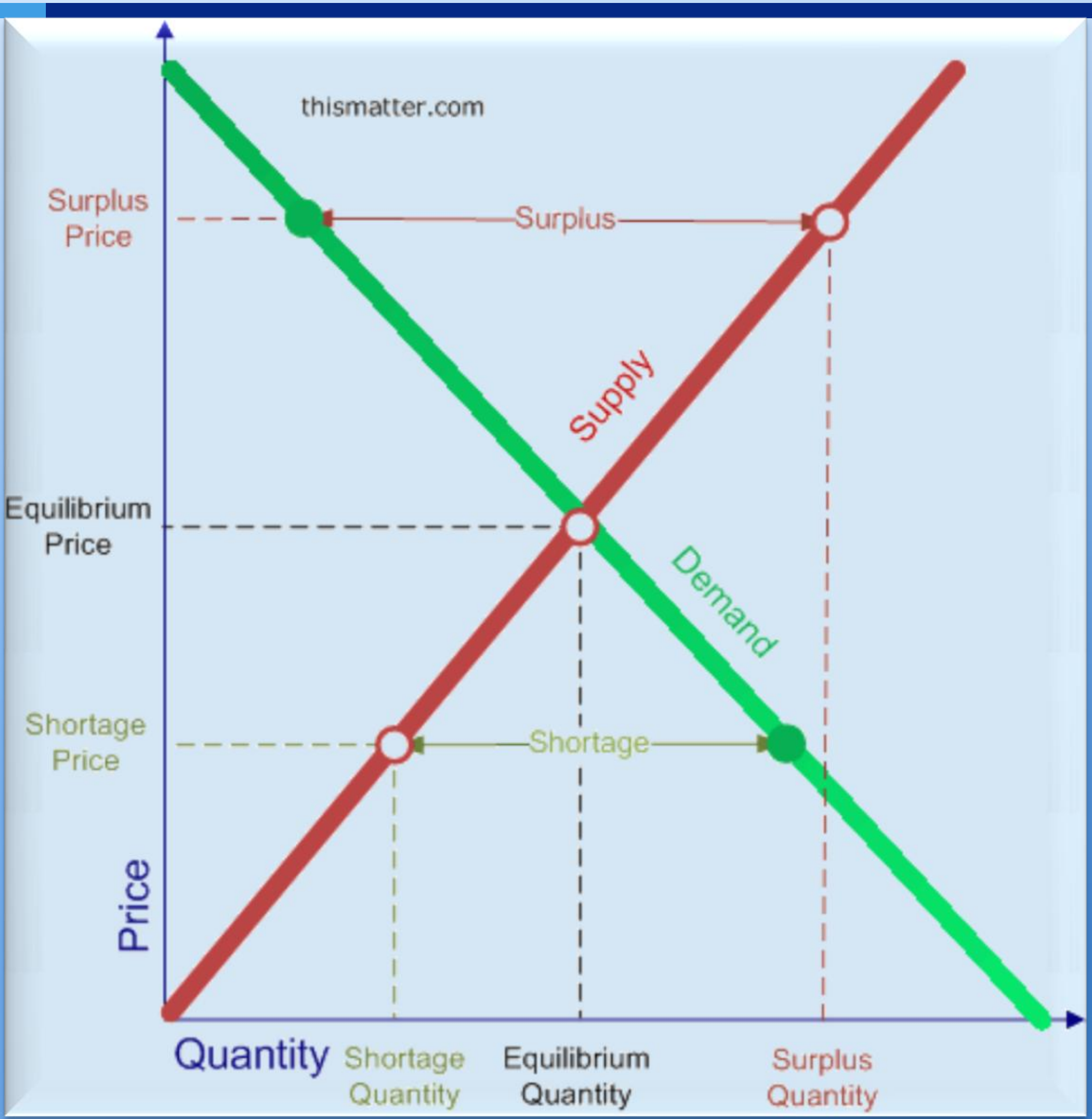
SUPPLY AND DEMAND PART III

Supply always comes on the heels of demand.
-Robert Collier

CHART: BALANCING THE MARKET

The point at which quantity demanded and quantity supplied come together is known as *equilibrium.*



