Supply Analysis

Supply

- Supply represents the number of units of a product that a firm would be willing and able to offer for sale at a particular price during a given time period.

Supply Analysis

- **Supply** is the *relationship* between the price of a good and the quantity supplied, holding other factors constant. This relationship can be represented in a supply schedule or a supply curve.

Determinants of Supply

- The ***price*** of the good or service.
- The ***cost*** of producing the good, which in turn depends on:
  - The ***price of required inputs*** (labor, capital, and land),
  - The ***technologies*** that can be used to produce the product,
- The ***prices of related products.***

Factors That Shift the Supply Curve:

- **Short-run:**
  - **Storage costs.**
  - **Change in financial conditions.**
  - **Expectations about future prices.**

Factors That Shift the Supply Curve:

- **Long-run:**
  - **Costs of production.**
  - **Relative prices.**
  - **Technology.**

Supply in Output Markets

CLARENCE BROWN'S SUPPLY SCHEDULE FOR SOYBEANS	
PRICE (PER BUSHEL)	QUANTITY SUPPLIED (THOUSANDS OF BUSHELS PER YEAR)
$ 2	0
1.75	10
2.25	20
3.00	30
4.00	45
5.00	45

- A ***supply schedule*** is a table showing how much of a product firms will supply at different prices.
- ***Quantity supplied*** represents the number of units of a product that a firm would be willing and able to offer for sale at a particular price during a given time period.

The Supply Curve and the Supply Schedule

- A ***supply curve*** is a graph illustrating how much of a product a firm will supply at different prices.

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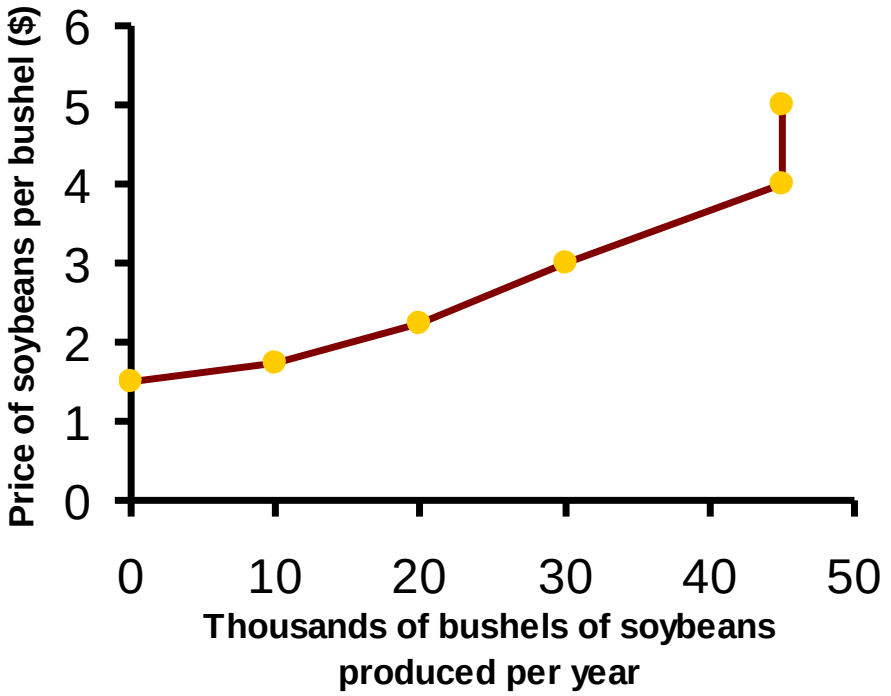


SUPPLY FUNCTION

Supply function refers to the mathematical expression of the quantity supplied and the factors that determine the supply.

$$S_x = f(P_x P_1 \ldots P_n C, T, G, O)$$

Where S_x refers to the quantity supplied of good X

P_x refers to the price of good X

$P_1 \ldots P_n$ refers to the price of related goods

C refers to the cost of production

T refers to the state of technology.

G refers to the goal of the firm

O refers to other factors.

