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Market Equilibrium

Anderson, Survey of Economics 1e

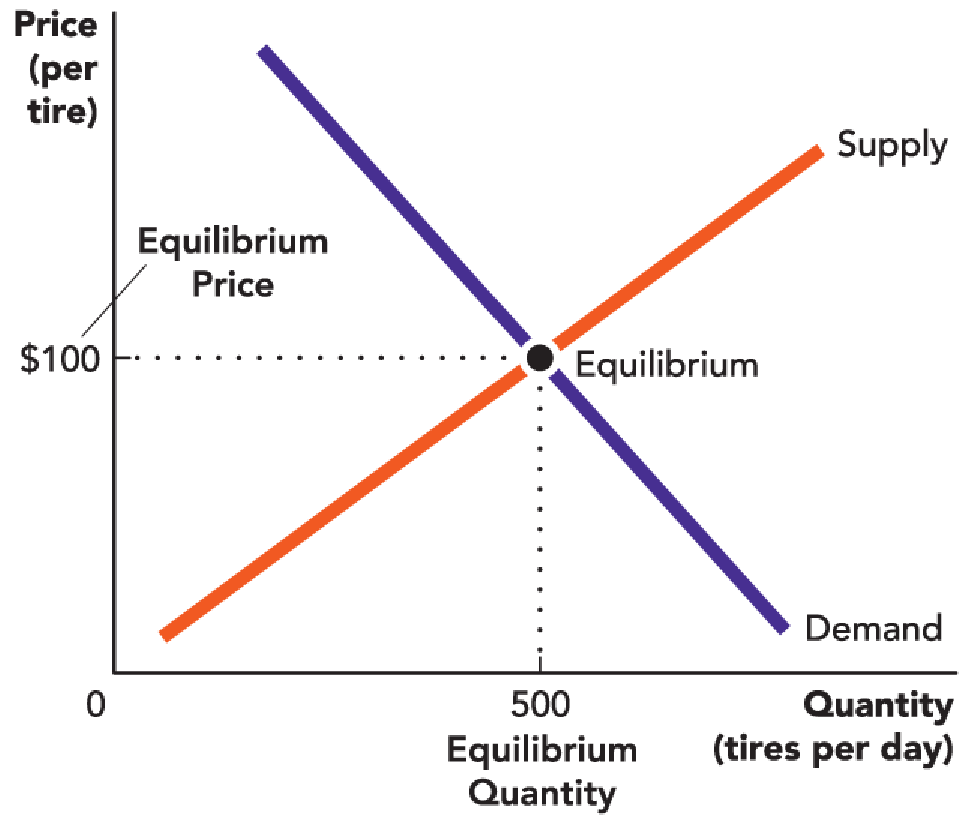
LEARNING OBJECTIVES

1. Explain how a market reaches its equilibrium price and quantity
2. Discuss the effects of price ceilings and price floors
3. Show how shifts in supply and demand affect a market's equilibrium
4. Solve problems involving market equilibrium

PUTTING SUPPLY AND DEMAND TOGETHER

- When a demand curve and a supply curve are placed on the same graph, the place where they intersect is called the **equilibrium point**.

- This is where balance between the quantity demanded and the quantity supplied is achieved.

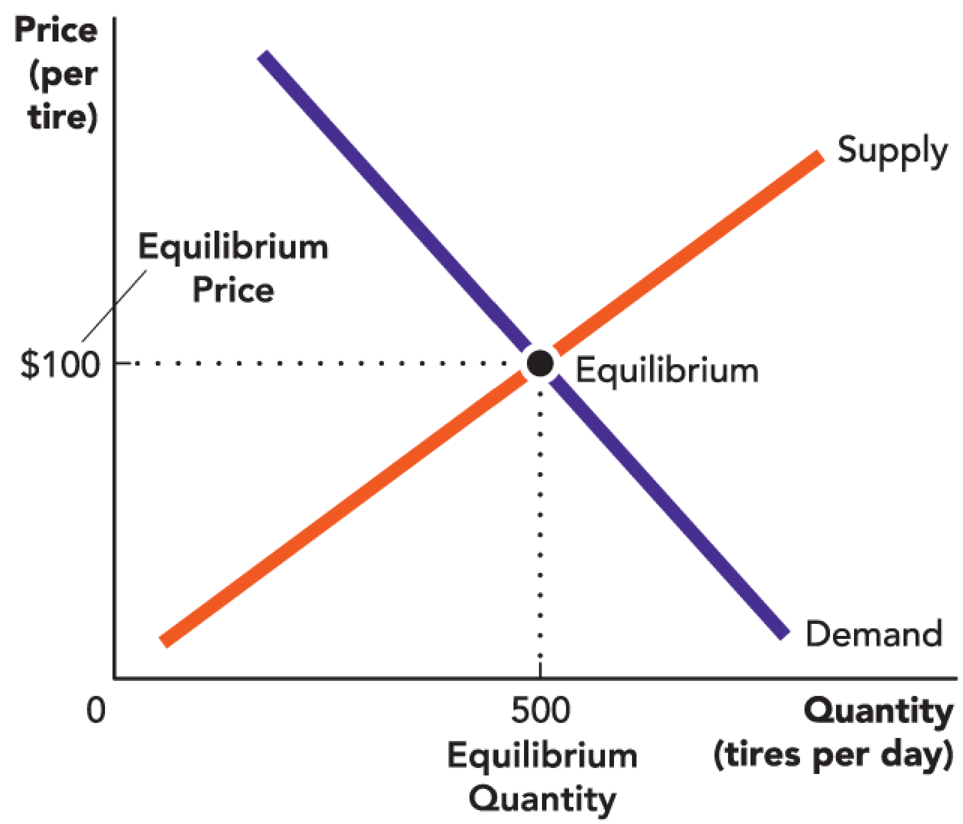


EQUILIBRIUM PRICE AND QUANTITY

- The price that brings the market to equilibrium is called the **equilibrium price**.

