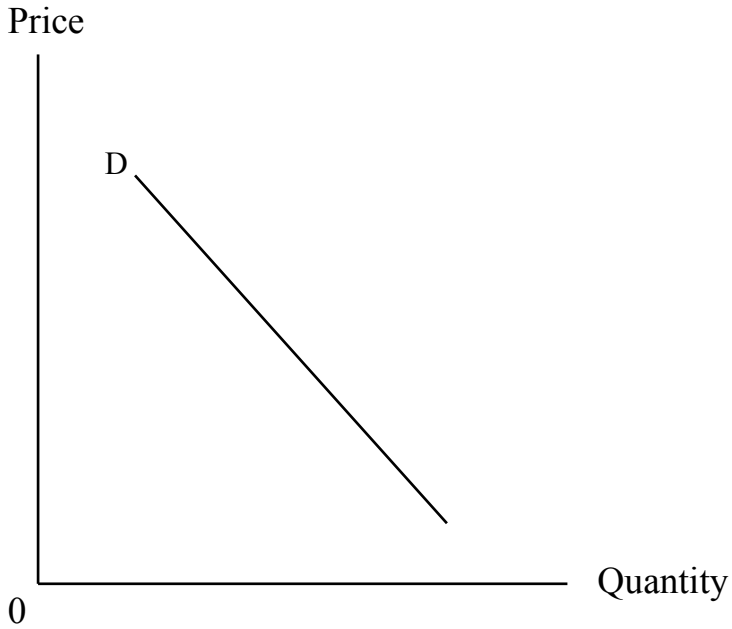
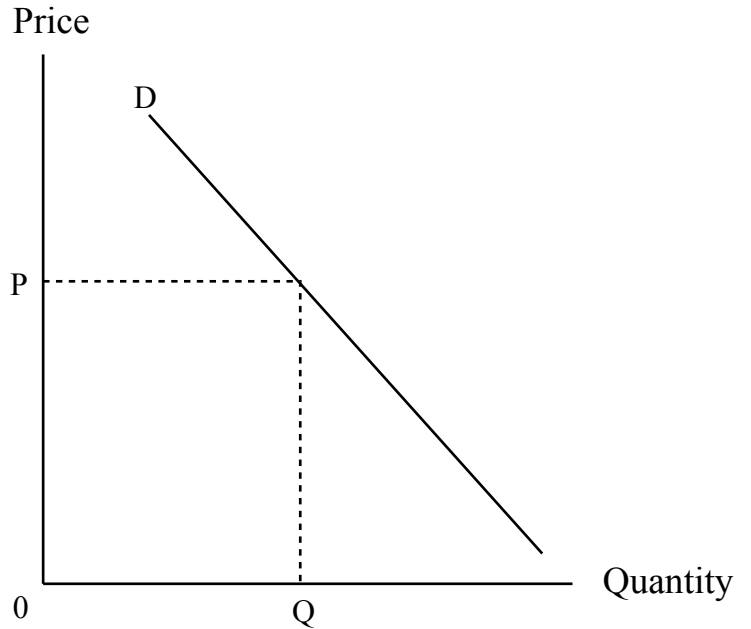


DEMAND, SUPPLY AND ELASTICITY DIAGRAMS

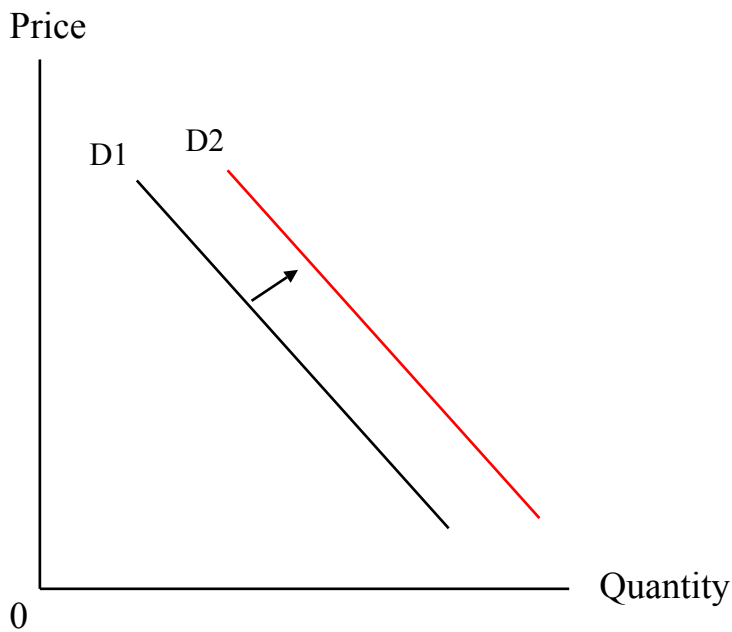
The demand curve



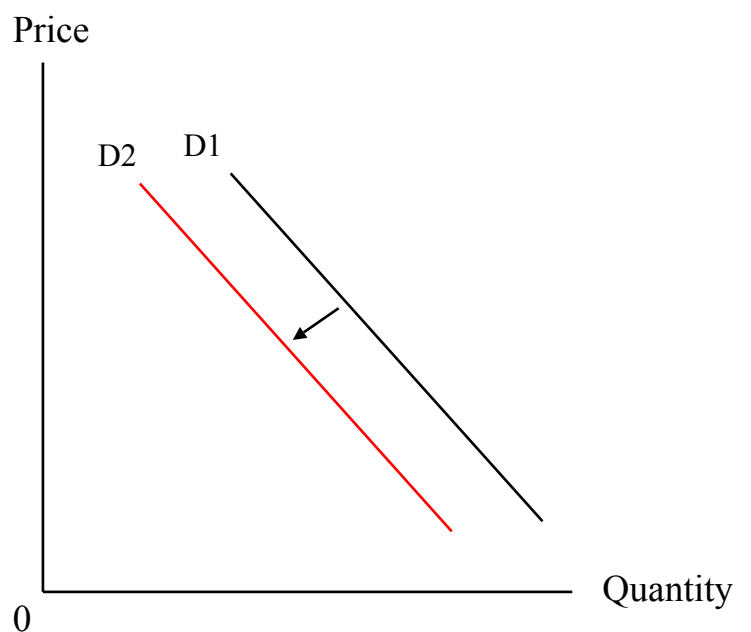
A random price and quantity shown on the demand curve



