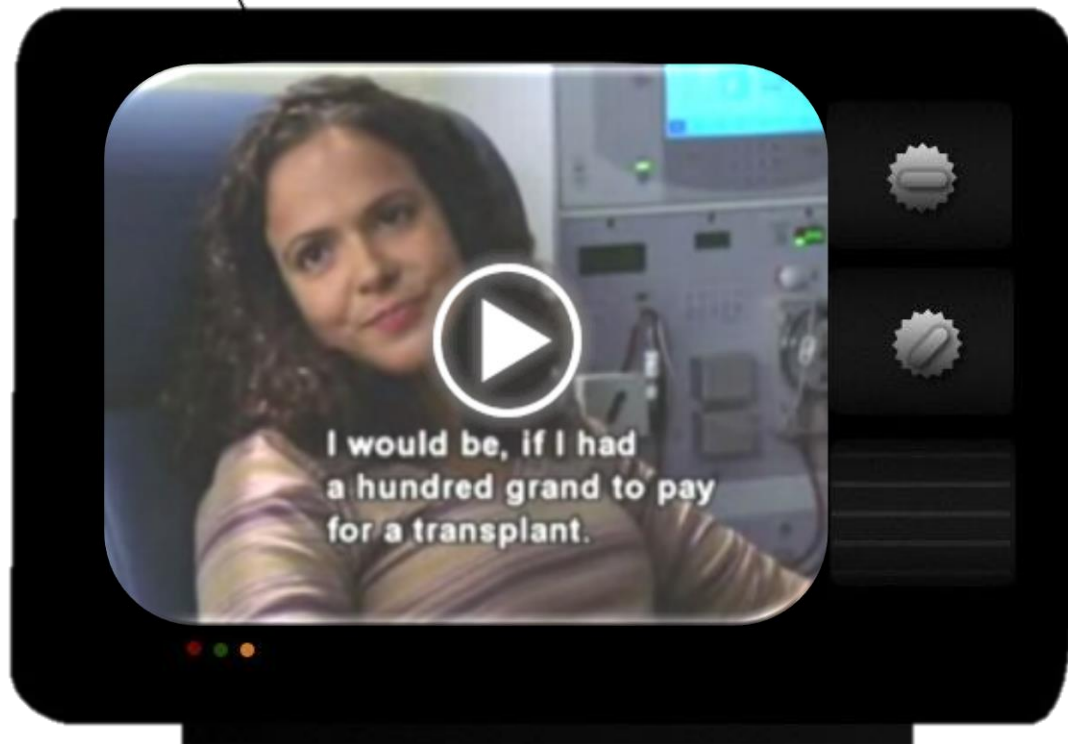


Discuss:

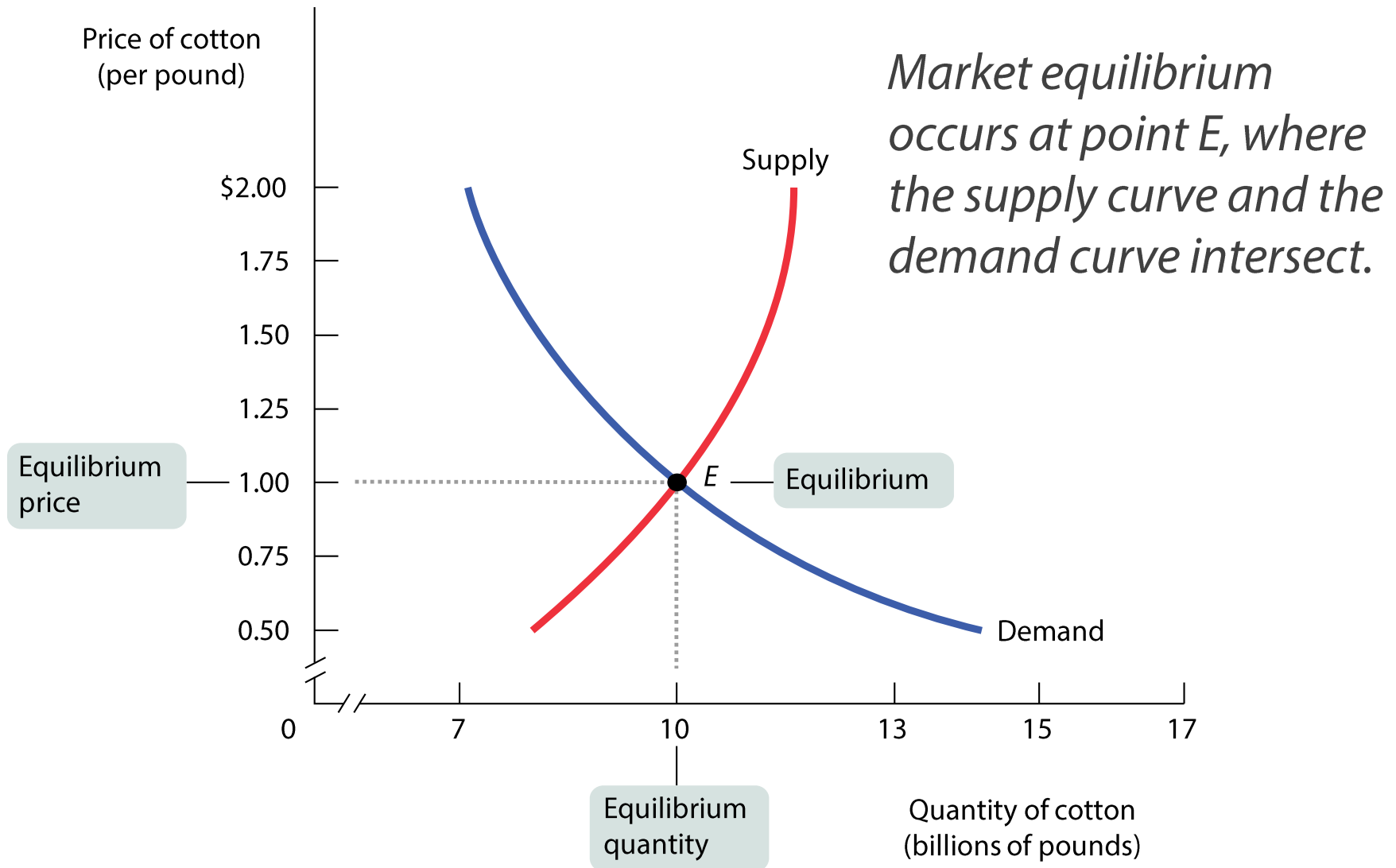
- › Are you in favor of legalizing the sale of kidneys? Why or why not?
- › Do you support the move to distribute organs in the United States based on “benefit” rather than simply who’s been on the waiting list longest? Why or why not?

... at how the market (legal AND illegal) for kidneys works by clicking [here](#) or on the picture below. (Law and Order SVU) (6:18 minutes)



- › What is a demand curve? What is a supply curve?
- › What's the difference between “movements” along a curve and “shifts” of a curve?
- › How do supply and demand curves determine a market's equilibrium price and equilibrium quantity?
- › If there's a shortage or surplus, how does price moves the market back to equilibrium?