- The quantity that is both demanded and supplied at the equilibrium price is the **equilibrium quantity**.

- Markets tend to gravitate toward their equilibrium points.



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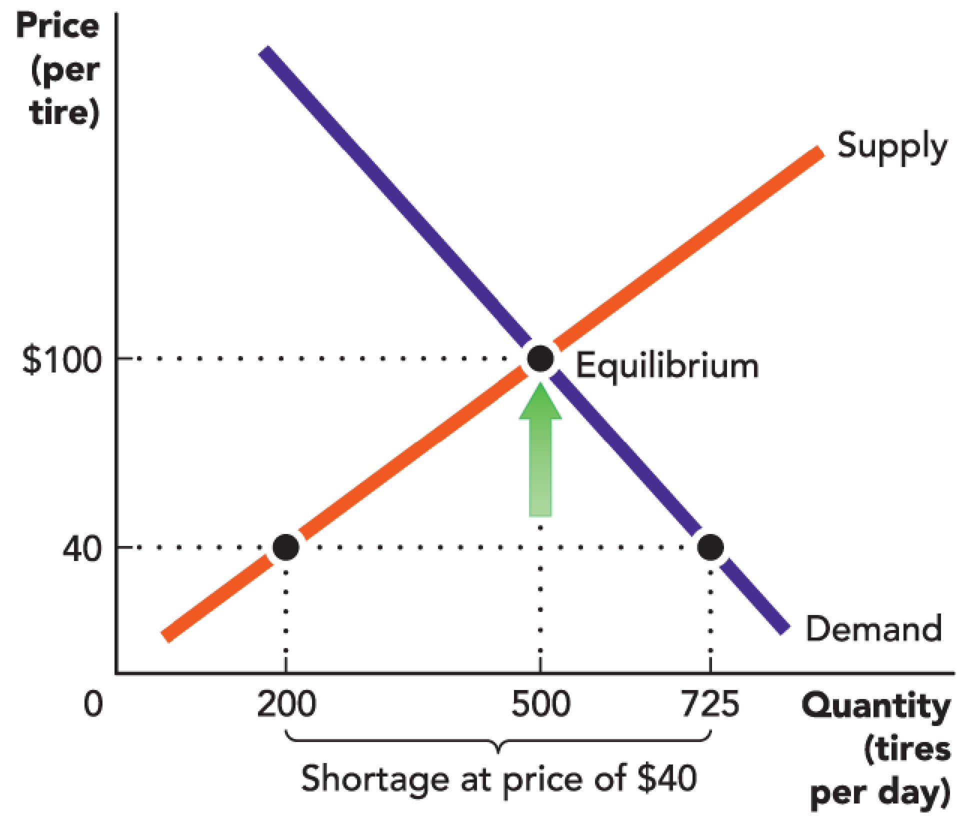
SHORTAGES

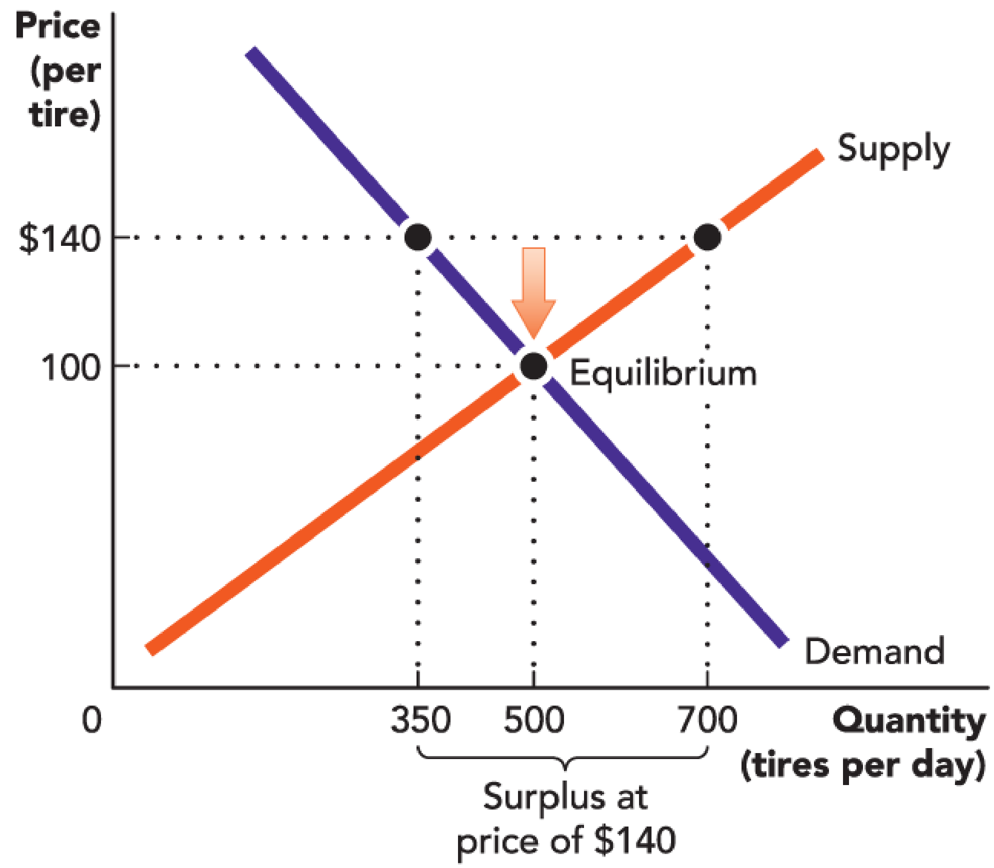
- When the going price is lower than the equilibrium price, a *shortage* occurs.
- Less is supplied than is demanded.
- Long lines of customers form outside of stores.
- This causes firms to raise their prices, moving the market toward equilibrium.



