Equilibrium

The Interaction of Supply and Demand

- **The English historian Thomas Carlyle once said:**
  “Teach any parrot the words *supply* and *demand* and you’ve got an economist.”

Equilibrium

- Equilibrium is a concept in which opposing dynamic forces cancel each other out.

Equilibrium

- In a free market, the forces of supply and demand interact to determine equilibrium quantity and equilibrium price.

Equilibrium

- *Equilibrium price* **– the price toward which the invisible hand drives the market.**

- *Equilibrium quantity* **– the amount bought and sold at the equilibrium price.**

What Equilibrium Isn't

- Equilibrium isn't a state of the world, it is a characteristic of a model.
- Equilibrium isn't inherently good or bad, it is simply a state in which dynamic pressures offset each other.

What Equilibrium Isn't

- **When the market is not in equilibrium, you get either excess supply or excess demand, and a tendency for price to change.**

Excess Supply

- *Excess supply* – **a surplus, the quantity supplied is greater than quantity demanded**
- **Prices tend to fall.**

Excess Demand

- *Excess demand* **– a shortage, the quantity demanded is greater than quantity supplied**
- **Prices tend to rise.**

Price Adjusts

- **The greater the difference between quantity supplied and quantity demanded, the more pressure there is for prices to rise or fall.**