Finding the Equilibrium Price and Quantity

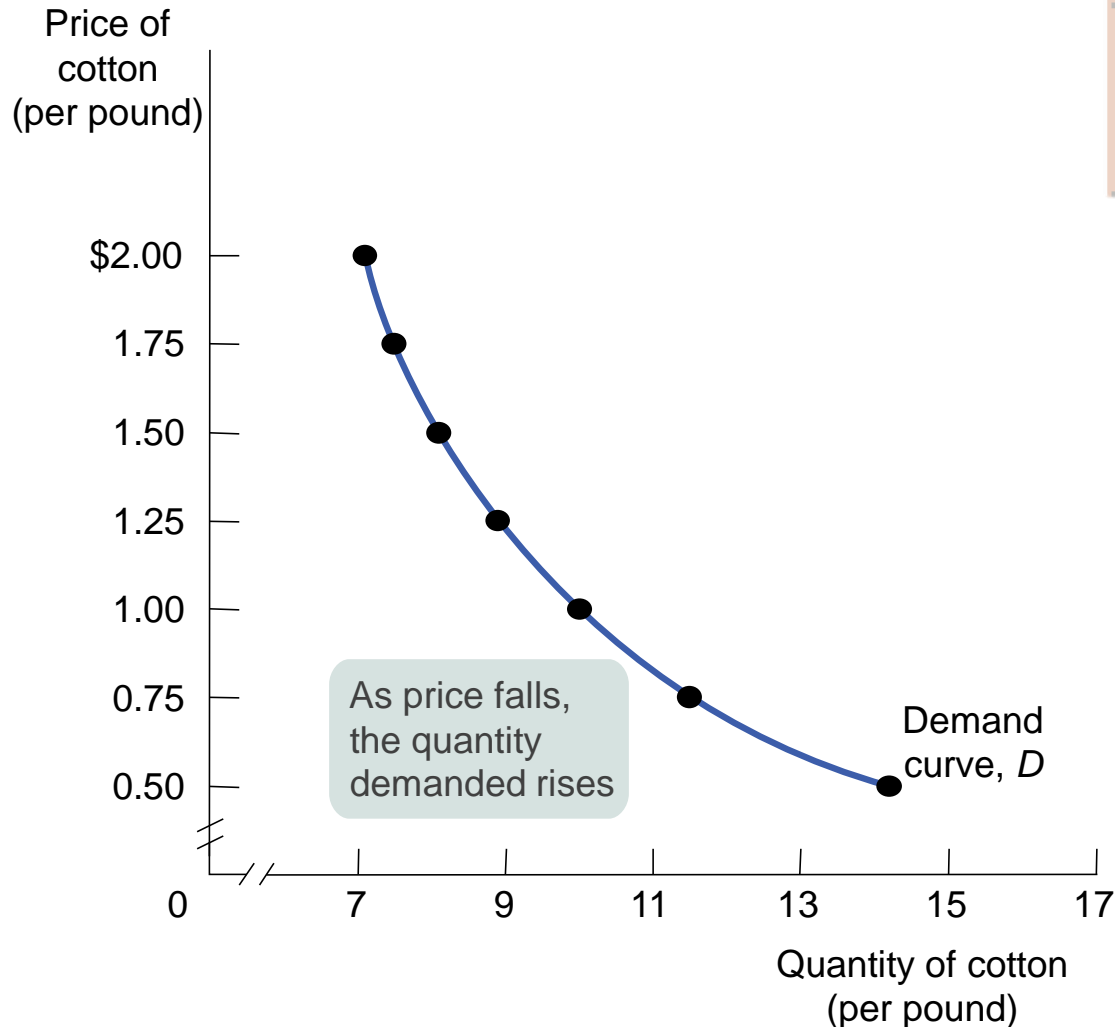


The Demand Schedule and the Demand Curve



The Law of demand: a higher price for a good or service leads people to demand a smaller quantity.

The Demand Schedule and the Demand Curve



Demand Schedule for Cotton	
Price of cotton (per pound)	Quantity of cotton demanded (billions of pounds)

\$2.00	7.1
1.75	7.5
1.50	8.1
1.25	8.9
1.00	10.0
0.75	11.5
0.50	14.2

Don't be sloppy in terminology:

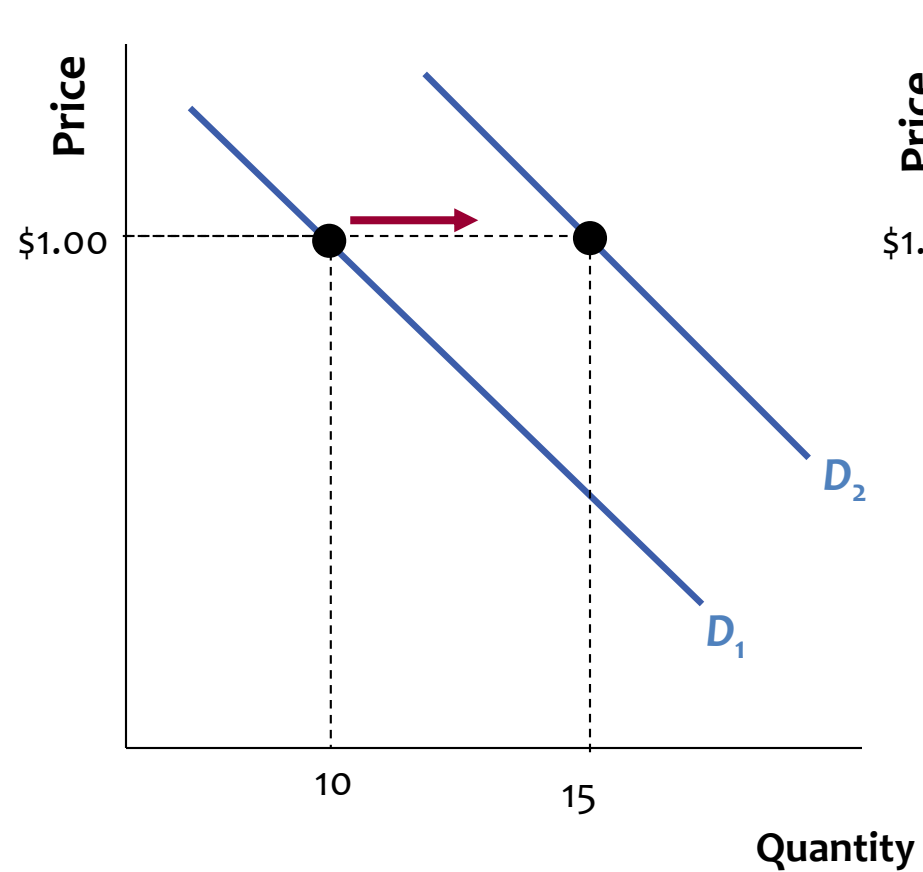
a “*change in demand*”



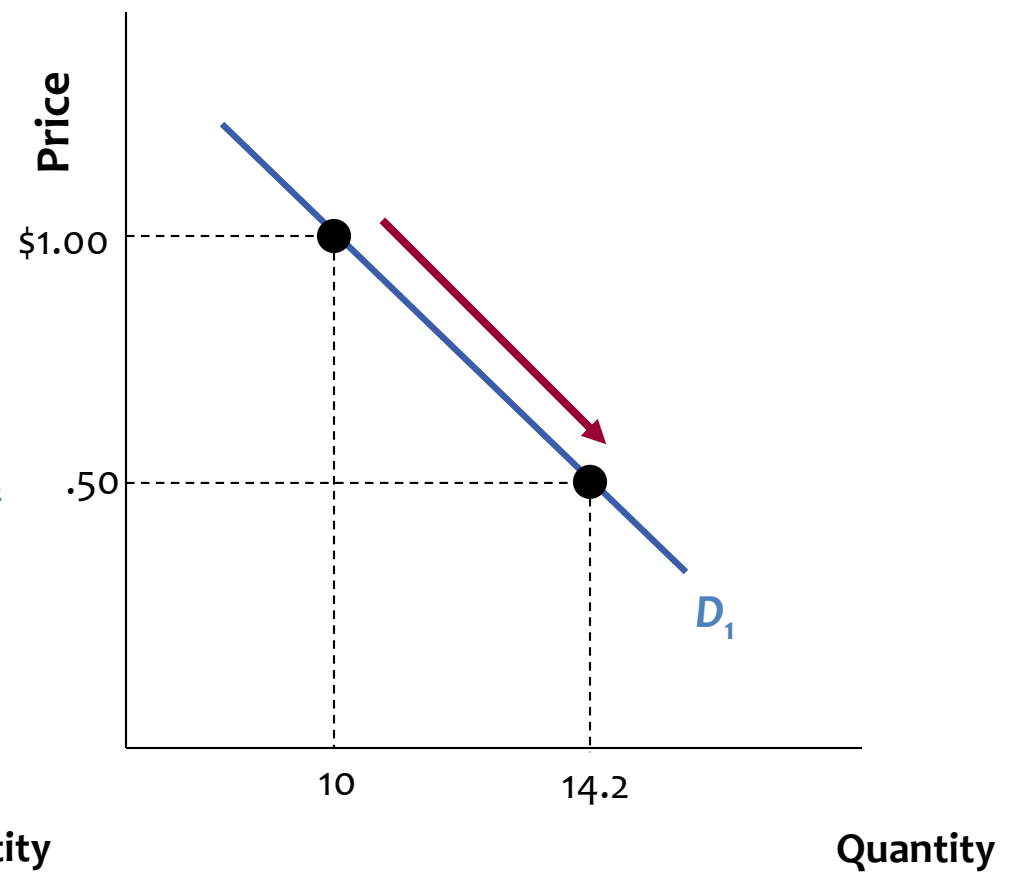
a “*change in quantity demanded*”