- As the price rises, the horizontal gap between the supply and demand curves narrows, and the shortage is reduced.

SURPLUSES

- When the going price is above the equilibrium price, a *surplus* occurs.
- More is supplied than is demanded.
- Excess goods pile up in inventories.
- This causes firms to lower their prices, moving the market toward equilibrium.



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- As the price falls, the horizontal gap between the demand and supply curves narrows, and the surplus is reduced.

MARKET PRICE AND EQUILIBRIUM PRICE

- The price currently charged in the market is called the *market price*.
- Firms' natural responses to shortages and surpluses push the market price toward the equilibrium price.
- Once equilibrium is reached, there is no further push in prices unless there is a change in supply or demand.

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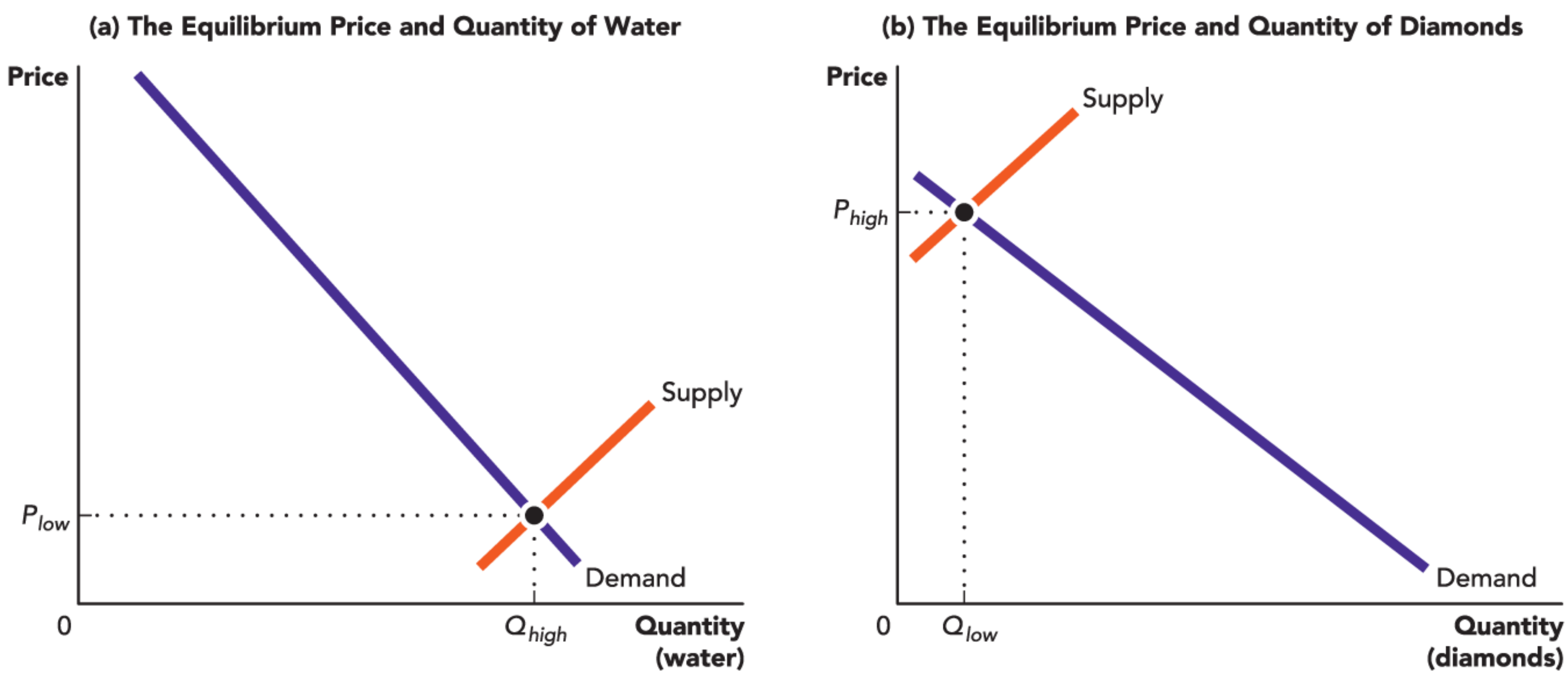
- Knowing that markets will gravitate toward equilibrium allows us to know how a change in supply or demand affects the market.

