_3 because of the fall in price
- If there was a price rise from P_3 to P_1 there would be a **contraction** of the demand curve, the quantity demanded would fall from Q_3 to Q_1 because of the rise in price
- An **increase or shift to the right** of the demand curve from D_1 to D_2 (a rise in demand at the same market price P_1) would eventually create a higher price and quantity now demanded, settling finally at P_2 Q_2 once a new equilibrium is found, due to a shortage
- A **decrease or shift to the left** of the demand curve from D_1 to D_3 (a fall in demand at the same market price P_1) would eventually create a lower price and quantity now demanded, settling finally at P_4 Q_4 once a new equilibrium is found, due to a surplus

Factors that cause an actual shift in the demand curve

As prices rise or fall this would contract or extend the quantity demanded along the demand curve or schedule, however the following factors, rather than contract or extend the demand curve, cause an actual shift to the right (increase in demand) or to the left (decrease in demand) creating a new demand curve, if this were to happen.

- Advertising and promotion
- Population of an economy
- Expectations of buyers and sellers
- Prices of substitute goods or services
- Prices of complimentary goods or services
- Incomes of households (size and distribution of incomes)
- Tastes and fashions over time

Types of good

Normal good

As incomes of consumers/households rise the quantity demanded also would rise e.g. the demand curve would shift to the right.

Inferior good

As incomes of consumers/households rise the quantity demanded would fall e.g. the demand curve would shift to the left.

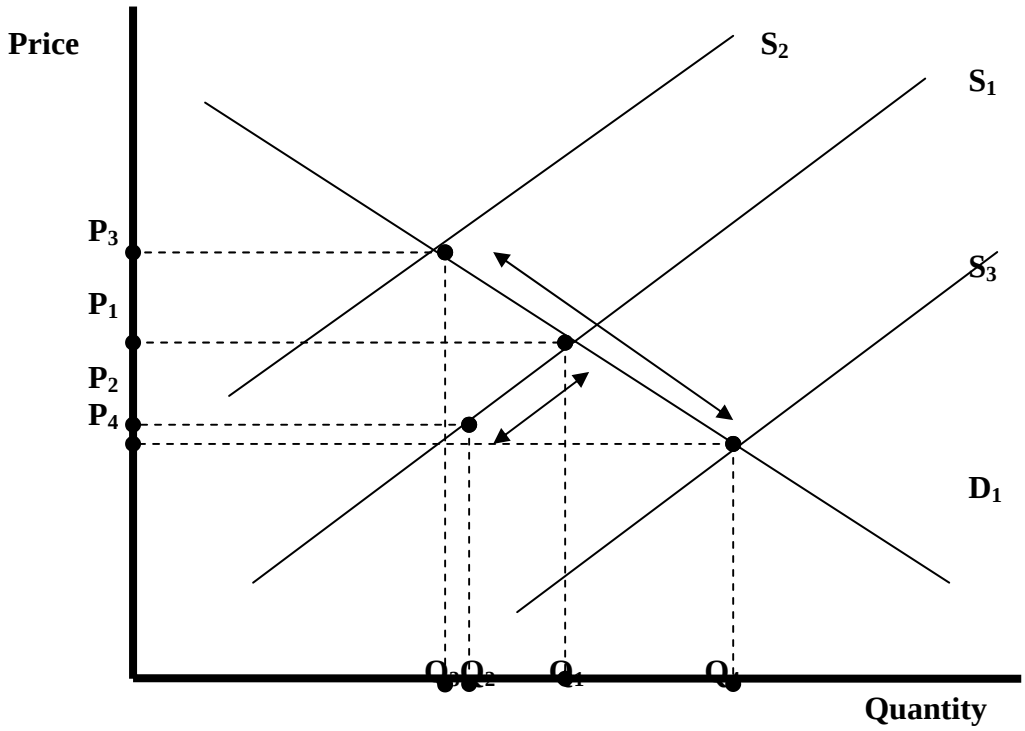
Giffen good

As the price of the good or service rises the quantity demanded would also rise and vice versa e.g. an upward sloping demand curve.