Changes in Demand vs. Changes in Quantity Demanded

Change in demand



Change in quantity demanded



Three ways to show Demand



1) DEMAND SCHEDULE

Price (pepsi)	Qty demanded (bottle of pepsi)
0.25	?
0.50	4
0.75	3
1.00	2
1.25	1
1.50	?

2) DEMAND EQUATION

Equation to represent the Demand for Pepsi can be either:

$$P = 1.50 - 0.25 Q$$

or

$$Q = 6 - 4 P$$

3) DEMAND CURVE

Try to graph this demand curve on your own:

*) 1.50 is the y-intercept

*) 6 is the x-intercept

Understanding Shifts of the Demand Curve

Important demand shifters:

1. Changes in the **prices of related goods or services**
2. Changes in **income**
3. Changes in **tastes**
4. Changes in **expectations**
5. Changes in the **number of consumers**

Changes in Price of Related Goods: Substitutes

Two goods are *substitutes* if a decrease in the price of one leads to a decrease in demand for the other (or vice versa).

What happens to the demand for travel in Hawaii if the cost of traveling to Mexico decreases?



Changes in Price of Related Goods: Complements



Two goods are **complements** if a decrease in the price of one good leads to an increase in the demand for the other (or vice versa).

Consumers often have to buy goods together.

An **increase in price of gasoline** will **decrease the demand for SUVs**.

Changes in Income

The effect of changes in income on demand *depends on the nature of the good in question.*

A **normal good**: Demand increases when income increases (and vice versa).

An **inferior good**: Demand decreases when income increases (and vice versa).



Changes in Tastes

Tastes and preferences are subjective and vary among consumers.

Seasonal changes or fads have a predictable effects on demand.

What happens to demand for boots in October?



Changes in Expectations



Timing of a purchase and *expectations*:

Buyers adjust current spending *in anticipation of the direction of future prices* in order to get the lowest price.

If prices for Xbox 360 consoles are expected to drop right before Christmas, what will happen to sales during November?

Active Learning: Practice



When the price of petroleum goes up,
the demand for natural gas _____,
the demand for coal _____, and
the demand for solar power _____.

(Assume these goods are all substitutes for petroleum.)

- a) increases; increases; increases
- b) increases; increases; decreases
- c) decreases; decreases; increases
- d) decreases; decreases; decreases

Active Learning: Practice



Which of the following will cause an **increase in the demand** for autos?

- a. Price of car tires increases because of a Malaysian rubber shortage.
- b. Concrete steel reinforcing rods are replaced by aluminum along the Atlantic coast to prevent rusting.
- c. Gasoline prices drop by 50% when OPEC nations increase production.
- d. McDonald's increases its hamburger production in response to consumer trends.

Supply

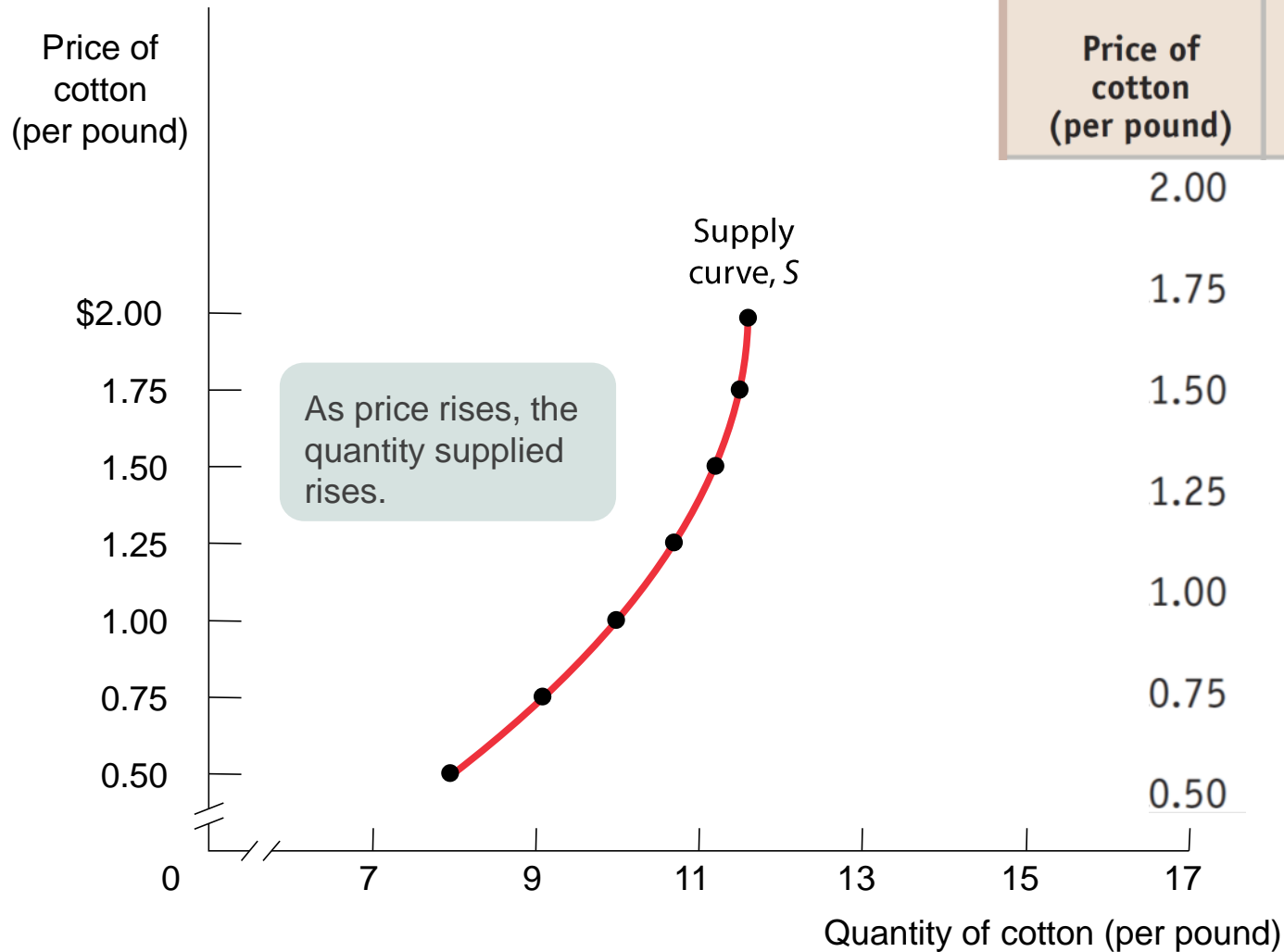


Supply represents the behavior of sellers.