THE WATER-DIAMOND PARADOX

- A relatively small supply of diamonds leads to a much higher price for diamonds than for water, even though water is essential and diamonds are not.
- If water were in short supply, its price would also be very high.



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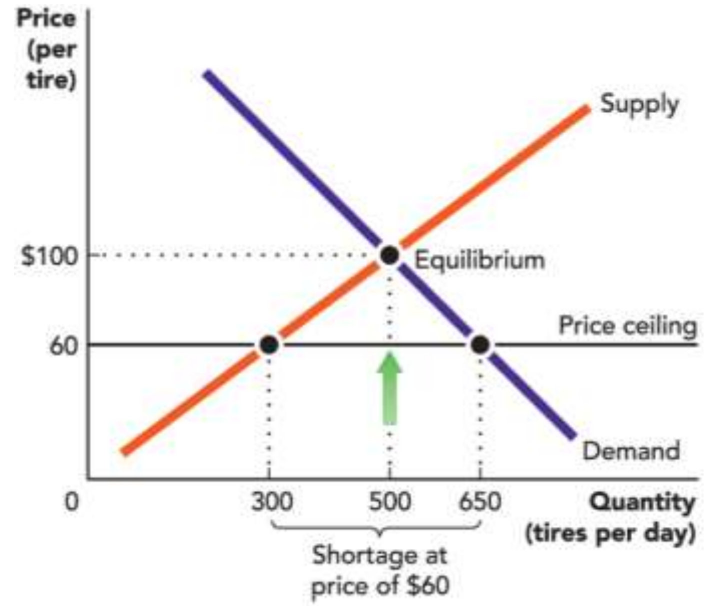
PRICE CEILINGS

- Sometimes governments control prices by putting upper or lower limits on them. These are called *price controls*.

- A **price ceiling** is an artificial upper limit on the price of a good or service. To have any effect, price ceilings must be set below the equilibrium price.

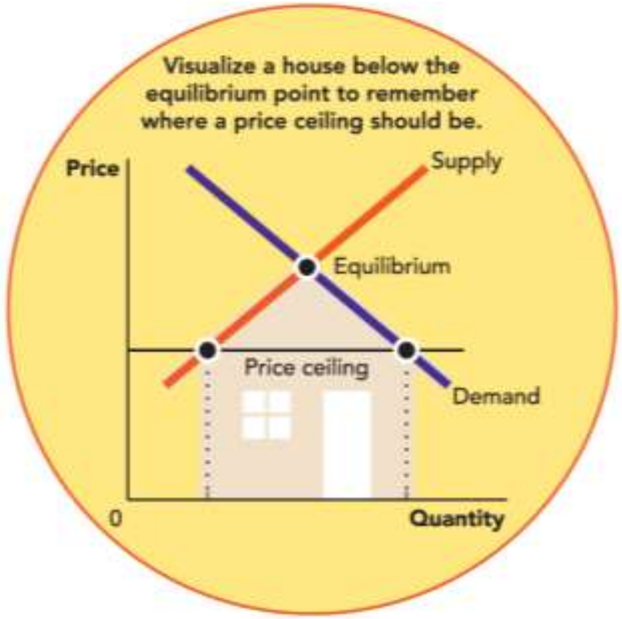


- Price ceilings are used to make prices for things like food and housing more affordable.

- An effective price ceiling results in a permanent shortage.

PROBLEMS CAUSED BY PRICE CEILINGS: BLACK MARKETS

- A shortage means that there are customers who are unable to purchase a good and are willing to pay more than the going price.
- This can motivate some sellers to charge prices above the price ceiling in an illegal market known as a **black market.**
- Black markets emerge when there are price ceilings and when the sale of a good or service is prohibited.
- For example, black markets are common when sports teams cap ticket prices.



PROBLEMS CAUSED BY PRICE CEILINGS: QUEUING COSTS

- Shortages cause consumers to end up standing in line to buy goods. The value of the time that customers lose by standing in line is a *queuing cost*.

- Queuing costs can be minimized by rationing out the available goods.

- Two methods of rationing are lotteries and *rationing coupons.*

- Rationing coupons were used by the government during World Wars I and II to ensure that goods were distributed appropriately.