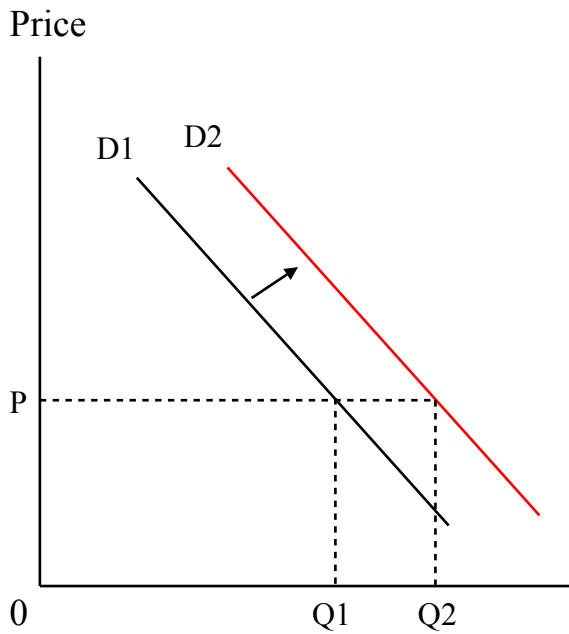
An increase in demand



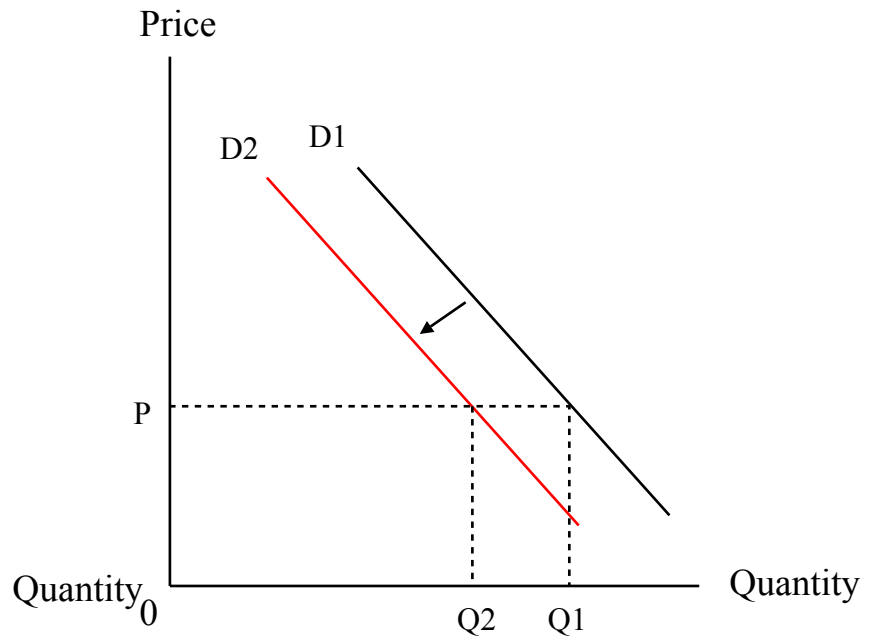
A decrease in demand



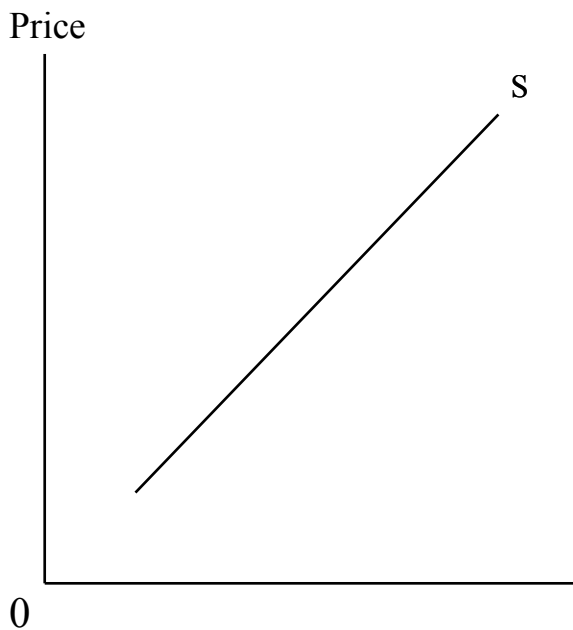
An increase in demand: at any given price, more is demanded



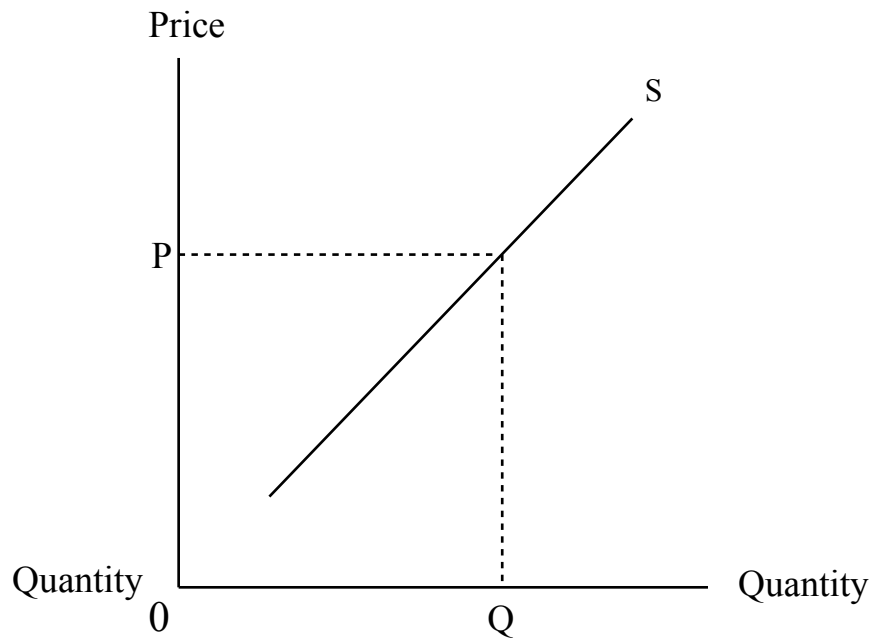
A decrease in demand: at any given price, less is demanded