A **supply curve** shows the quantity supplied at various prices.

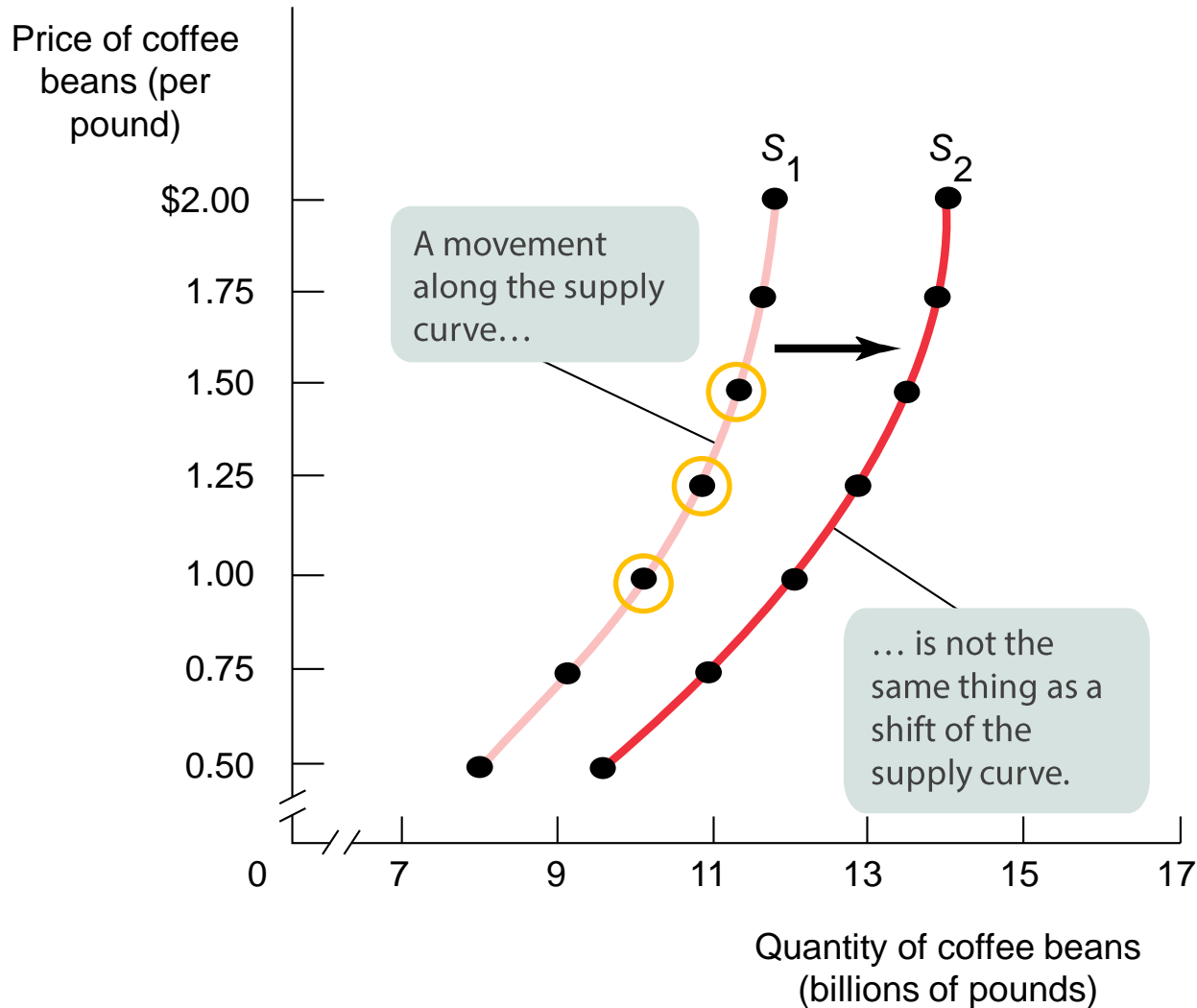
The **quantity supplied** is the quantity that producers are willing and able to sell at a particular price.

The Supply Schedule and the Supply Curve

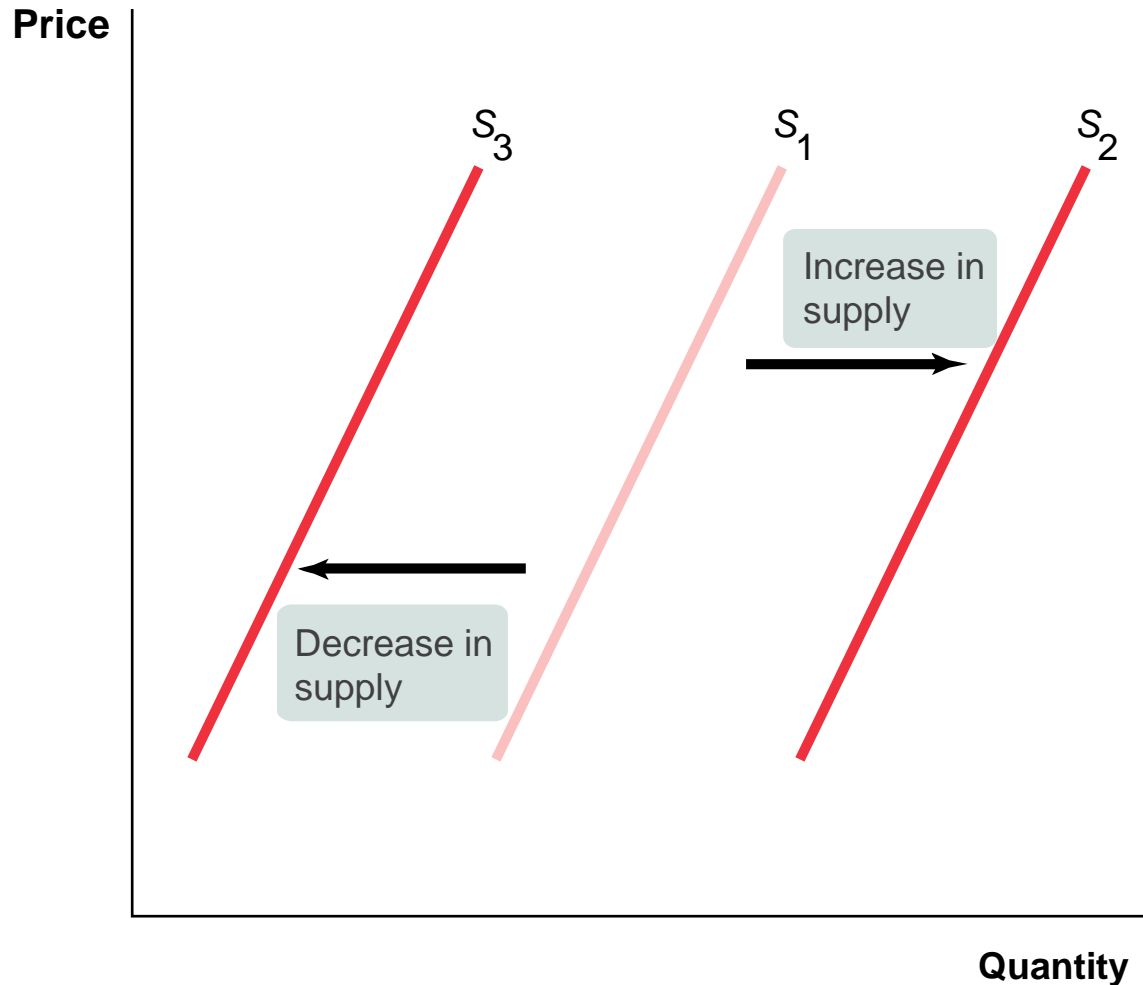


Supply Schedule for Cotton	
Price of cotton (per pound)	Quantity of cotton supplied (billions of pounds)
2.00	11.6
1.75	11.5
1.50	11.2
1.25	10.7
1.00	10.0
0.75	9.1
0.50	8.0

An Increase in Supply



Shifts of the Supply Curve



An **increase in supply** means a *rightward* shift of the supply curve.

