Demand and Supply

Relative and nominal prices

- Relative price = price of a good in terms of another good
- Nominal price = price expressed in terms of the monetary unit
- Relative price is a more direct measure of opportunity cost

Markets

- In a market economy, the price of a good is determined by the interaction of demand and supply

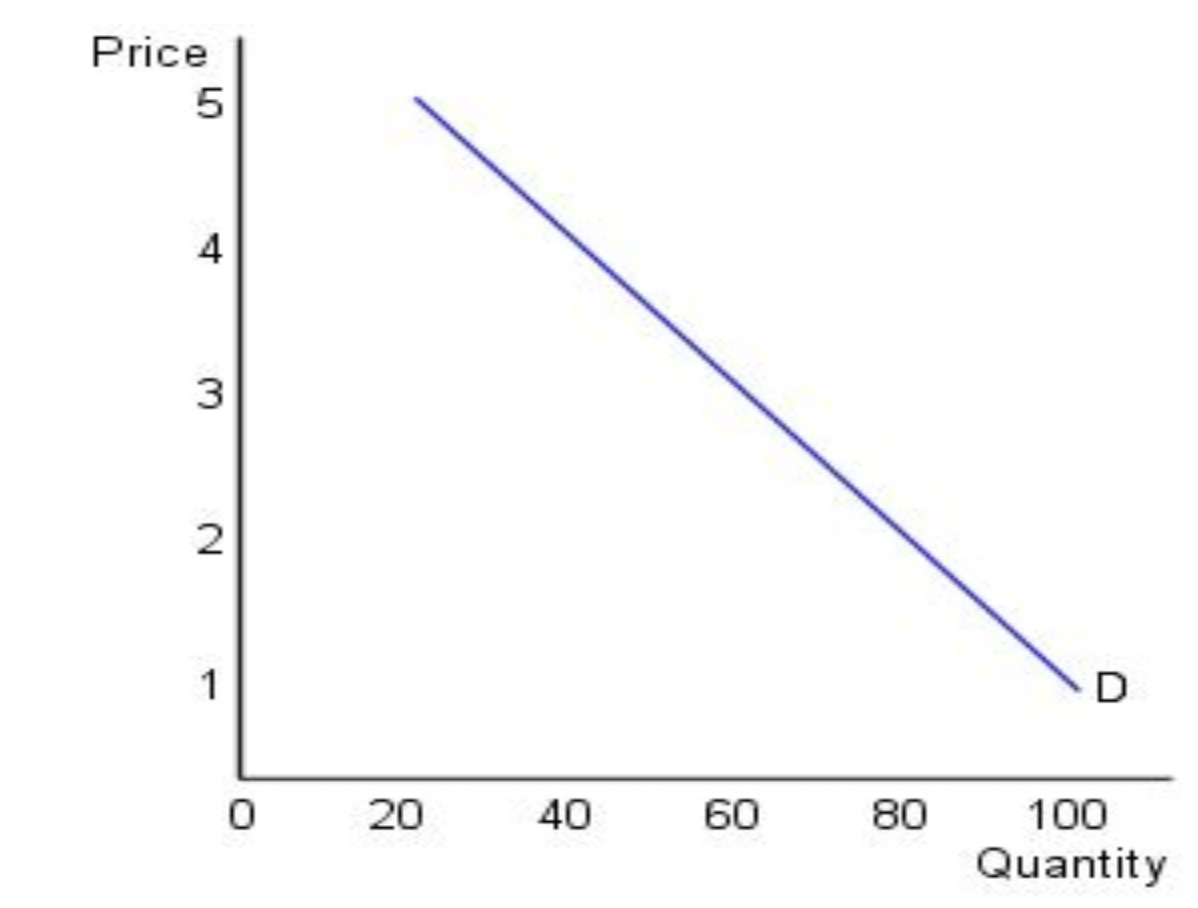
Demand

- A relationship between price and quantity demanded in a given time period, *ceteris paribus*.