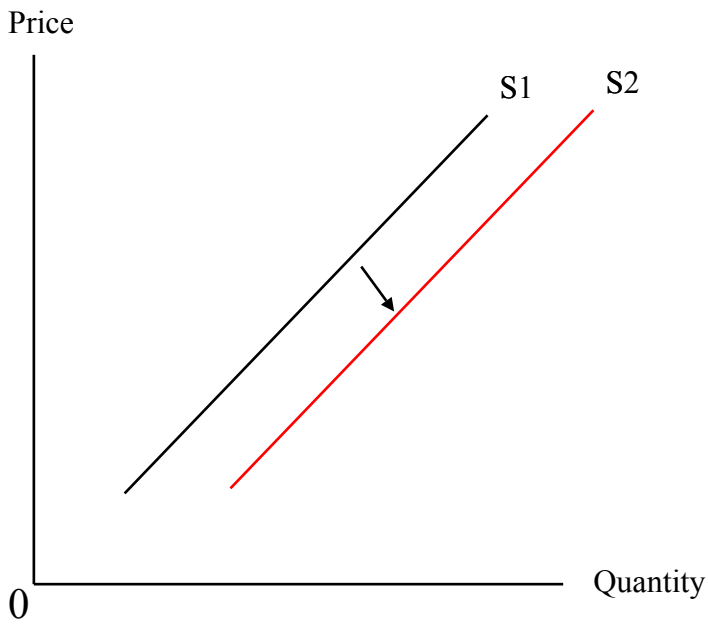
The supply curve



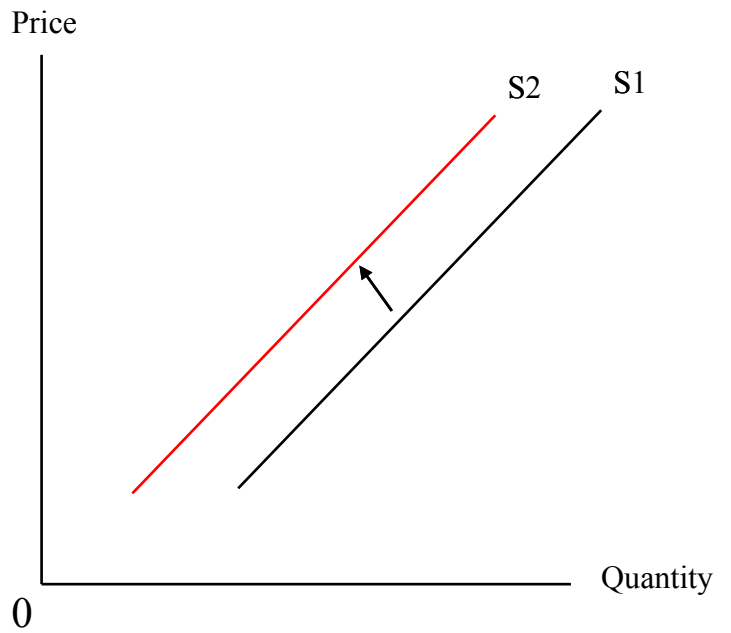
A random price and quantity shown on the supply curve



An increase in supply

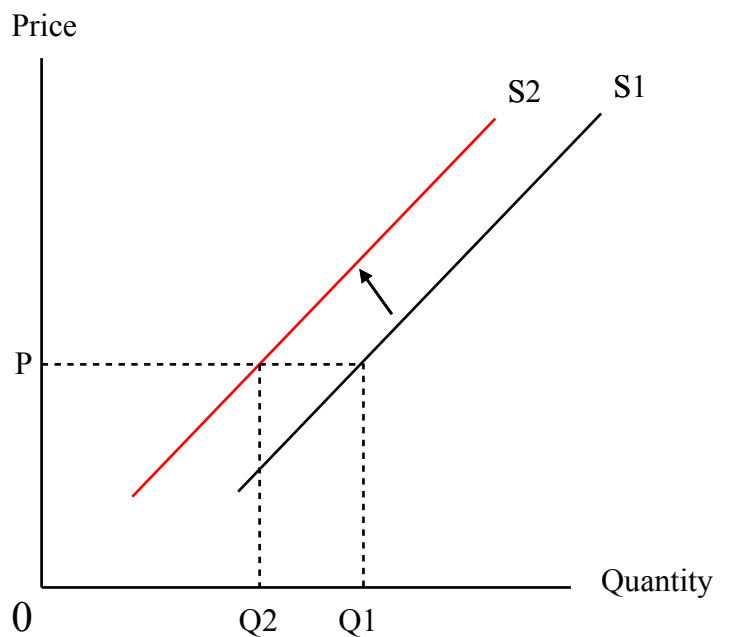
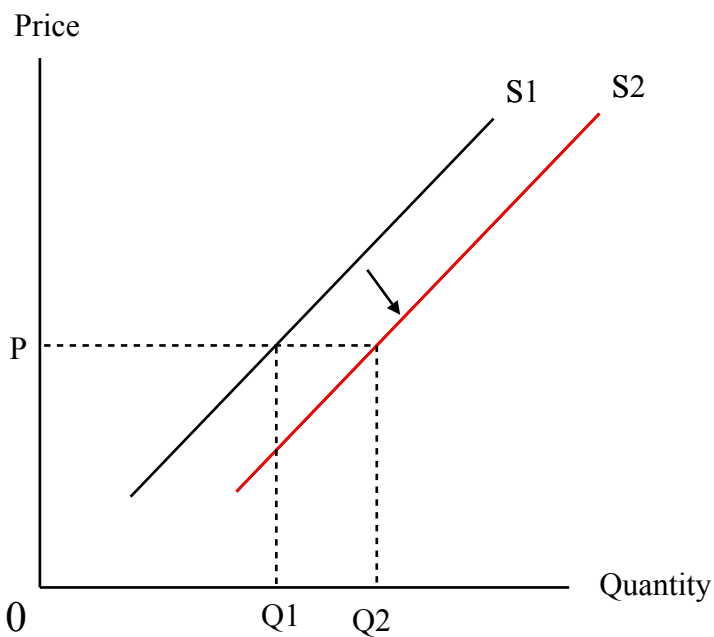


A decrease in supply

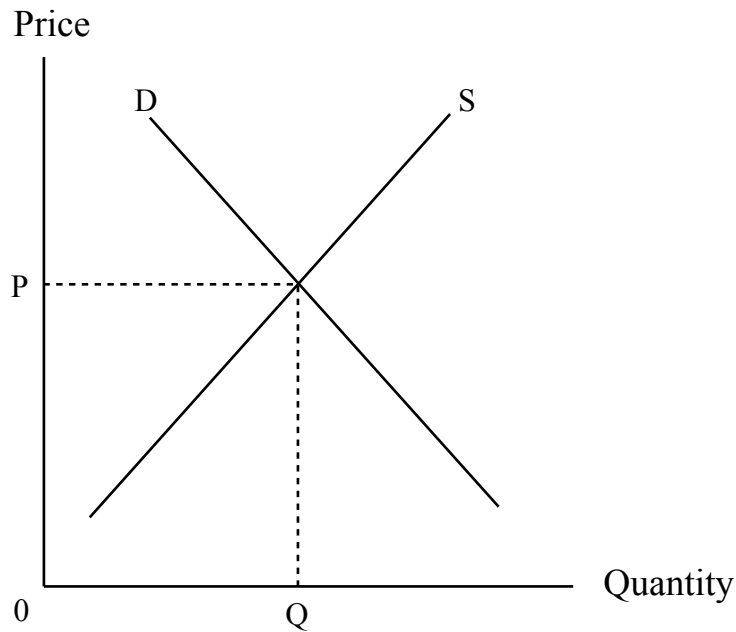


An increase in supply: at any given price, more is supplied

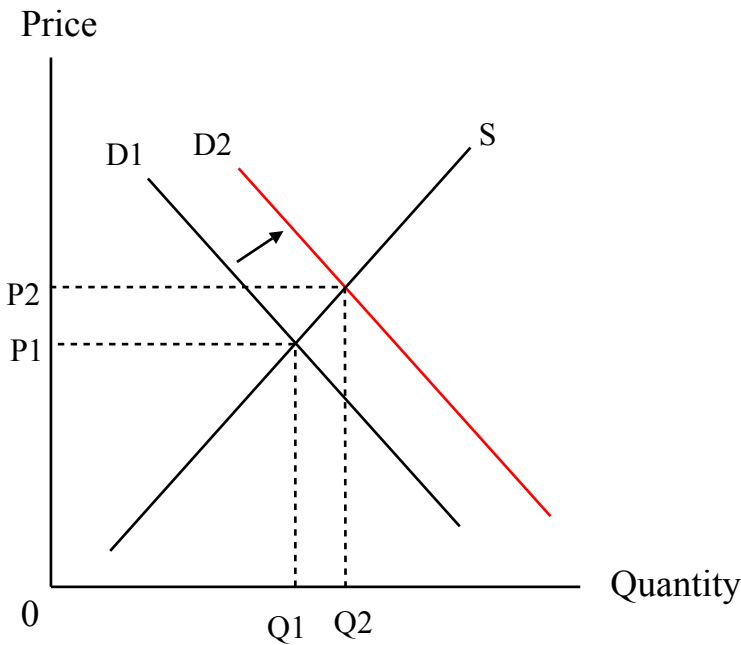
A decrease in supply: at any given price, less is supplied