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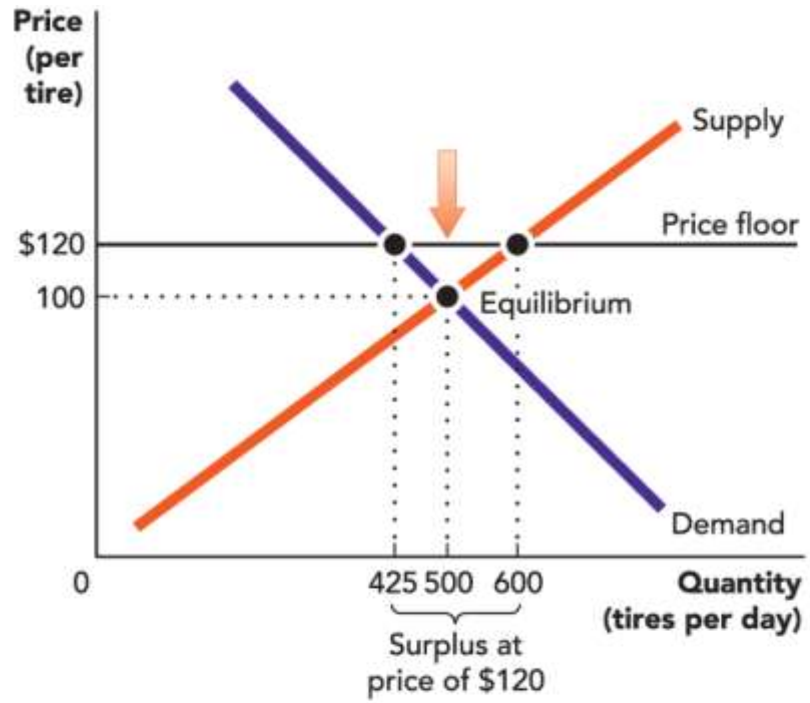
PROBLEMS CAUSED BY PRICE CEILINGS: INFERIOR QUALITY & INDUSTRY DECLINE

- Excess demand reduces the incentive for firms to maintain quality.
- A price ceiling on rent enables landlords to rent out poorly maintained apartments, taking advantage of the shortage.
- High prices motivate firms to produce higher quantities, so lower prices, such as those imposed by price ceilings, motivate firms to produce lower quantities.
- Malaysia discontinued a price ceiling on cement in 2008 because not enough cement was being produced, slowing development projects.

PRICE FLOORS

- A **price floor** is an artificial lower bound on the price of a good or service.
- Governments impose price floors to assist workers or industries.
- To have any effect, a price floor must be set above the equilibrium price.
- The most prominent price floor is the minimum wage, designed to assist low-income workers.



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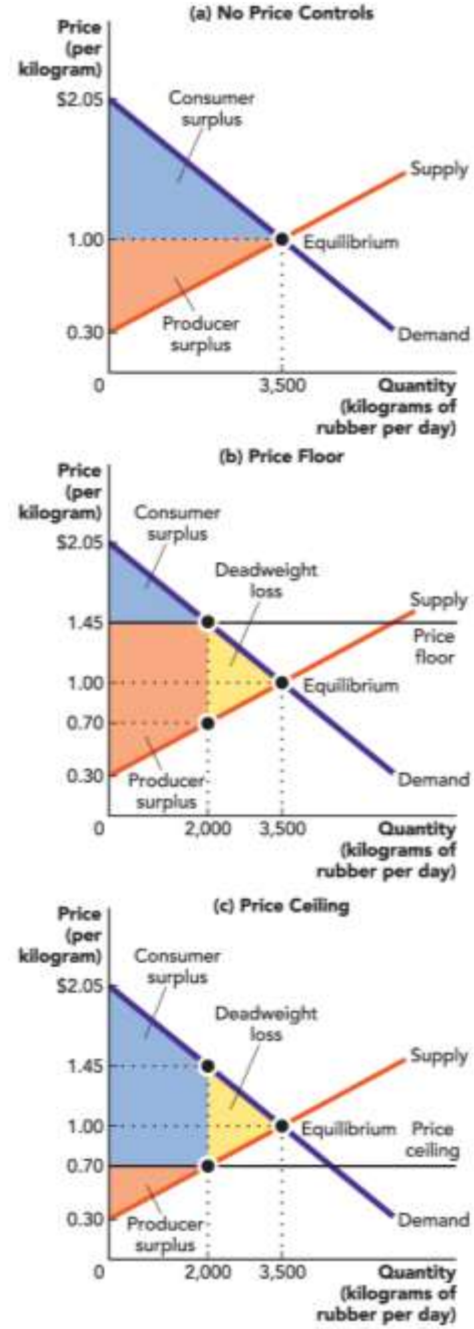
PRICE CONTROLS AND DEADWEIGHT LOSS PART I

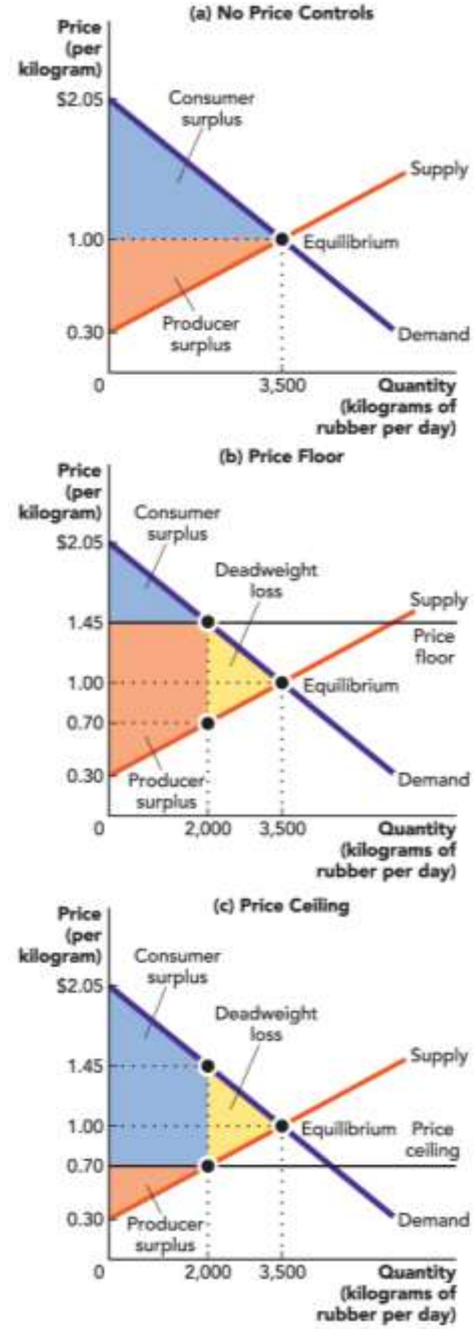
- Price controls lead to inefficiency in markets.
- The first graph shows consumer surplus and producer surplus in equilibrium.
- When a price floor is introduced, as in the second graph, some consumer surplus is converted to producer surplus, and some consumer and producer surplus are lost.



