## Chapter 6

1. Use the following supply and demand schedules for bicycles to answer the questions below.

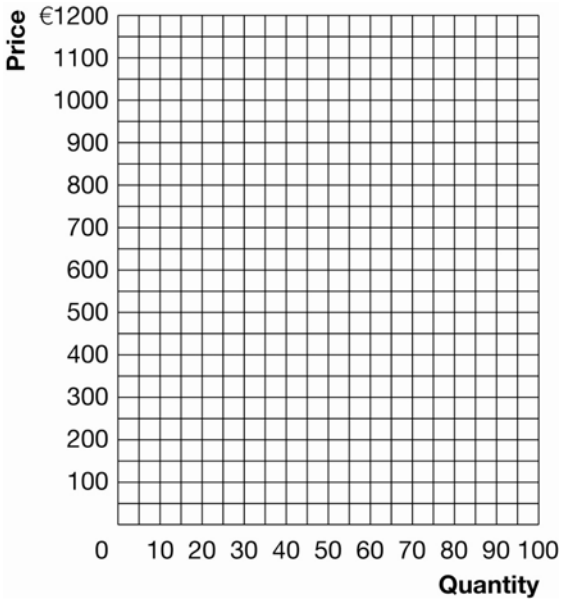
| Price | Quantity demanded | Quantity supplied |
|---|---|---|
| €300 | 60 | 30 |
| 400 | 55 | 40 |
| 500 | 50 | 50 |
| 600 | 45 | 60 |
| 700 | 40 | 70 |
| 800 | 35 | 80 |

a. In response to lobbying by the Bicycle Riders Association, the government places a price ceiling of €700 on bicycles. What effect will this have on the market for bicycles? Why?

Answer:
It will have no effect. The price ceiling is not binding because the equilibrium price is €500 and the price ceiling is set at €700.

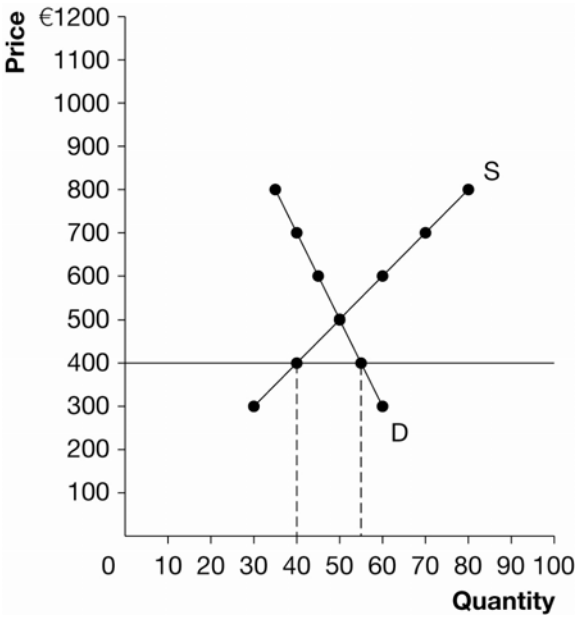
b. In response to lobbying by the Bicycle Riders Association, the government places a price ceiling of €400 on bicycles. Use the information provided above to plot the supply and demand curves for bicycles in Exhibit 1. Impose the price ceiling. What is the result of a price ceiling of €400 on bicycles?

Exhibit 1




Answer:
See Exhibit 5. The quantity demanded rises to 55 units, the quantity supplied falls to 40 units, and there is a shortage of 15 units.

**Exhibit 5**

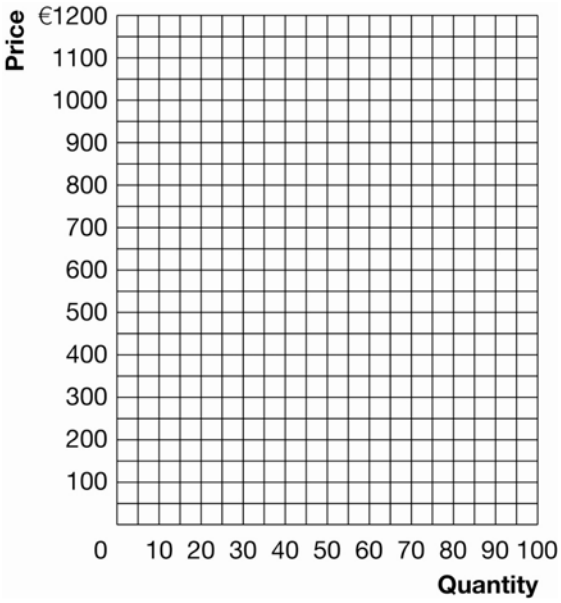



c. Does a price ceiling of €400 on bicycles make all bicycle buyers better off? Why or why not?

