

The price mechanism



Read pages 25–38 of the textbook.

In a market economy the distribution of goods and services is determined by the price mechanism. Changes in prices act as signals to producers about how much consumers want to buy and they adjust their production accordingly. This ensures that the quantity of goods and services that consumers want to buy is the same as quantity produced and that resources are used efficiently. In his book *The Wealth of Nations* (1776), Adam Smith described this as an ‘invisible hand’ that guided the economy without government interference.

Prices are determined in a market. A market is any organisation that allows buyers and sellers to exchange goods and services. Examples of markets include real estate, shares, fish, fruit and vegetables and foreign exchange. In each of these markets there are consumers who have a demand for the product and producers who supply that product. It is the interaction of demand and supply that determines prices.

Demand

Demand is the quantity of a good or service that buyers are willing and able to buy at a given price. Although each individual will have their own demand for a good or service, producers are interested in market demand which is the total demand from all consumers. In general, the market will be willing to buy more of a good or service when the price is lower. On the other hand, if prices are higher, people will generally buy less. This is known as the law of demand.

A demand schedule shows the quantity demanded at various prices. Assume the following demand applies for bread:

Price	Quantity (loaves per week)
\$3.00	10 000
\$2.50	15 000
\$2.00	20 000
\$1.50	25 000
\$1.00	30 000
\$0.50	35 000

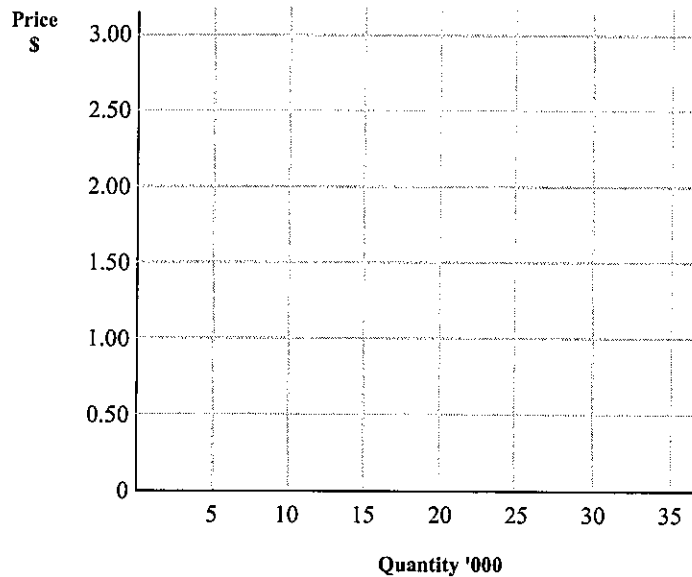
Note that as the price decreases, the quantity demanded increases.

This information can be graphed to create a demand curve, which shows the relationship between price and quantity demanded, assuming everything else remains constant.

Microeconomics

Activity 1

Use the table on the previous page to graph a demand curve on the axes below.



You should have found the graph was a straight line, downward sloping from left to right.

Changes in the quantity demanded (expansion and contraction of demand)

The demand curve shows that when price changes, there is a change in the quantity demanded. For example if the price of bread increased from \$1.00 to \$2.00, the quantity demanded would decrease from 30 000 to 20 000 loaves. This is sometimes known as a contraction in demand. On the other hand, if the price decreased from \$2.50 to \$2.00 the quantity demanded would increase from _____ to _____. This is sometimes known as an expansion of demand.

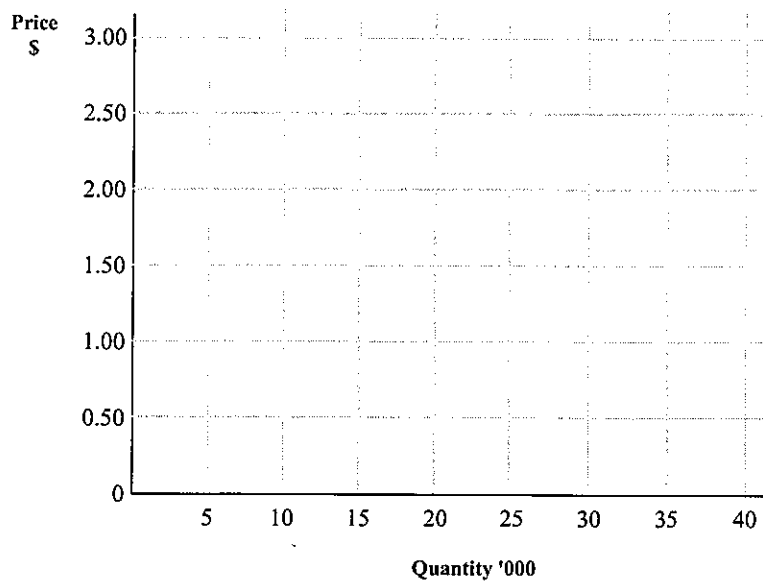
An increase or decrease in the quantity demanded only occurs when the price changes and is shown by a movement along the curve.

Increases and decreases in demand

An increase or decrease in demand is caused by a change in one of the factors of demand (factors of demand are discussed below). A change in a factor of demand causes the whole demand curve to change position. For example, an increase in demand means that consumers are willing to buy more at each price level, as shown below:

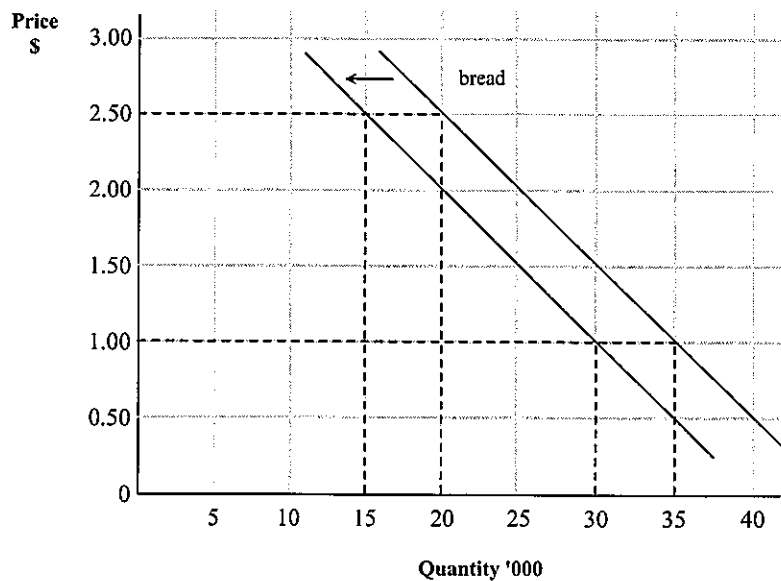
Price	Quantity 1 (loaves per week)	Quantity 2
\$3.00	10 000	15 000
\$2.50	15 000	20 000
\$2.00	20 000	25 000
\$1.50	25 000	30 000
\$1.00	30 000	35 000
\$0.50	35 000	40 000

Graph both sets of figures on the axes below.



You should have found that the demand curve moved to the right.

If consumers wanted to buy less at each price level, there is a decrease in demand and the demand curve shifts to the left from D to D_1 as shown below.



Less is demanded at each price level

Factors of demand

There are many factors that influence consumer demand for goods and services including:

Household income

Income is an important factor of demand. As incomes increase, people can afford to buy more of a product than before and demand increases. If income falls, however, demand is likely to decrease.

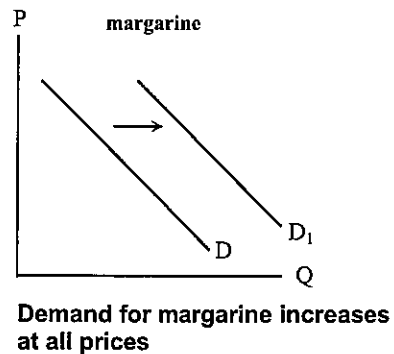
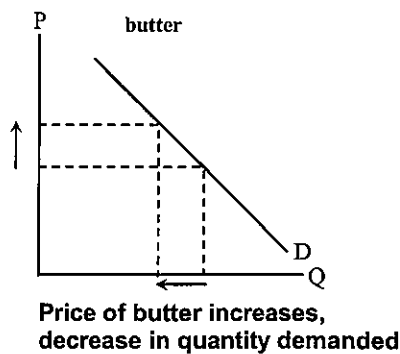
Tastes and preferences

Consumer tastes and preferences can be affected by fashion and advertising. For example, items that have become trendy will experience an increase in demand. Items that have fallen out of favour will decrease in demand.