PRICE CONTROLS AND DEADWEIGHT LOSS PART II

- **Deadweight loss** is the loss of consumer or producer surplus caused by an inefficient quantity of output.

- The third graph shows how a price ceiling converts some producer surplus to consumer surplus and how some consumer and producer surplus are lost as deadweight.



LEARN BY DOING: PRACTICE QUESTION 1

Which of these statements are true?

I. Price controls promote efficiency.

II. Markets reach equilibrium as firms change prices in response to surpluses and shortages.

III. Price floors decrease consumer surplus and increase producer surplus.

a) I and III only

b) II and III only

c) II only

d) III only

LEARN BY DOING: PRACTICE QUESTION 1 (Answer)

Which of these statements are true? Price controls promote efficiency.

I. Markets reach equilibrium as firms change prices in response to surpluses and shortages.

II. Price floors decrease consumer surplus and increase producer surplus.

a) I and III only

b) II and III only

c) II only (correct answer)

d) III only

SHIFTS IN SUPPLY OR DEMAND

- When supply or demand changes, so does the equilibrium point.

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- You can track the equilibrium point for a good or service to learn what happens to its price and quantity.

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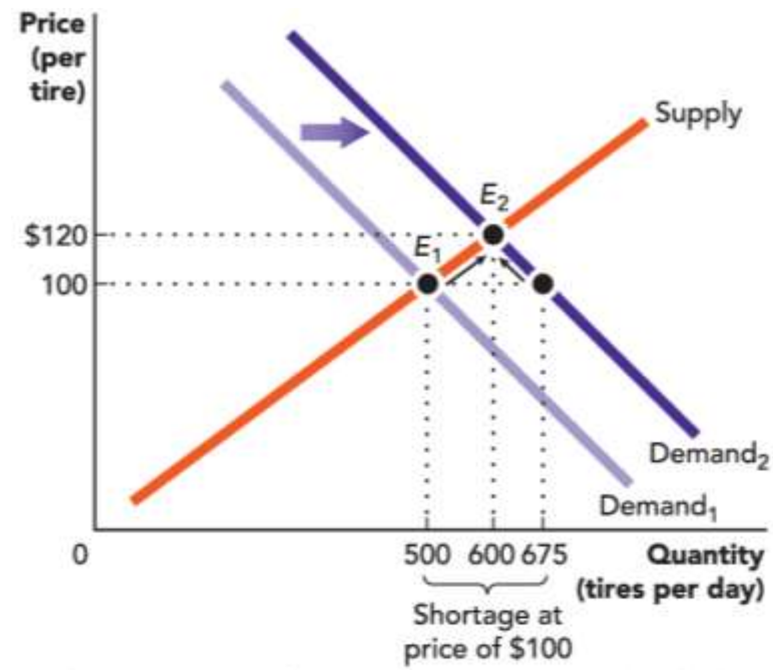
AN INCREASE IN DEMAND

- Anything that increases the value of marginal utility will result in an increase in demand.
- An increase means that more is demanded at every price, including the old equilibrium price, so a shortage results.
- The shortage puts upward pressure on the price until a new equilibrium is reached.
- An increase in demand causes both the equilibrium price and the equilibrium quantity to increase.



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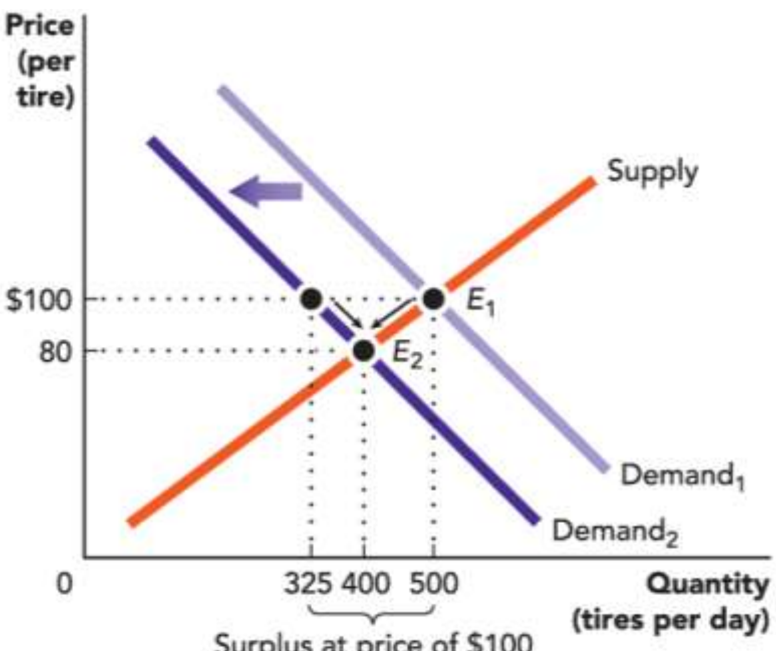
A DECREASE IN DEMAND

- Anything that decreases the value of marginal utility will result in a decrease in demand.