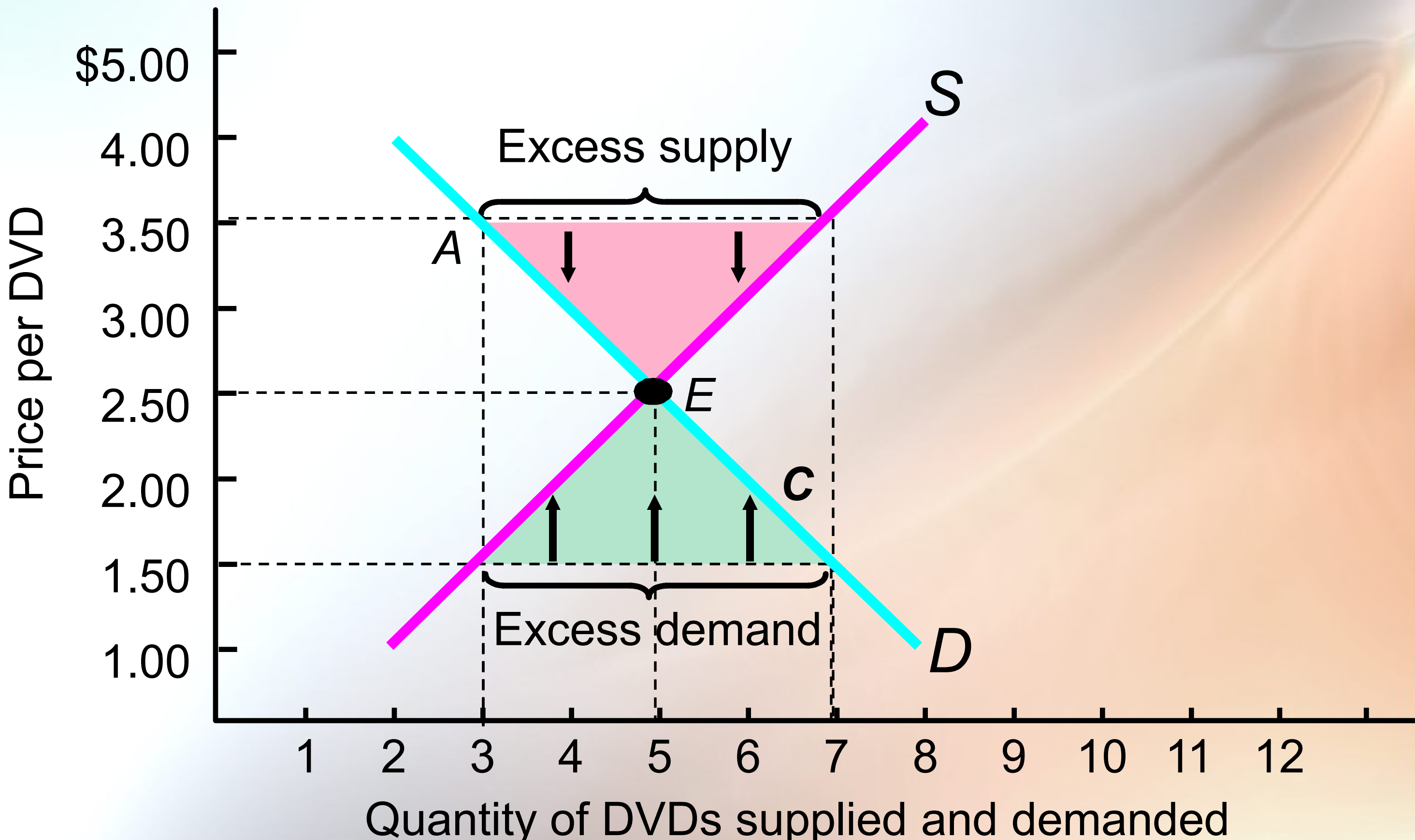
Price Adjusts

- When quantity demanded equals quantity supplied, prices have no tendency to change.

The Graphical Interaction of Supply and Demand

Price (per DVD)	Quantity Supplied	Quantity Demanded	Surplus (+) Shortage (-)
$3.50	7	3	+4
$2.50	5	5	0
$1.50	3	7	-4

The Graphical Interaction of Supply and Demand



The Graphical Interaction of Supply and Demand

- When price is $3.50 each, quantity supplied equals 7 and quantity demanded equals 3.

- The excess supply of 4 pushes price down.

The Graphical Interaction of Supply and Demand

- When price is $1.50 each, quantity supplied equals 3 and quantity demanded equals 7.

- The excess demand of 4 pushes price up.

The Graphical Interaction of Supply and Demand

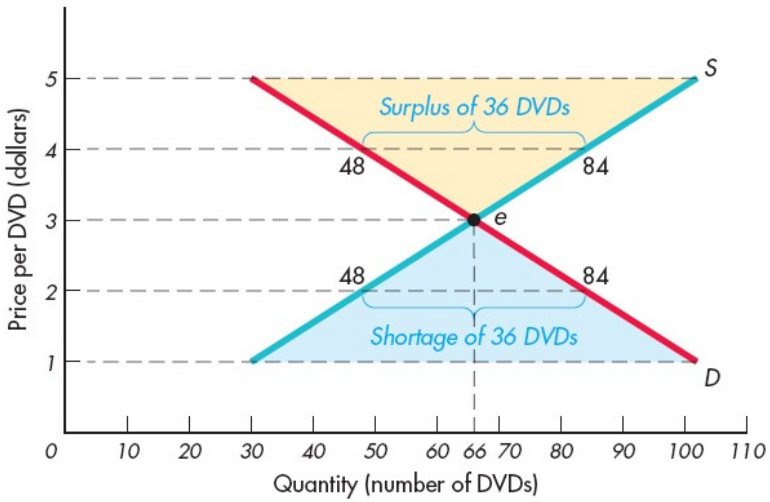
- When price is $2.50 each, quantity supplied equals 5 and quantity demanded equals 5.

- There is no excess supply or excess demand, so price will not rise or fall.

Equilibrium (Graph)

FIGURE 10 Equilibrium

Price per DVD	Quantity Demanded per Week	Quantity Supplied per Week	Status
$5	30	102	Surplus of 72
$4	48	84	Surplus of 36
$3	66	66	Equilibrium
$2	84	48	Shortage of 36
$1	102	30	Shortage of 72



Equilibrium is established at the point where the quantity that suppliers are willing and able to offer for sale is the same as the quantity that buyers are willing and able to purchase. Here, equilibrium occurs at the price of $3 per DVD and the quantity of 66 DVDs. It is shown as point *e*, at the intersection of the demand and supply curves. At prices above $3, the quantity supplied is greater than the quantity demanded, and the result is a surplus. At prices below $3, the quantity supplied is less than the quantity demanded, and the result is a shortage. The area shaded tan shows all prices at which there is a surplus—where quantity supplied is greater than the quantity demanded. The surplus is measured in a horizontal direction at each price. The area shaded blue represents all prices at which a shortage exists—where the quantity demanded is greater than the quantity supplied. The shortage is measured in a horizontal direction at each price.