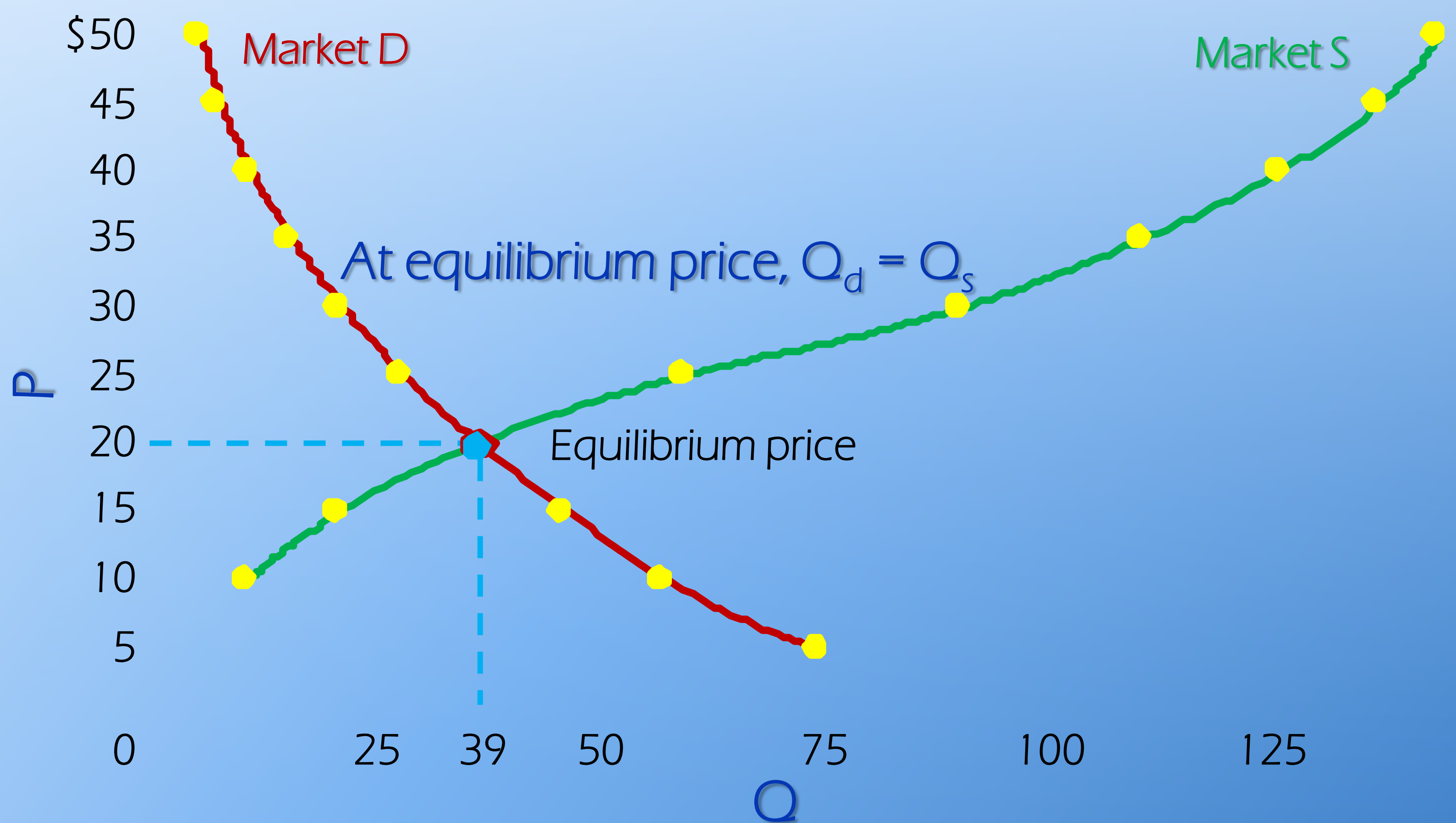
MARKET CLEARING

- Not everyone is happy with the prevailing price or quantity at equilibrium.
- The unique outcome at market equilibrium is efficient.