2.4 Supply

The supply curve or supply schedule represents the total quantity of a good or service supplied in aggregate, by all sellers or firms within the market at different prices. The law of supply states that as prices fall the quantity supplied falls and vice versa.

The theory of supply states that as sellers want to maximise profit, a higher price would encourage existing suppliers to expand output due to more profit per unit being earned, the rise in price may also attract more firms into the industry. A lower price would cause existing firms to leave the industry or to contract production of the good or service due to lower profits being earned.



Terminology

Market in equilibrium P_1 Q_1 where demand D_1 equals supply S_1

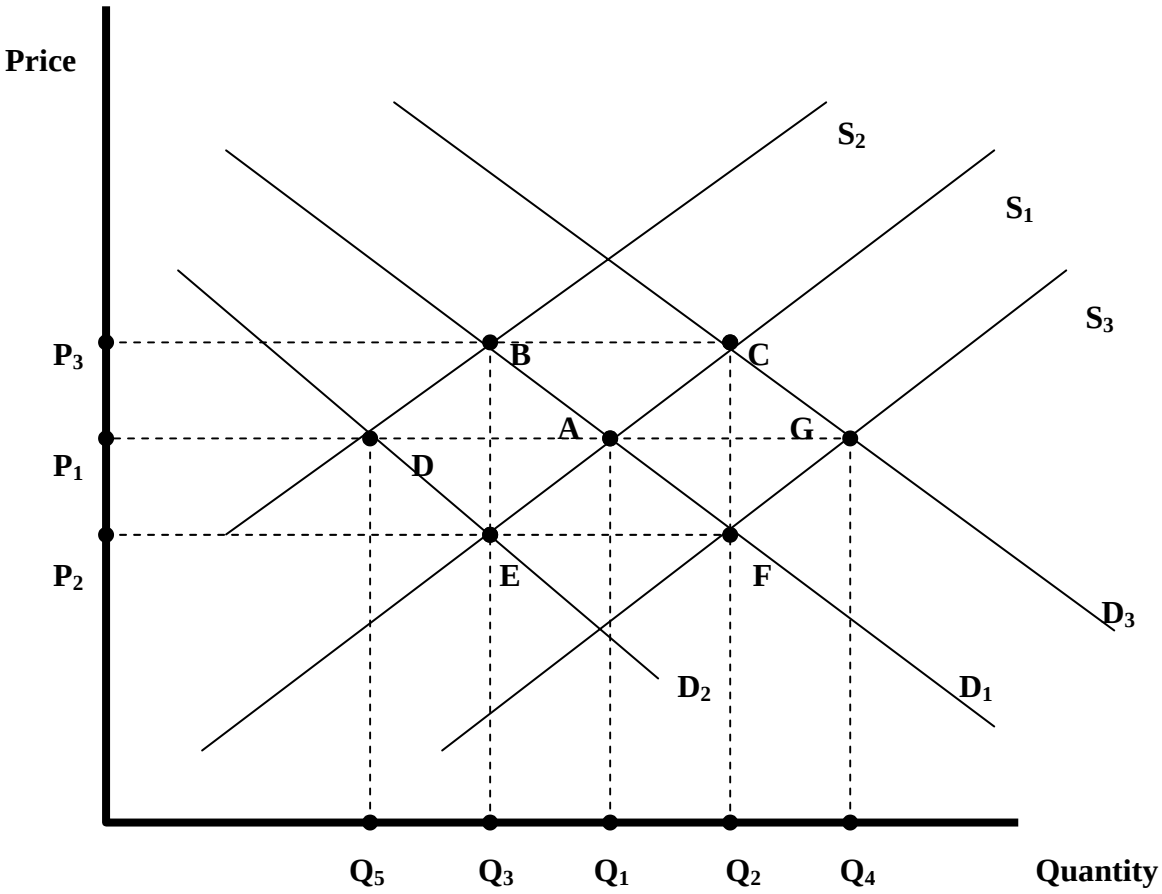
- If price fell from P_1 to P_2 there would be an contraction of the supply curve, the quantity supplied falling from Q_1 to Q_2
- If price rises from P_2 to P_1 there would be an extension of the supply curve the quantity supplied rising from Q_2 to Q_1
- An increase or shift to the right of the supply curve from S_1 to S_3 (a greater quantity supplied at the same market price P_1) would eventually create a lower price and quantity now supplied (P_4 Q_4) due to a surplus
- A decrease or shift to the left of the supply curve from S_1 to S_2 (a smaller quantity supplied at the same market price P_1) would create a higher price and quantity now supplied (P_3 Q_3) due to a shortage