- A decrease means that less is demanded at every price, including the old equilibrium price, so a surplus results.



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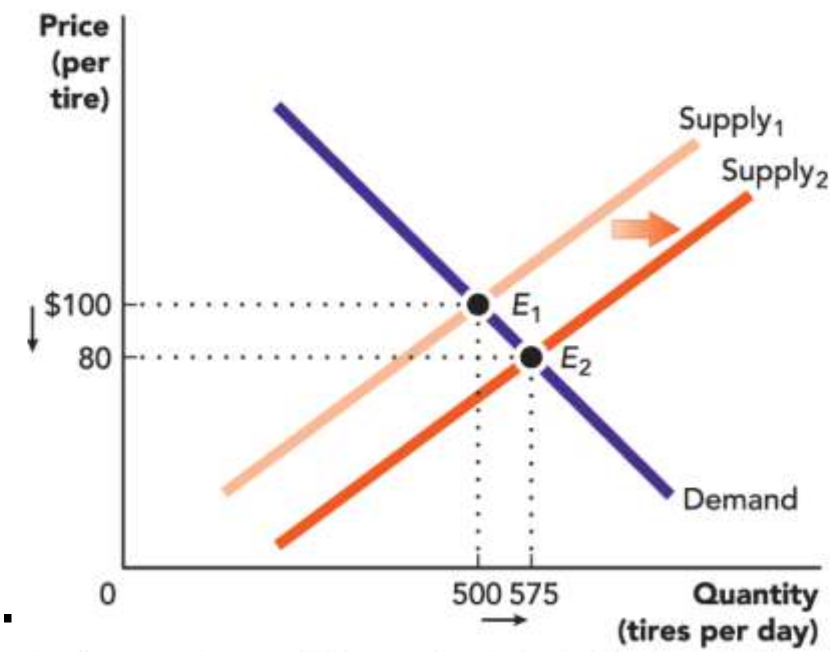
- The surplus puts downward pressure on the price until a new equilibrium is reached.

- A decrease in demand causes both the equilibrium price and the equilibrium quantity to decrease.

AN INCREASE IN SUPPLY

- Anything that decreases the marginal cost of production will result in an increase in supply.
  - New technology often reduces cost and increases supply.
- An increase means that more is supplied at every price, including the old equilibrium price, so a surplus results.
- The surplus puts downward pressure on the price until a new equilibrium is reached.
- An increase in supply causes the equilibrium price to decrease and the equilibrium quantity to increase.



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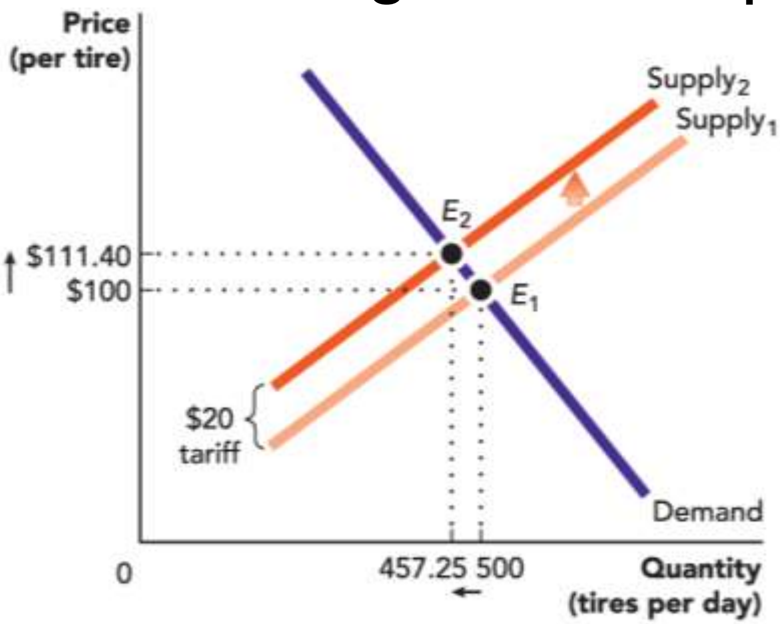
A DECREASE IN SUPPLY

- Anything that increases the marginal cost of production will result in a decrease in supply.
  - An **import tariff** is a tax on goods or services purchased from another country. Import tariffs increase the cost of selling goods made in another country.
- A decrease means that less is supplied at every price, including the old equilibrium price, so a shortage results.