TABLE: EQUILIBRIUM PRICE

P	Q_s	Market Status	Q_d
$50	148	surplus	5
45	140	surplus	8
40	130	surplus	11
35	114	surplus	16
30	90	surplus	22
25	62	surplus	30
20	39	*equilibrium*	39
15	20	shortage	47
10	10	shortage	57

CHART: EQUILIBRIUM PRICE



THE INVISIBLE HAND

- The *market mechanism* is the use of market prices and sales to signal desired outputs (or resource allocations).
- Adam Smith characterized this market mechanism as *the invisible hand*.

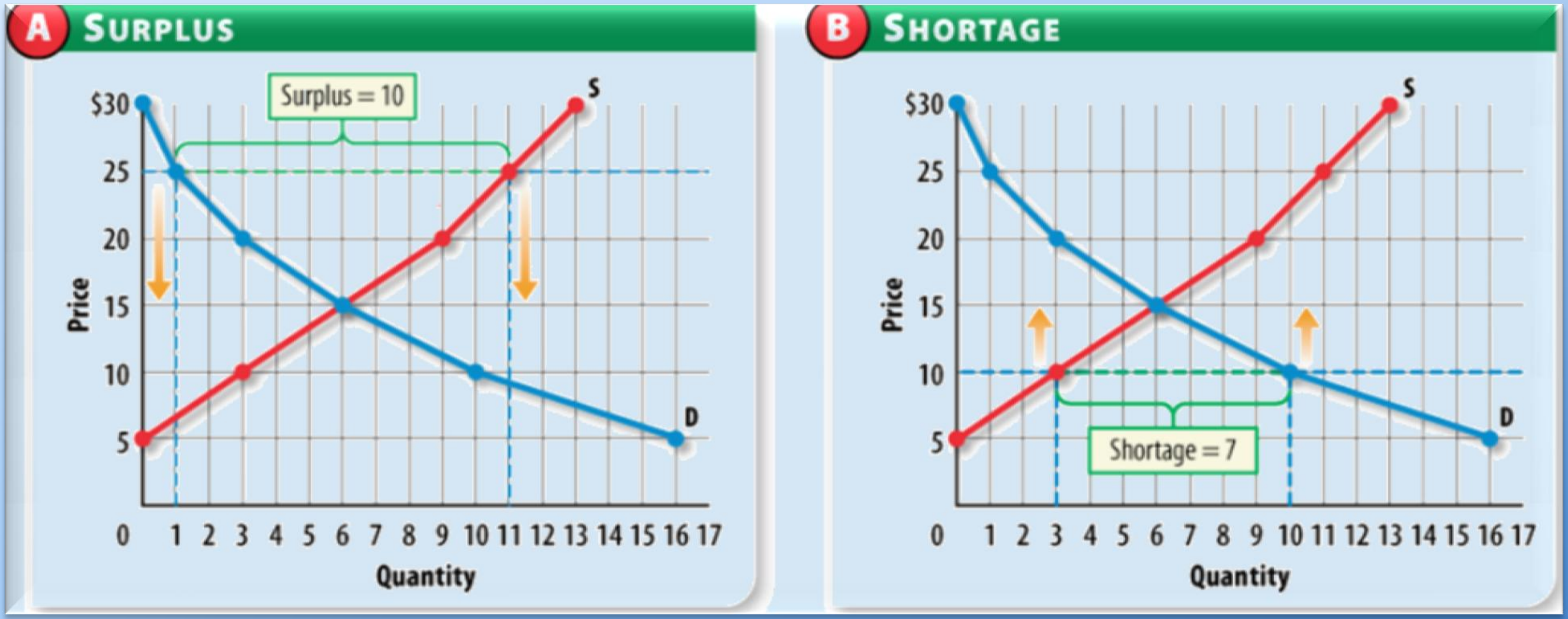
MARKET SURPLUS

- A *market surplus* is the amount by which the quantity supplied exceeds the quantity demanded at a given price – excess supply.
- A market surplus is created when the seller's asking prices are too high so that the seller has products that cannot be sold.
- At that asking price, the quantity demanded is less than the quantity the seller supplied.

MARKET SHORTAGE

- A *market shortage* is the amount by which the quantity demanded exceeds the quantity supplied at a given price – excess demand.