A **decrease in supply** means a *leftward* shift of the supply curve.

Understanding Shifts of the Supply Curve

Important supply shifters include changes in:

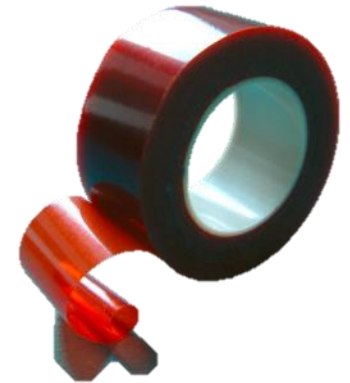
- 1. input prices.**
- 2. the prices of related goods or services.**
- 3. technology.**
- 4. expectations.**
- 5. the number of producers.**

Changes in Input Prices

A decrease in the price of an input (all else equal) *increases profits* and encourages more supply (and vice versa).

What will happen to the number of new businesses if the government reduces the fees and **red tape** associated with new business licenses?

What happens if the fees rise?



What about TAXES?

What about SUBSIDIES?

Changes in Input Prices

A close-up photograph of cotton plants. Several large, fluffy white cotton bolls are in focus, surrounded by brown, dried leaves and green stems. The background is a clear blue sky.

When the price of cotton rises, the supply of blue jeans decreases.

Changes in the Price of Related Goods or Services

Inputs used in production have *opportunity costs*. Sellers will choose to use inputs whose profit is the highest.

There are **substitutes** and **complements** in production processes.

Complement in pork processing? Lard.

Substitute in corn production? Cotton.



Changes in Technology

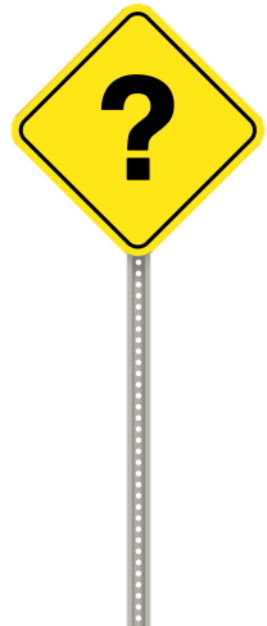
A technological innovation *lowers costs* and *increases supply*.



Changes in Expectations

The expectation of a higher price for a good in the future *decreases current supply of the good* – if they can store the good (and vice versa).

Sellers will adjust their current offerings in anticipation of the *direction of future prices* in order to obtain the highest possible price.



What is the future direction of Games?

Changes in Number of Producers

As producers enter and exit the market, the overall supply changes.

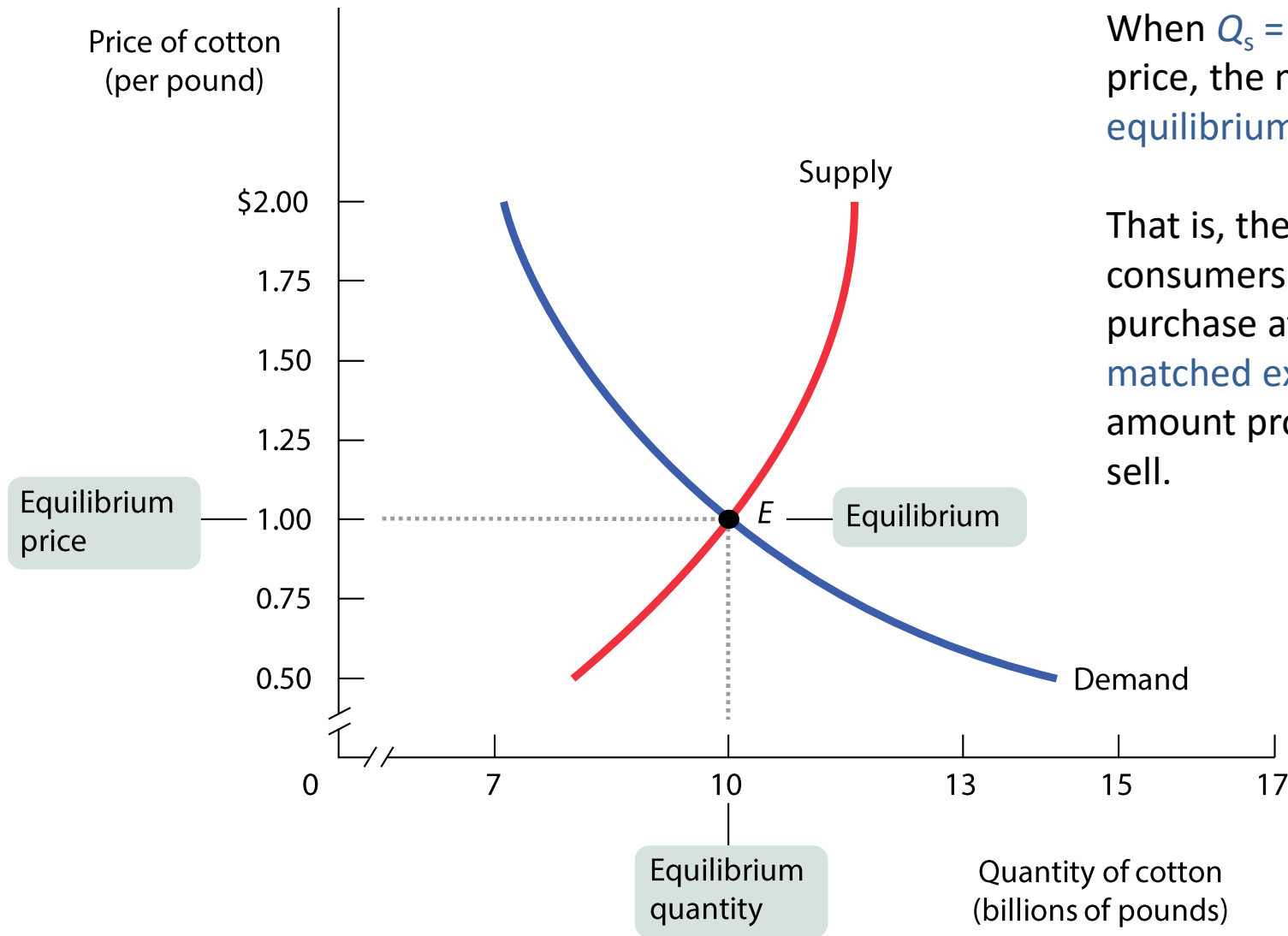
Entry implies more sellers in the market, **increasing supply**.

Exit implies fewer sellers in the market, **decreasing supply**.



As more firms enter the solar installation market, the number of solar installations available for sale increases.