The price of substitutes

Substitute goods are alternative products that can be used to satisfy the same want. For example, different brands of petrol are substitutes because they can all be used to run your car. Other examples include coffee and tea or beef and lamb.

If the price of one good increases, there will be an increase in demand for the substitute good. For example, if the price of butter increases, some consumers will switch their spending away from butter and to the relatively cheaper substitute, margarine. Demand for margarine therefore increases.

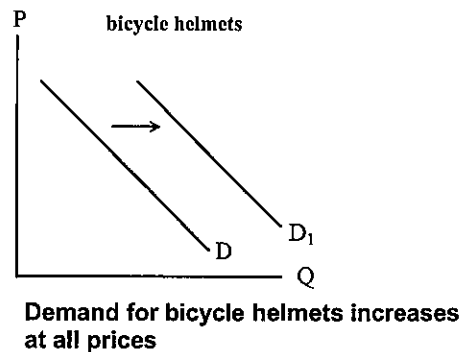
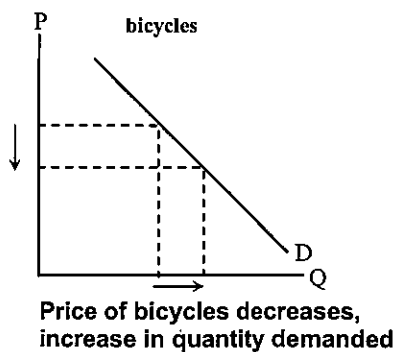


On the other hand, if the price of one good decreases, demand for its substitute will decrease.

Give other examples of substitutes.

The price of complementary goods

Complementary goods are consumed together to satisfy a want. Bread and butter or a car and petrol are examples. If the price of one good decreases, there will be an increase in demand for the complement. For example, if the price of bicycles decreases, consumers will buy more bicycles and so demand for bicycle helmets will increase.



However, if the price of one good increases, demand for its complement will decrease.

Give other examples of complementary goods.

In your experience what influences your demand for goods and services?

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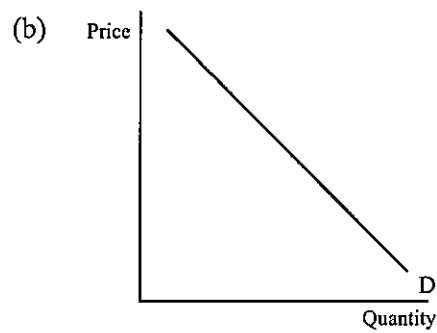
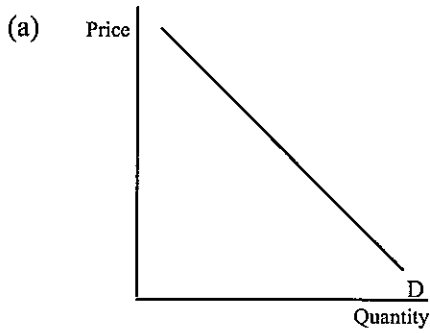
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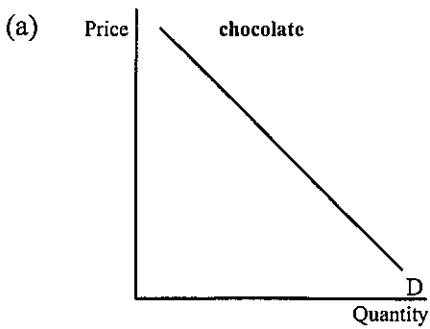
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Activity 2

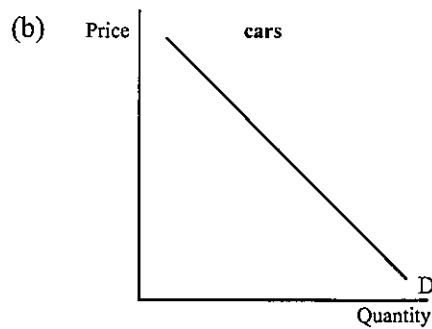
1. On the diagrams below show (a) an increase in quantity demanded and (b) an increase in demand.



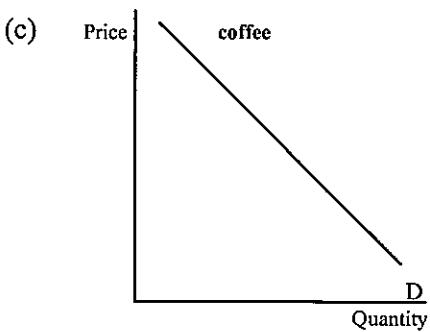
2. On the diagrams below show the effect of the following on demand.



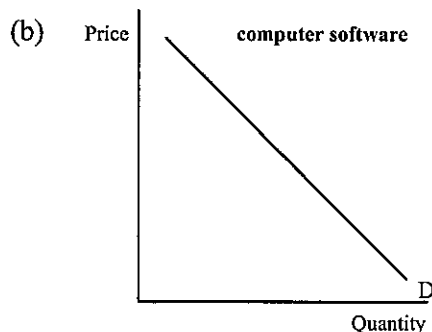
A study shows chocolate has health benefits



An increase in household income



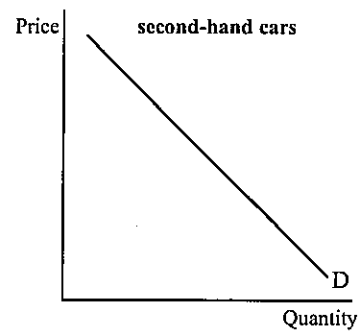
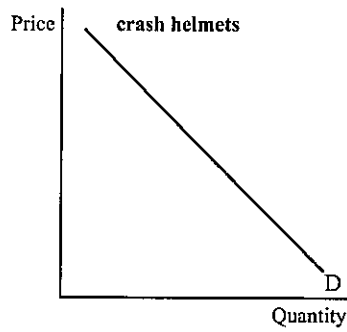
The price of tea decreases



The price of computers increases

Microeconomics

3. Show how a rise in the price of new motor bikes is likely to affect the demand for:



Supply

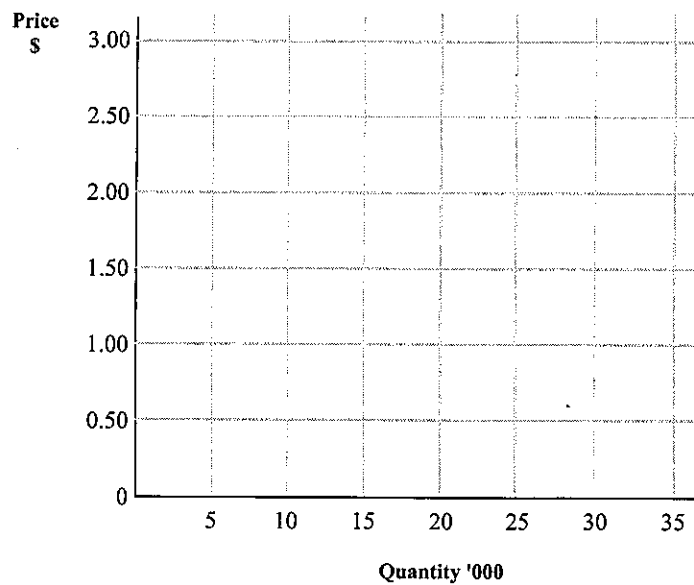
Supply is the quantity of a good or service that producers are willing and able to offer for sale at a given price.

Market supply is the total supply offered by all firms in that market. In general, the higher the price, the greater the amount supplied. This is because firms are able to make a higher profit at higher prices.

Suppose the schedule for market supply of bread is as follows:

Price	Quantity ('000 loaves per week)
\$3.00	30 000
\$2.50	25 000
\$2.00	20 000
\$1.50	15 000
\$1.00	10 000
\$0.50	5 000

Graph these figures on the axes below:



Describe the slope of the supply curve you have just drawn.

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Using the graph, state the law of supply.

