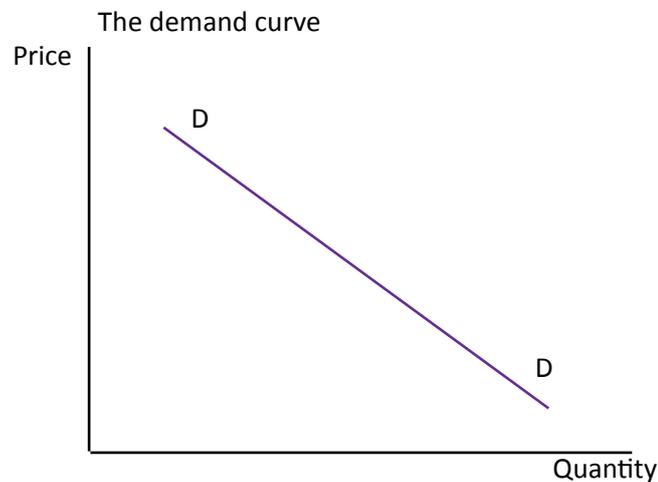


Chapter 3

Demand and supply

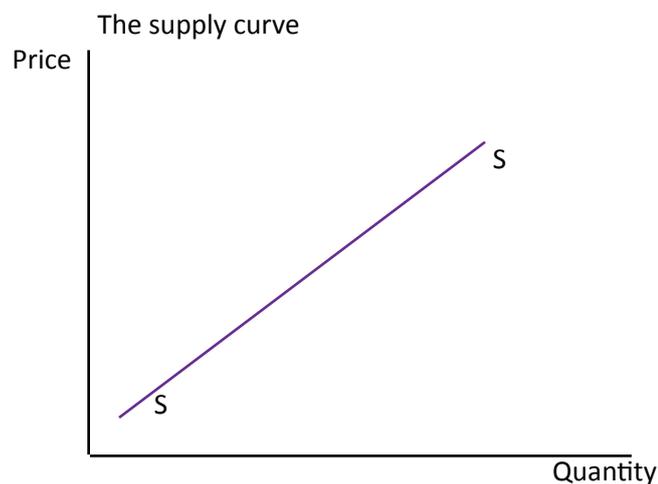
Demand is the amount of a product that consumers are willing and able to purchase at any given price. It is assumed that this is **effective demand**, i.e. it is backed by money and an ability to buy.



The law of demand states that the higher the price, the lower the quantity demanded; and the lower the price, the higher the quantity demanded. Naturally, consumers are willing and able to buy less as the price rises. This results in a downward sloping demand curve.

Movements along the demand curve are therefore caused by changes in price.

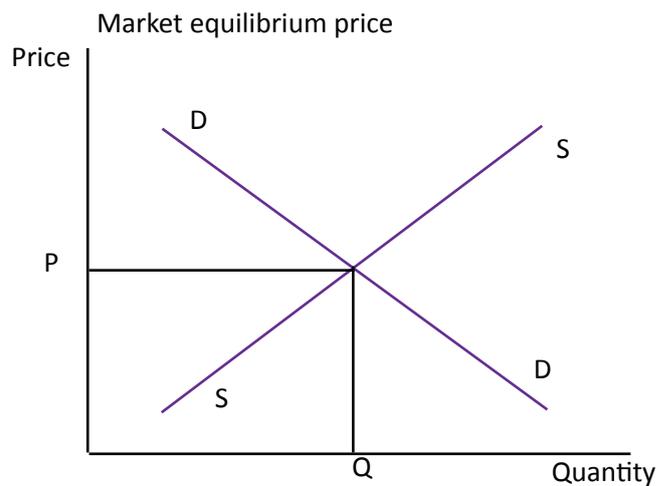
Supply is the amount of a product which suppliers will offer to the market at a given price.



As the price of an item goes up, suppliers will attempt to maximize their profits by increasing the quantity offered for sale. This means that the lower the price, the lower the quantity supplied; and the higher the price, the higher the quantity supplied. At low price levels only the most efficient suppliers can make a profit so supply is limited. As price increases, the profit motive attracts new resources to supply and the higher price allows less efficient producers to make a profit. So as price increases, supply increases.

Movements along the supply curve are therefore caused by changes in price.

Equilibrium



Where the demand curve and the supply curve intersect, we have a point where the quantity that consumers are willing to purchase matches the quantity that suppliers are willing to supply at a given price. This point is known as the **market equilibrium**. From the market equilibrium we can derive market price and market quantity. This market equilibrium is not fixed; it is likely to change over time due to changes in the patterns of demand and supply.