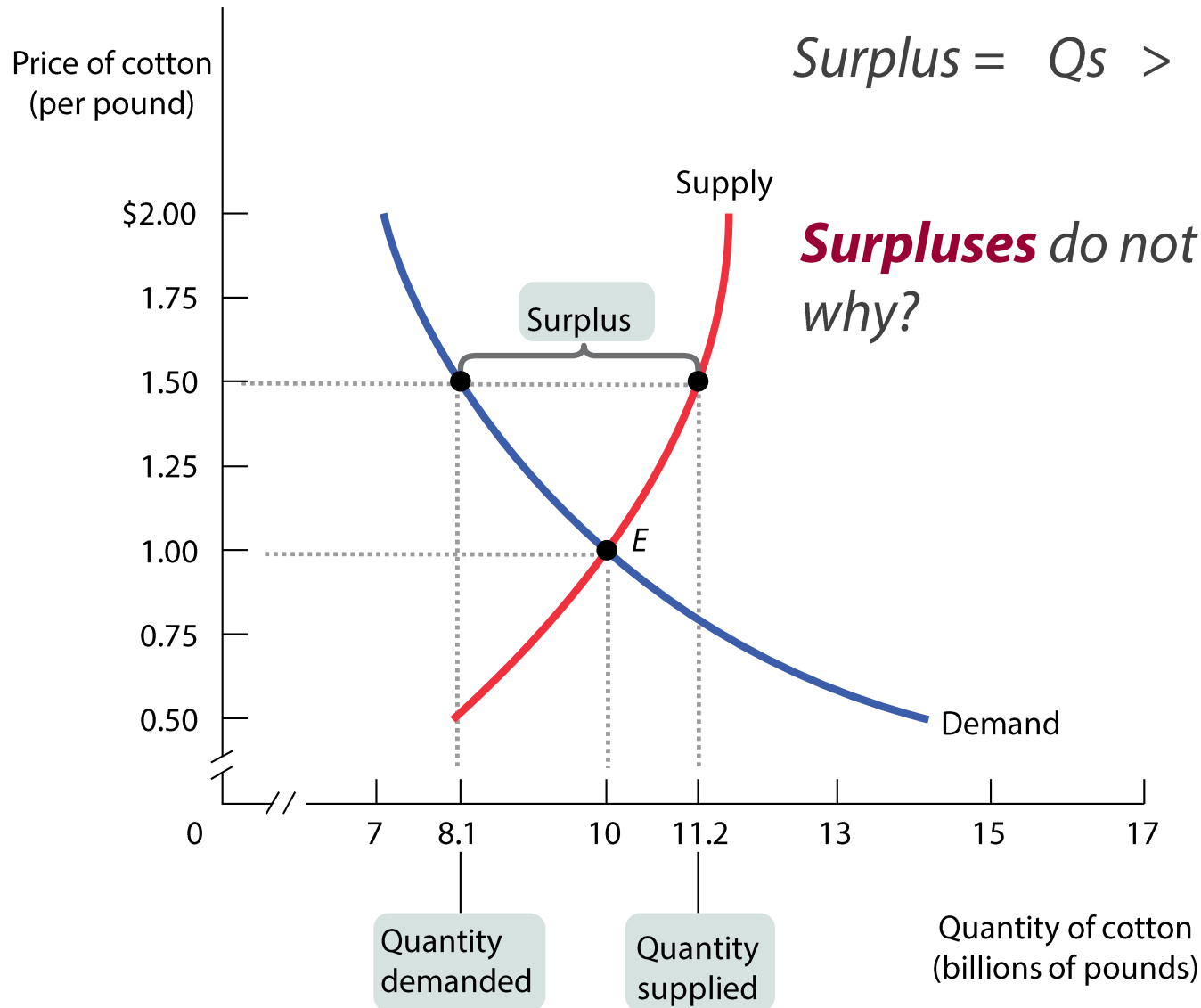
Finding the Equilibrium Price and Quantity



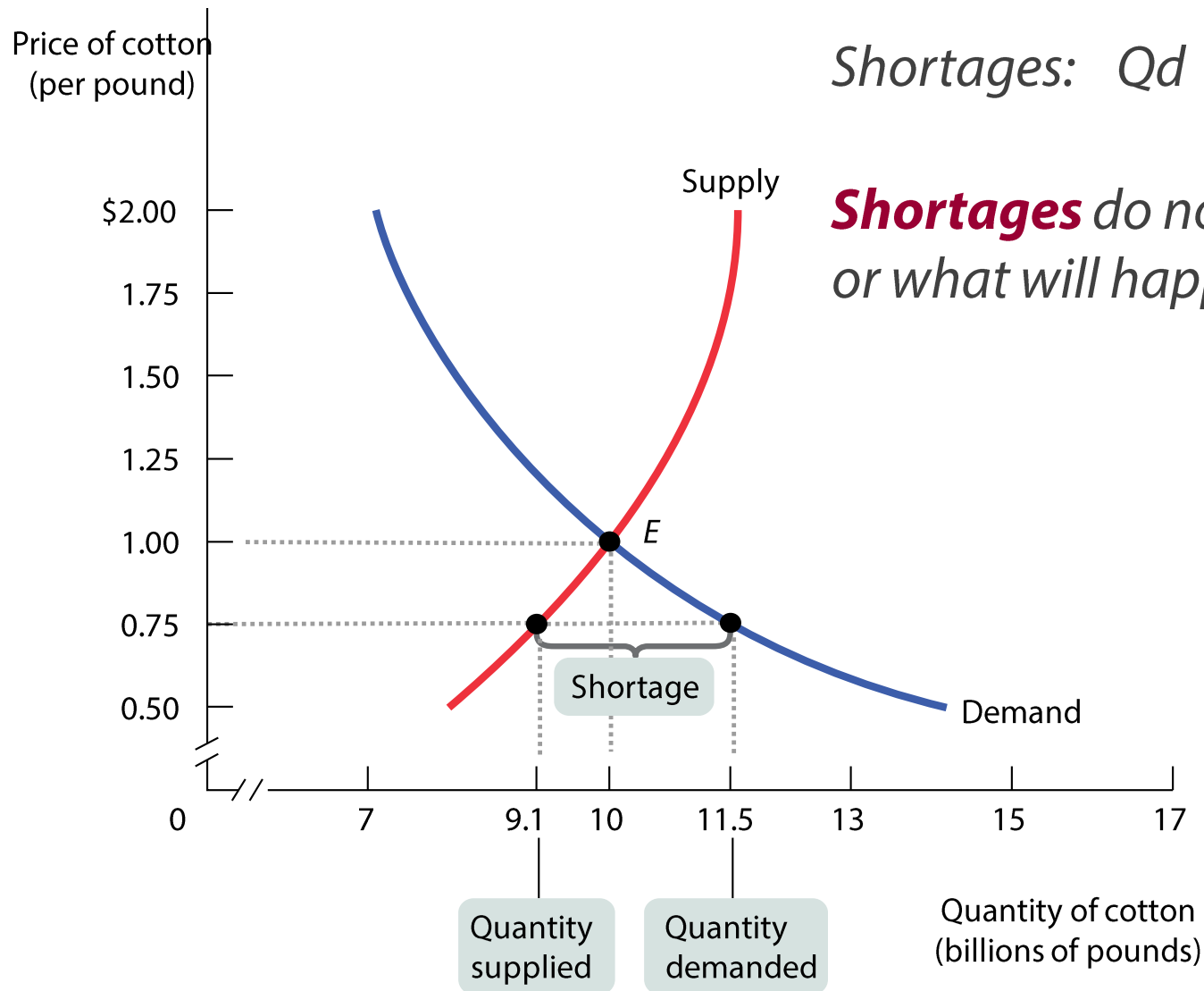
When $Q_s = Q_d$ at a certain price, the market is **in equilibrium**.

That is, the amount consumers would purchase at this price **is matched exactly** by the amount producers wish to sell.

Why Does the Market Price tends to Fall if It Is Above the Equilibrium Price?



