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AS Markets & Market Systems

Theory of Supply

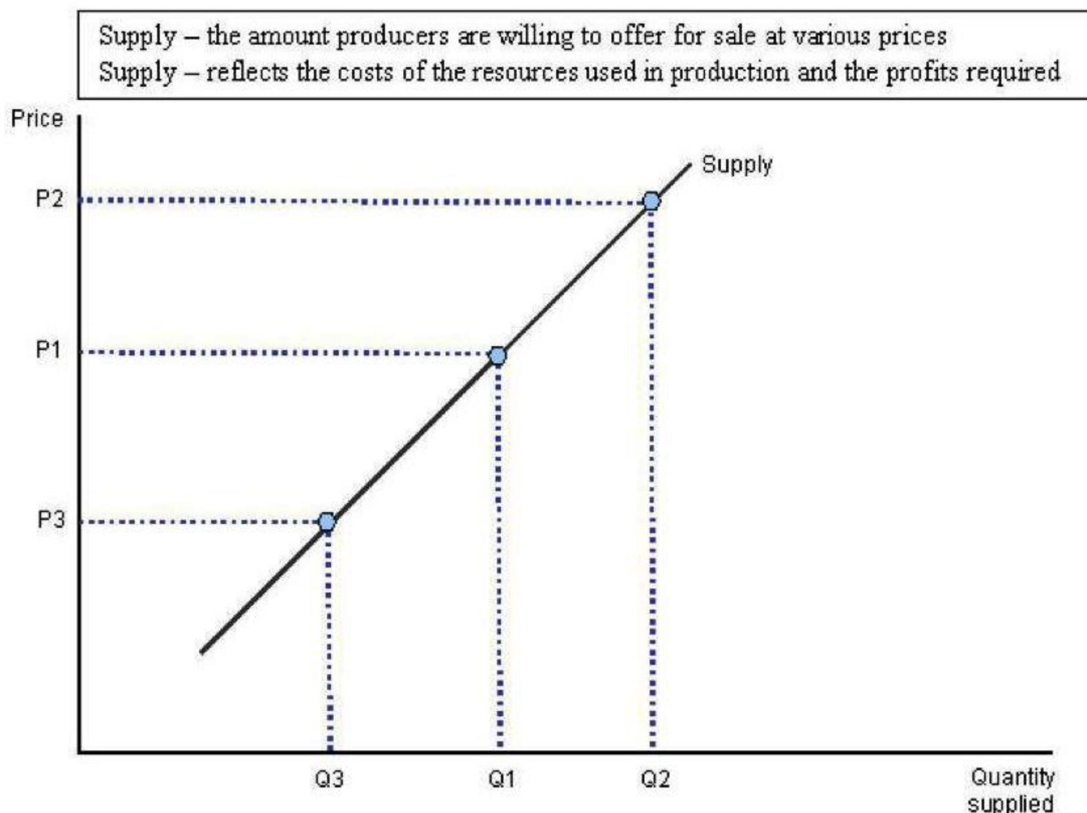
In this chapter we turn our attention to the decisions that producers make about how much of a product to supply to a market at any given price. Once we have understood the basics of supply, we can they put supply and demand together to consider the determination of equilibrium prices in a market.

Definition of Supply

Supply is defined as the quantity of a product that a producer is **willing and able to supply** onto the market **at a given price in a given time period**.

Note: Throughout this study companion, the terms firm, business, producer and seller have the same meaning.

The basic **law of supply** is that as the price of a commodity rises, so producers expand their supply onto the market. A supply curve shows a relationship between price and quantity a firm is willing and able to sell.



A supply curve is drawn assuming ceteris paribus - ie that all factors influencing supply are being held constant except price. If the price of the good varies, we move along a supply curve. In the diagram above, as the price rises from P1 to P2 there is an **expansion of supply.** If the market price falls from P1 to P3 there would be a **contraction of supply** in the market. Businesses are responding to **price signals** when making their output decisions.

Explaining the Law of Supply

There are three main reasons why supply curves for most products are drawn as sloping upwards from left to right giving a **positive relationship between the market price and quantity supplied:**

1. **The profit motive:** When the market price rises (for example after an increase in consumer demand), it becomes more profitable for businesses to increase their output. Higher prices send signals to firms that they can increase their profits by satisfying demand in the market.
2. **Production and costs:** When output expands, a firm's production costs rise, therefore a higher price is needed to justify the extra output and cover these extra costs of production.
3. **New entrants coming into the market:** Higher prices may create an incentive for other businesses to enter the market leading to an increase in supply.