Price equilibrium - the quantity demanded just equals the quantity supplied

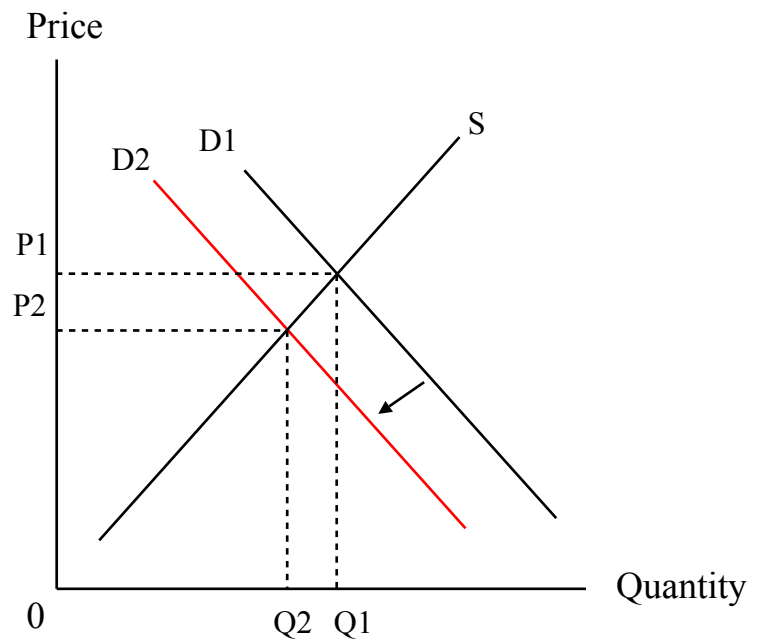


The effects of an increase in demand



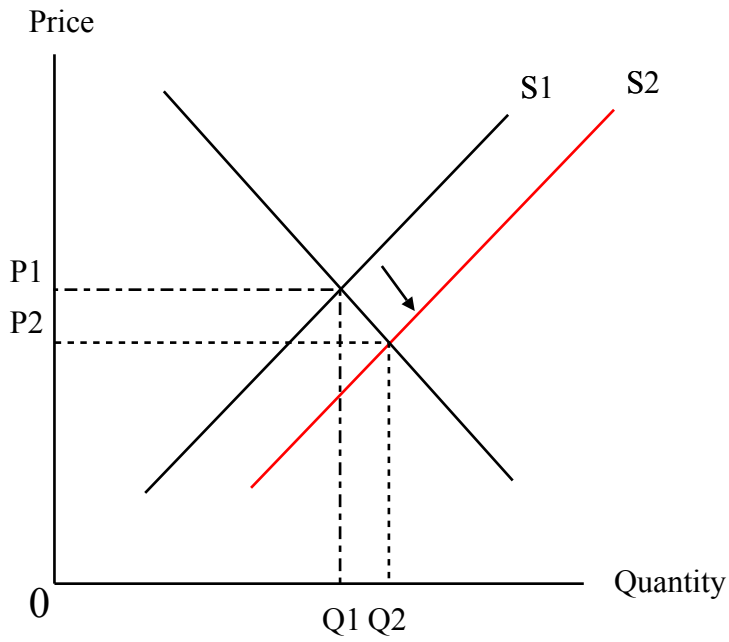
The increase in demand leads to a new equilibrium position: price increases as does the quantity supplied

The effects of a decrease in demand



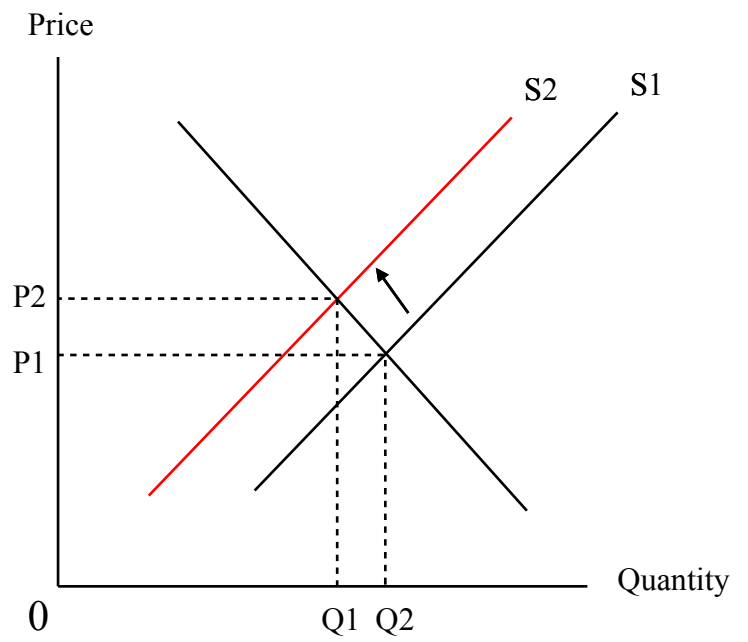
The decrease in demand leads to a new equilibrium position: price falls as does the quantity supplied

An increase in supply



The increase in supply leads to a fall in price and an increase in the quantity supplied

A decrease in supply

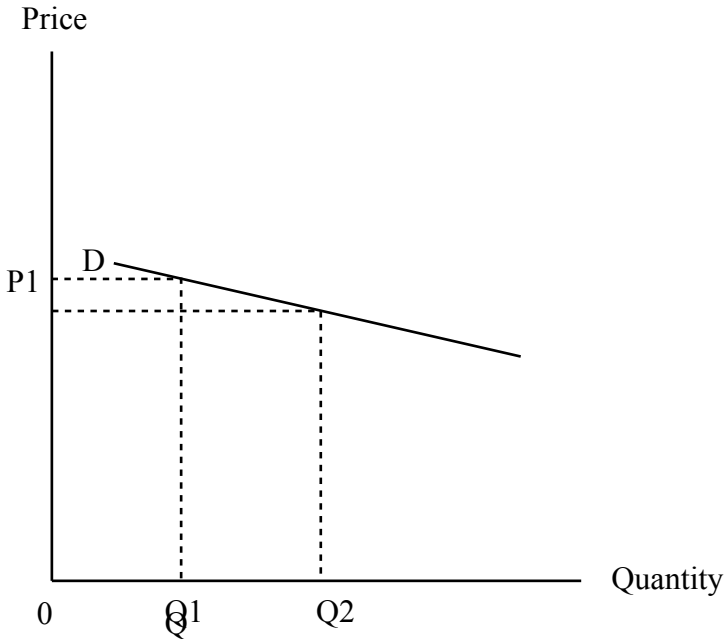


The decrease in supply leads to an increase in price and a fall in the quantity supplied