Demand schedule

Price	Quantity Demanded
1	100
2	80
3	60
4	40
5	20

Demand curve

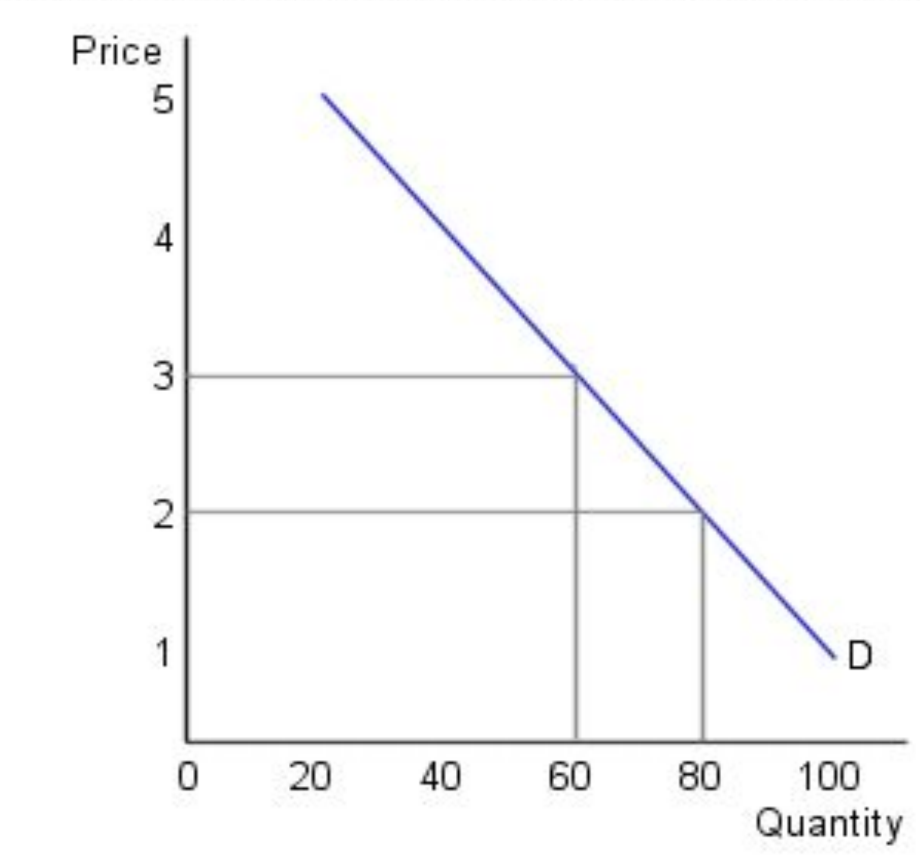


Law of demand

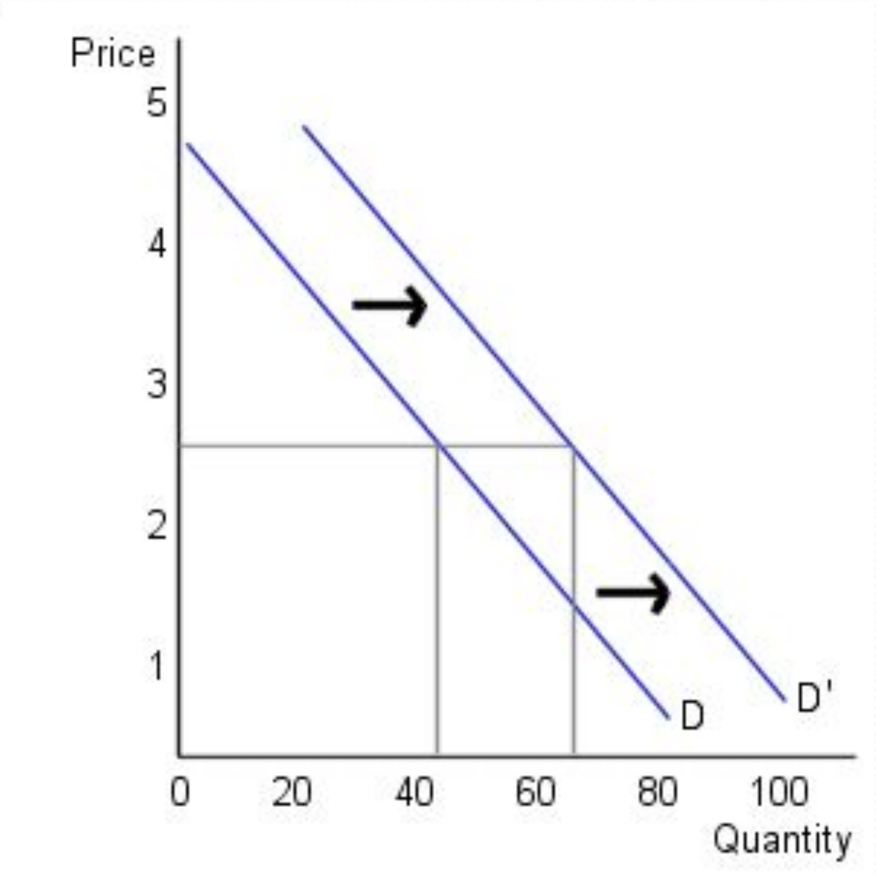
- An inverse relationship exists between the price of a good and the quantity demanded in a given time period, *ceteris paribus*.
- Reasons:
  - substitution effect
  - income effect

Change in quantity demanded vs. change in demand

Change in quantity demanded



Change in demand



Market demand curve

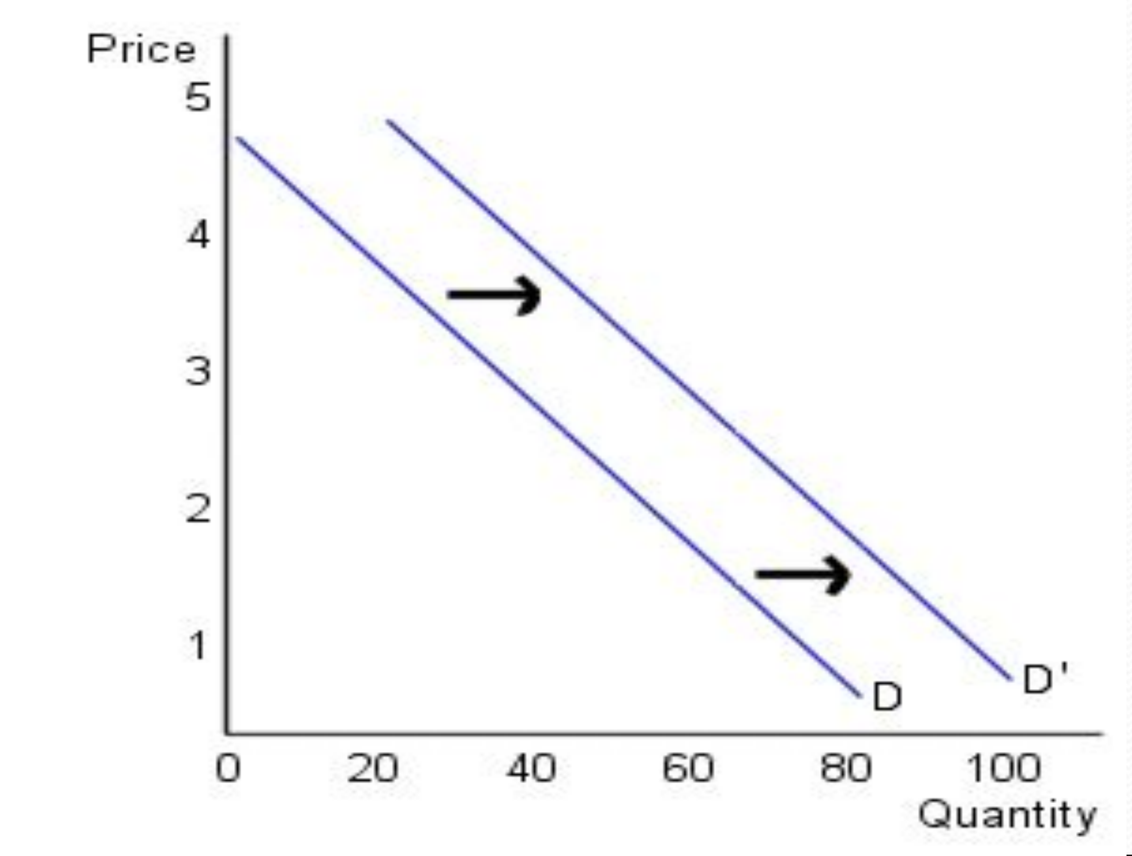
- Market demand is the horizontal summation of individual consumer demand curves

Determinants of demand

- tastes and preferences
- prices of related goods and services
- income
- number of consumers
- expectations of future prices and income

Tastes and preferences

- Effect of fads:

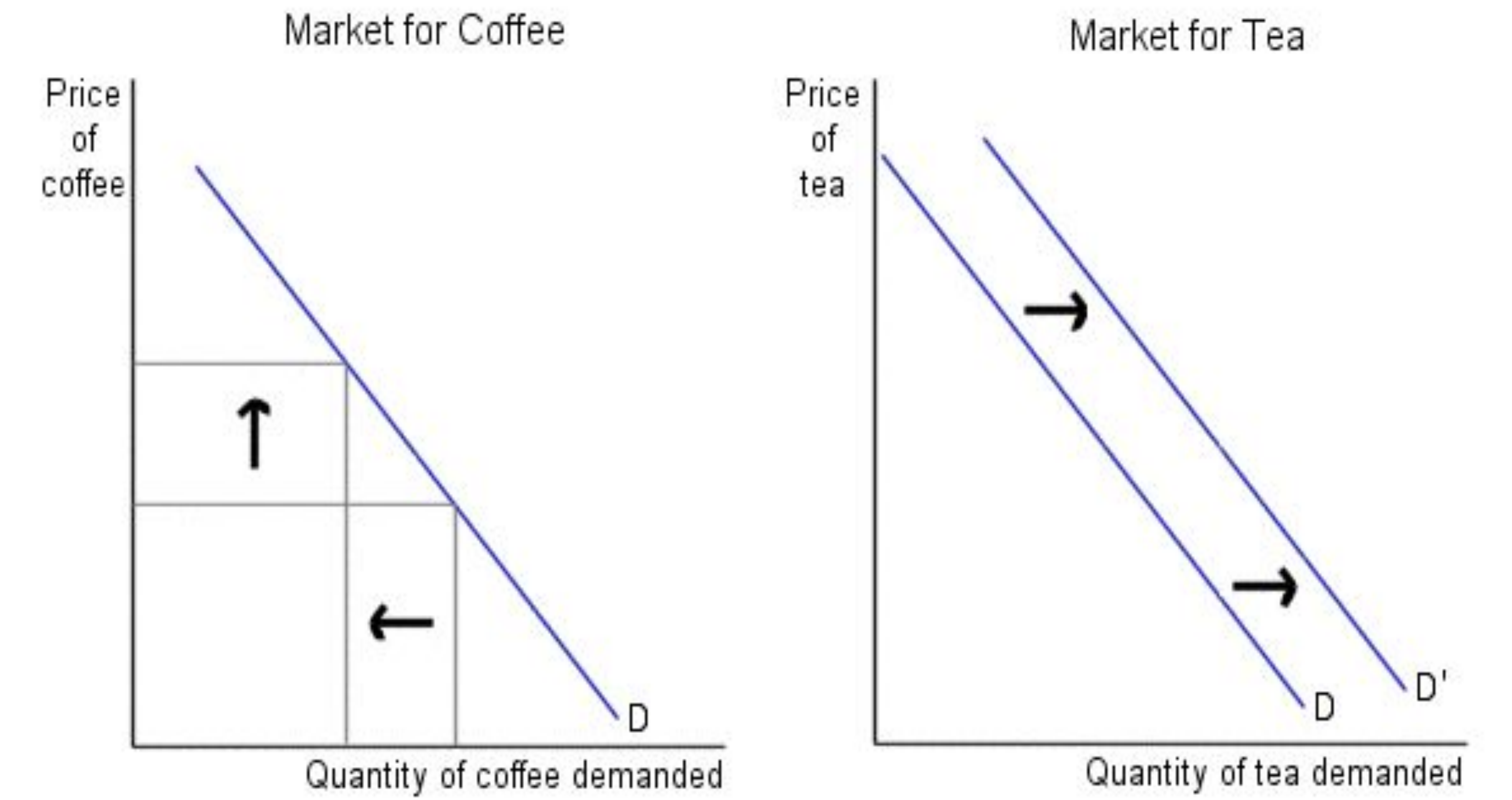


Prices of related goods

- substitute goods – an increase in the price of one results in an increase in the demand for the other.
- complementary goods – an increase in the price of one results in a decrease in the demand for the other.

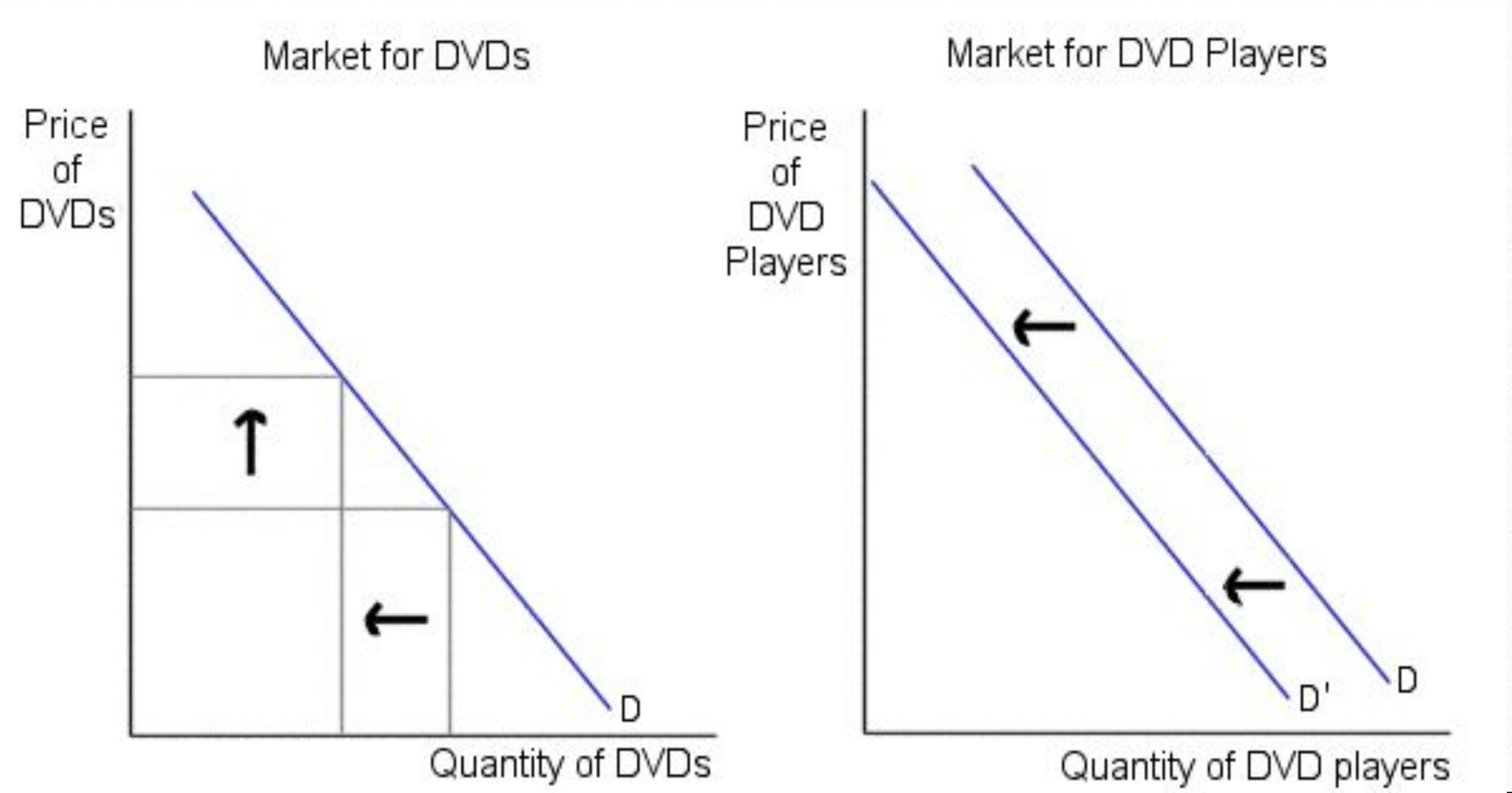
Change in the price of a substitute good

- Price of coffee rises:



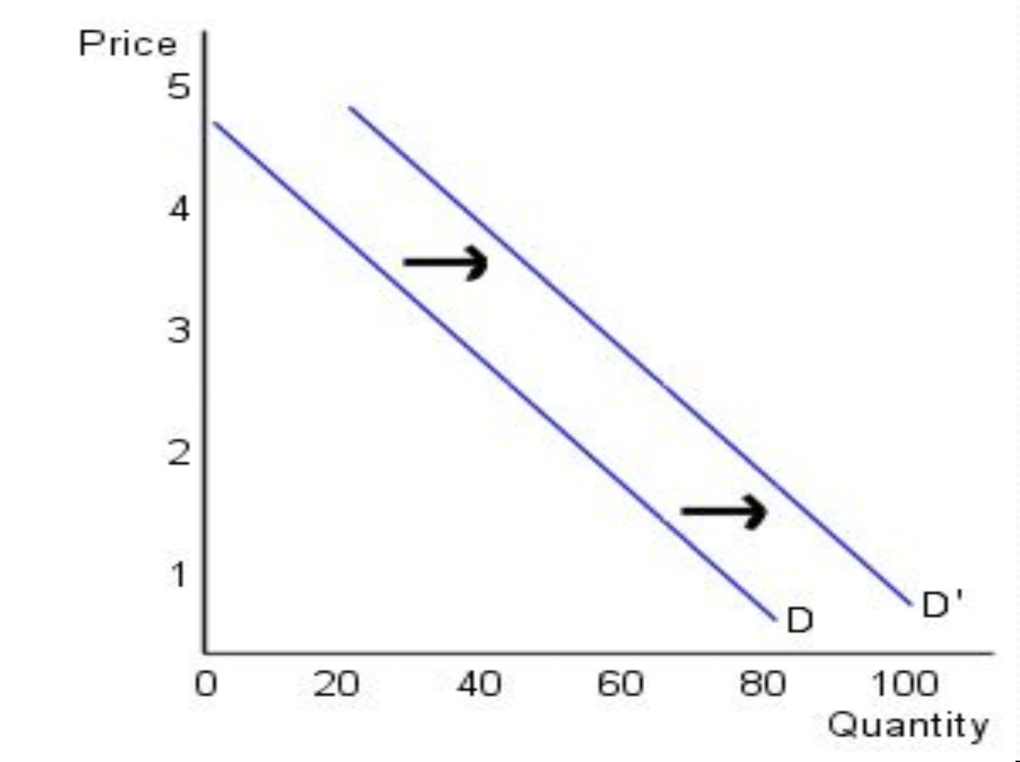
Change in the price of a complementary good