Shifts in the Supply Curve

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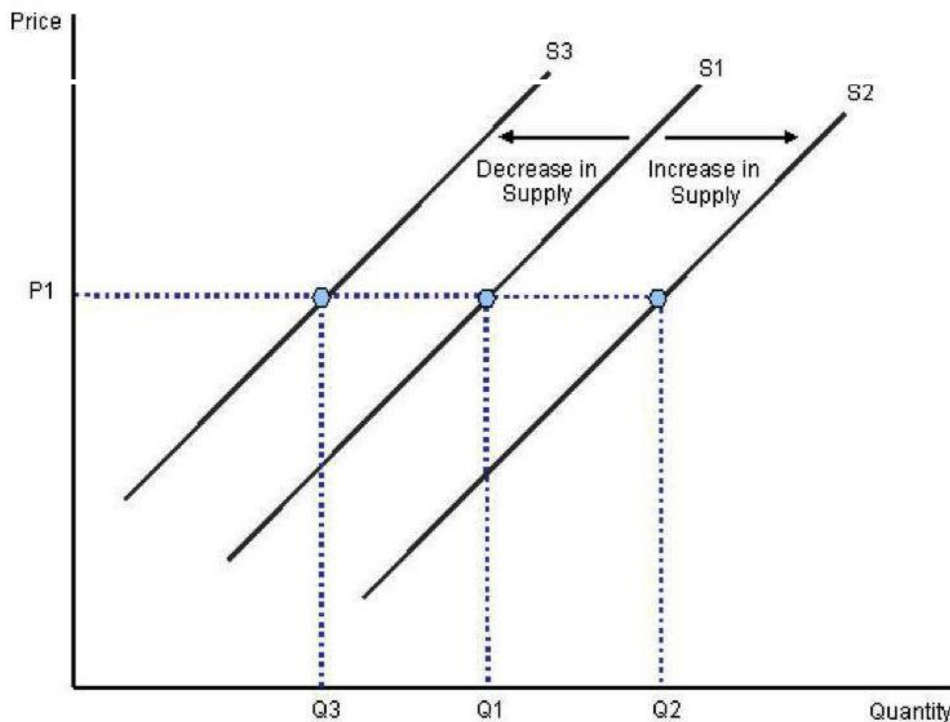
The supply curve can shift position. If the supply curve shifts to the right (from S1 to S2) this is an increase in supply; more is provided for sale at each price. If the supply curve moves inwards from S1 to S3, there is a decrease in supply meaning that less will be supplied at each price.

Changes in any of the factors other than price cause a shift in the supply curve
A shift in supply to the left – the amount that producers offer for sale at every price will be less



Changes in the costs of production

Lower costs of production mean that a business can supply more at each price. For example a magazine publishing company might see a reduction in the cost of its imported paper and inks. A car manufacturer might benefit from a stronger exchange rate because the cost of components and new technology bought from overseas becomes lower. These cost savings can then be passed through the **supply chain** to wholesalers and retailers and may result in lower market prices for consumers.

Conversely, if the costs of production increase, for example following a rise in the price of raw materials or a firm having to pay higher wages to its workers, then businesses cannot supply as much at the same price and this will cause an inward shift of the supply curve.

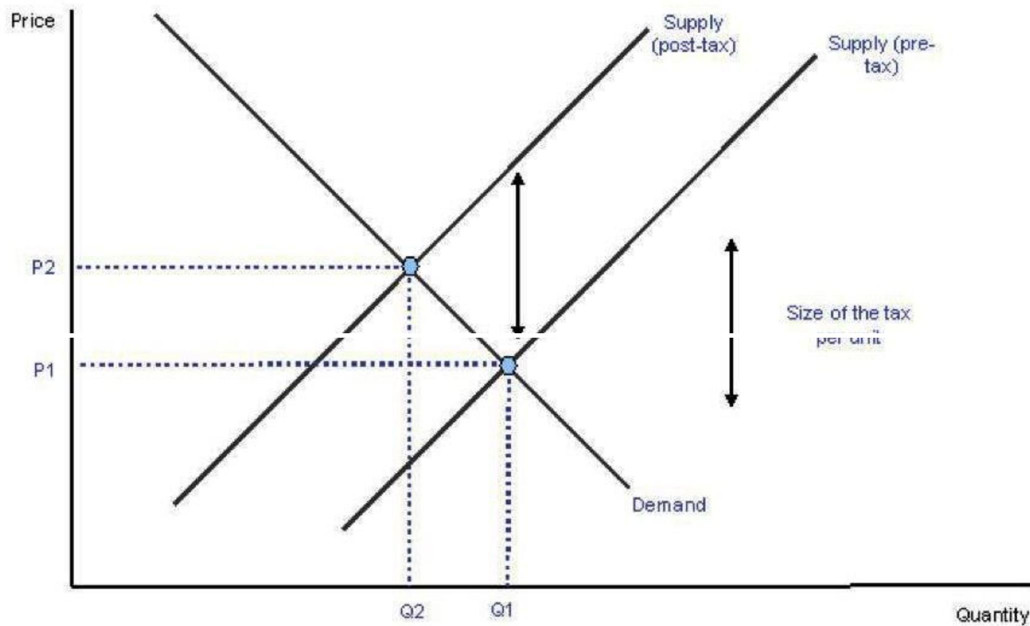
A **fall in the exchange rate** causes an increase in the prices of imported components and raw materials and will (other factors remaining constant) lead to a decrease in supply in a number of different markets and industries. For example if the pounds falls by 10% against the Euro, then it becomes more expensive for British car manufacturers to import their rubber and glass from Western European suppliers, and higher prices for paints imported from Eastern Europe.