Factors that cause an actual shift in the supply curve

As prices rise or fall this would contract or extend the quantity supplied along the supply curve or schedule, however the following factors, rather than contract or extend the supply curve, cause an actual shift to the right (increase in supply) or to the left (decrease in supply) creating a new supply curve, if this were to happen.

- Climate
- Price of factors of production
- Resource availability
- Indirect taxes
- Subsidies
- Goods in joint supply
- Expectations of sellers
- Technology

2.5 The price mechanism and how it works



The above diagram assumes the market is in equilibrium, whereby demand equals supply at point A (P_1 Q_1). The following would happen should there be an increase or decrease in demand or supply, ceteris paribus e.g. all other things being equal.

An increase in demand from D_1 to D_3 with supply unchanged at S_1 would create a shortage in the market equivalent to Q_4 minus Q_1 (or the difference between point A and G). Suppliers knowing about the shortage and driven by profit motive will increase prices, buyers knowing there is a shortage would be prepared to pay more for the good or service therefore putting pressure on prices to rise. The new demand curve D_3 will contract and the existing supply curve S_1 will extend as prices rise, until a new equilibrium price and quantity is found by the market at point C (P_3 Q_2).

A decrease in demand from D_1 to D_2 with supply unchanged at S_1 would create a surplus in the market equivalent to Q_1 minus Q_5 (or the difference between point A and D). Suppliers knowing about the surplus and driven by profit motive will decrease prices in order to avoid rising stock levels, buyers knowing there is a surplus would be prepared to pay less for the good or service therefore putting pressure on prices to fall by negotiation. The new demand curve D_2 will extend and the existing supply curve S_1 will contract as prices fall, until a new equilibrium price and quantity is found by the market at point E (P_2 Q_3).

An increase in supply from S_1 to S_3 with demand unchanged at D_1 would create a surplus in the market equivalent to Q_4 minus Q_1 (or the difference between point A and G). Suppliers knowing about the surplus and driven by profit motive will decrease prices in order to avoid rising stock levels, buyers knowing there is a surplus would be prepared to pay less for the good or service therefore putting pressure on prices to fall by negotiation. The new supply curve S_3 will contract and the existing demand curve D_1 will extend as prices fall, until a new equilibrium price and quantity is found by the market at point F (P_2 Q_2).