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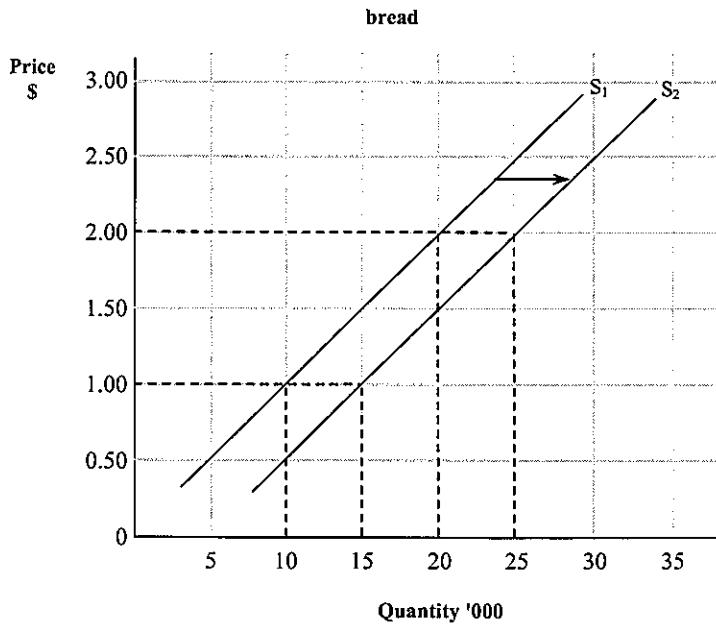
Changes in the quantity supplied (expansion and contraction in supply)

A change in price will cause producers to change the amount they supply. If the price increased from \$1.50 to \$2.00, for example, there would be an increase in the quantity supplied (sometimes known as an expansion in supply) from 25 000 to 30 000 loaves per week. If price was to decrease from \$2.50 to \$1.50, there would be a decrease in the quantity supplied (sometimes known as a contraction in supply) from _____ to _____.

A change in the quantity supplied only occurs when price changes and is shown by a movement along the curve.

Increases and decreases in supply

An increase or decrease in supply is caused by a change in one of the factors of supply (discussed below). A change in a factor of supply causes the whole supply curve to change position. For example, an increase in supply means that producers are willing to sell more at each price level. This is represented on the graph as a shift in the supply curve to the right as shown below:



More is supplied at each price level

A decrease in supply would be shown by the supply curve shifting to the left.

Microeconomics

Factors affecting supply

Production costs

An increase in the cost of production such as wages or materials will cause producers to supply less at each price as production is less profitable. Some producers may stop production altogether. The result is a decrease in supply.

A decrease in production costs will lead to an increase in supply.

Technology

An improvement in technology means that production is more efficient and allows producers to gain higher profits. This will encourage them to increase supply.

Weather

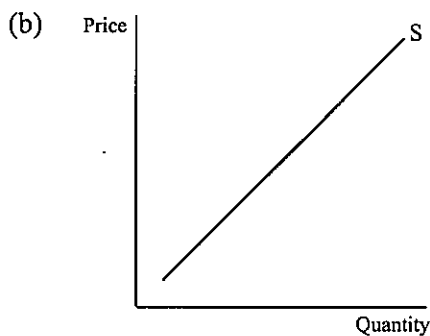
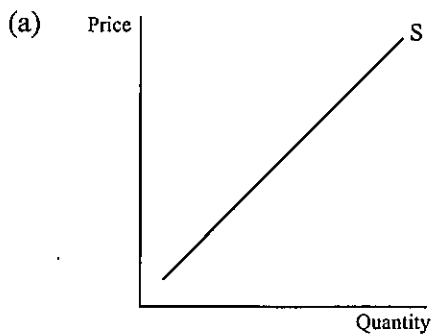
The amount of some products supplied can be influenced by the weather. Droughts or floods can severely affect the production of agricultural products for example. Alternatively, a good season can result in a large increase in supply.

Taxes and subsidies

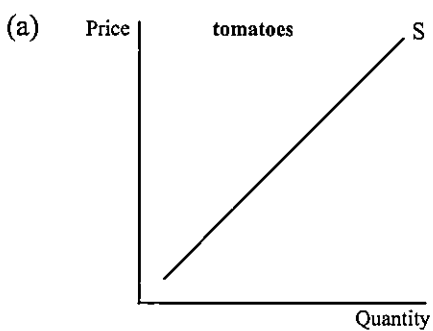
Governments can influence the profitability of firms by changing taxes or paying subsidies. For example, if the government subsidises wheat production, farmers will be willing to supply more at each price as the costs of production are reduced and profits increase. However, an increase in tax may be passed on to consumers by producers who have to pay it.

Activity 3

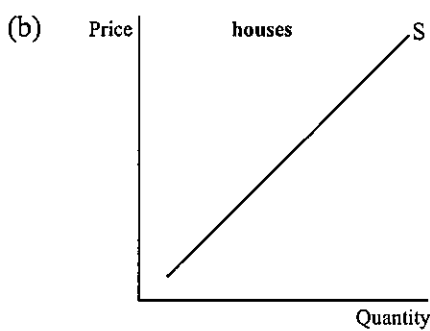
1. On the diagrams below show (a) an increase in quantity supplied and (b) an increase in supply.



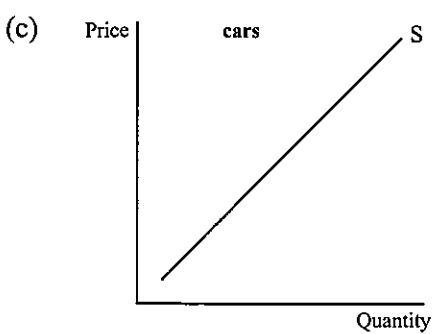
2. On the diagrams below show the effect of the following on supply.



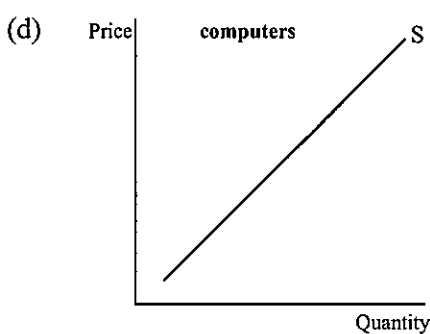
Hail damages tomato crops



A wage rise is granted for bricklayers



Sales tax on cars is removed



An improvement in technology

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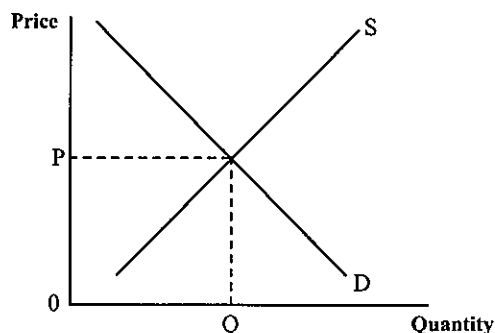
The price mechanism



Read pages 39–46 of the textbook.

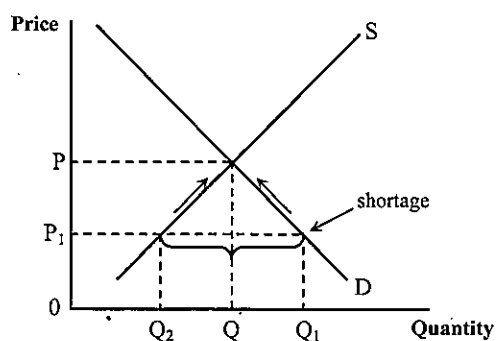
Market equilibrium

Markets determine prices through the interaction of demand and supply. When the demand and supply curves are graphed together, there is only one price where the quantity demanded and the quantity supplied are the same. This is called the equilibrium price.



The equilibrium price will be OP in this example. This is the only price where the quantity demanded is equal to the quantity supplied. It is the only price where there is no tendency to change. Price and quantity will remain stable at these levels unless the factors of demand or supply change. All other prices are unstable as shortages or surpluses are created, and market forces cause price to move towards equilibrium to eliminate those shortages or surpluses.

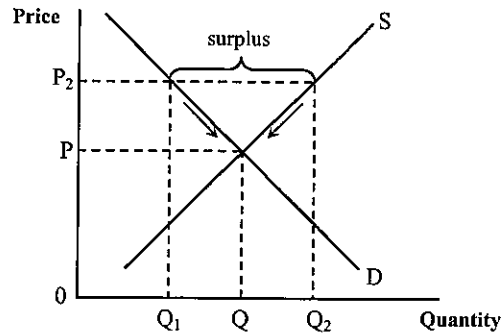
Shortage



At any price below equilibrium, the quantity demanded will be greater than the quantity supplied. This creates a situation of shortage. For example, at a price of OP_1 , the quantity demanded is OQ_1 but producers are willing to supply only OQ_2 , so there is a shortage. As some consumers are willing to pay more to get the goods they want, producers are able to charge a higher price. As price rises, the quantity demanded decreases and the quantity supplied increases (as shown by the arrows on the diagram above) until equilibrium is reached. Price will move from OP_1 towards the equilibrium price OP .