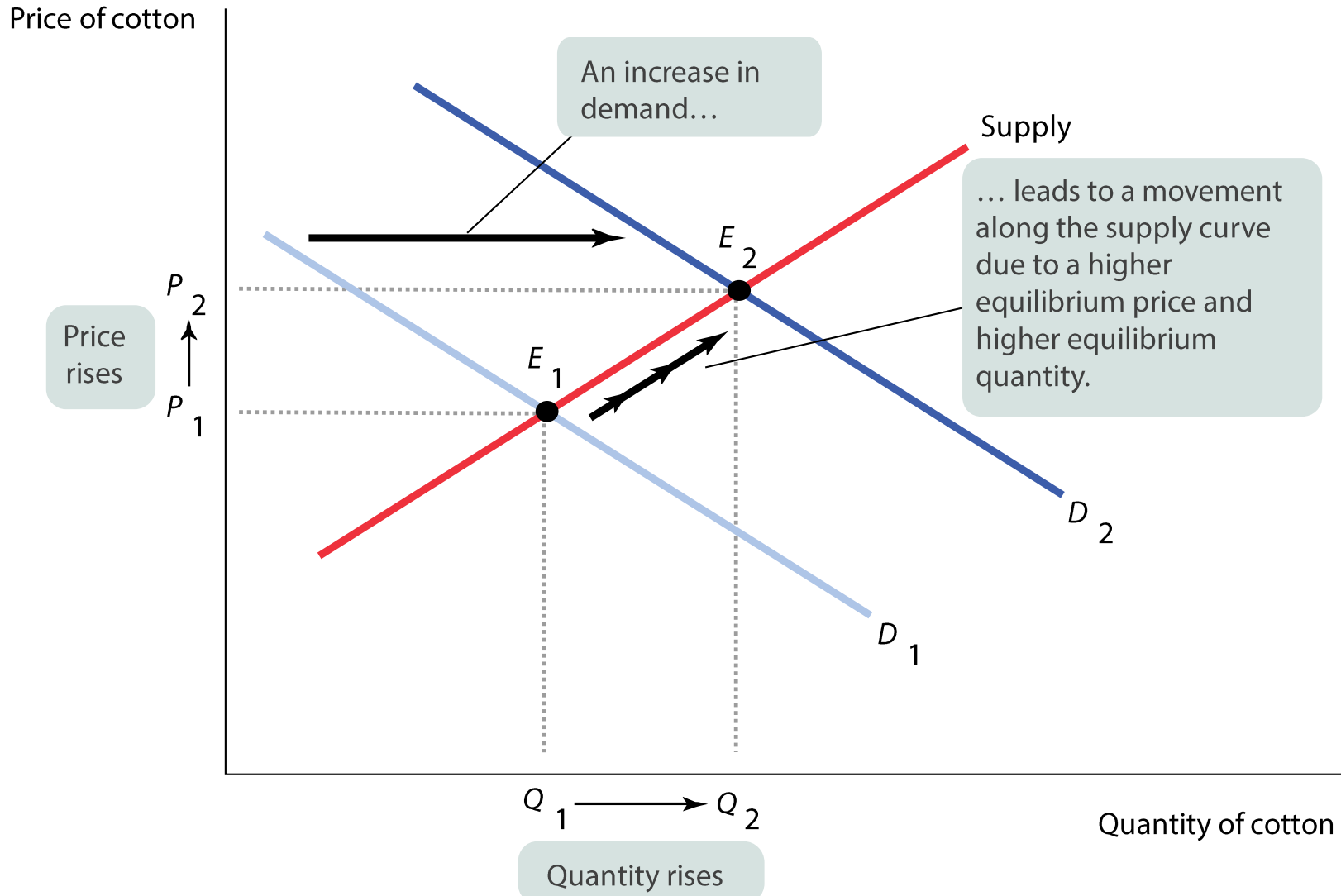
Why Does the Market Price Rise If It Is Below the Equilibrium Price?



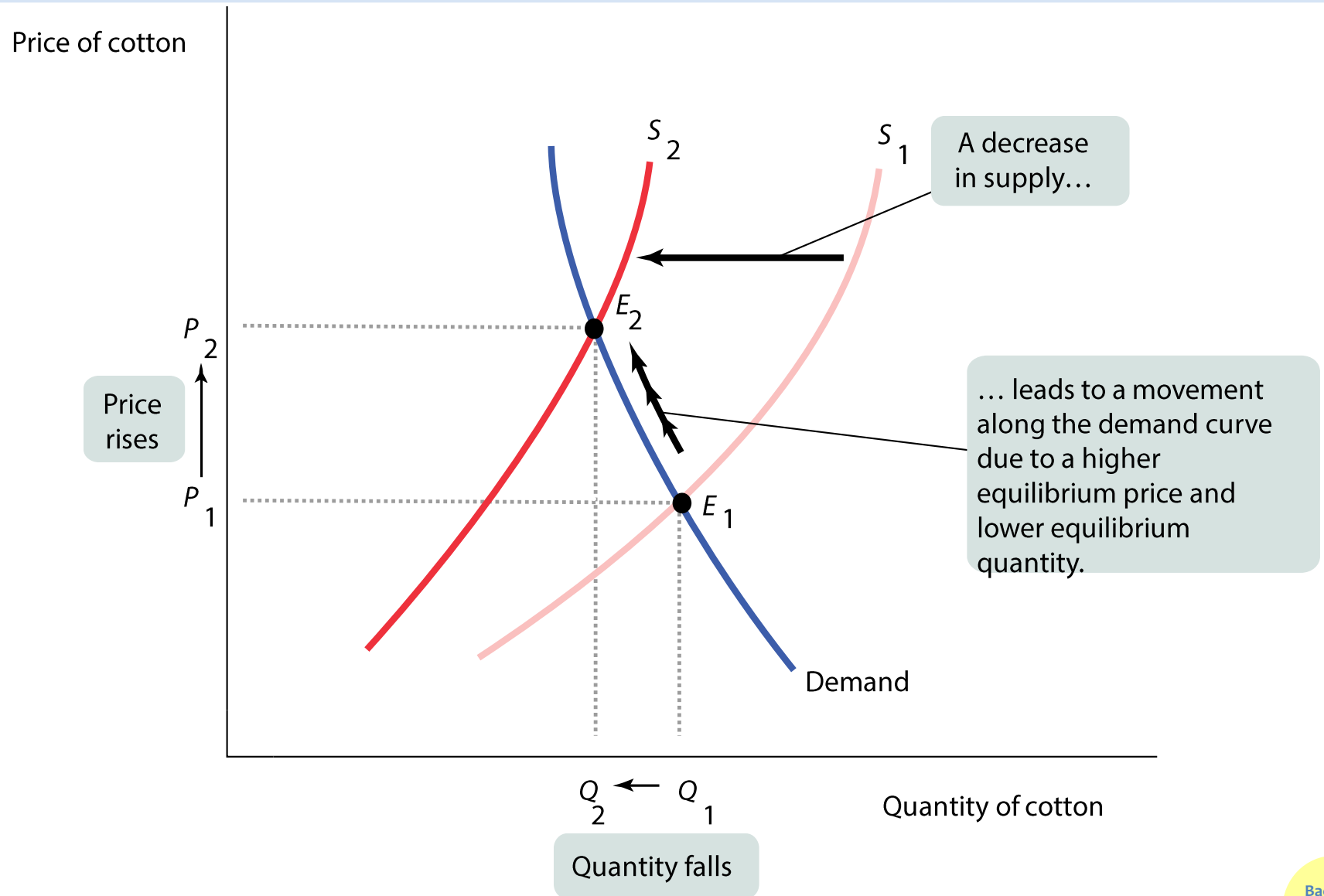
Shortages: $Q_d > Q_s$

Shortages do not last: why, or what will happen?

What Happens When the Demand Curve Shifts



What Happens When the Supply Curve Shifts





How do you know what caused a price change? Or which curve?

