

When it comes to supply, we are talking about how much of a given product the sellers, or firms, or producers are prepared to supply to the market at any given price.

### The theory of supply

Just like with demand, where it only became effective if it was backed up with the ability to pay, supply is defined as the willingness and ability of producers to supply goods and services on to a market at a given price in a given period of time. With demand, the downward-sloping curve reflected an inverse relationship between price and quantity demanded. The opposite is true of supply. In theory, at higher prices a larger quantity will generally be supplied than at lower prices, *ceteris paribus*, and at lower prices a smaller quantity will generally be supplied than at higher prices, *ceteris paribus*. So this time we have higher supply at higher prices and vice versa. Again, it is important to assume that 'all other things remain constant'. Any change in one of the other determinants of supply will cause the curve to shift.

While it is fairly obvious why the demand curve is downward sloping, it is not so clear why the supply curve should be upward sloping. Basically, the producer will make higher profits as the price per unit sold increases. Imagine that a brewer produced a lager and a bitter. Assume, not unreasonably, that the costs of production are the same per pint produced, whether it is a pint of lager or a pint of bitter. If the price of lager then rose relative to the price of bitter, it would seem sensible for the brewer to transfer resources from making bitter towards the production of lager, thereby increasing the supply of lager as its price rises.

### The determinants of supply

As with the demand curve, there are many things that affect supply as well as the price of the good in question. Notice how similar many of these factors are in comparison to the factors that affect demand. Notice also that nearly all of these factors affect the firms' costs. Given that the firms' supply curve is its marginal cost curve (see the 'costs and revenues' topic) then it is of no surprise that a cost changing measure will shift the supply curve.

Prices of other factors of production. An increase in the price of, say, hops, will increase the costs of a brewing firm and so for any given price the firm will not be able to brew as much beer. Hence, the firm's supply curve will shift to the left. The same would be true for changes in wage costs or fuel costs.

Technology. The supply curve drawn above assumes a 'constant' state of technology. But as we know, there can be improvements in technology that tend to reduce firms' unit costs. These reduced costs mean that more can be produced at a given price, so the supply curve would shift to the right.

Indirect taxes and subsidies. When the chancellor announces an increase in petrol tax (again!), it is the firm who actually pays the tax. Granted, we end up paying the tax indirectly when the price of petrol goes up, but the actual tax bill goes to the firm. This again, therefore, represents an increase in the cost to the firm and the supply curve will shift to the left. The opposite is true for subsidies as they are handouts by the government to firms. Now the firm can make more units of output at any given price, so the supply curve shifts to the right.

Labour productivity. This is defined as the output per worker (or per man-hour). If labour productivity rises, then output per worker rises. If you assume that

the workers have not been given a pay rise then the firm's unit costs must have fallen. Again, this will lead to a shift to the right of the supply curve.

Price expectations. Just as consumers delay purchases if they think the price will fall in the future, firms will delay supply if they think prices will rise in the future. It's the same point but the other way round.

Entry and exit of firms to and from an industry. If new entrants are attracted into an industry, perhaps because of high profit levels (much more on this in the topic 'Market structure'), then the supply in that industry will rise at all price levels and the supply curve will shift to the right. If firms leave the industry then the supply curve will shift to the left.

As with demand, we must now look at the difference between a movement along a supply curve and a shift of a supply curve. Those of you who have looked at the 'Demand curve' QuickLearn should know exactly what is coming next!

#### Movements along a supply curve

If you understand this topic when it is related to the demand curve then you will be fine here as well. The principles are exactly the same. A movement along a supply curve only occurs when the price changes, *ceteris paribus*. In other words, the price changes but the other non-price determinants remain constant. The diagram below shows that a price rise will cause an extension up the supply curve, from point A to point B, whilst a price fall will cause a contraction back down the supply curve, from point A to point C.