Microeconomics

Surplus



At any price above equilibrium, the quantity demanded will be less than the quantity supplied. This creates a situation of surplus. For example, at a price of OP_2 , the quantity demanded is OQ_1 but producers are willing to supply OQ_2 . Producers will have stocks of unsold goods. They will reduce prices to encourage more buyers and eliminate the surplus. As price decreases the quantity demanded increases and the quantity supplied decreases (as shown by the arrows on the diagram) until equilibrium is reached. Price will move from OP_2 towards the equilibrium price OP .

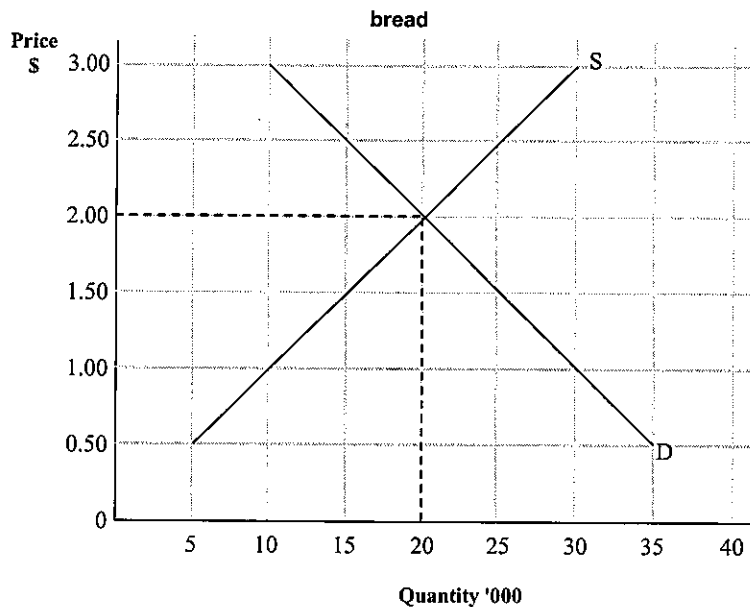
Only at a price level of OP will the quantity demanded equal the quantity supplied. There will be no shortage or surplus and therefore no tendency for price to change.

Activity 1

The following table has information about demand and supply for bread.

Price	Quantity demanded (loaves per week)	Quantity supplied (loaves per week)
\$3.00	10 000	30 000
\$2.50	15 000	25 000
\$2.00	20 000	20 000
\$1.50	25 000	15 000
\$1.00	30 000	10 000
\$0.50	35 000	5 000

This information can be graphed as shown below:



Complete the following using the graph on the previous page.

(a) At a price of \$2.50
the quantity demanded would be
the quantity supplied would be
there would be a shortage/surplus of
price will, because

(b) At a price of \$1.00
the quantity demanded would be
the quantity supplied would be
there would be a shortage/surplus of
price will, because

(c) The equilibrium price is At this price
the quantity demanded is
the quantity supplied is
there is no or so there is no tendency to change.

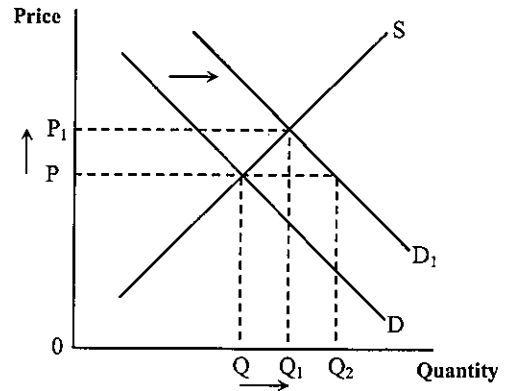
Microeconomics

Changes in price

When the factors of demand or supply change, there will be a new demand or supply curve and a new equilibrium price. The change in demand or supply causes a temporary shortage or surplus in the market which is eliminated by the price moving to a new equilibrium.

An increase in demand

An increase in demand will cause a shift in the demand curve to the right from D to D_1 as shown here.

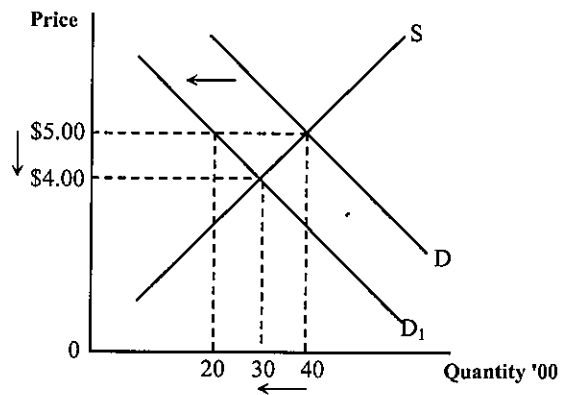


At the original price OP , the quantity demanded will now be OQ_2 . However, the quantity supplied is still OQ . This creates a temporary shortage of Q_1Q_2 . Producers will increase prices, causing a decrease in quantity demanded and an increase in quantity supplied, until the new equilibrium price of OP_1 is reached and the shortage is eliminated.

The increase in demand has caused price to increase (from OP to OP_1) and quantity to increase (from OQ to OQ_1).

A decrease in demand

Use the diagram here to explain what will happen if there is a decrease in demand from D to D_1 as shown here.



Explanation

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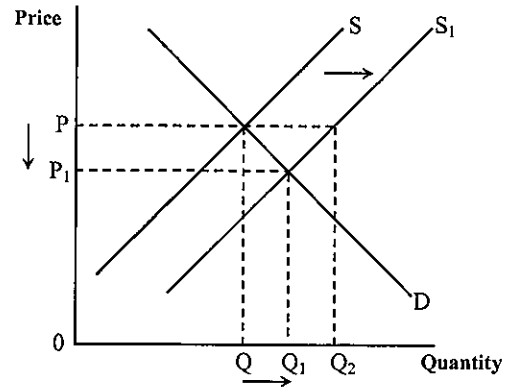
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An increase in supply

An increase in supply causes the supply curve to move to the right as shown here:

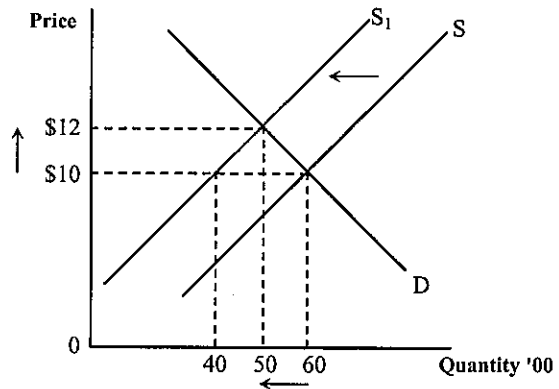


At the original price OP, the quantity supplied will now be OQ₂. However, the quantity demanded is still OQ. This creates a temporary surplus of QQ₂. Producers will decrease prices, causing an increase in quantity demanded and a decrease in quantity supplied, until the new equilibrium price of OP₁ is reached and the surplus is eliminated.

The increase in supply has caused price to decrease (from OP to OP₁) and quantity to increase (from OQ to OQ₁).

A decrease in supply

Use the diagram here to explain what will happen if there is a decrease in supply from S to S₁ as shown here:



Explanation

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Summary

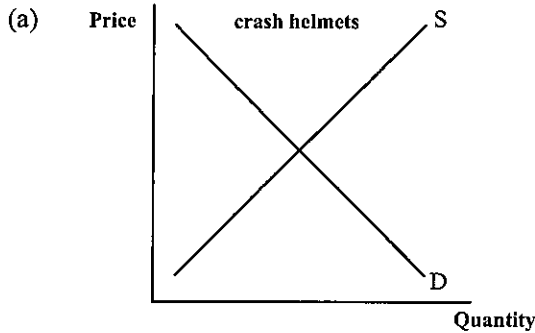
A change in price is caused by either a change in demand or a change in supply. The following table summarises the effects.