Changes in production technology

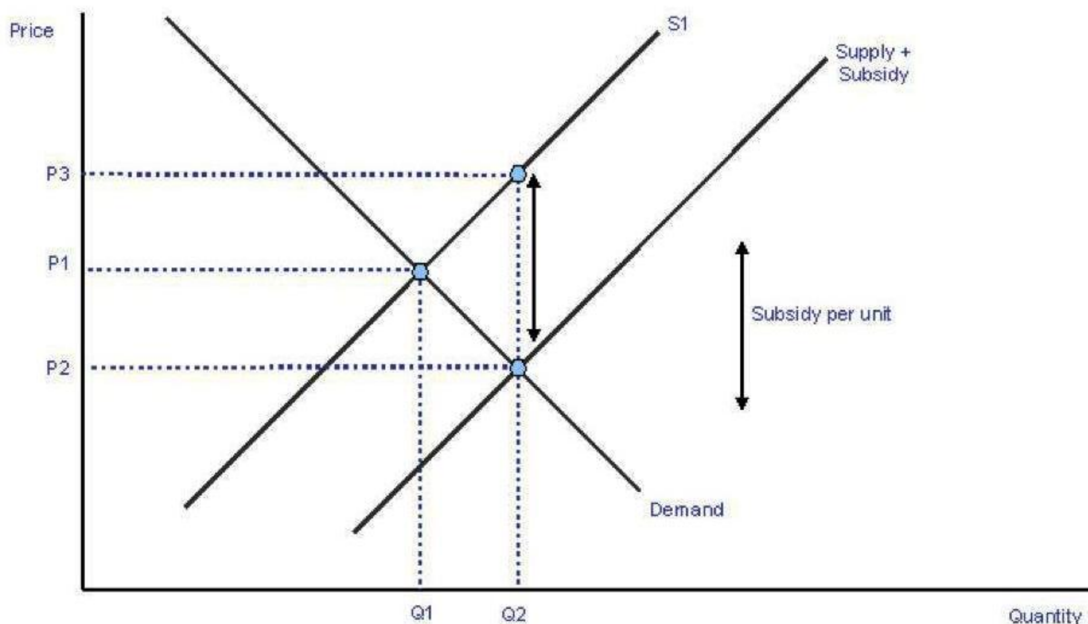
Production technologies can change quickly and in industries where technological change is rapid we see increases in supply and lower prices for the consumer.

Government taxes and subsidies

A tax increases the costs faced by producers. The amount of the tax is shown by the vertical distance between the two supply curves. Because of the tax, less can be supplied at each price level. The result is an increase in the equilibrium market price and a contraction in market demand to a new equilibrium output of Q2



A government subsidy encourages an increase in supply at each price level because the subsidy provides a reduction in a firm's costs of production. The extent of the subsidy per unit is shown by the vertical distance between the two supply curves.



Changes in climate

For commodities such as coffee, oranges and wheat, the effect of **climatic conditions** can exert a great influence on market supply. Favourable weather will produce a bumper harvest and will increase supply. Unfavourable weather conditions will lead to a poorer harvest, lower yields and therefore a decrease in supply.

Changes in climate can therefore have an effect on prices for agricultural goods such as coffee, tea and cocoa. Because these commodities are often used as ingredients in the production of other products, a change in the supply of one can affect the supply and price of another product. Higher coffee prices for example can lead to an increase in the price of coffee-flavoured cakes. And higher banana prices as we see in the article below, will feed through to increased prices for banana smoothies in shops and cafes.

Cyclone destroys the Australian banana crop and sends prices soaring

Cyclone Larry has devastated Australia's banana industry, destroying fruit worth $300 million and leaving up to 4,000 people out of work. Australians now face a shortage of bananas and likely price rises after the cyclone tore through the heart of the nation's biggest growing region. Queensland produces about 95 per cent of Australia's bananas. The storm ruined 200,000 tonnes of fruit and market supply shortages will be severe because Australia does not allow banana imports because of the bio-security risks in doing so. Bananas are grown throughout the year in north Queensland, with the fruit having a growing cycle of around two months.

Change in the prices of a substitute in production

A **substitute in production** is a product that could have been produced using the same resources. Take the example of barley. An increase in the price of wheat makes wheat growing more financially attractive. The profit motive may cause farmers to grow more wheat rather than barley.

The number of producers in the market and their objectives

The **number of sellers (businesses) in an industry** affects market supply. When new businesses enter a market, supply increases causing downward pressure on price.

Competitive Supply

Goods and services in competitive supply are alternative products that a business could make with its factor resources of land, labour and capital. For example a farmer can plant potatoes or maize.

Farmers can change their crops if there are sizeable changes in market prices and if expectations of future price movements also change.

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