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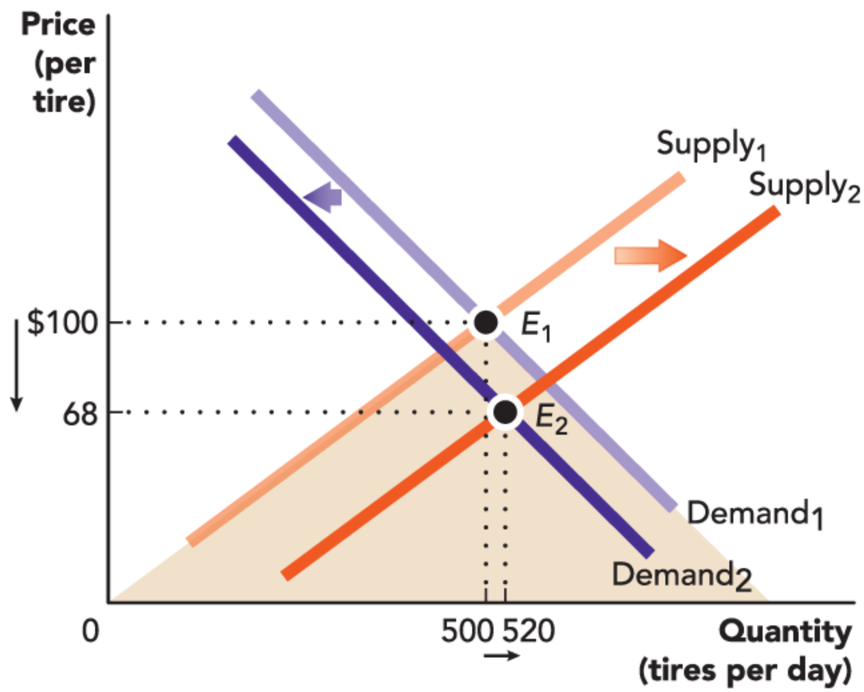
- The shortage puts upward pressure on the price until a new equilibrium is reached.
- A decrease in supply causes the equilibrium price to increase and the equilibrium quantity to decrease.

WHEN BOTH THE SUPPLY CURVE AND THE DEMAND CURVE SHIFT PART I

- When both curves shift at once, the effect on either the equilibrium price or the equilibrium quantity is clear, but the effect on the other measure depends on the relative size of the shifts.



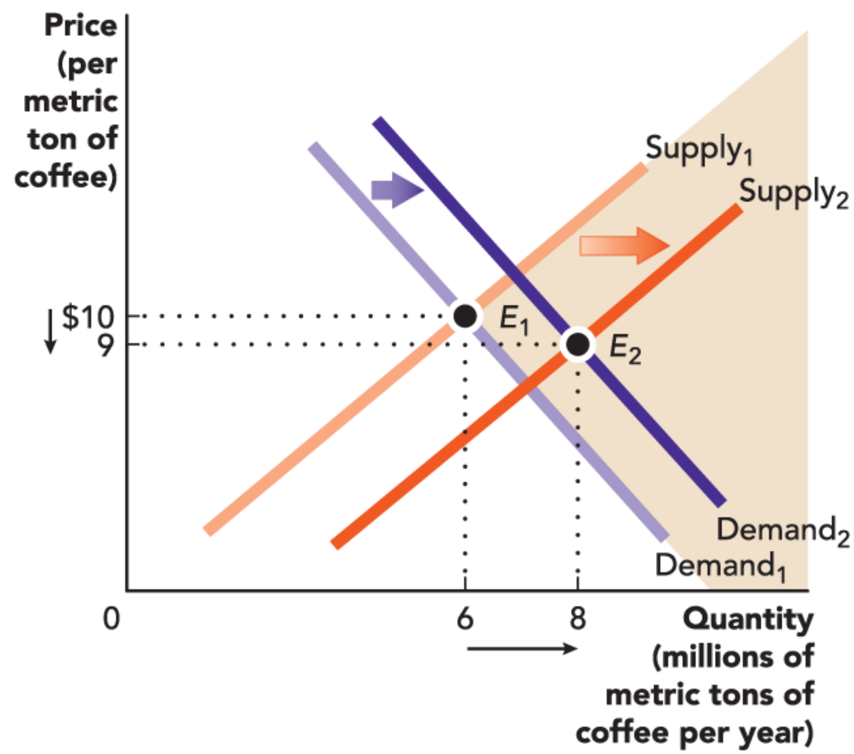
- When the supply increases and the demand decreases, as shown here, the result could be anywhere in the shaded area.

- In this case, price will definitely decrease, but how the quantity changes is unclear.

WHEN BOTH THE SUPPLY CURVE AND THE DEMAND CURVE SHIFT PART II

- When both curves increase, as shown here, the result could be anywhere in the shaded area.

- The quantity will definitely increase, but how the price changes in unclear.



- Double shifts usually require two separate influences.

- Be careful not to shift both curves as the result of a change that really affects only one curve.

LEARN BY DOING: PRACTICE QUESTION 2

Suppose that increased littering causes tires to get holes (from nails and other road debris) more often. What effect would this have on supply and demand for tires?

a) Demand would increase.
b) Supply would increase.
c) Demand and supply would both increase.
d) Demand and supply would both decrease.

LEARN BY DOING: PRACTICE QUESTION 2 (Answer)

Suppose that increased littering causes tires to get holes (from nails and other road debris) more often. What effect would this have on supply and demand for tires?

a) **Demand would increase. (correct answer)**

b) Supply would increase.

c) Demand and supply would both increase.

d) Demand and supply would both decrease.