Change	Price	Quantity
Increase in demand	↑	↑
Decrease in demand	↓	↓
Increase in supply	↓	↑
Decrease in supply	↑	↓

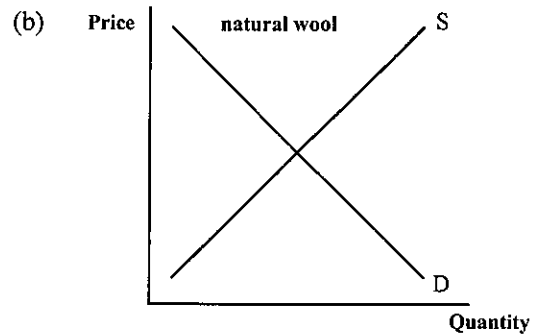
Microeconomics

Activity 2

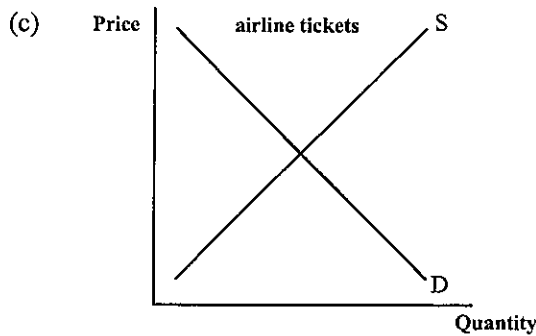
In each of the following, draw a new demand or supply curve on the diagram and show what happens to price and quantity.



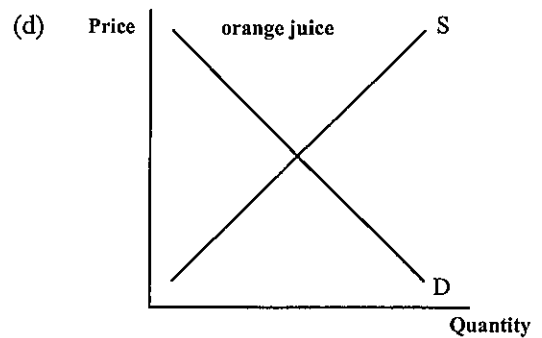
A rise in the price of motor bikes



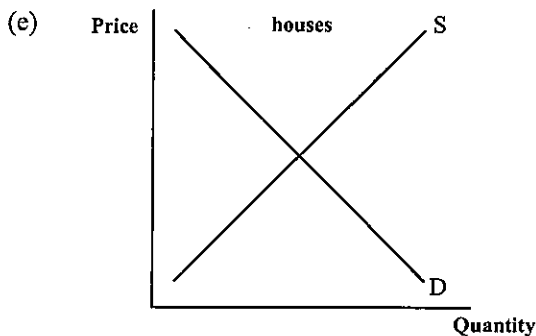
Synthetic wool becomes cheaper to produce



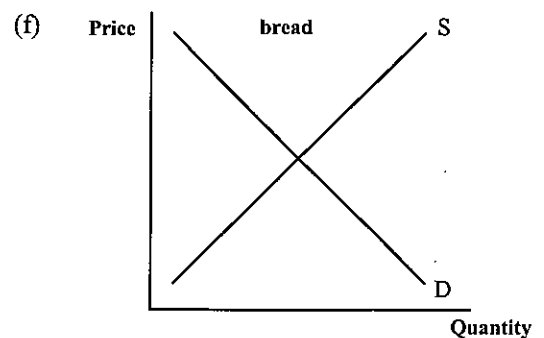
Introduction of a new airline



A heatwave destroys a large part of the orange crop



A rise in mortgage interest rates



A new higher-yielding strain of wheat is developed



View the demonstration of the demand supply model on the CD-ROM and try the exercises. Record your answers below.

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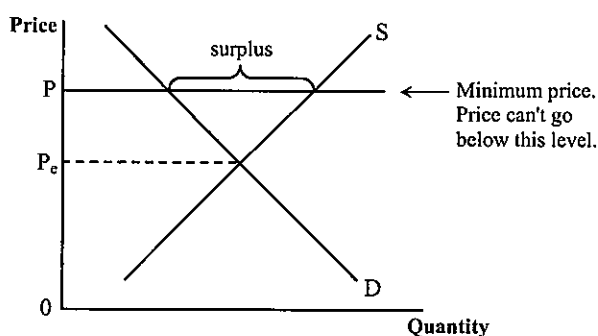
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Government interference in the price mechanism

Governments sometimes intervene in the market using price controls. This is achieved by setting upper or lower limits on prices. However, this leads to a distortion of the market mechanism, and so price controls are uncommon.

A floor price

The government may set a minimum price (or floor price) for a product to ensure that suppliers of that product get a reasonable income. If this minimum price is set above the equilibrium price the price mechanism will be unable to work.



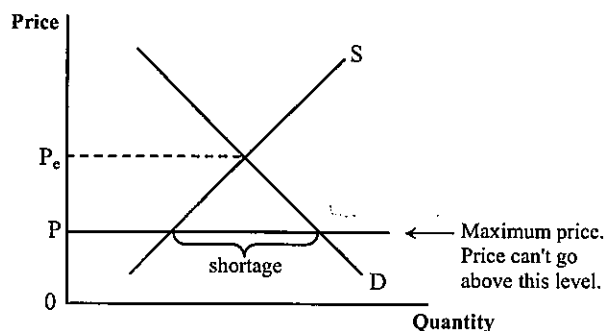
Graph showing floor price

The minimum price, OP , has been set above the equilibrium price OP_e . At this price level the quantity supplied is greater than the quantity demanded, so there is a surplus.

Normally, the price mechanism would work to decrease prices towards equilibrium. However, this is not possible as the price control prevents the price from falling. The result is a permanent surplus and increasing stocks of unsold goods. This situation occurred in the 1980s in the Australian wool market.

A price ceiling

The government may also set a maximum price level (or ceiling price). Usually this is to ensure that low income earners are not disadvantaged by high prices. If the maximum price is set below the equilibrium price the market mechanism can't work.



Graph showing ceiling price

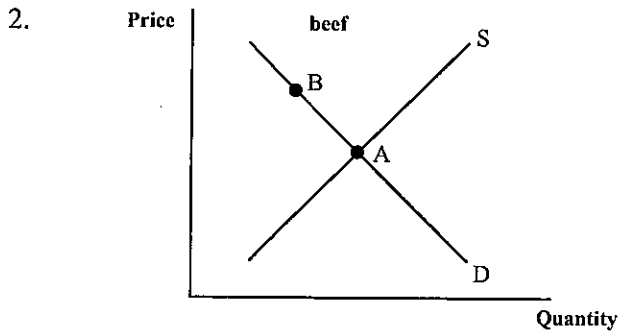
The maximum price, OP , has been set below the equilibrium price OP_e . At this price level the quantity demanded will be greater than the quantity supplied, so there is a shortage. As the price control prevents the price mechanism from increasing prices, the shortage will be permanent. This generally leads to that good or service being rationed, as has occurred in the market for housing trust rental accommodation. Another possible outcome is a black market developing.

What is a black market?

Microeconomics

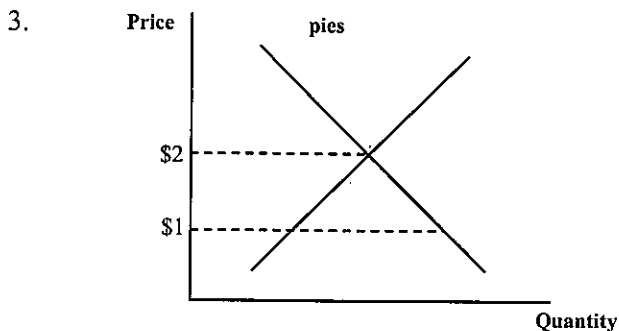
Activity 3: Review questions

1. If an increase in the price of one good caused a decrease in demand for another good, this would indicate that:
 - J. the two goods were substitutes
 - K. consumers tastes had changed
 - L. the two goods were complements
 - M. there had been a contraction in demand.



Which of the following could cause the equilibrium point to shift from A to B?

- J. an increase in consumer income
- K. an increase in the price of lamb (a substitute for beef)
- L. an increase in grazing land available for cattle
- M. disease destroying herds of cattle.