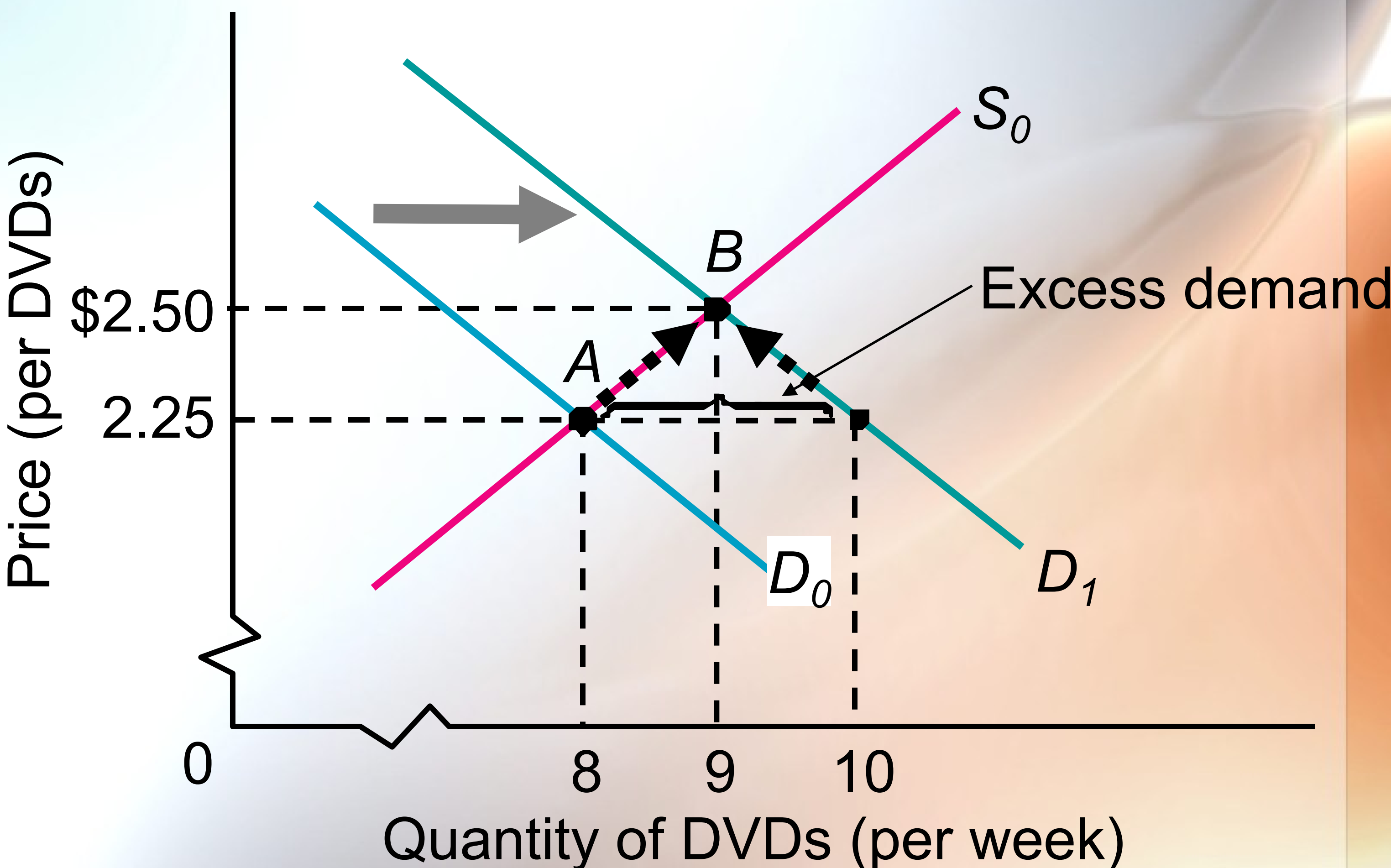
Shifts in Supply and Demand

- Shifts in either supply or demand change equilibrium price and quantity.

