

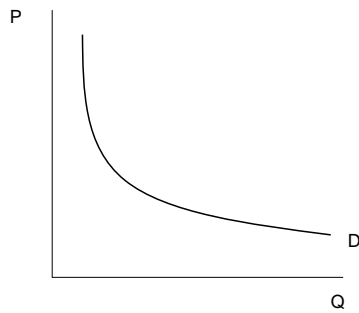
Managerial Economics  
Supply and Demand Lab/Review

Individual Demand: The quantity of a product or service that the individual is willing and able to purchase at a specified price.

Market Demand: The aggregate quantity of all consumers within the market for each specified price.

The demand curve is almost always downward sloping (has a negative slope). Sometimes it can be horizontal or vertical. Increases in price mean that people purchases fewer units of the product.

Unfortunately, early economists were confused about whether price or quantity was the dependent variable, so charts today are drawn with Price on the vertical axis.

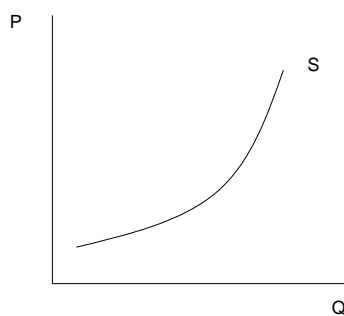


Items that will shift the demand curve include:

- Consumer income
- The price of substitute products
- The price of complementary products
- Expectations about future prices
- Preferences, popularity, society, marketing
- The number of buyers

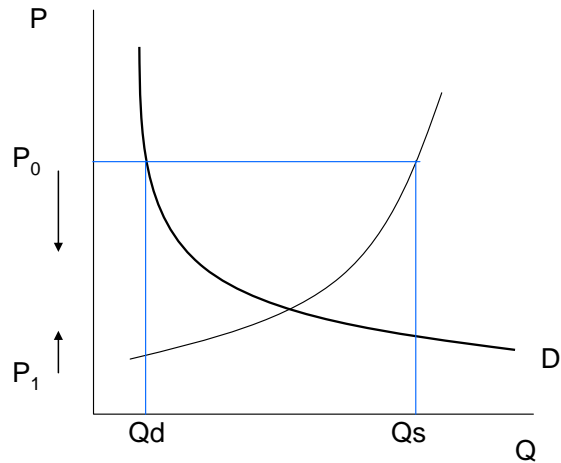
Supply: The quantity of an item or service that a firm is willing and able to sell at a specified price in a given time period.

The supply curve generally has a positive slope, but it can sometimes be vertical or horizontal.



Things that will shift the supply curve include

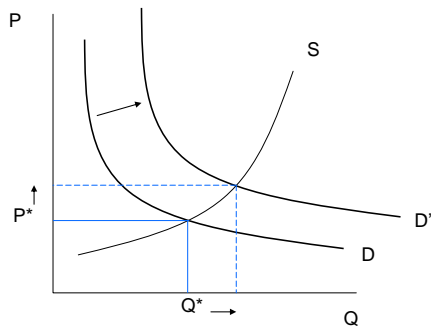
- Underlying costs
- Technology
- Prices of substitutes in production
- Prices of complements in production
- Future expectations
- Number of sellers
- Environmental factors including the weather
- Government regulations
- Consumption/sales Taxes



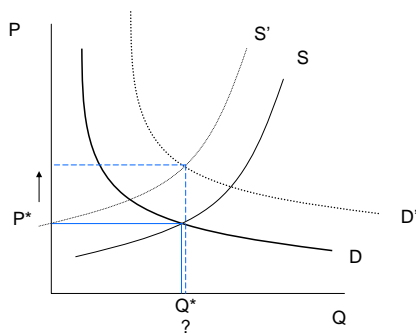
When Price is above equilibrium,  $Q_d < Q_s \rightarrow$  Surplus, so cut price to clear inventory.

When Price is below equilibrium,  $Q_s < Q_d \rightarrow$  Shortage, so increase price.

Comparative Statics: Shifts in the supply and demand curves.



Shifts in both curves results in one of the values (P or Q) being indeterminate, depending on the size of the shifts.



## Lab Assignments

1. Identify the market changes for the following effects on the market for bicycles:
  - a. Barack Obama gets elected and gives everyone a \$5,000 tax refund.
  - b. The price of gas increases to \$10 a gallon.
  - c. The average age of the population increases to 65 and independently, a new technology enables bicycles to be built for half the cost.
  - d. Governments impose a tax on bicycles to pay for roads but new medical research shows that riding a bicycle adds 20 years to the average life.
  - e. Interest rates increase to 10% forcing people to spend more on their mortgage payments, but global warming extends the riding season by three months.
2. Given the following equations:  $Q_d = 200 - 17 P$  and  $Q_s = -50 + 8 P$ 
  - a. Plot them in Excel.
  - b. Find the equilibrium point algebraically.
  - c. Show what happens if a new technology enables companies to produce the same quantity with a 25% decrease in price.