If, in the above market, the price of pies was \$1:

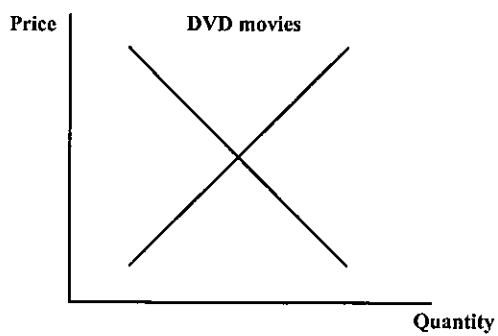
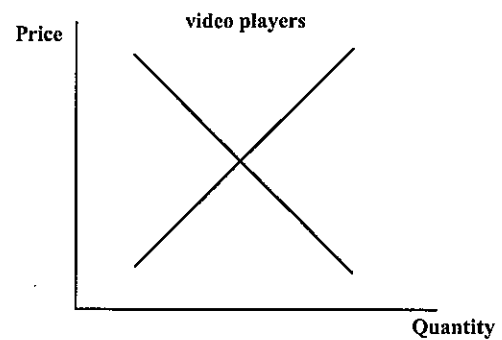
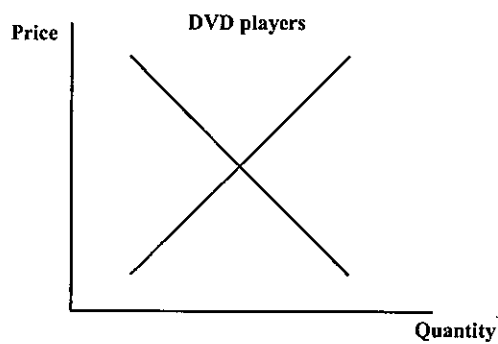
- J. there would be a temporary shortage of pies on the market
 - K. the new equilibrium price would become \$1
 - L. there would be an increase in demand for pies
 - M. there would be a decrease in supply of pies.
4. Assume coal and oil are substitutes. If a new source of coal was discovered, the result would be:
 - J. a decrease in the price of both coal and oil
 - K. a decrease in the price of coal and an increase in the price of oil
 - L. a decrease in both the price and quantity of coal and oil
 - M. an increase in the price of coal but a decrease in the price of oil.

5.

DVD takes over from video

Sales of DVD players are booming in Australia according to figures released yesterday. Industry estimates show DVD sales were up 55% on the previous year. A spokesman attributed the huge increase to advances in DVD technology and consumer demand for improved picture quality.

Show how this information would affect the following:





Price elasticity



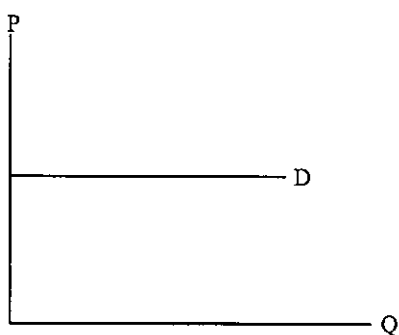
Read pages 55–60, 62–63, 66–70 of the textbook.

Elasticity refers to how responsive something is to being changed. An elastic band, for example, is elastic because it stretches when a force is applied to it before returning to its original shape. A wooden ruler, however, is inelastic as it does not respond to the same force. Price elasticity refers to how responsive quantity demanded or supplied is to a change in price. The more responsive quantity is to price the more elastic is demand or supply. If quantity is less responsive to price, however, then demand or supply is inelastic.

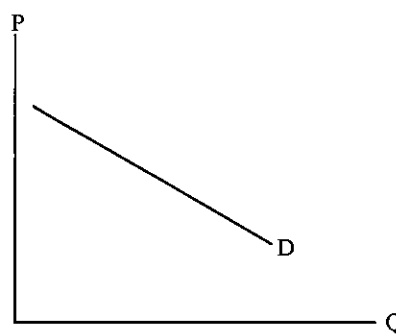
Price elasticity of demand

Price elasticity of demand shows how responsive the quantity demanded is to a change in price. Note that elasticity is measured in proportional terms, that is, by what proportion quantity changes for a certain proportionate change in price.

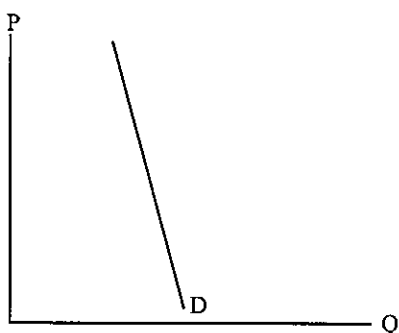
The elasticity of demand ranges from perfectly elastic to perfectly inelastic as shown below:



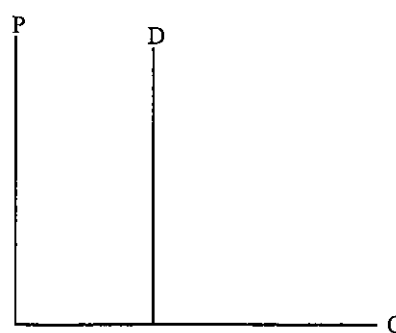
Perfectly elastic demand



Elastic demand



Inelastic demand



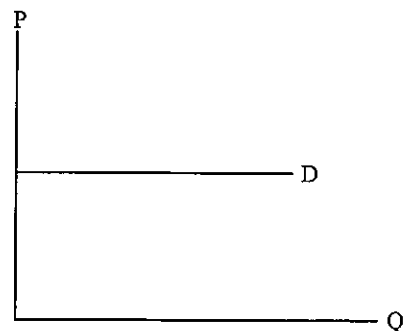
Perfectly inelastic demand

Limits of demand elasticity

Perfectly elastic demand

This means that consumers will buy an unlimited amount at a given price but none at all above or below that price. The demand curve is horizontal.

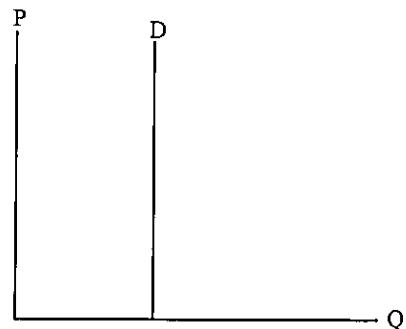
This may be the case for an agricultural product such as oranges, where there is a large number of buyers and sellers and no one producer can influence price by changing the amount they put on the market.



Perfectly inelastic demand

This means that buyers want a certain quantity of the good and are willing to pay any price to obtain it. The demand curve will be vertical.

An example might be a hardened smoker who will buy cigarettes regardless of the price. They will pay any amount to get the cigarettes they need.

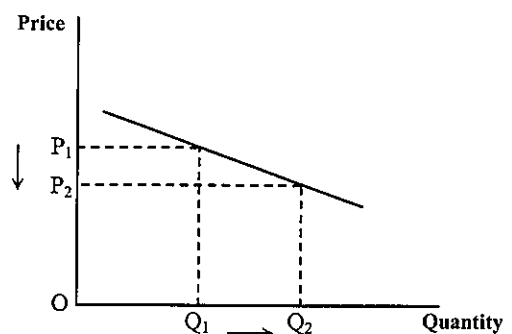


Note that perfectly elastic and perfectly inelastic demand are not common in the real world as most goods do have some price elasticity.

Elastic demand

If a price change leads to a larger percentage change in the quantity demanded then demand is elastic. An example might be if a 5% rise in price leads to a 10% fall in quantity demanded. Similarly, a 10% fall in price which causes a 20% rise in quantity demanded is also elastic. The demand curve will be relatively flat.

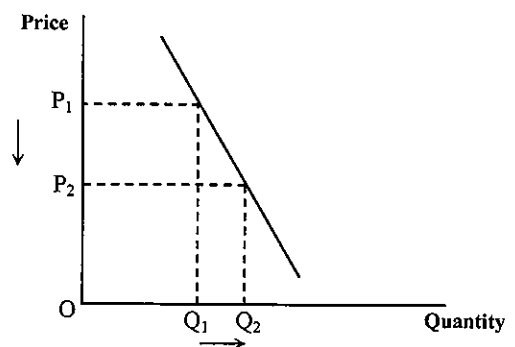
The fall in price from OP_1 to OP_2 has caused a larger percentage increase in the quantity demanded from OQ_1 to OQ_2 . Demand is relatively elastic.