Increase in Demand

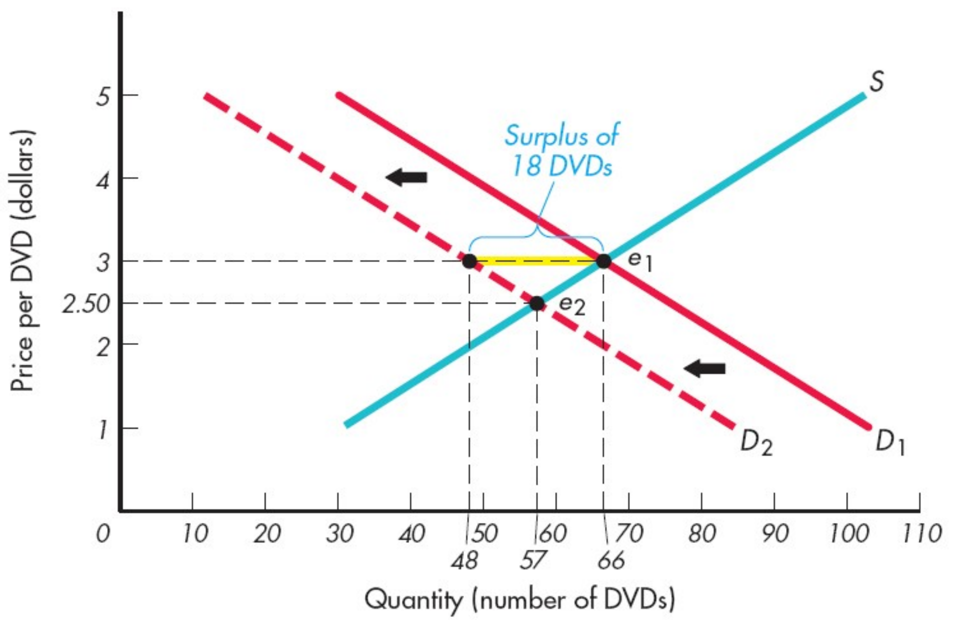
- An increase in demand creates excess demand at the original equilibrium price.
- The excess demand pushes price upward until a new higher price and quantity are reached.