Answer:
No. It may make those bicycle buyers better off that actually get a bicycle. However, some buyers are unable to get a bike, must wait in line, pay a bribe, or accept a lower quality bicycle.

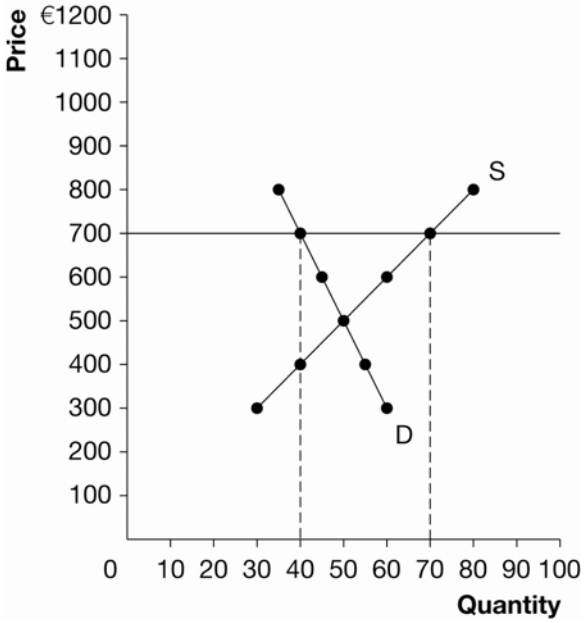
d. Suppose instead, in response to lobbying by the Bicycle Manufactures Association, the government imposes a price floor on bicycles of €700. Use the information provided above to plot the supply and demand curves for bicycles in Exhibit 2. Impose the €700 price floor. What is the result of the €700 price floor?

**Exhibit 2**



Answer:
See Exhibit 6. The quantity supplied rises to 70 units, the quantity demanded falls to 40 units, and there is a surplus of 30 units.

**Exhibit 6**

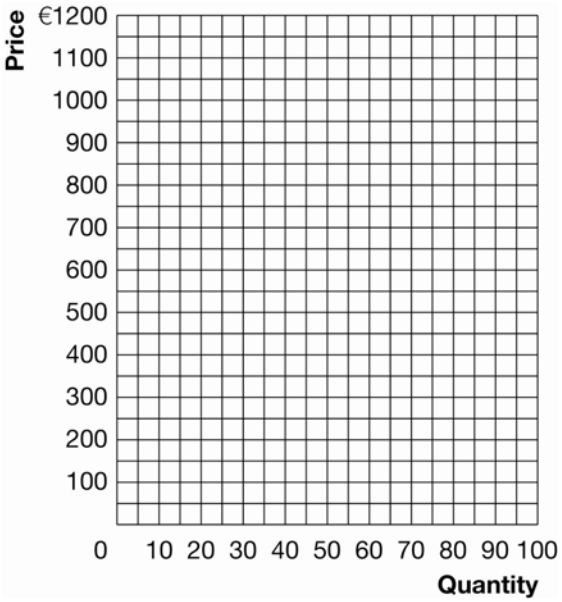



2. Use the following supply and demand schedules for bicycles to answer the questions below.

| Price | Quantity demanded | Quantity supplied |
|---|---|---|
| €300 | 60 | 30 |
| 400 | 55 | 40 |
| 500 | 50 | 50 |
| 600 | 45 | 60 |
| 700 | 40 | 70 |
| 800 | 35 | 80 |