- A market shortage is created when the seller's asking prices are too low.
- At that asking price, the seller doesn't have enough supply to satisfy the quantity demanded.

CHARTS: SURPLUS AND SHORTAGE



SELF-ADJUSTING PRICES

- A **market surplus** will emerge when the market price is above the equilibrium price.
- *A* **market shortage** will emerge when the market price is below the equilibrium price.
- Buyers and sellers will change their behavior to overcome a surplus or shortage.
- Only at the equilibrium price will no further adjustments be required.

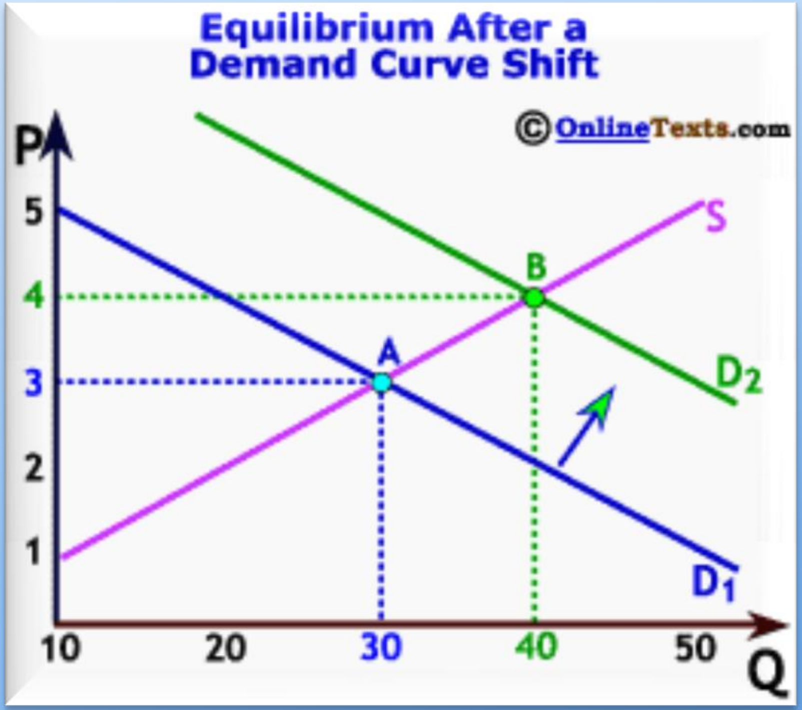
CHANGES IN EQUILIBRIUM

- No equilibrium price is permanent.
- The equilibrium price will change whenever the supply or demand curve shifts.
- Changes in supply and demand occur when the determinants of supply and demand change.

A DEMAND SHIFT

Should the demand curve shift, the result will be a change in equilibrium price and quantity.