- Price of DVDs rises:



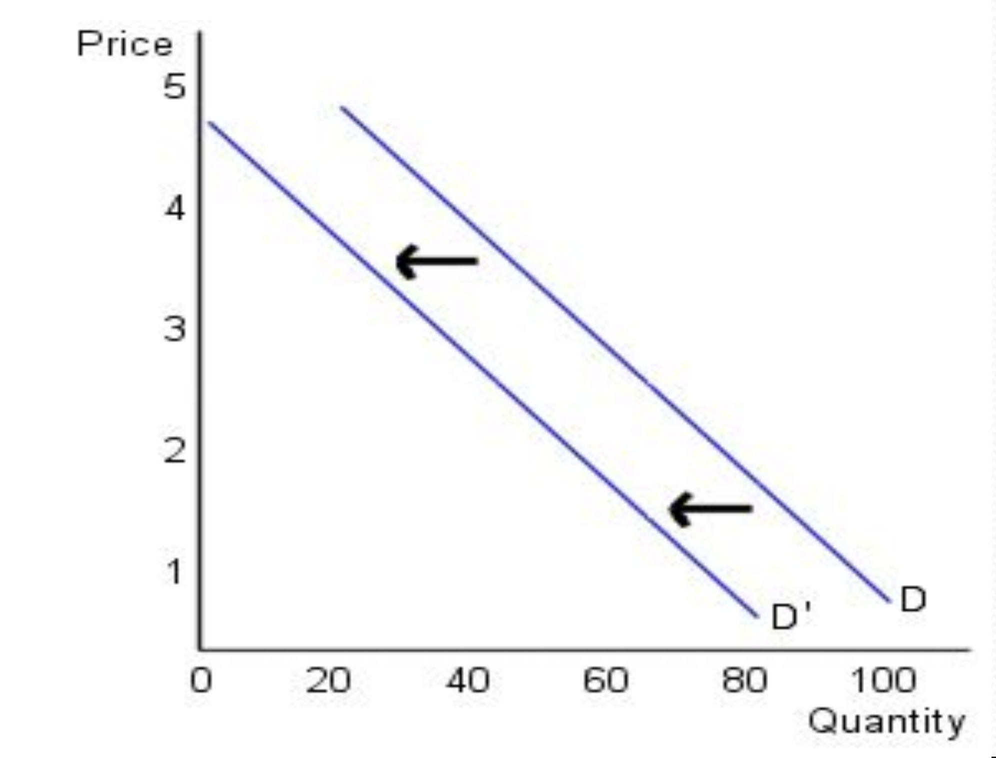
Income and demand: normal goods

- A good is a **normal good** if an increase in income results in an increase in the demand for the good.



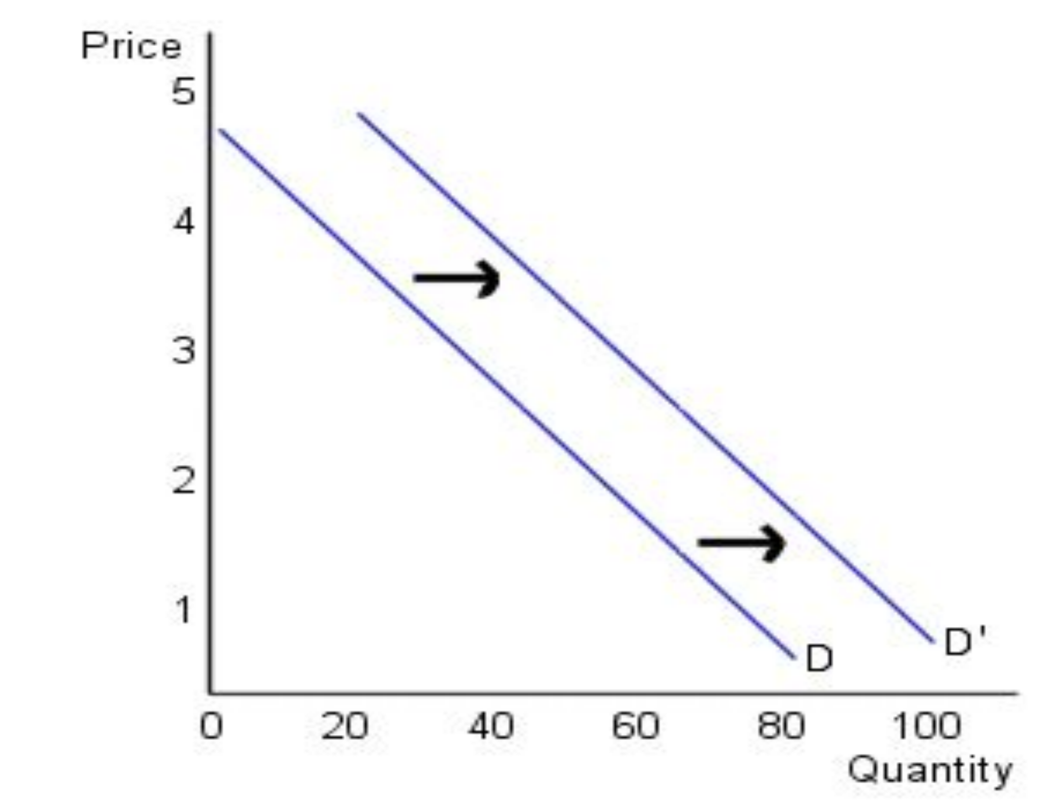
Income and demand: inferior goods

- A good is an **inferior good** if an increase in income results in a reduction in the demand for the good.



Demand and the # of buyers

- An increase in the number of buyers results in an increase in demand.



Expectations

- A higher expected future price will increase current demand.
- A lower expected future price will decrease current demand.
- A higher expected future income will increase the demand for all normal goods.
- A lower expected future income will reduce the demand for all normal goods.

International effects

- exchange rate – the rate at which one currency is exchanged for another.
- currency appreciation – an increase in the value of a currency relative to other currencies.
- currency depreciation – a decrease in the value of a currency relative to other currencies.

International effects (continued)

- Domestic currency appreciation causes domestically produced goods and services to become more expensive in foreign countries.
- An increase in the exchange value of the U.S. dollar results in a reduction in the demand for U.S. goods and services.
- The demand for U.S. goods and services will rise if the U.S. dollar depreciates.

Supply

- the relationship that exists between the price of a good and the quantity supplied in a given time period, *ceteris paribus*.

Supply schedule

Price	Quantity Supplied
1	16
2	39
3	62
4	85

Law of supply

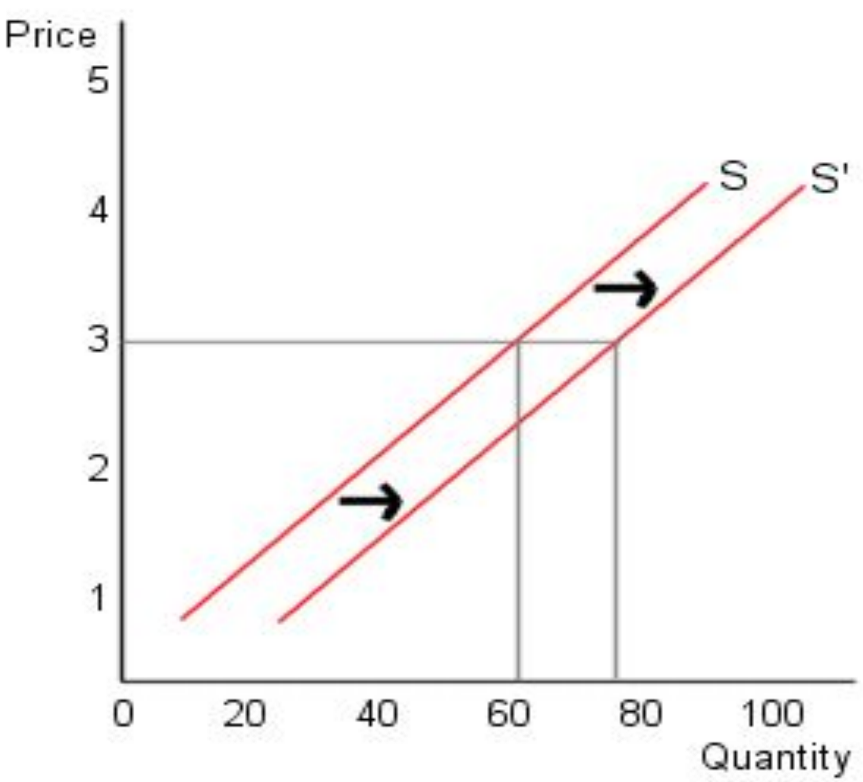
- A direct relationship exists between the price of a good and the quantity supplied in a given time period, *ceteris paribus*.