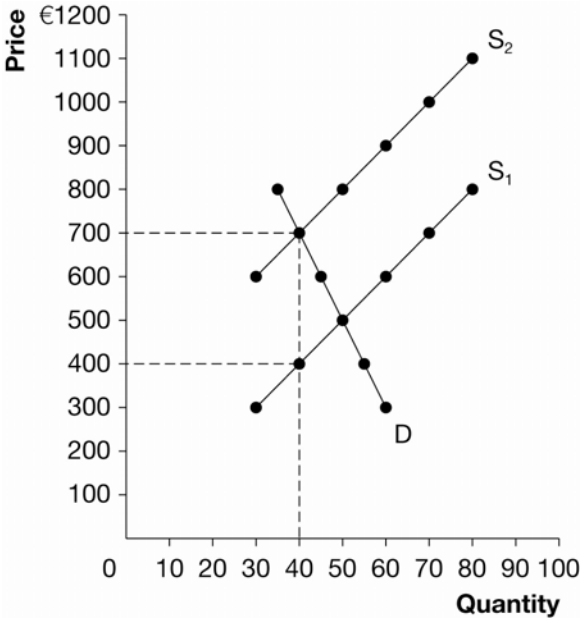
a. Plot the supply and demand curves for bicycles in Exhibit 3. On the graph, impose a tax of €300 per bicycle to be collected from the sellers. After the tax, what has happened to the price paid by the buyers, the price received by the sellers, and the quantity sold when compared to the free market equilibrium?

Exhibit 3



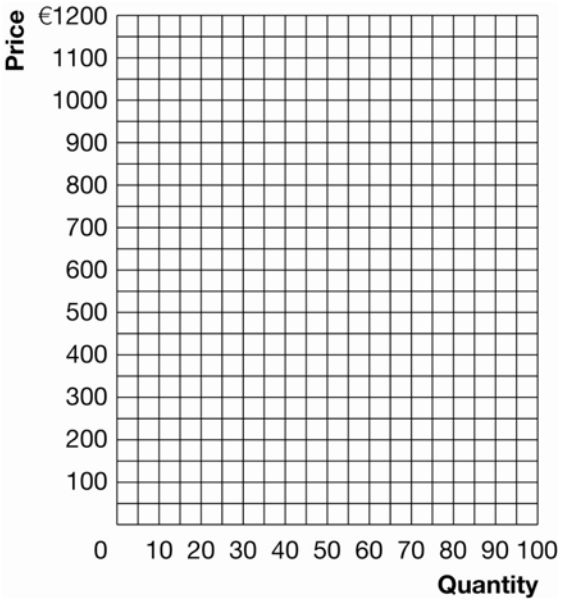

Answer:
See Exhibit 7. The price buyers pay rises to €700, the price sellers receive falls to €400, and the quantity sold falls to 40 units.

**Exhibit 7**



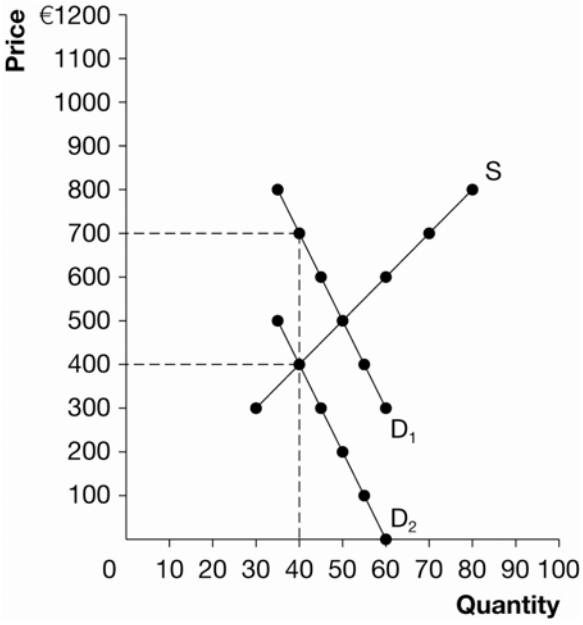
b. Again, plot the supply and demand curves for bicycles in Exhibit 4. On the graph, impose a tax of €300 per bicycle to be collected from the buyers. After the tax, what has happened to the price paid by the buyers, the price received by the sellers, and the quantity sold when compared to the free market equilibrium?

Exhibit 4




Answer:
See Exhibit 8. The price buyers pay rises to €700, the price sellers receive falls to €400, and the quantity sold falls to 40 units.

**Exhibit 8**



c. Compare your answers to questions (a) and (b) above. What conclusion do you draw from this comparison?

Answer:
The impact of a tax collected from sellers is equivalent to the impact of a tax collected from buyers.

d. Who bears the greater burden of this tax, the buyers or the sellers? Why?

Answer:
The greater burden of the tax has fallen on the buyers. The free market equilibrium price was €500. After the tax, the price the buyers pay has risen €200 while the price the sellers receive has fallen €100. This is because demand is less elastic than supply.