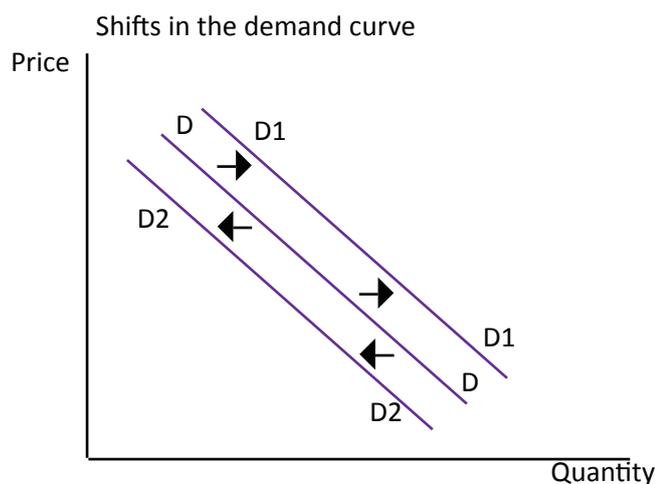
Label the diagram (demand and supply)

<http://bit.ly/1QkYiVe>

Shifts in demand and supply

As well as price there are a number of other factors which affect the demand and supply for a product. Whereas a change in price will cause a movement up or down the demand and supply curves, other factors might cause the curves to **shift**. This means that more or less of a product will be demanded or supplied at any given price.

Shifts in the demand curve

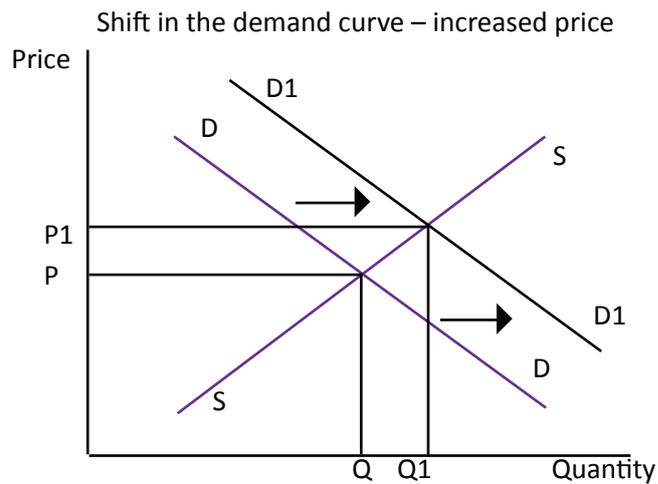


The demand curve can shift outward (to the right) or inward (to the left). If the demand curve shifts out, this means that more is demanded at each price level. This **increase in demand** is shown by the shift to a new demand curve, D1 in the diagram. An inward shift to a new curve at D2 indicates a **decrease in demand** – this indicates that less is demanded at each price level.

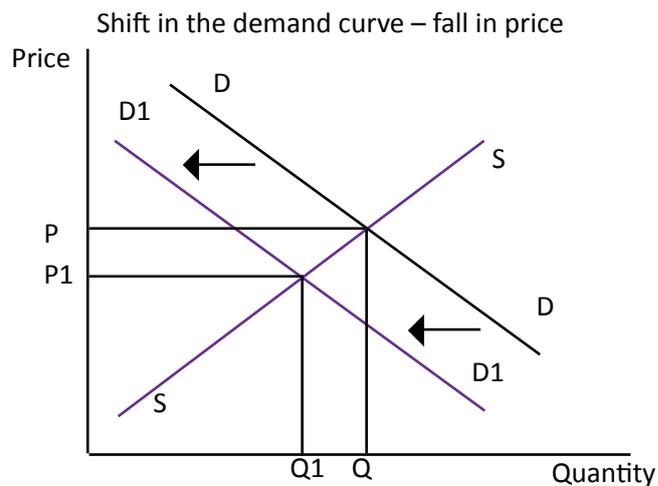
Factors that affect demand

- Firstly, an increase in consumers' **incomes** is likely to shift a demand curve to the right for most normal and luxury goods. With more disposable income people buy more of the things they want. So as incomes increase, the demand for cars, holidays, consumer electronics etc. also increases. A fall in incomes will cause the demand curve to shift inwards and to the left – demand decreases.
- **A change in tastes and fashion** can also shift the demand curve. If goods become more fashionable the demand curve shifts to the right, increasing demand at all price levels. If goods go out of fashion, the demand curve shifts to the left.
- Other factors which shift the demand curve include a **change in the price of other goods**:
Complimentary goods are those used alongside another good. For example, if demand for holidays increases, demand for luggage or perhaps suntan lotion will also increase. A change in the price of *substitute goods* will also shift the demand curve. A substitute is a good used instead of another good. For example, if train fares increase some people will switch to private transport and travel by car. This may lead to an increase in the demand for petrol, shifting the demand curve for petrol to the right. If the price of airline tickets were to increase, then it is likely that demand for holidays at home in the UK would increase.
- A successful **advertising** campaign can cause the demand curve for a product to shift to the right. However, bad publicity will have the opposite effect and cause a shift to the left.
- **Changes in population** will also affect demand. The UK has an ageing population with those of retirement age forming a larger proportion of the population. This has resulted in an increase in demand for retirement homes, stair lifts and numerous other products that are used by the elderly.
- **Government legislation** may also have an impact on the demand for certain products. When legislation was passed making child seats compulsory in vehicles there was a significant increase in demand at any given price.