CHART: CHANGES IN EQUILIBRIUM: DEMAND SHIFT

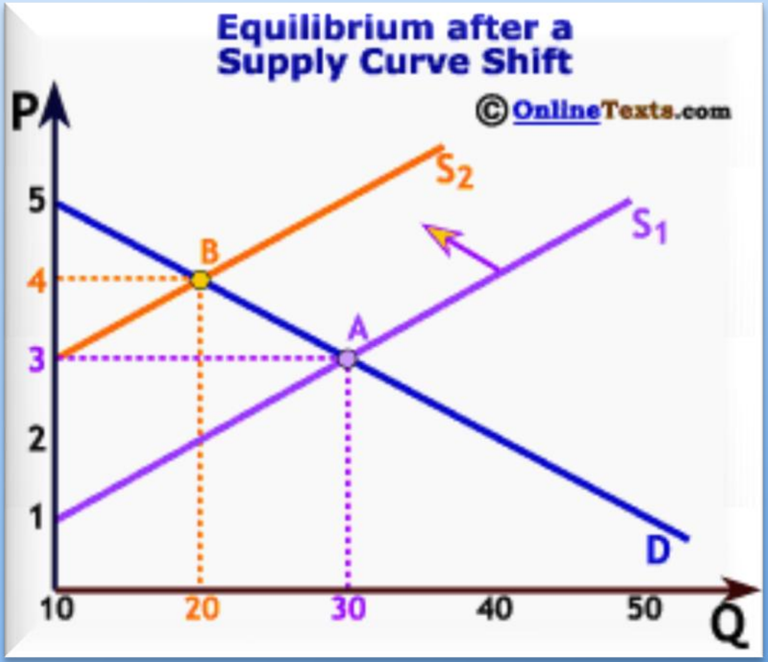


The shift in the demand curve moves the market equilibrium from point A to point B, resulting in a higher price (from \$3 to \$4) and higher quantity (from 30 to 40 units). Note that if the demand curve shifted to the left, both the equilibrium price and quantity would decline.

A SUPPLY SHIFT

If the supply curve shifts, the result will be a change in equilibrium price and quantity.

CHART: CHANGES IN EQUILIBRIUM: A SUPPLY SHIFT



The shift of the supply curve moves the equilibrium from point A to point B, resulting in a higher price (from $3 to $4) and lower quantity (from 30 to 20). Conversely, a rightward shift of the supply curve reduces the equilibrium price and increases the equilibrium quantity.

TABLE: ANALYZING SHIFTS IN SUPPLY AND DEMAND

DEMAND	SUPPLY	PRICE	QUANTITY	CURVE, SHIFT
increase	unchanged	increase	increase	demand, right
decrease	unchanged	decrease	decrease	demand, left
unchanged	increase	decrease	increase	supply, right
unchanged	decrease	increase	decrease	supply, left

DEMAND AND SUPPLY EXAMPLES

- Why are ATMs everywhere?
  - demand rises
  - price rises
  - profit increases
  - firms enter and existing firms expand
- How would government control of prices affect the market?

DEMAND AND SUPPLY EXAMPLES

- Why does the kid who skipped college earn big bucks playing games?
  - demand – high
  - laborers – highly skilled, limited supply
  - equilibrium price (wage) – very high

DEMAND AND SUPPLY EXAMPLES

- Why do teenage sitters have so much power?
- The problem boils down to simple economics:
  - low supply – 7.4 million girls are in the pool of 12-15 year olds
  - high demand – 35 million families have newborn to 11-year-old children

MARKET OUTCOMES

The market mechanism resolves the basic economic questions of WHAT, HOW and FOR WHOM.

MARKET OUTCOMES

- WHAT we produce is determined by the equilibrium of the markets.
- HOW we produce is determined by profit-seeking behavior and efficient resource usage.
- FOR WHOM we produce is determined by those willing and able to pay the equilibrium price.

OPTIMAL, NOT PERFECT

- Not everyone is happy with market outcomes.
- Although the outcomes of the marketplace are not perfect, they are often optimal.
- we are given the opportunity to maximize our own satisfaction.
- Everyone has done the best possible, given their incomes and talents.