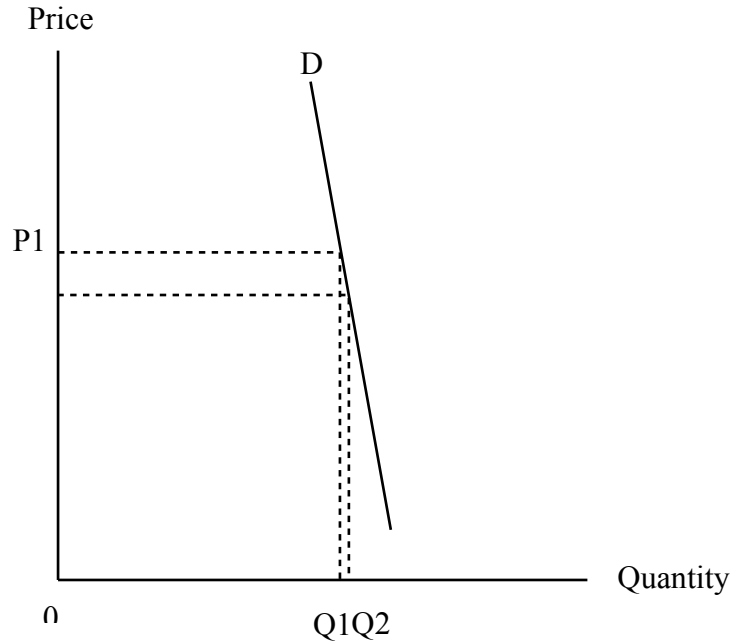
The different elasticities of demand

1. Price elasticity (we also have cross-elasticity and income elasticity of demand)

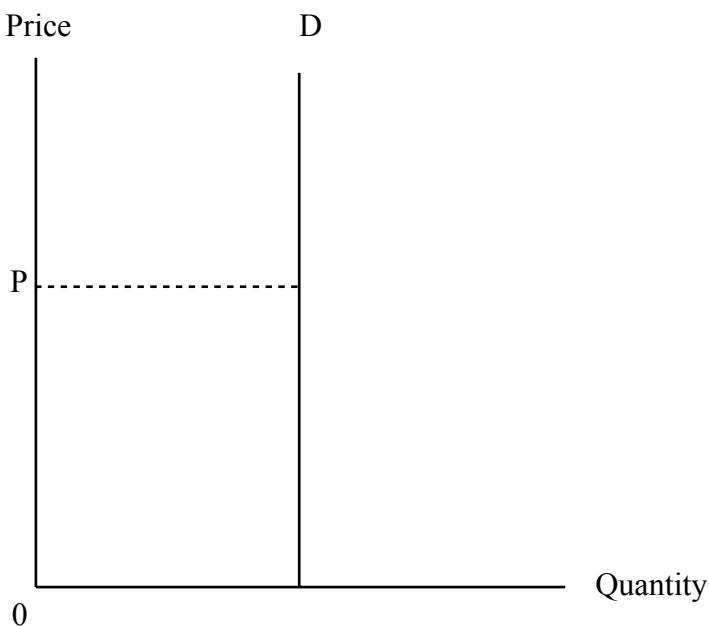
Relatively elastic demand
(Quantity stretches more than price)



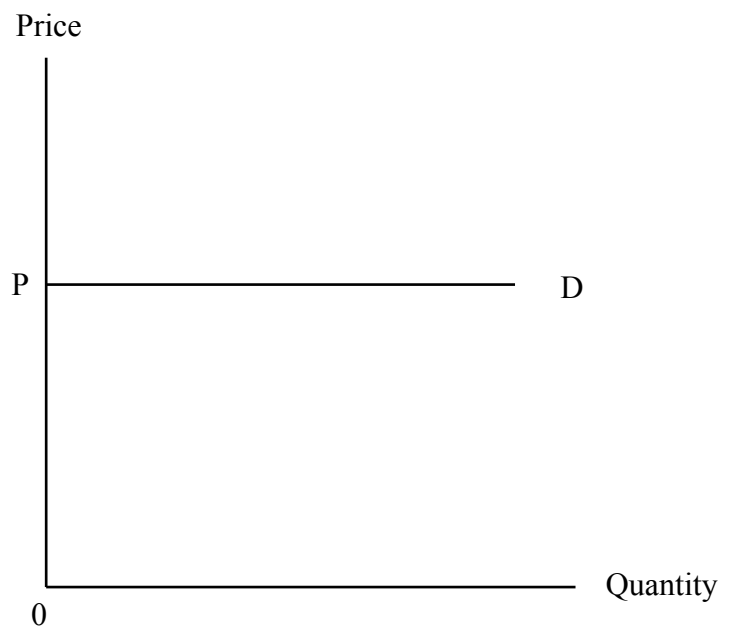
Relatively inelastic demand
(Quantity stretches less than price)



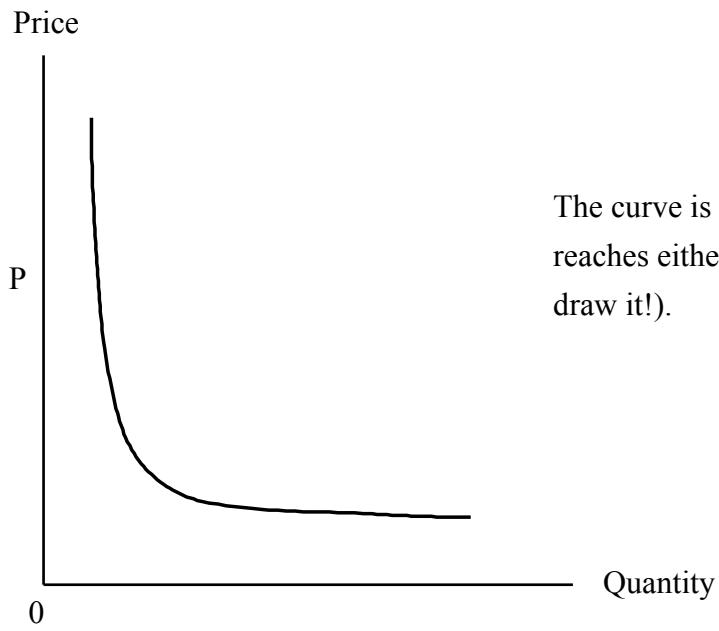
Perfectly inelastic demand
(A limiting case)



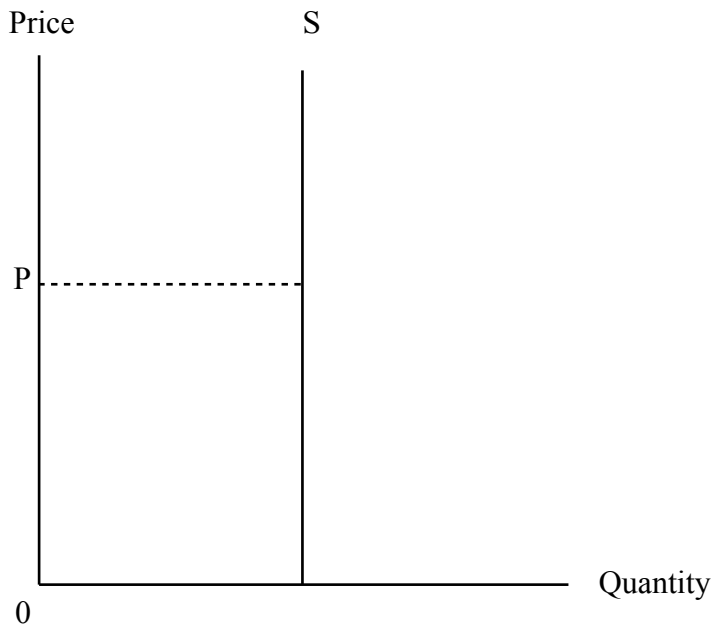
Perfectly elastic demand
(A limiting case)