Reason for law of supply

- The **law of supply** is the result of the **law of increasing cost**.
  - As the quantity of a good produced rises, the marginal opportunity cost rises.
  - Sellers will only produce and sell an additional unit of a good if the price rises above the marginal opportunity cost of producing the additional unit.

Change in supply vs. change in quantity supplied

Change in supply



Change in quantity supplied

Individual firm and market supply curves

- The market supply curve is the horizontal summation of the supply curves of individual firms. (This is equivalent to the relationship between individual and market demand curves.)

Determinants of supply

- the price of resources,
- technology and productivity,
- the expectations of producers,
- the number of producers, and
- the prices of related goods and services
    - note that this involves a relationship in production, not in consumption

Price of resources

- As the price of a resource rises, profitability declines, leading to a reduction in the quantity supplied at any price.

Technological improvements

- Technological improvements (and any changes that raise the productivity of labor) lower production costs and increase profitability.

Expectations and supply

- An increase in the expected future price of a good or service results in a reduction in current supply.

Increase in # of sellers

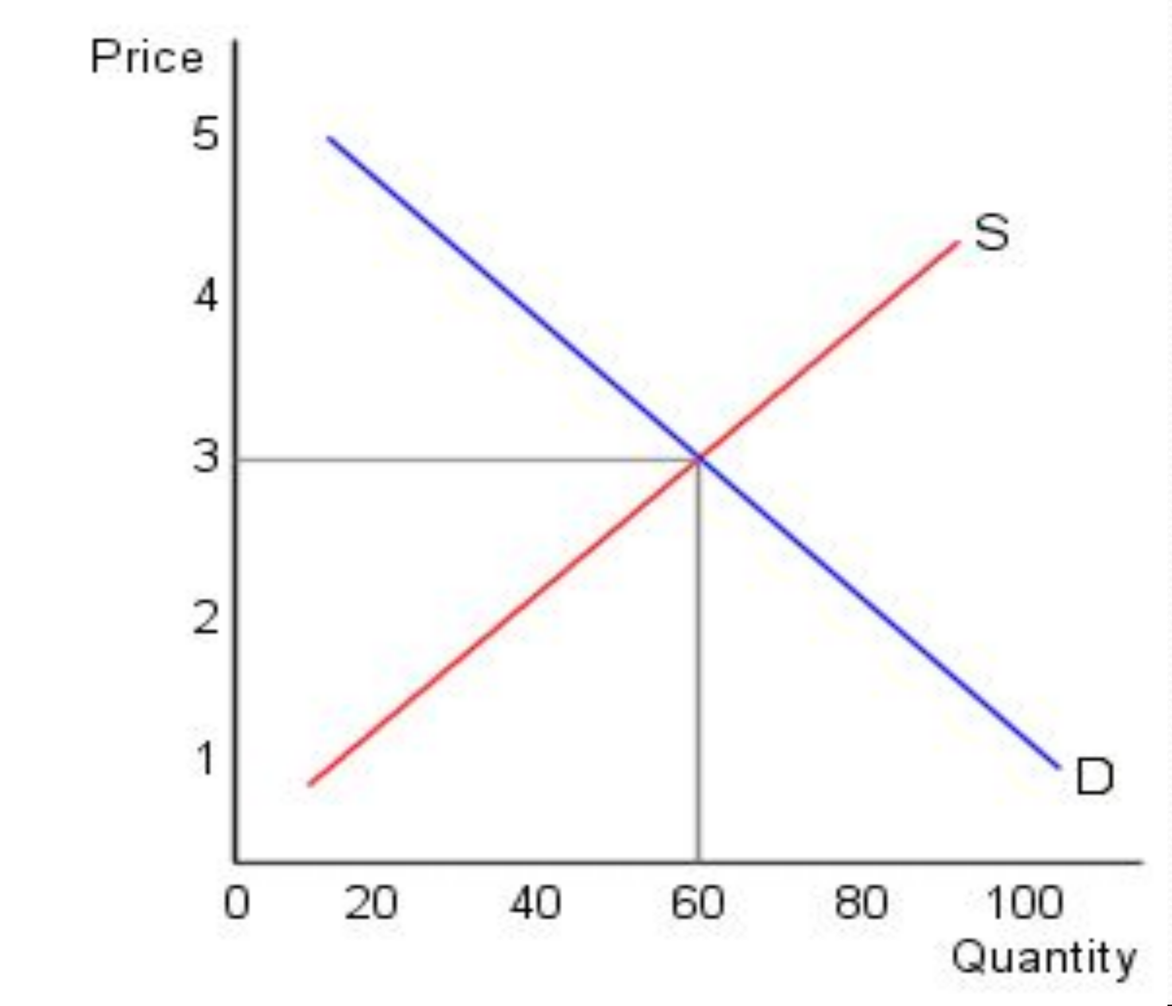
Prices of other goods

- Firms produce and sell more than one commodity.
- Firms respond to the relative profitability of the different items that they sell.
- The supply decision for a particular good is affected not only by the good's own price but also by the prices of other goods and services the firm may produce.

International effects

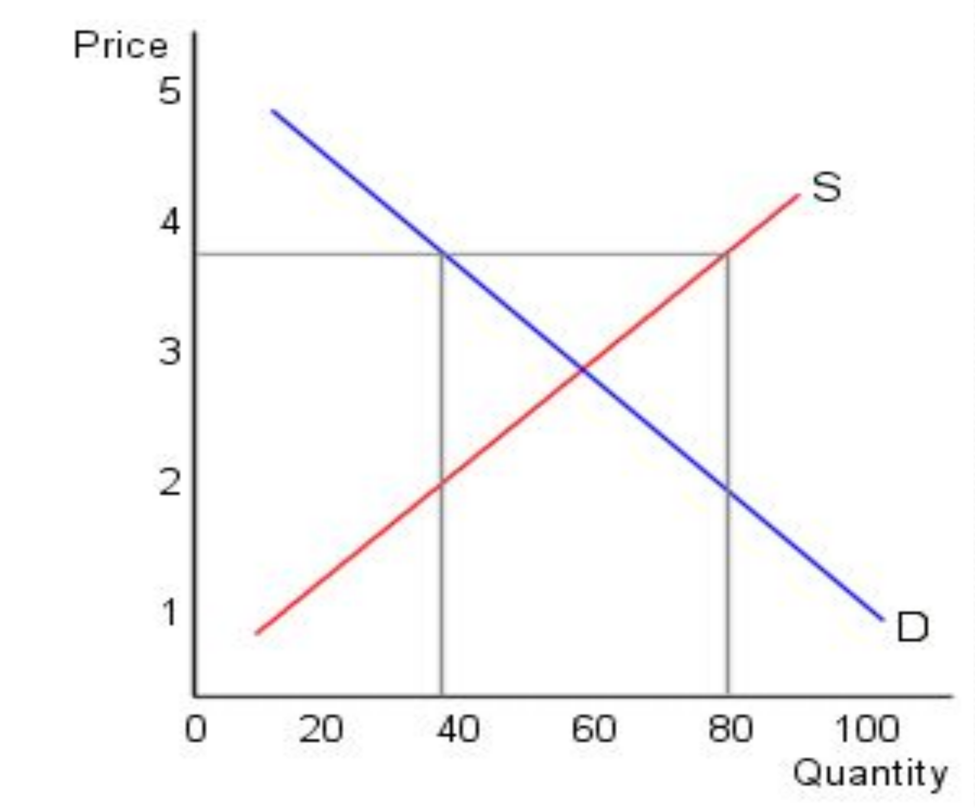
- Firms import raw materials (and often the final product) from foreign countries. The cost of these imports varies with the exchange rate.
- When the exchange value of a dollar rises, the domestic price of imported inputs will fall and the domestic supply of the final commodity will increase.
- A decline in the exchange value of the dollar raises the price of imported inputs and reduce the supply of domestic products that rely on these inputs.