THE ROLE OF PRICES IN A FREE MARKET

- Prices serve a vital role in a free market economy.
- Prices help move land, labor and capital into the hands of producers, and finished goods in to the hands of buyers.
- Prices create efficient resource allocation for producers and a language that both consumers and producers can use.

ADVANTAGES OF PRICES

1. Incentive – Prices communicate to both buyers and sellers whether goods or services are scarce or easily available. Prices can encourage or discourage production.
2. Signals – Think of prices as traffic lights. A relatively high price is a green light telling producers to make more. A relatively low price is a red light telling producers to make less.
3. Flexibility – In many markets, prices are much more flexible than production levels. They can be easily increased or decreased to solve problems of excess supply or excess demand.
4. Free – Unlike central planning, a distribution system based on prices costs nothing to administer.

MARKET FAILURE

- A market failure is a situation in which the price system creates a problem for society or fails to achieve society's goals.
- Adam Smith said there must be competition for markets to function properly.
- When there isn't sufficient competition, the result is market failure.

MARKET DISEQUILIBRIUM

If the market price or quantity supplied is anywhere but at the equilibrium price, the market is in a state called *disequilibrium*. There are two causes of disequilibrium:

Excess Demand

- Excess D occurs when Q_d is more than Q_s.

Excess Supply

- Excess S occurs when Q_s is more than Q_d.

If allowed, interactions between buyers and sellers will always push the market back toward equilibrium.

DISEQUILIBRIUM PRICING: PRICE CEILINGS

- A *price ceiling* is an upper limit imposed on the price of a good by the government.
- An example of a price ceiling is rent control, a situation where the government sets a maximum amount that can be charged for rent.