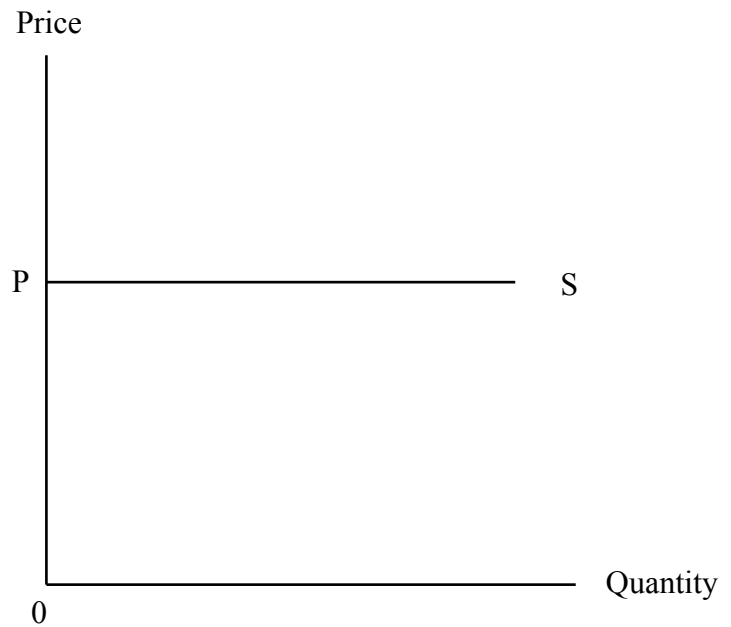
Unit elastic demand ($\% \Delta \text{ in } P = \% \Delta \text{ in } Q$)



Perfectly inelastic supply

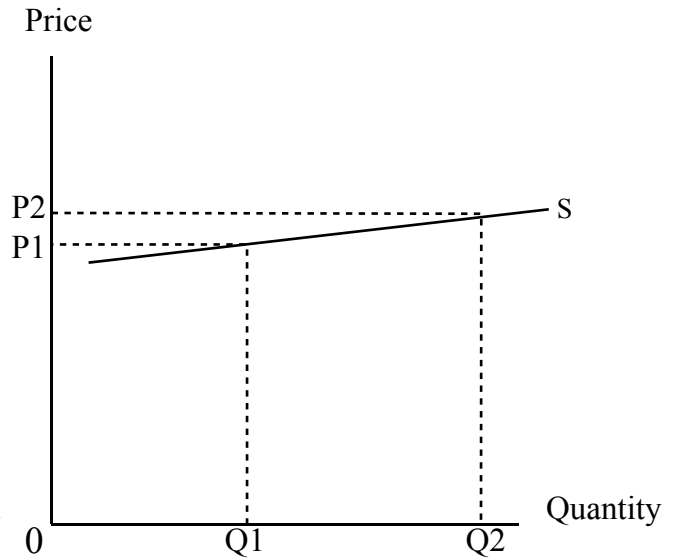
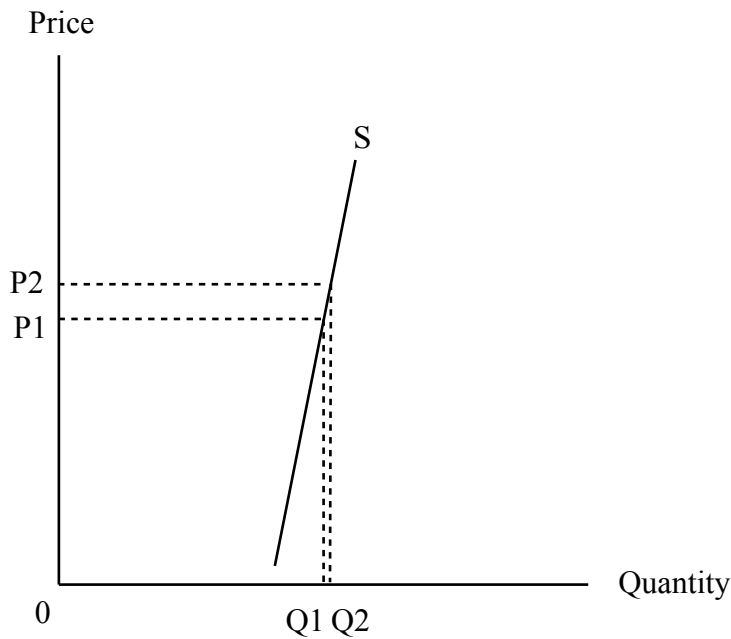


Perfectly elastic supply

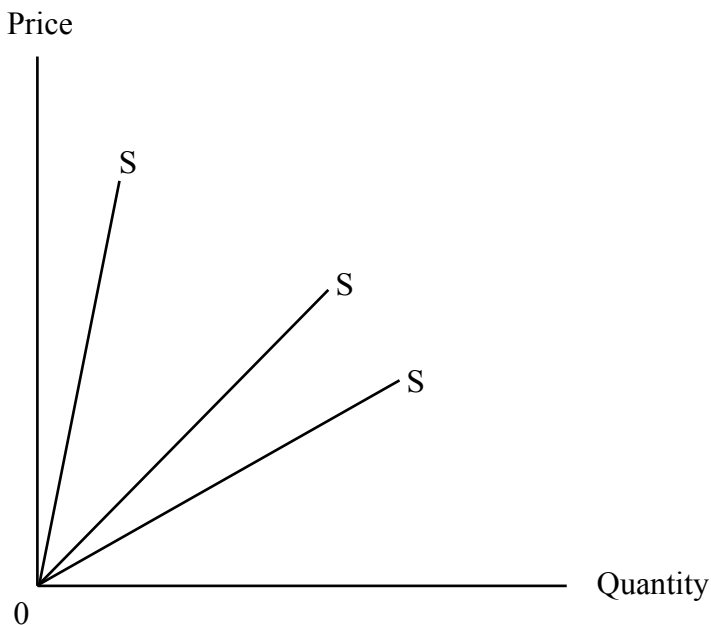


Relatively inelastic supply
(Quantity stretches less than price)

Relatively elastic supply
(Quantity stretches more than price)