Increase in Demand



The Effects of a Shift of the Demand Curve

FIGURE 11 The Effects of a Shift of the Demand Curve

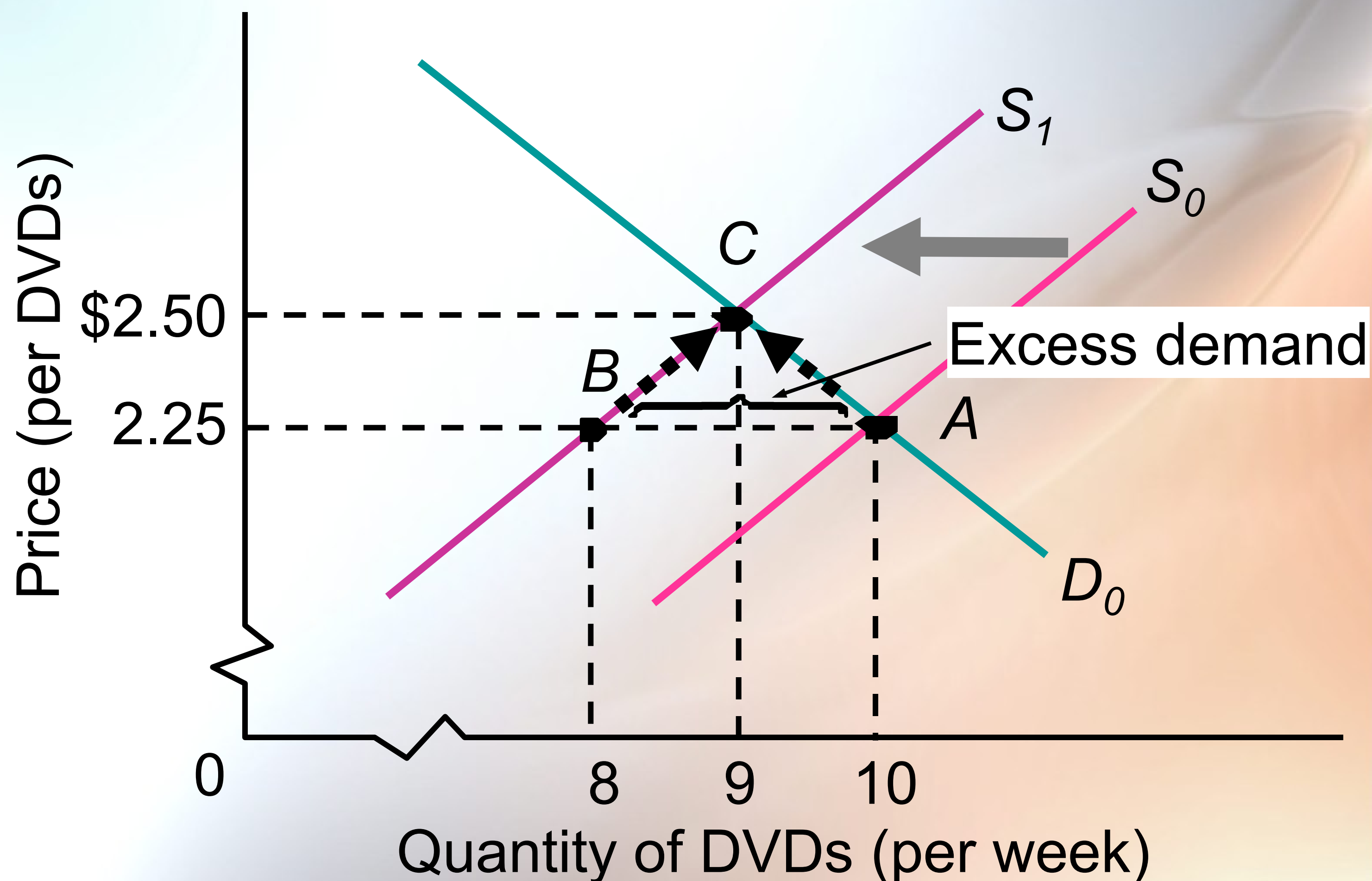


The initial equilibrium price ($3 per DVD) and quantity (66 DVDs) are established at point e_1, where the initial demand and supply curves intersect. A change in the tastes for DVDs causes demand to decrease, and the demand curve shifts to the left. At $3 per DVD, the initial quantity supplied, 66 DVDs, is now greater than the quantity demanded, 48 DVDs. The surplus of 18 units causes producers to reduce production and lower the price. The market reaches a new equilibrium, at point e_2, $2.50 per DVD and 57 DVDs.

Decrease in Supply

- **A decrease in supply creates excess demand at the original equilibrium price.**
- **The excess demand pushes price upward until a new higher price and lower quantity are reached.**

Decrease in Supply



The Limitations Of Supply And Demand Analysis

- Sometimes supply and demand are interconnected.
- Other things don't remain constant.

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The Limitations Of Supply And Demand Analysis

- All actions have a multitude of ripple and possible feedback effects.

  - The ripple effect is smaller when the goods are a small percentage of the entire economy.

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The Limitations Of Supply And Demand Analysis

- The other-things-constant assumption is likely not to hold when the goods represent a large percentage of the entire economy.

A Price Floor