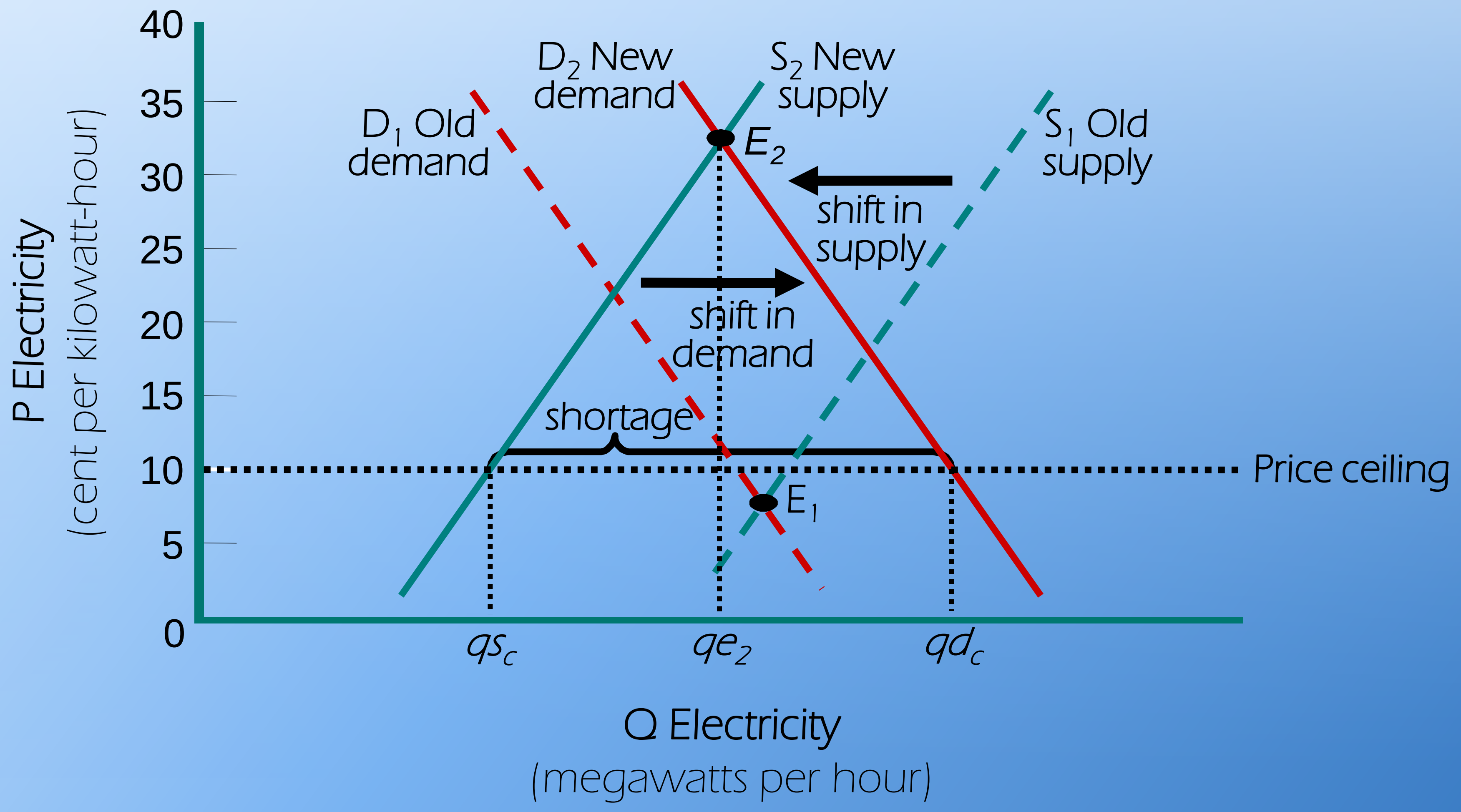
PRICE CEILINGS CREATE SHORTAGES

- Price ceilings have three predictable effects.
  - Increase in the quantity demanded … The decrease in prices created by the price ceiling results in an increase in demand even though the price decrease is artificial.
  - Decrease in the quantity supplied … The decrease in prices created by the price ceiling results in a decrease in supply since suppliers leave the market rather than be forced to sell at unprofitable prices..
  - Create a market shortage … The increased demand and decreased supply create a shortage. Since the price decrease that led to the shortage is imposed rather than created by market forces, there is no way that the market can achieve equilibrium and so no way of eliminating the shortage.

ELECTRIC SHOCK: ENERGY-PRICE SPIKES

- In a market-driven economy, electricity prices are set by the forces of supply and demand.
- People are often upset with the market outcome and demand government intervention.
- Electricity prices increased in California because of an increase in demand and a decrease in supply.
  - The demand curve shifted rightward.
  - The supply curve shifted leftward.
- The California legislature put a price ceiling on retail electricity prices.

CHART: PRICE CEILINGS CREATE SHORTAGES



ALLOWING THE MARKET TO WORK

- Letting prices rise would:
  - reduce the quantity demanded.
  - increase the quantity supplied.
  - alleviate the market shortage.