Inelastic demand

Demand is inelastic when a price change causes a smaller percentage change in the quantity demanded. For example, if a 20% price fall caused a 10% rise in quantity demanded. The demand curve is relatively steep.

The fall in price from OP_1 to OP_2 has caused a smaller percentage increase in quantity demanded from OQ_1 to OQ_2 . Demand is relatively inelastic.



Factors affecting price elasticity of demand

Substitutes

Substitutes are products that satisfy the same want, such as butter and margarine. If a close substitute is available then that product is likely to have an elastic demand. For example, if the price of car insurance with one company increases, consumers can easily switch to another company. Consumers are able to respond easily to the price change.

A product without close substitutes, such as eggs, will have a relatively inelastic demand. A price change will have little impact on the quantity demanded.

Necessities

Goods that consumers consider to be necessities have a relatively inelastic demand. A change in the price of bread or milk will not have a big effect on the quantity demanded as many consumers consider them an important part of their diet, for example. People addicted to drugs will continue to buy them no matter what the price.

Durability

Demand for durable goods tends to be relatively elastic. If the price of white goods, such as washing machines, increases, consumers are able to defer their purchases until later. The washing machine can be repaired or made to last until the consumer can afford a new one.

Complementary goods

Complementary goods are those that go with each other to satisfy a want, such as a car and petrol. Demand tends to be relatively inelastic for a good that is a cheaper complement to a more expensive good. For example, demand for petrol is not likely to be significantly affected by a price rise for people who own cars. Demand for petrol is therefore inelastic.

Relative cost

Inexpensive items tend to have an inelastic demand. For example, a rise in the price of newspapers is unlikely to greatly affect demand as they are an insignificant part of most consumers' incomes. Expensive items that take up a significant part of consumers' incomes, such as overseas holidays, will have an elastic demand.

Summary

Elastic demand	Inelastic demand
goods with close substitutes	goods without substitutes
durable goods	necessities
expensive goods	complementary goods
	inexpensive goods

Microeconomics

Activity 1

1. Explain what is meant by price elasticity of demand.

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2. Classify the following items as either demand elastic or inelastic and give a reason why.

Item	Elastic or inelastic demand	Reason
salt		
refrigerators		
cigarettes		
petrol		
houses		
medical services		
film for a camera		
bottled water		
bus travel		
car registration		

3. Explain why toothpaste itself has an inelastic demand but demand for different brands of toothpaste is elastic.

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Total revenue method

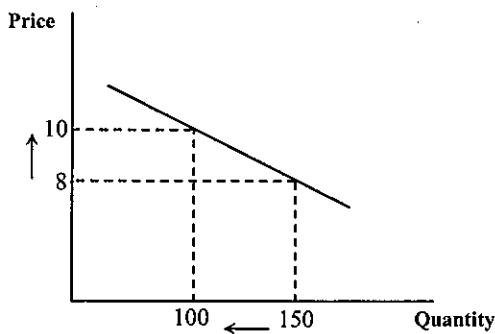
The total revenue method is one way of measuring whether demand is elastic or inelastic. It examines the effect of price changes on the total revenue received by a supplier. Total revenue earned by a producer is found by multiplying price by the quantity demanded.

$$TR = P \times Q$$

Demand is elastic when a price change causes a larger percentage change in quantity demanded, so total revenue moves in the opposite direction to the price change.

For example, a price increase will cause a larger percentage decrease in quantity demanded and result in a decrease in total revenue. Alternatively, a price decrease will cause a larger percentage increase in quantity demanded and result in an increase in total revenue.

Example: elastic demand



A price rise from \$8 to \$10 has caused the quantity demanded to fall from 150 to 100.

Before the price rise:

$$\text{Total revenue} = P \times Q = 8 \times 150 = \$1200$$

After the price rise:

$$\text{Total revenue} = P \times Q = 10 \times 100 = \$1000$$

The price rise caused total revenue to decrease so demand is elastic.

So, if demand is elastic:

- a price **increase** causes total revenue to **decrease**

or

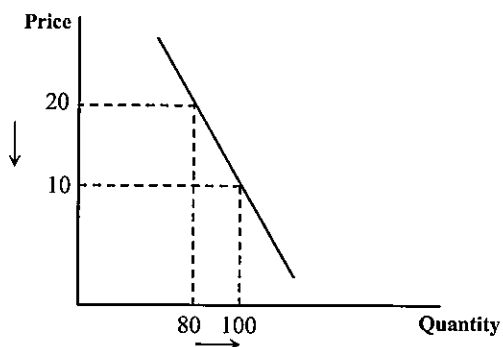
- a price **decrease** causes total revenue to **increase**.

Microeconomics

Demand is inelastic when a price change causes a smaller percentage change in quantity demanded, so total revenue moves in the **same direction** as the price change.

For example, a rise in price causes only a small percentage decrease in quantity demanded and so there is an increase in total revenue. Alternatively, a drop in price causes total revenue to decrease because there is only a small percentage increase in quantity demanded.

Example: inelastic demand



A price fall from \$20 to \$10 has caused the quantity demanded to rise from 80 to 100.

Before the price fall:

$$\text{Total revenue} = P \times Q = 20 \times 80 = \$1600$$

After the price fall:

$$\text{Total revenue} = P \times Q = 10 \times 100 = \$1000$$

The price fall caused total revenue to decrease so demand is inelastic.

So, if demand is inelastic:

- a price **increase** causes total revenue to **increase**
- or
- a price **decrease** causes total revenue to **decrease**.

Summary

The total revenue method is summarised in the table below:

		Revenue	
		Decrease	Increase
price	increase	elastic	inelastic
	decrease	inelastic	elastic

When total revenue moves in the same direction as the price change, demand is inelastic.

When total revenue moves in the opposite direction as the price change, demand is elastic.

Note: The textbook gives more detail on the total revenue method than is required for this course.

Activity 2

1. Explain how the total revenue method can be used to determine the elasticity of demand for products.

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2. Complete the following table by showing whether total revenue will increase or decrease.

	Elastic demand	Inelastic demand
Price rise	Total revenue will	Total revenue will
Price fall	Total revenue will	Total revenue will

3. Use the total revenue method to determine if demand is elastic or inelastic in the following cases.

- (a) At a price of \$2 the quantity demanded was 400. If the price increases to \$3 the quantity demanded would be 300.

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- (b) If the price fell from \$10 to \$6 and quantity demanded increased from 400 to 700.

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- (c) Quantity demanded at a price of \$20 was 500. When the price fell to \$16 quantity demanded was 800.

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Microeconomics

4. (a) If demand was inelastic, would the producer increase or decrease price to increase total revenue? Explain.

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- (b) If demand was elastic, would the producer increase or decrease price to increase total revenue? Explain.

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5. Explain what is meant by:

- (a) perfectly elastic demand

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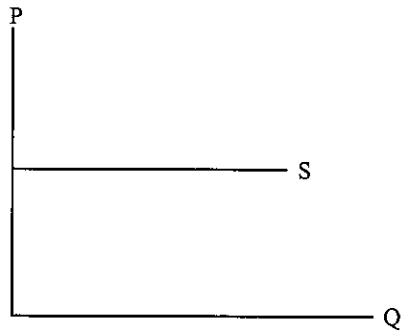
- (b) perfectly inelastic demand

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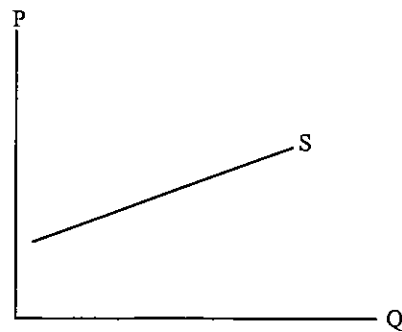
Price elasticity of supply

Price elasticity of supply refers to how responsive the quantity supplied is to a change in price. Usually when there is an increase in price, suppliers supply more. How much more depends on the elasticity of supply.

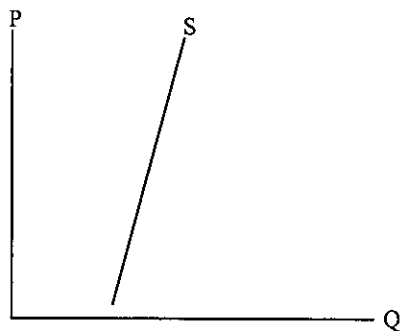
The elasticity of supply ranges from perfectly elastic to perfectly inelastic as shown below.