The effect on equilibrium price of a change in demand

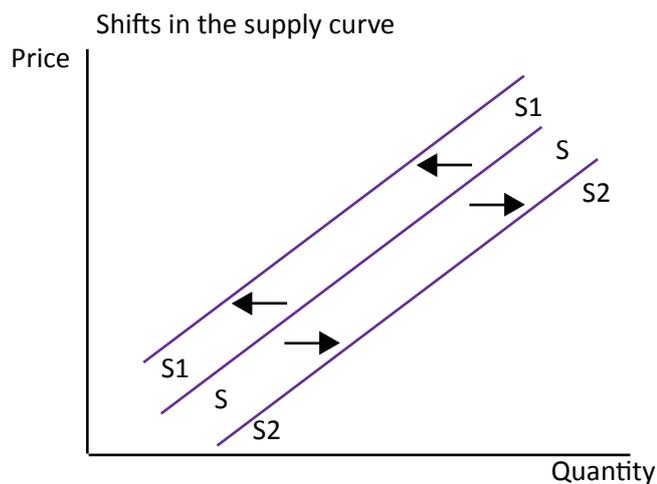


The diagram shows a shift outwards of the demand curve (caused by perhaps increasing incomes or the increasing price of the substitute good). Initially at market equilibrium we have price P and quantity Q . A new equilibrium is created where $D1$ cuts the original supply curve. Price rises to $P1$ and quantity demanded and supplied expands to $Q1$.



In this diagram we see a shift to the left of the demand curve (perhaps caused by a fall in price of a substitute). Again we start with equilibrium with price P and quantity Q . After the shift in demand curve we have a new equilibrium with price $P1$ and quantity $Q1$. The impact of the shift in of the demand curve has been to reduce price and to cause a contraction in the quantity demanded and supplied.

Shifts in the supply curve

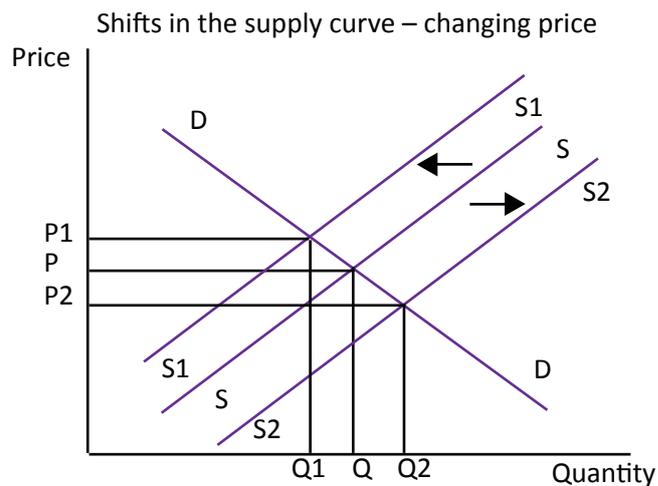


Like demand, supply can also change – independent of any change in price. Supply at each price level can increase (shift outwards to S2) or the amount supplied at each price level can decrease (shift inwards to S1).

Factors that affect supply

- One of the most important factors that changes supply, independent of any change in price, is a **change in costs**. If producers' costs fall resulting from a factor such as a fall in the price of raw materials or cost of labour, this will increase supply, shifting the supply curve outwards and to the right. Now at each price level more is supplied. Rising costs will have the opposite effect and shift the supply curve inwards and to the left.
- **Weather** can have a significant impact on the supply of agricultural products. Increased output is likely to result from a good harvest – this again shifts the supply curve outwards and to the right. Bad weather, of course, has the opposite effect.
- **Introduction of new technology**, especially in production techniques, also increases supply: this increase in productivity shifts the supply curve outwards and to the right.
- **Legislation** can also have a significant impact on the supply of some products. Increasingly businesses find their costs are increasing because they have to comply with new anti-pollution legislation introduced by the government. This shifts the supply curve inwards and to the left. When the government imposes a tax on a good or service, this too will cause the supply curve to shift to the left.