DISEQUILIBRIUM PRICING: PRICE FLOORS

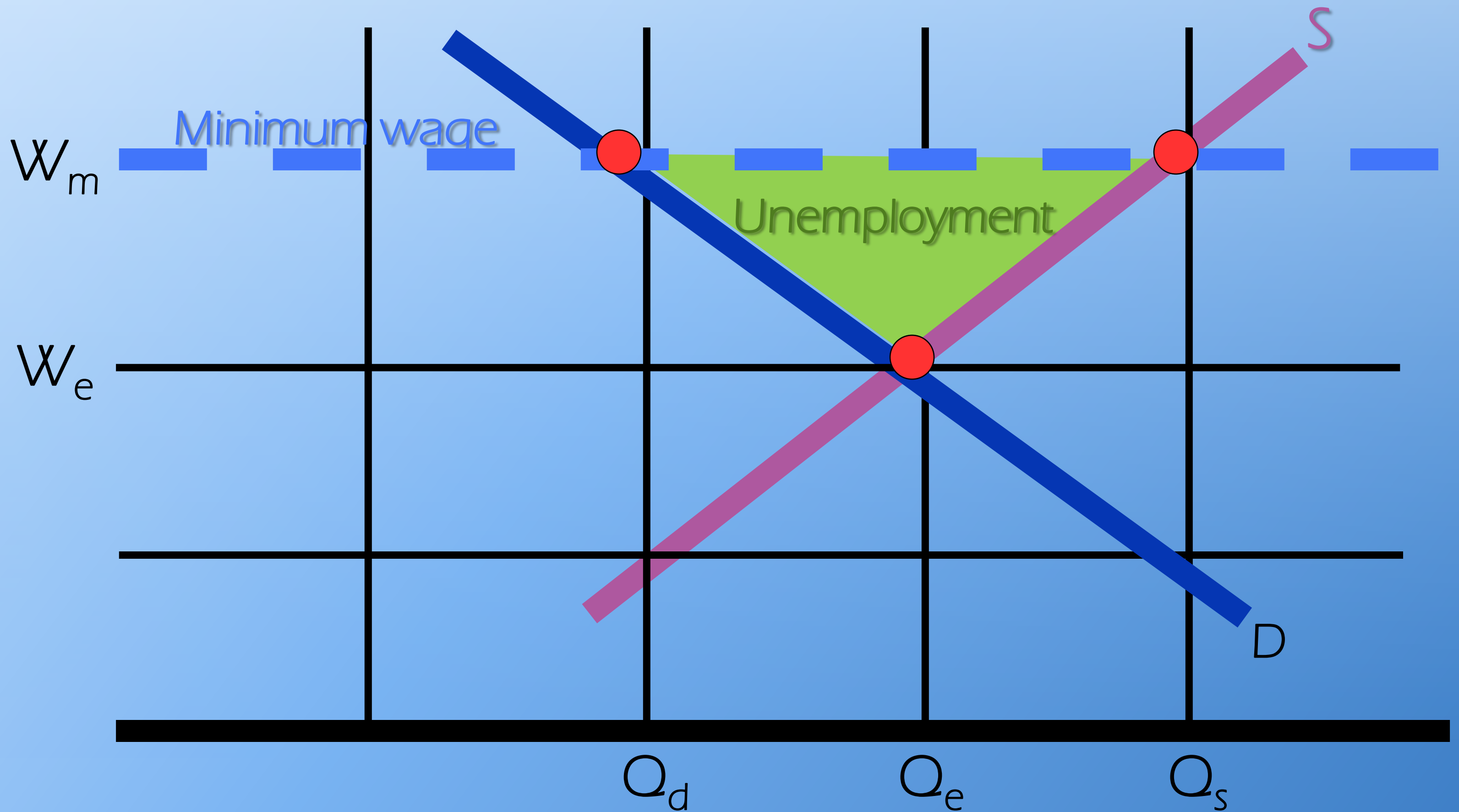
- *A price floor* is a minimum price, set by the government, that must be paid for a good or service.
- One well-known price floor is the *minimum wage*, which sets a minimum price an employer must pay a worker for each hour of labor.

PRICE FLOORS CREATE SURPLUSES

- Price floors have three predictable effects.
  - Decrease in the quantity demanded … The increase in costs created by the price floor results in a decrease in demand since buyers can no longer afford to buy the same quantity as before.
  - Increase in the quantity supplied … The increase in prices created by the price floor results in an increase in supply even though the increased price is artificially imposed.
  - Create a market surplus … The decreased demand andincreased supply create a surplus. Since the price increase that led to the surplus is imposed rather than created by market forces, there is no way that the market can achieve equilibrium and so no way of eliminating the surplus.

CHART: PRICE FLOORS CREATE SURPLUSES

The result of a price floor on wages paid to labor (price) is a surplus of labor (supply), leading to higher unemployment.



ALLOWING THE MARKET TO WORK

- Letting prices fall would:
  - increase the quantity demanded.
  - decrease the quantity supplied.
  - alleviate the market surplus.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