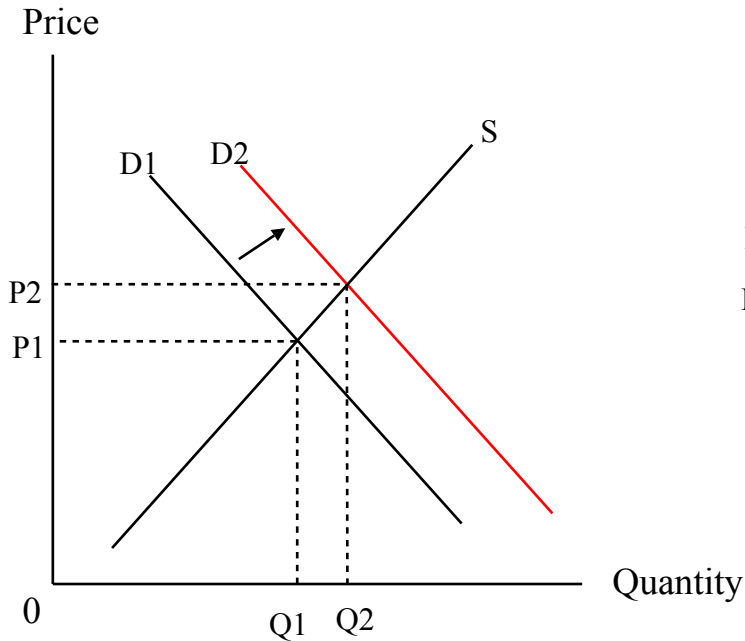
Unit elastic supply - any straight line S curve that goes through the origin (as slide along curve, the ratio between P and Q is unchanged)



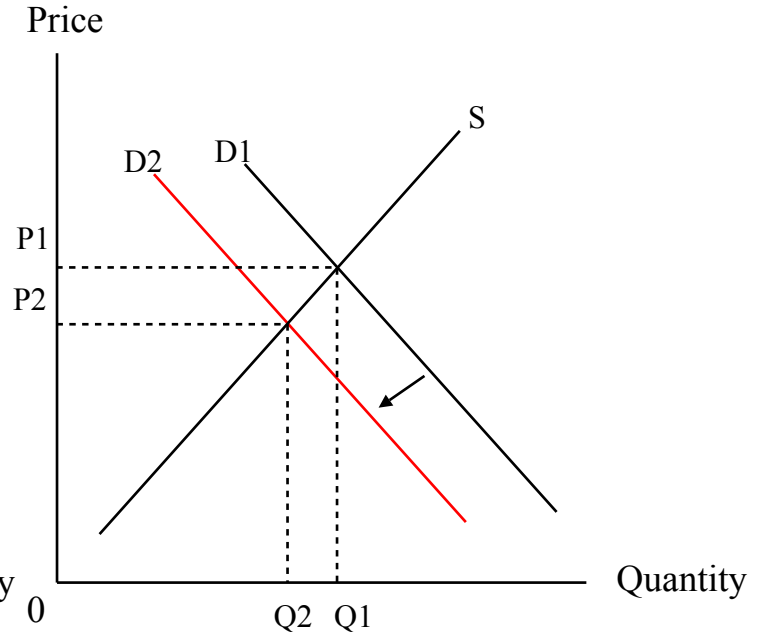
2. Cross-elasticity of demand (the change in the quantity demanded of good A when the price of a different good, B, changes)

When the demand for good B increases and this causes a fall in demand for good A, it means that the two goods are *substitutes*. People are switching from A to B

An increase in demand for good B



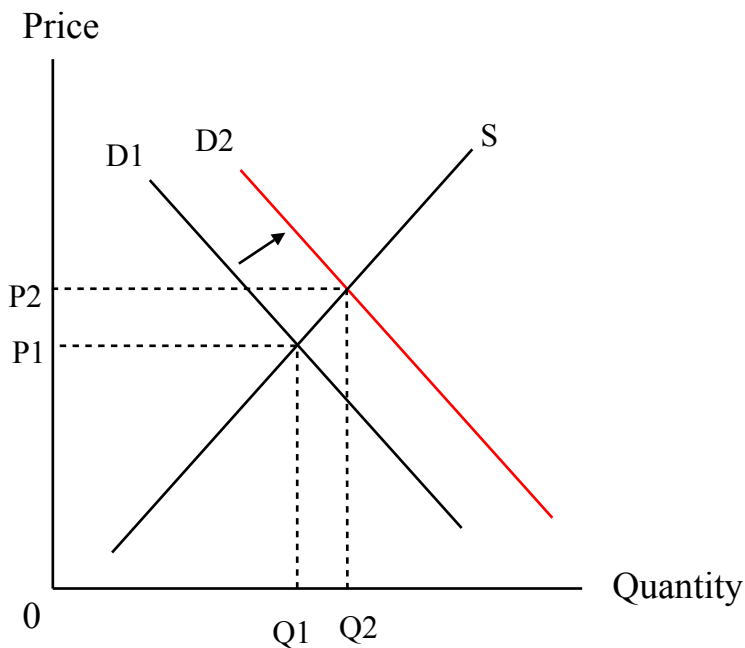
A decrease in demand for good A



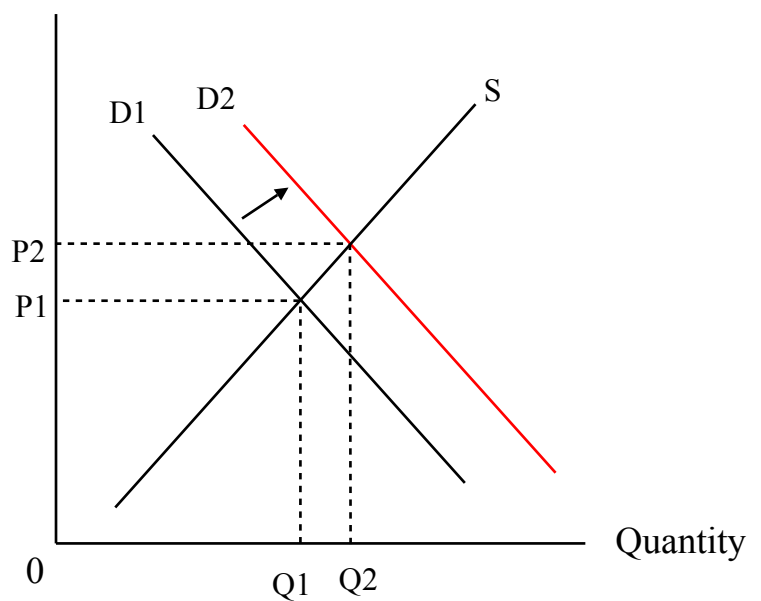
The opposite case: when the demand for good B increases and this causes an increase in demand for good A, it means that the two goods are *complements*.

People need more of good A to use with the extra quantity of good B being consumed.

