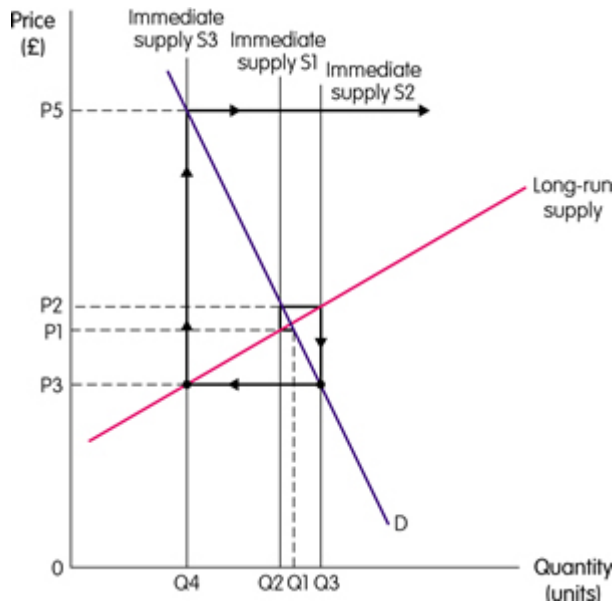


The cobweb

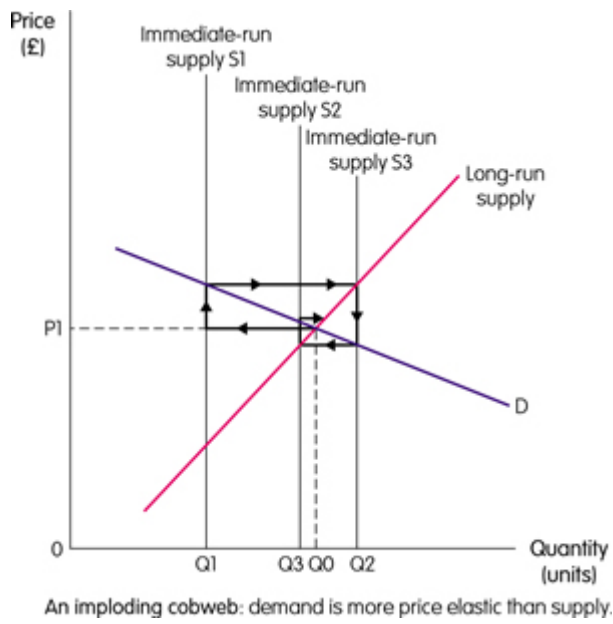
Price instability in markets such as agriculture can be highlighted using the cobweb model.



Imagine the market is in equilibrium at P_1 Q_1 . Demand equals the long run supply. The long run supply curve shows what can be produced over a period of time when it is possible to change all factors of production. Imagine there is now a supply shock such as a change to the weather that reduces the crop available. In the immediate run there is now Q_2 available whatever the price. Supply is totally price inelastic. This leads to an increase in price. The price rises to P_2 .

This price sends a signal to farmers to produce more in the long run. They will put more resources into this crop and aim to produce Q_3 in the long run. When this crop is harvested the supply available is Q_3 whatever the price. The immediate supply is once again completely price inelastic. The increase in supply leads to a fall in the market price to P_3 . This sends a signal to farmers to reduce their production of this crop so they will switch resources away from it. The supply when the crop is harvested will be Q_4 . This fall in supply will increase the price to P_5 which would lead to more being produced and so on. The changes in price led to changes in supply which then lead to changes in price. If demand is more price inelastic than the long run supply then there will be an exploding cobweb. The price fluctuations will be ever greater and move the market away from equilibrium.

If demand were more price elastic than the long run supply the cobweb would be imploding. The price fluctuations would get smaller and move the market back towards the equilibrium.



The cobweb model assumes that farmers have adaptive expectations; they base next year's crop on last year's price. It highlights potential price instability in markets without government intervention.