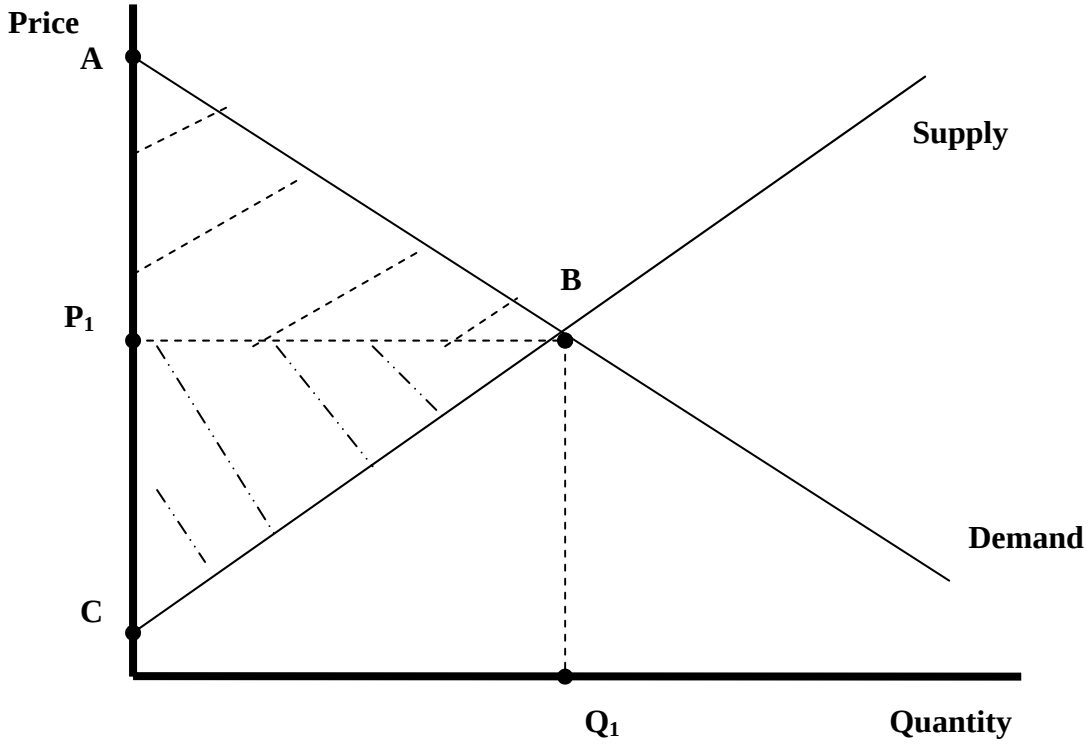
A decrease in supply from S_1 to S_2 with demand unchanged at D_1 would create a shortage in the market equivalent to Q_1 minus Q_5 (or the difference between point A and D). Suppliers knowing about the shortage and driven by profit motive will increase prices, buyers knowing there is a shortage would be prepared to pay more for the good or service therefore putting pressure on prices to rise. The new supply curve S_2 will extend and the existing demand curve D_1 will contract as prices rise, until a new equilibrium price and quantity is found by the market at point B (P_3 Q_3).

Example 2.1

Put a tick against the appropriate column to which you think would be the most likely outcome to the following statements?

	Increase in demand	Decrease in demand	Increase in supply	Decrease in supply
Second hand car market 1. Increase in the use of public transport 2. Fall in price for new cars 3. Increase in the price of petrol 4. Government putting a tax on each car manufacturers produce because of car pollution **Beef market** 1. Increase in the supply of leather 2. Bad press coverage about the health scare of eating beef **House market** 1. Reduction in interest rates 2. Government giving tax incentives to construction companies to build more houses **Farming market** 1. Severe weather damaging crops 2. Increase in EU subsidies to farmers				

2.6 Consumer and producer surplus



At equilibrium P_1 Q_1 (point B where demand equals supply)

- **Consumer surplus** is equal to area P_1AB this represents the difference between the amount buyers in aggregate were willing to pay for the good or service compared to what they actually did pay (P_1), in effect the utility the buyer received but did not pay for.
- **Producer surplus** is equal to area P_1BC this represents the difference between the price firms in aggregate would have accepted for the good or service supplied compared to what they actually did receive (P_1).

Solutions to lecture examples

Example 2.1

Put a tick against the appropriate column to which you think would be the most likely outcome to the following statements?

	Increase in demand	Decrease in demand	Increase in supply	Decrease in supply
Second hand car market				
1. Increase in the use of public transport		✓		
2. Fall in price for new cars		✓		
3. Increase in the price of petrol		✓		
4. Government putting a tax on each car manufacturers produce because of car pollution				✓
Beef market				
1. Increase in the supply of leather			✓	
2. Bad press coverage about the health scare of eating beef		✓		

Example 2.1 -continued

Put a tick against the appropriate column to which you think would be the most likely outcome to the following statements?

	Increase in demand	Decrease in demand	Increase in supply	Decrease in supply
House market				
1. Reduction in interest rates	✓			
2. Government giving tax incentives to construction companies to build more houses			✓	
Farming market				
1. Severe weather damaging crops				✓
2. Increase in EU subsidies to farmers			✓	