The effect on equilibrium price of a change in supply



The diagram shows a shift outwards to the right of the supply curve (S2) (perhaps caused by falling costs). Initially at market equilibrium we have price P and quantity Q. The shift outwards results in a fall in price to P2 and an increased quantity demanded and supplied at Q2. The diagram also shows a shift of the supply curve (S1) (perhaps caused by a bad harvest). Initially at market equilibrium we have price P and quantity Q. The shift in the supply curve to the left results in an increase in price to P1, and fall in quantity demanded and supplied to Q1.

The concept of elasticity

Price elasticity of demand measures the responsiveness of demand to a change in price.

Understanding price elasticity of demand is very important to business managers who need to know the impact of changes in price on likely levels of demand. They need to know how **sensitive** the demand for their good or service is to a change in price.

Price elastic/Price sensitive

In markets approaching perfect competition, elasticity of demand is likely to be highly **elastic** – this means that a change in price will cause a more than proportional change in the quantity demanded. Price goes up, demand falls dramatically. When price falls, the reverse happens. Given the conditions of near perfect competition, where goods are largely undifferentiated, this impact of the change in price on demand levels is quite predictable. Why should people buy a higher priced good when a virtually identical good is immediately available at a lower price?

Price inelastic/Price insensitive

If a good has **inelastic** price elasticity of demand then a change in price causes a less than proportional change in the quantity demanded. So if price goes up, demand falls just a little. If price goes down demand increases just a little. Inelastic price elasticity of demand is likely to occur when the levels of competition are low, when there are a few substitutes, the goods are necessities or perhaps addictive. In these circumstances the business involved has much more control over the price than companies in highly competitive markets. Of course for many retailers and producers price elasticity of demand is likely to be somewhere between highly elastic/sensitive and highly inelastic/insensitive. But knowing and understanding price elasticity of demand is important in decision-making, especially with regards to the marketing of goods.

The objective of most businesses would be to make the price elasticity of demand of their goods or services more inelastic. This means that they have more control over their price, they are price makers and not price takers. If price elasticity of demand is inelastic and increasing price causes a less than proportional fall in the quantity demanded, this means **revenue would increase**. This is a much more preferable situation to a situation where price elasticity of demand is elastic and there is an increase in price which leads to a more than proportional fall in the quantity demanded, resulting in a fall in revenue.

Businesses can make demand for their goods more price inelastic if they do the following:

- **encourage consumer loyalty;**
- **reduce or restrict competition in the market;**
- **increase brand value.**

Income elasticity of demand

Income elasticity is the responsiveness of demand to changes in income.

Business managers like to look at the relationship between changing (increasing or falling) incomes and changing demand levels for different types of goods or services. Generally real incomes increase over time ('real' means allowing for the impact of inflation), leading to increased wealth and rising demand for most, but not all, goods and services. As people get richer they consume more, driving up demand for many goods and services.

When we link this pattern of changing demand to changing income we can measure the income elasticity of demand for each type of good or service.

- Income elasticity of demand can be elastic: a change in income causes a more than proportional change in the quantity demanded. For example, a 5% increase in incomes leads to a 10% increase in demand for pizzas.
- Income elasticity of demand can be inelastic: a change in income causes a less than proportional change in the quantity demanded. For example, incomes fall by 4% but demand for toothpaste falls by just 2%.
- Income elasticity of demand can also be negative when a rise in incomes causes a fall in demand. For example, incomes increase by 6%, and this causes a 5% fall in demand for supermarkets' own brand lemonade.

Normal, luxury and inferior goods

When real incomes of customers increase, the demand for **normal goods** responds as we might expect. As people become better off they buy more of this type of product. The majority of everyday items fall into this category – for example, cars, furniture, washing machines etc.

Luxury goods also fall into the category of normal goods but tend to be more sensitive to changes in real income. If incomes increase, demand for gym membership booms; if incomes fall many people quickly cancel their gym memberships in an attempt to save money.

Inferior goods are those goods that have negative income elasticity of demand – demand rises when real incomes fall. Supermarket own-label products are a good example of inferior goods. During a recession, consumers may turn to such products in order to economise. However, as incomes rise, they do not buy more of the own-label products but may switch to buy higher priced branded products instead.



Elasticity of demand
<http://bit.ly/1P2GmOf>

Discussion themes

Discuss the following statement: 'Businesses can do little to alter the price elasticity of demand for their goods.'

Explain the differing circumstances where

- a fall in price increases revenue;
- an increase in price increases revenue.

Explain how demand for different types of goods (normal, inferior and luxury) responds to changes in income.

Read the article

<http://www.dailymail.co.uk/news/article-2608359/Choc-horror-It-Easter-world-running-chocolate-demand-China-outstripping-cocoa-bean-production-forcing-prices-up.html>

Draw a diagram (with explanation) to show how the impact of Chinese chocolate demand has impacted on price.

What is likely to happen in the long run to chocolate prices if the actions of Mondelez International are successful?