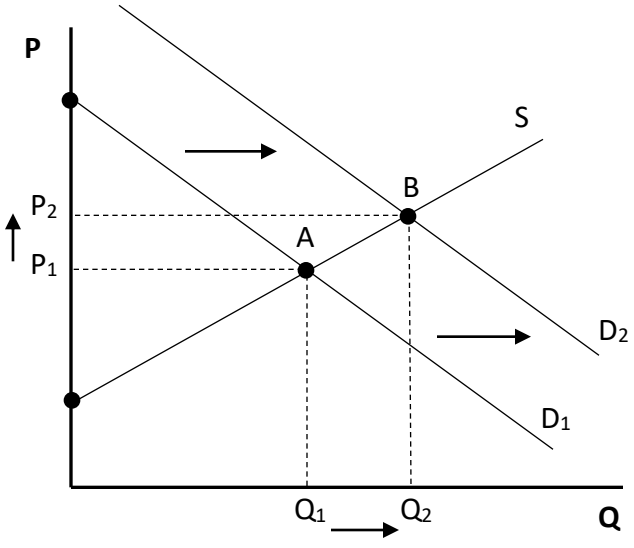
Demand and Supply model: shifts and changes in the market equilibrium
Econ 201/Haworth

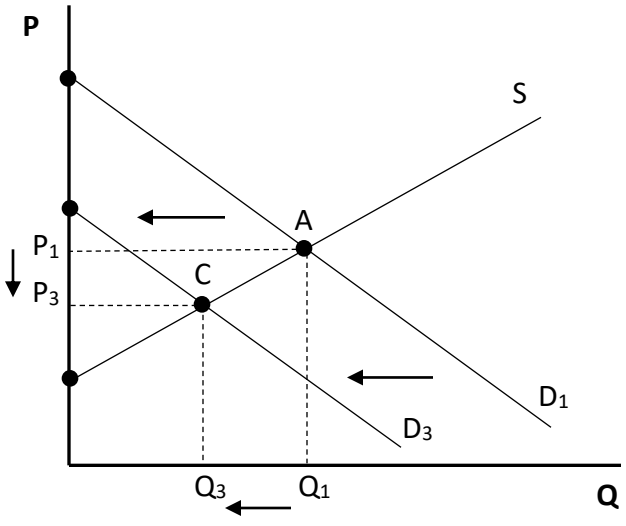
The demand and supply model exists to help us explain and predict the changes in price and quantity sold that we observe within markets. The first step toward understanding this model is to define what we mean by a demand curve and supply curve, but we follow that discussion up by covering what we call shift variables – i.e. the things which cause a demand or supply curve to shift.

Once these curves are plotted on a graph, we determine the point which represents an equilibrium (i.e. basically, a starting point) and assume that unless there is something preventing us from going to that equilibrium point (e.g. a price control), the market will always go directly to its equilibrium. I.e., once there's a shift, we move from the original equilibrium point to a new equilibrium point.

Let's consider just one type of shift and illustrated what was just stated above. In the graph below, the one on the left, we see that there's been an increase in demand (shift right in the demand curve) and that this has led to a change in our equilibrium. We started at point A, experienced the shift, and then we move to point B. This leads to a change in our equilibrium price and equilibrium quantity. We begin at P_1 and Q_1 (which correspond with point A), experience the shift and move to point B, where the new equilibrium is associated with a higher equilibrium price at P_2 and greater equilibrium quantity at Q_2. In other words, increases in demand are associated with an increase in the market price and more units (i.e. greater quantity) being sold. That statement is provided below the graph. Of course, the same reasoning applies to decreases in demand (where price and quantity falls).

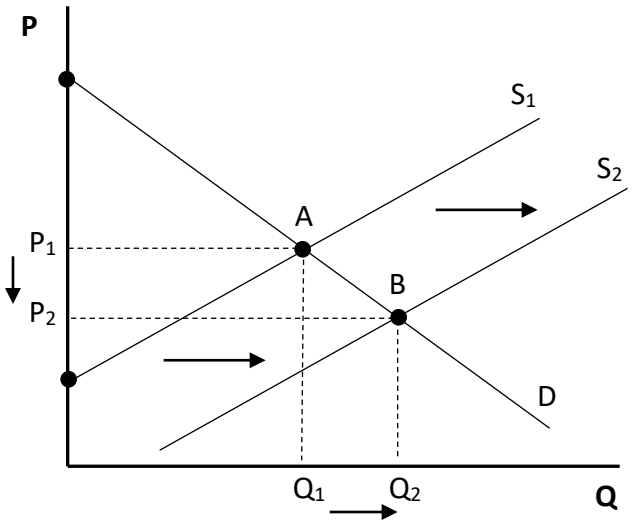


Increase in Demand ⇔ P↑ Q↑

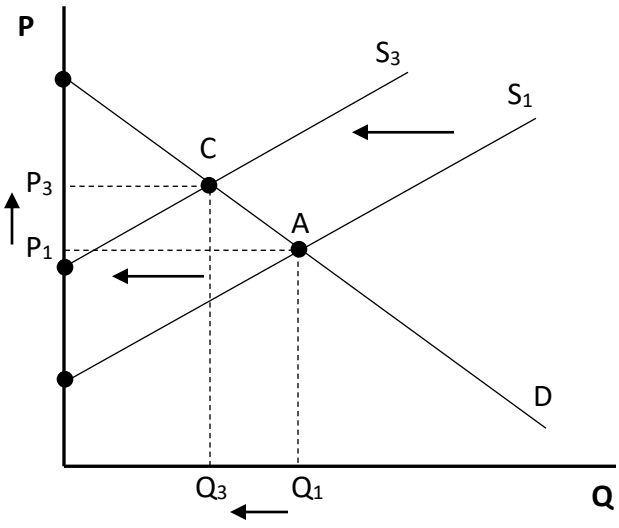


Decrease in Demand ⇔ P↓ Q↓

When we consider how shifts in supply affect the equilibrium within a market, we see similar, but obviously different changes in the equilibrium. Increases in supply (shift right in the supply curve) lead to movement from the original equilibrium in the graph below – the graph on the left, from point A to point B. The equilibrium price falls from P_1 to P_2, and the equilibrium quantity increases from Q_1 to Q_2. That is, increases in supply gives us lower prices and greater quantities sold.



Increase in Supply ⇔ P↓ Q↑



Decrease in Supply ⇔ P↑ Q↓

Just as an increase in supply leads to lower prices and greater quantities within a market, we note that a decrease in supply has the opposite effect on price and quantity.

With this kind of information in hand, we can use the demand and supply model to better understand the world around us. One obvious use here is to use the model to predict the effect of various applications of policy. E.g., changes in any regulation which lowers the cost of firms will lead to an increase in supply, and increases in supply give demanders a lower price. I.e., this type of regulatory change would be good for demanders. If the change in regulation increases the cost of supplying, as many regulations tend to do, then we know that this raises the price in those affected markets, which is not so good for demanders.

Of course, we also have to consider the benefit of any regulation in and of itself, and determine whether the benefit which demanders receive from a regulation offsets the "cost to demanders" that comes with the higher price. E.g., clean water regulations may increase the price of water, but the benefit of clean water could potentially outweigh the "cost" of that higher price. In other words, just because a regulation raises the price of a good or service does not necessarily mean that demanders are "losing".