An increase in demand for good B



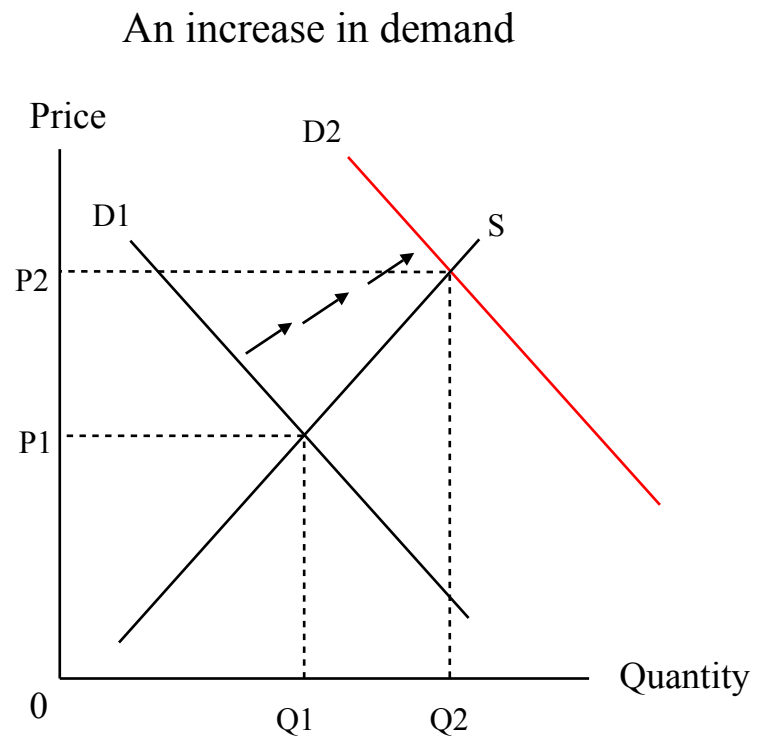
An increase in demand for good A



3. Income elasticity

If the good or service is *income elastic*, a given percentage change in income causes a greater percentage change in demand

Assuming a small increase in income, demand increases more than proportionately

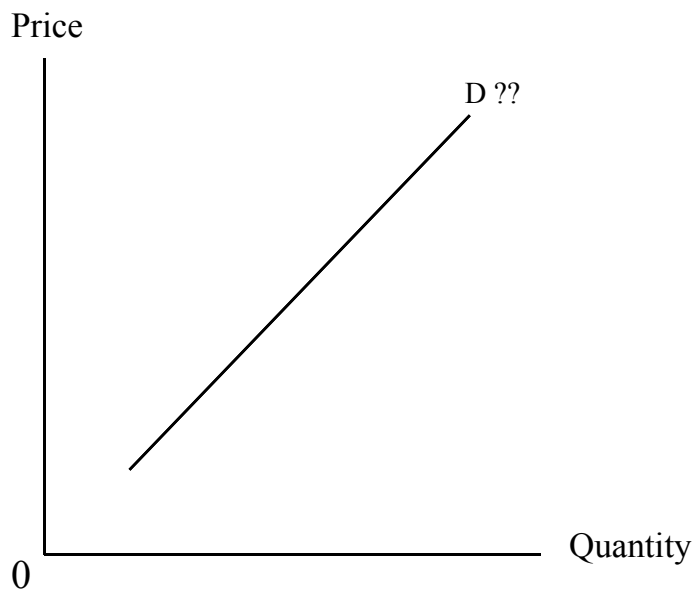


The opposite case: if the good or service is *income inelastic*, a given percentage change in income causes a smaller percentage change in demand

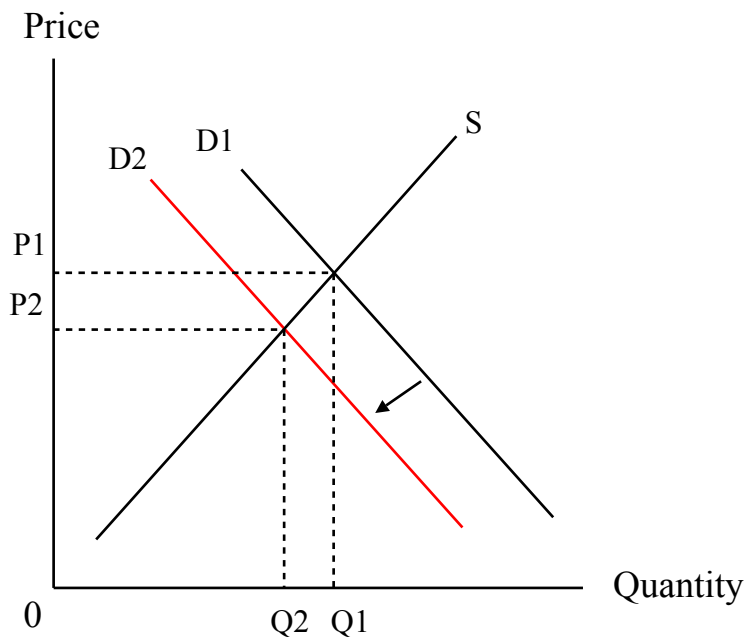
If the good or service is *income unit inelastic*, a given percentage change in income causes exactly the same percentage change in demand

If the good or service is *income negative elastic*, a given percentage increase in income causes a decrease in demand (and vice-versa)

Negative income elasticity was at the heart of the Giffen Paradox; Sir Robert Giffen noticed that in Ireland during the great famine of the Nineteenth Century as the price of potatoes fell, people bought *fewer* of them, an apparent reversal of the usual demand curve! Could it be a perverse demand curve, one that resembled a supply curve?



In fact, what was happening was that as the supply of potatoes increased, their price fell. Many people were surviving the famine by eating potatoes, and not much else, at every meal. As potatoes finally began to become cheaper, it meant people spent less on them, so real incomes increased. The extra income then went on anything but potatoes! This meant that the demand curve for potatoes shifted sharply down and to the left. So the initial fall in price led to an eventual fall in the number of potatoes consumed.



It was not a perverse demand curve after all, but the result of the income effect dominating the consumption effect, in this unusual situation. The income effect means that the increase in income was so great that it allowed people to buy other and nicer things and reduce their demand for potatoes (which means a shift in the demand curve). The consumption effect means that as a good or service fall in price, more is consumed (we slide down and out along an existing demand curve); in this case it was smaller than the income effect.

Three elements are needed for this rare event to occur:

- The good must be inferior
- It must make up a large proportion of the consumers' income
- There must be no reasonable substitutes for the good

A WORD OF ADVICE

It is possible to insert diagrams such as these into your essays by searching for diagrams online and copying the image electronically, or downloading and editing PDF files, or perhaps simply scanning a textbook. This is not recommended if you wish to learn economics. At best such behaviour allows you to learn and polish your skills in the computer or scanning programs you are using. To learn economics you need to practise drawing the diagrams for yourself. When you are under exam conditions you will probably have to do this in essays and even for multiple choice questions it can sometimes help you to get the right answer if you are able to draw a quick diagram for yourself.



The author's latest book is *Going to University: the Secrets of Success*, 2nd Revised and Expanded Edition, Kewei Press, UK, 2009. The recommended retail price is £9.95. An excerpt can be downloaded from www.keweipress.com A Kindle version is now available, priced about £3.45 (inc. VAT), or in United States dollars around \$4.99. Details and links on the Kewei Press site.

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Five free articles, all with an economics slant:

- “An Introduction to Economics in 5,000 Words and a Bit”
- “Trying to Make Sense of Economic Policy - Part 1: What Do Governments Try to Do?”
- “Trying to Make Sense of Economic Policy - Part 2: Why is it so Difficult to Get it Right?”
- “Demand, Supply and Elasticity Diagrams”
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One free cultural article:

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An Introduction to Economics