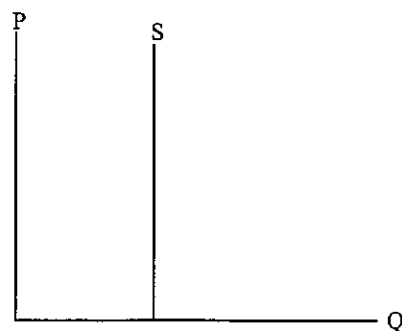
Perfectly elastic supply



Elastic supply



Inelastic supply



Perfectly inelastic supply

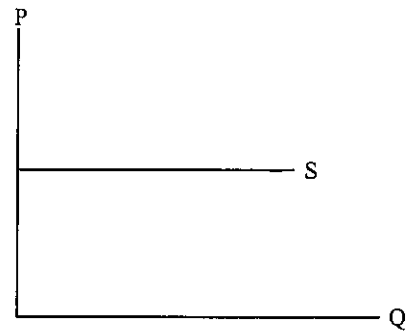
Microeconomics

Limits of supply elasticity

Perfectly elastic supply

This would mean that suppliers will supply any quantity of a good at a given price. The supply curve would be horizontal as shown on the right.

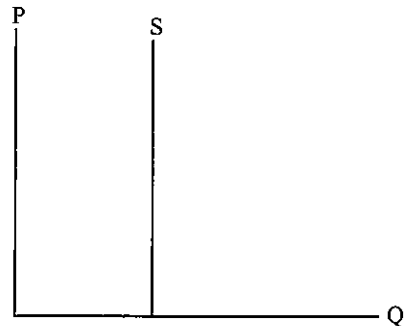
Perfectly elastic supply would occur where there is unlimited quantity of the product available, such as sand used to make glass.



Perfectly inelastic supply

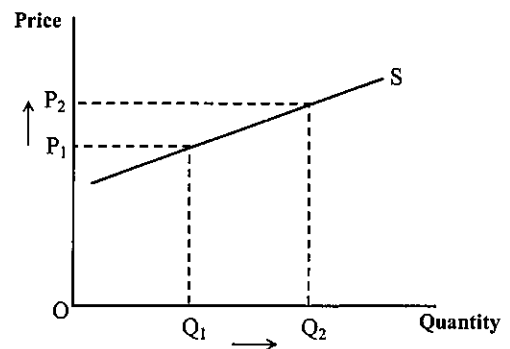
This means that there is a limited quantity of a product or service available for supply at a given time. The supply curve will be vertical.

This usually occurs at a particular point in time. For example, there is only a certain quantity of tickets available to football fans for the AFL grand final.



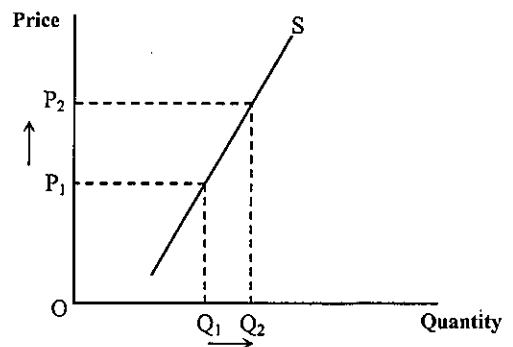
Elastic supply

If there is a large percentage increase in quantity supplied relative to the rise in price then supply is elastic. For example, a 10% rise in price causes a 20% increase in quantity supplied. The supply curve is relatively flat.



Inelastic supply

If an increase in price causes a smaller percentage increase in quantity supplied then supply is inelastic. For example, a 10% rise in price causes quantity supplied to increase by 5%. The supply curve is relatively steep.



Factors affecting the price elasticity of supply

Elasticity of supply depends on how easily suppliers can respond to price changes. This will depend on the following factors:

Excess capacity

Excess capacity means that producers have the ability to produce more because they have unused capital or labour resources. When price rises, suppliers with excess capacity will be able to use their resources to increase production. Supply therefore will be relatively elastic. Firms that are operating at full capacity will find it difficult to increase production in response to price rise, so supply will be inelastic.

Availability of resources

The resources available are an important determinant of supply elasticity. It is not possible to increase the quantity supplied in response to a price rise if resources are not available. Supply, therefore, will be more elastic if resources are plentiful, but inelastic if resources are not readily available.

Production time

The length of the production period will have an impact on the ability of suppliers to respond to changes in price. Supply of most agricultural products is inelastic because of the time needed to increase or decrease production. This is particularly the case if the crop has already been planted. For example, it can take up to three years for new vines to produce worthwhile yields of grapes. Grape producers therefore will find it difficult to increase the supply of grapes in the short term if prices increase. Similarly it is not easy to reduce the supply of grapes if price falls. Once picked, the grape grower will need to sell all his product at the current price.

Ability to hold stocks

The ability to store goods is an important factor in supply elasticity. Most agricultural products are unable to be stored easily due to their perishable nature. Sellers will continue to supply their product even if price falls so supply is inelastic. Producers of manufactured goods, on the other hand, may be able to store stocks of their product. If price falls, they can add to stocks and decrease the quantity supplied. If prices increase they can increase supply easily using previously stored goods. Supply therefore is elastic.

Microeconomics

Activity 3

1. Explain what is meant by price elasticity of supply.

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2. Decide whether the following goods are likely to have elastic or inelastic supply and give a reason.

(a) Carrots

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(b) Gold

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(c) Cars

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(d) Cabbages

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(e) Sand

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The importance of elasticity

Knowledge of the elasticity of demand for a product is useful for producers when making production and pricing decisions. For example, if they know demand for their product is elastic, producers would realise that increasing prices would lead to less revenue. It would be better to lower prices and increase production. This may be the case when deciding whether to offer discounts, for example. On the other hand, if demand is inelastic, producers know they can increase prices and total revenue will increase. Discounts would actually decrease their revenue.

The government would also need to take into account elasticity when making policy decisions. For example, when introducing a new tax, the government needs to know the effect on government revenue. Taxes on items such as cigarettes and alcohol will generate extra revenue as demand for these items is inelastic. People continue to buy them despite the price rise. If the tax was imposed on items with elastic demand, the government would not raise as much revenue. If they were considering whether to pay subsidies to producers to reduce prices, the total cost would depend on the elasticity of demand to the price change.

Activity 4: Review questions

1. The supply curve for fresh fish is likely to be relatively inelastic because :
 - J. it is difficult to store fresh fish for a long time
 - K. canned fish is a close substitute
 - L. fresh fish can be provided to the market quickly
 - M. there are always extra resources available to supply fish.

2. Demand for take away food is relatively elastic because:
 - J. relative to consumer incomes, it is an inexpensive item
 - K. take away food can be produced quickly
 - L. there are close substitutes available
 - M. supply of take away food is elastic.

3. If demand for a product is inelastic, to increase total revenue a producer should:
 - J. offer discounted prices to attract new customers
 - K. raise prices
 - L. increase supply
 - M. store stocks of goods until prices rise.

4. If a price rise from \$4 to \$5 causes a drop in quantity demanded from 600 to 500:
 - J. total revenue has increased and demand is elastic
 - K. total revenue has increased and demand is inelastic
 - L. total revenue has decreased and demand is inelastic
 - M. total revenue has decreased and demand is elastic.

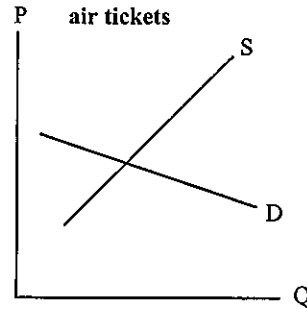
5. Read the newspaper article below and answer the questions that follow.

Airfare war erupts

An airline price war erupted today in Australia's domestic airline industry with the announcement of a new low-budget carrier by Qantas to be introduced later this year. Jetstar outlined plans to offer ultra-cheap

introductory fares on a range of routes around Australia. The offer was immediately matched by Virgin Blue. Bargain hunters are expected to swoop on the initial offer of cheap fares.

- (a) Show the effect of the new airline on the diagram and indicate what happens to price and quantity.



- (b) Describe the elasticity of demand for air travel, giving reasons.

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- (c) What is the likely impact of the lower prices on total revenue for the airlines? Explain why.

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- (d) Show the impact of the price war on the market for bus travel on the diagram.