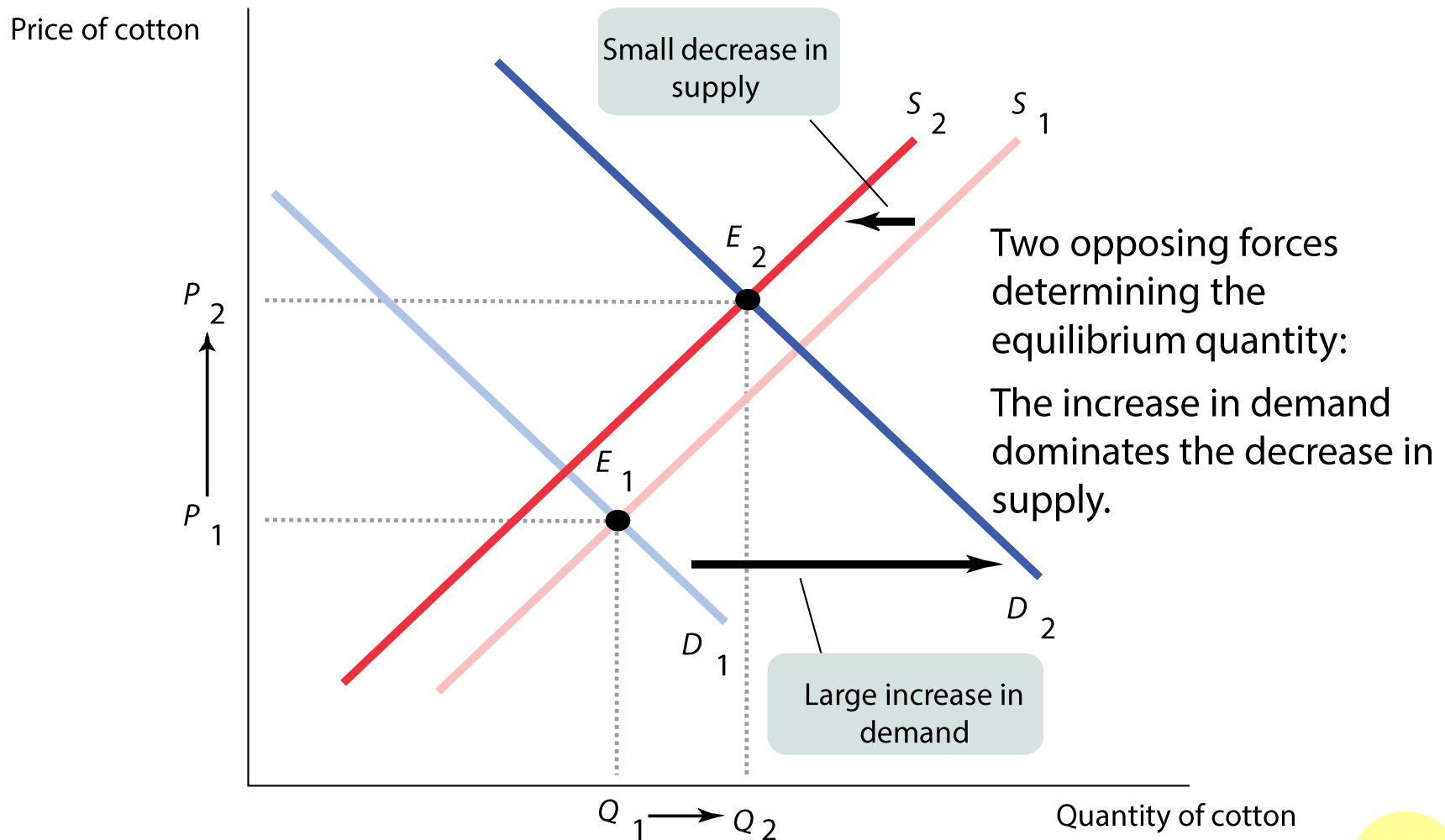
Look at the outcome:

if the price and quantity move together, it was a demand change.

If they move in opposite directions, a supply change.

SIMULTANEOUS Shifts of Supply and Demand

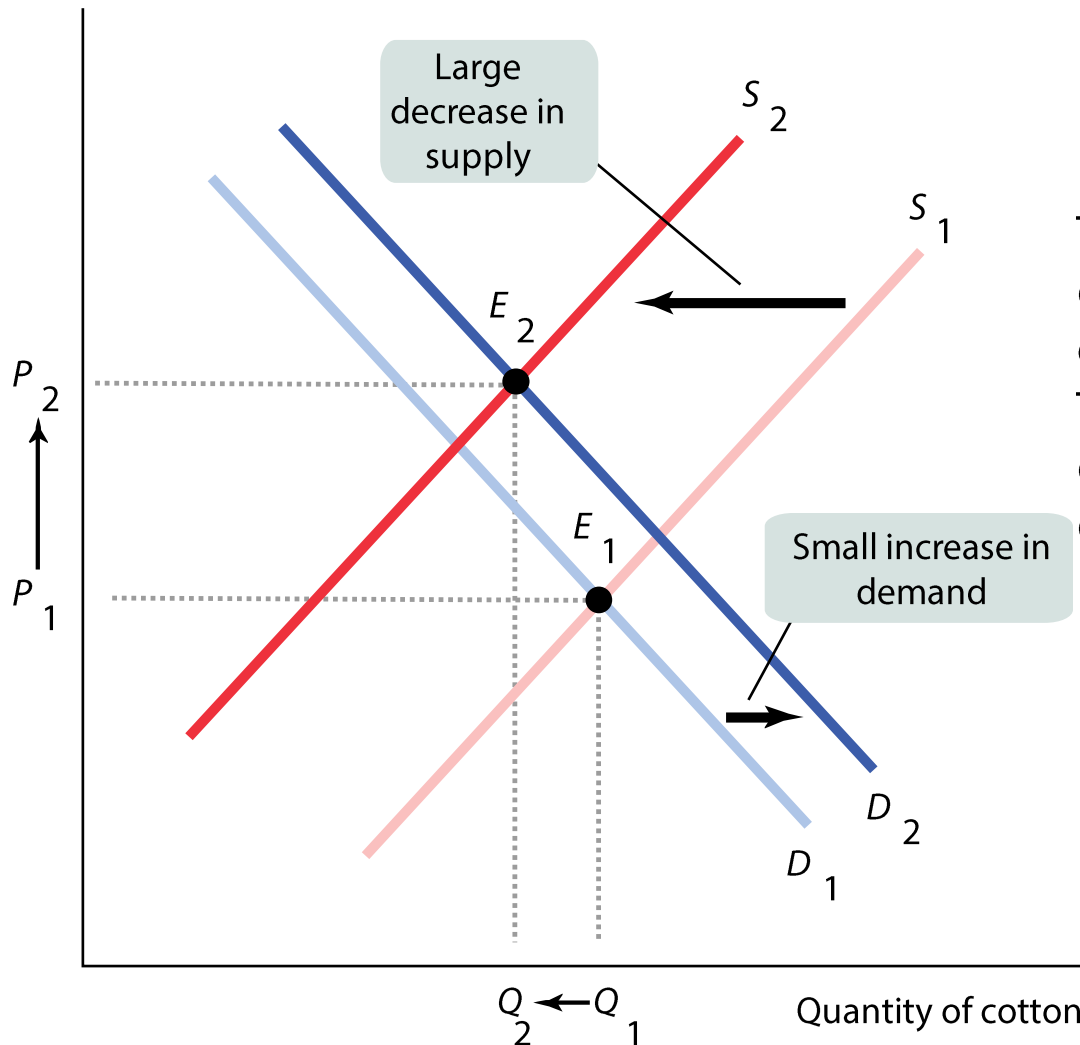
(a) **One possible outcome: Price rises, quantity rises.**



Simultaneous Shifts of Supply and Demand

(b) **Another possible outcome: price rises, quantity falls**

Price of cotton



Two opposing forces determining the equilibrium quantity: The decrease in supply dominates the increase in demand.

Active Learning: Practice



Consumers in Mayville consider houses and apartments to be substitutes. There is an increase in the price of houses in Mayville at the same time three new apartment buildings open there. In the market for apartments in Mayville:

- a) the equilibrium price will rise.
- b) the equilibrium price will fall.
- c) the equilibrium quantity will rise.
- d) the equilibrium quantity will fall.