Market equilibrium



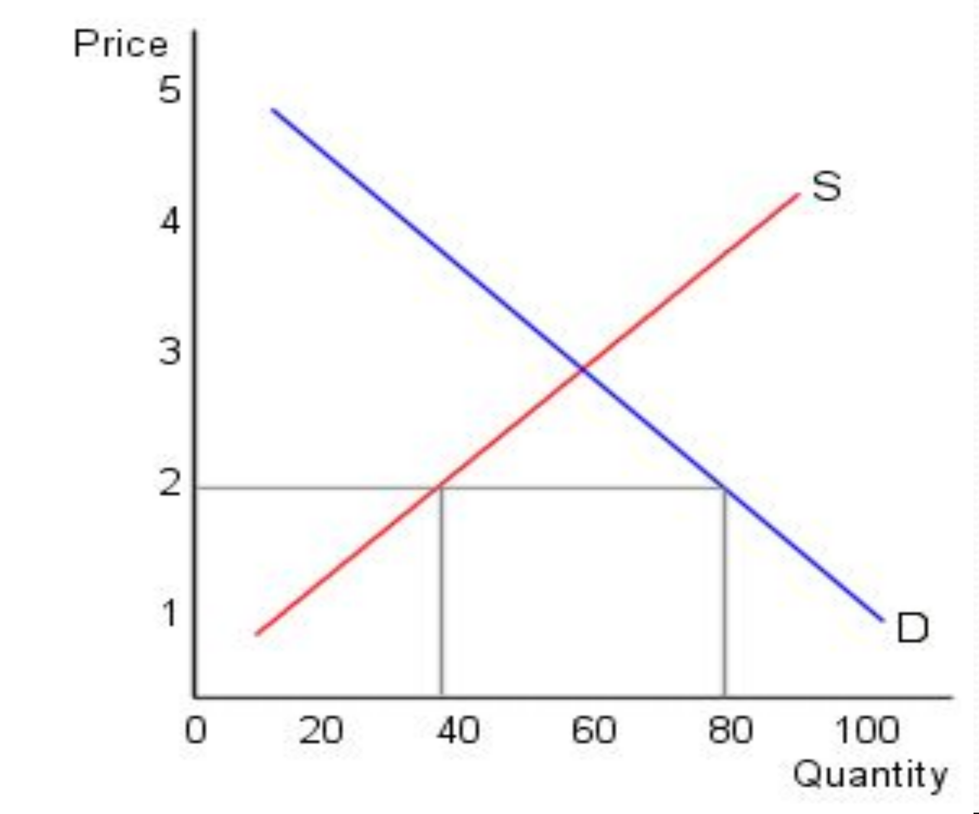
Price above equilibrium

- If the price exceeds the equilibrium price, a surplus occurs:

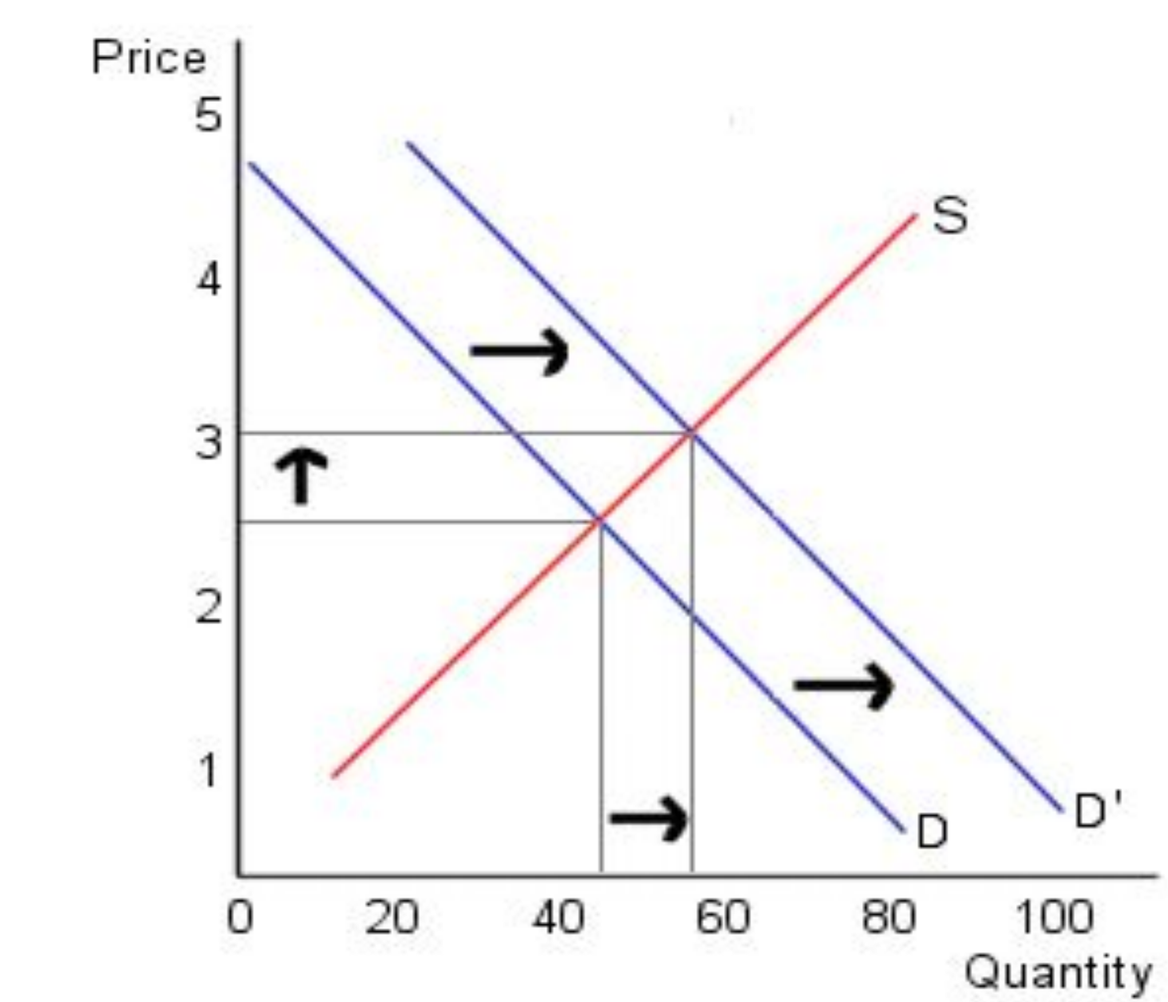


Price below equilibrium

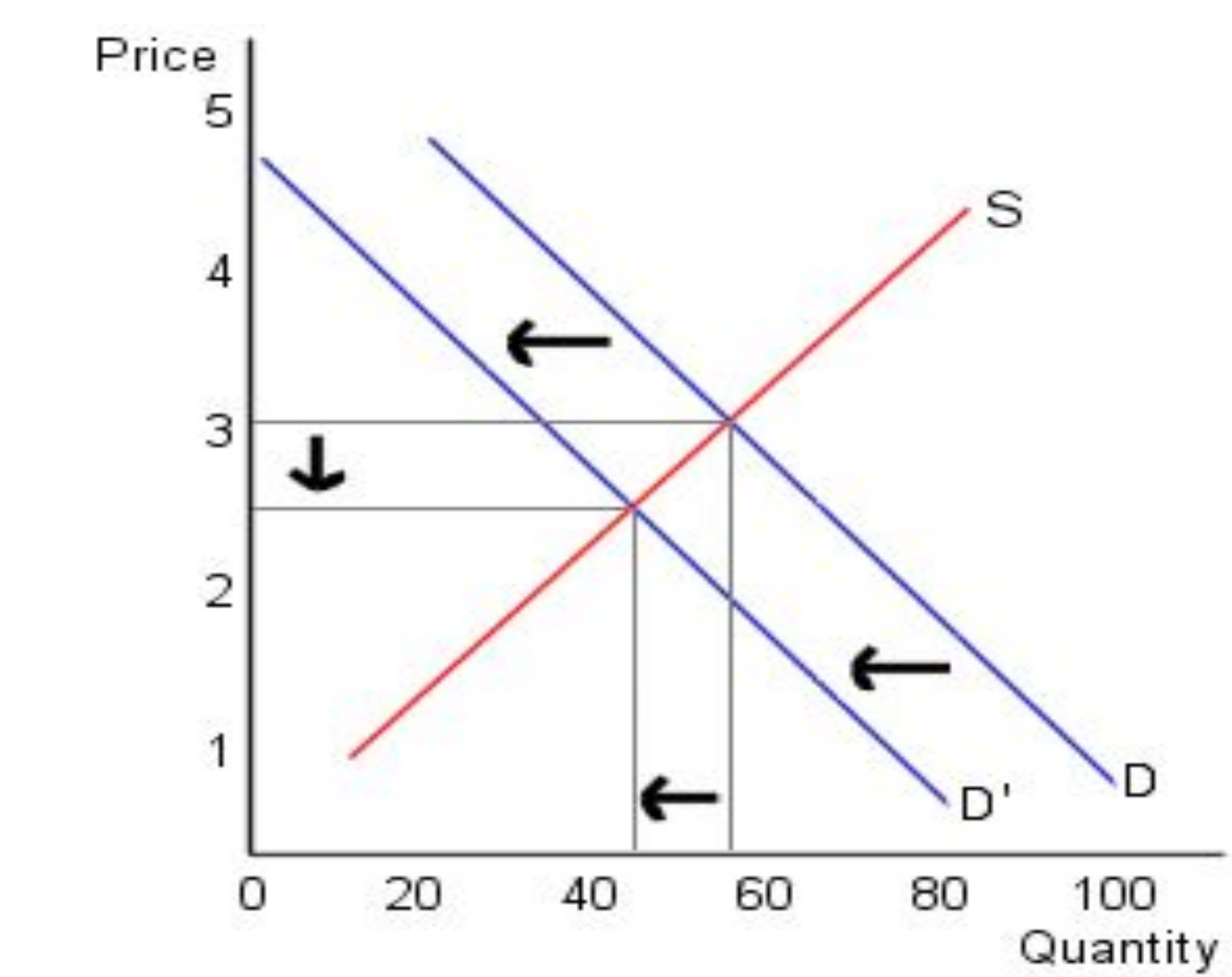
- If the price is below the equilibrium a shortage occurs:



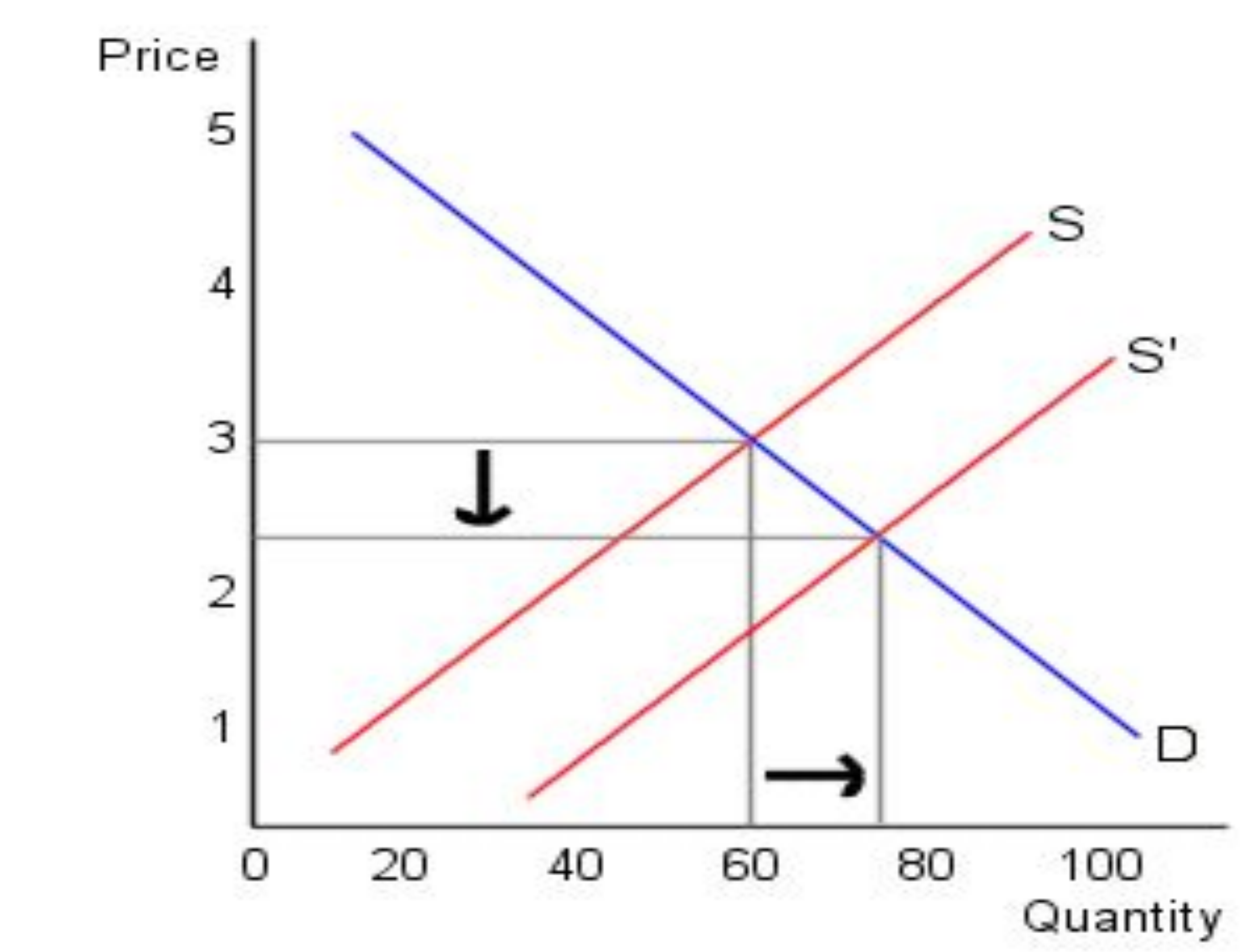
Demand rises



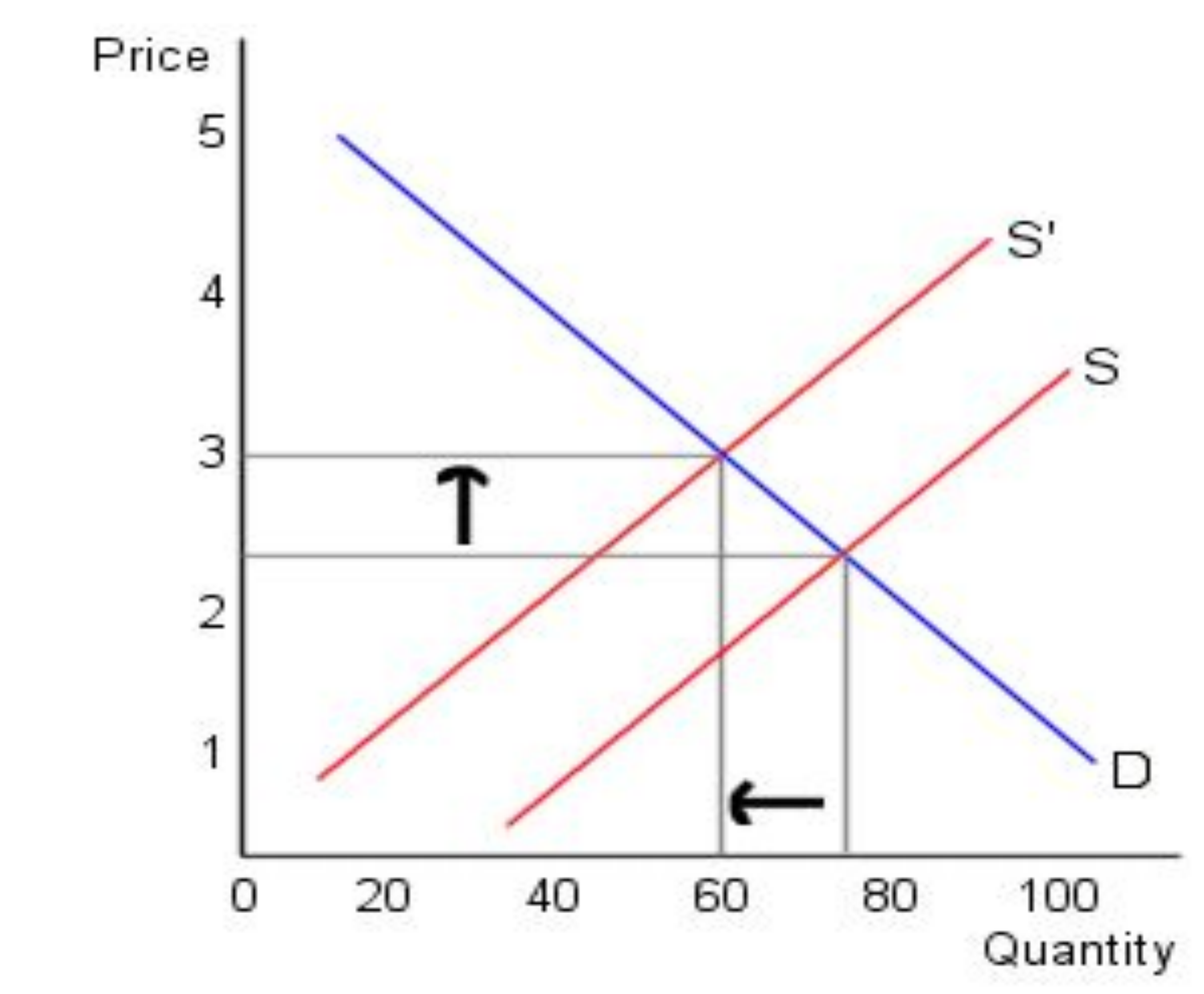
Demand falls



Supply rises



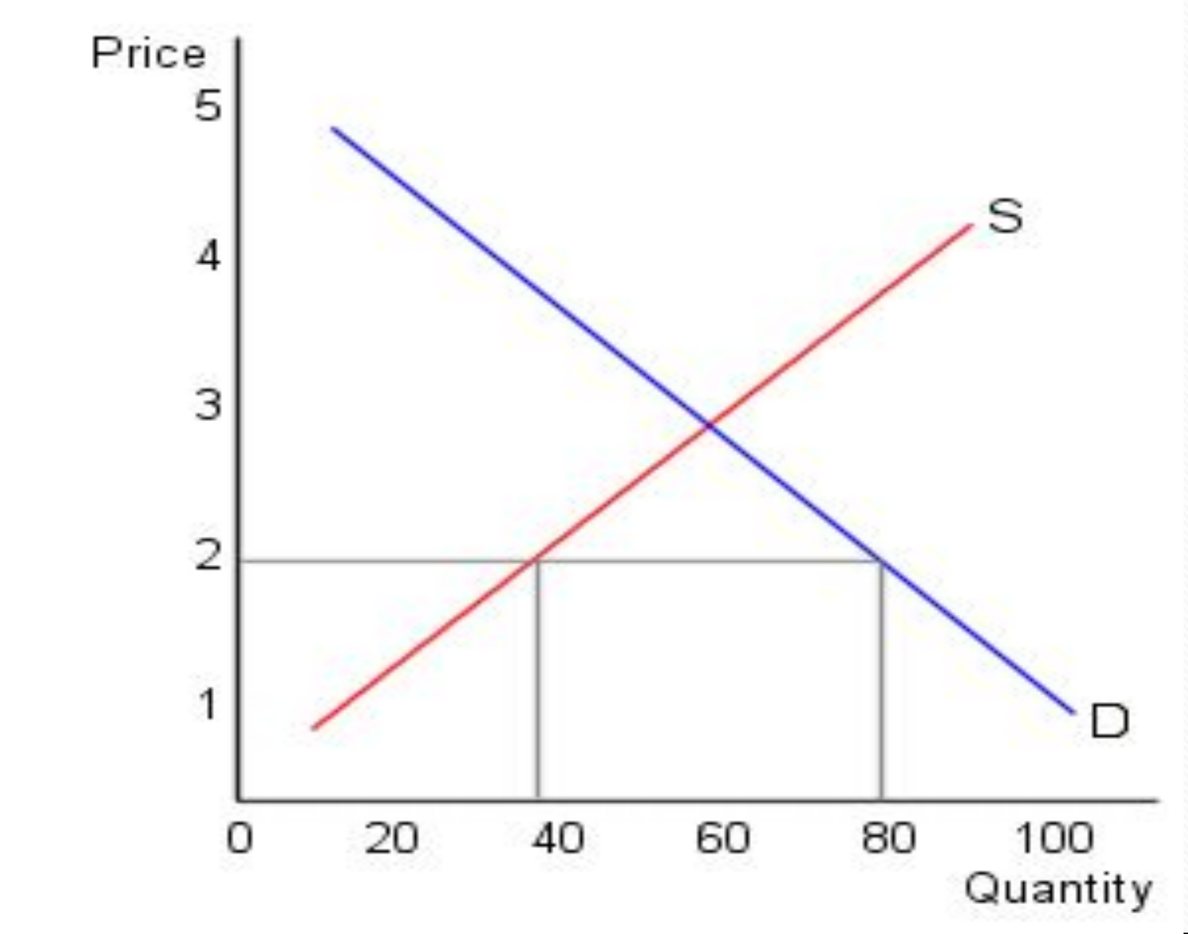
Supply falls



Price ceiling

- Price ceiling - legally mandated maximum price
- Purpose: keep price below the market equilibrium price
- Examples:
  - rent controls
  - price controls during wartime
  - gas price rationing

Price ceiling (continued)



Price floor

- price floor - legally mandated minimum price
- designed to maintain a price above the equilibrium level
- examples:
  - agricultural price supports
  - minimum wage laws

Price floor (continued)