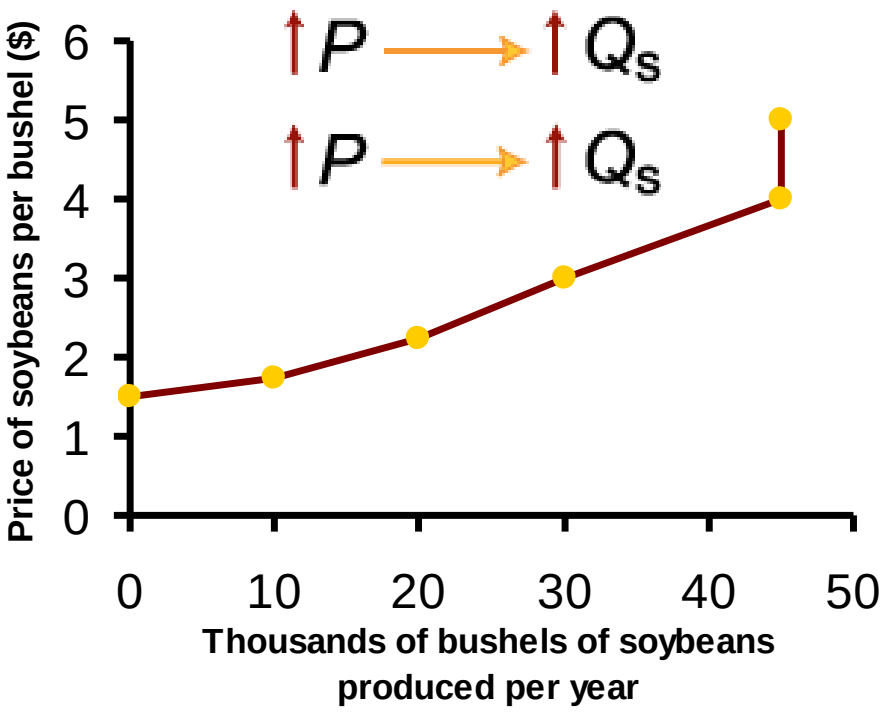
Law of Supply

- There is a direct or positive relationship between a good's price and the quantity supplied, other things equal.
- The law of supply is reflected in supply curves being upward sloping.
- An implication is that the quantity supplied will be larger the higher is the good's price, ceteris paribus.

The Law of Supply

- According to the law of supply, the higher the price, the larger the quantity produced.

The Law of Supply



- The ***law of supply*** states that there is a positive relationship between price and quantity of a good supplied.
- This means that supply curves typically have a positive slope.

Assumptions

- Following are assumptions of law of supply which are held constant while describing law of supply.

1. **No Change in cost of Production**
2. **No Change in technology**
3. **No Change in climate**
4. **No Change in Price of Substitutes**
5. **No Change in Natural Resources**

Time Period and Supply

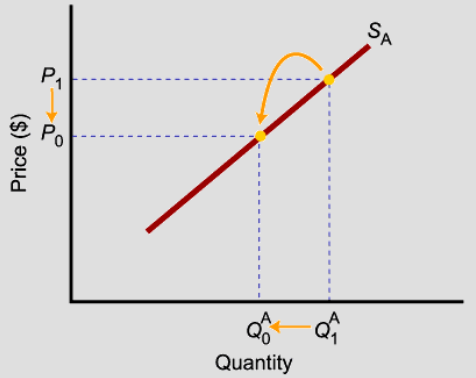
- Market Period: A market period is a very short interval of time. On the other hand, supply cannot change in the blink of an eye. Producers need time to adjust to the changes in the price of a commodity. Observe that such statements are similar to the conditions of a **perfectly inelastic supply**. Thus, in a market period, the supply is **perfectly inelastic**.
- Short Period: A Short period is a small period of time. In such a timeframe, only the variable factors of production can be played with. Hence the change in supply is limited to a small degree of response. Evidently, for a short period, the supply tends to be less elastic.
- Long Period: A long period of time is a time interval sufficiently long, in which all the factors of production can be altered. Thus for a long period, the supply responds in a high manner.

A Change in Supply Versus a Change in Quantity Supplied

To summarize:

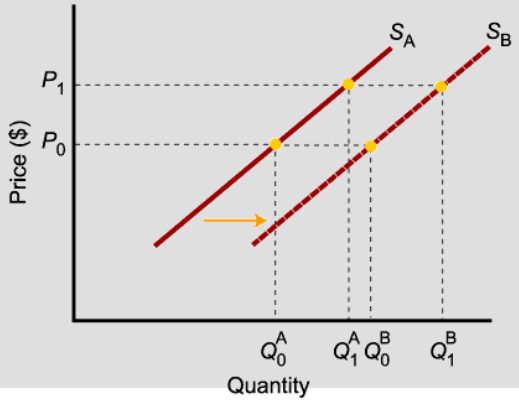
Change in price of a good or service
leads to

Change in *quantity supplied*
(**Movement along the curve**).



Change in costs, input prices, technology, or prices of related goods and services
leads to

Change in supply
(**Shift of curve**).

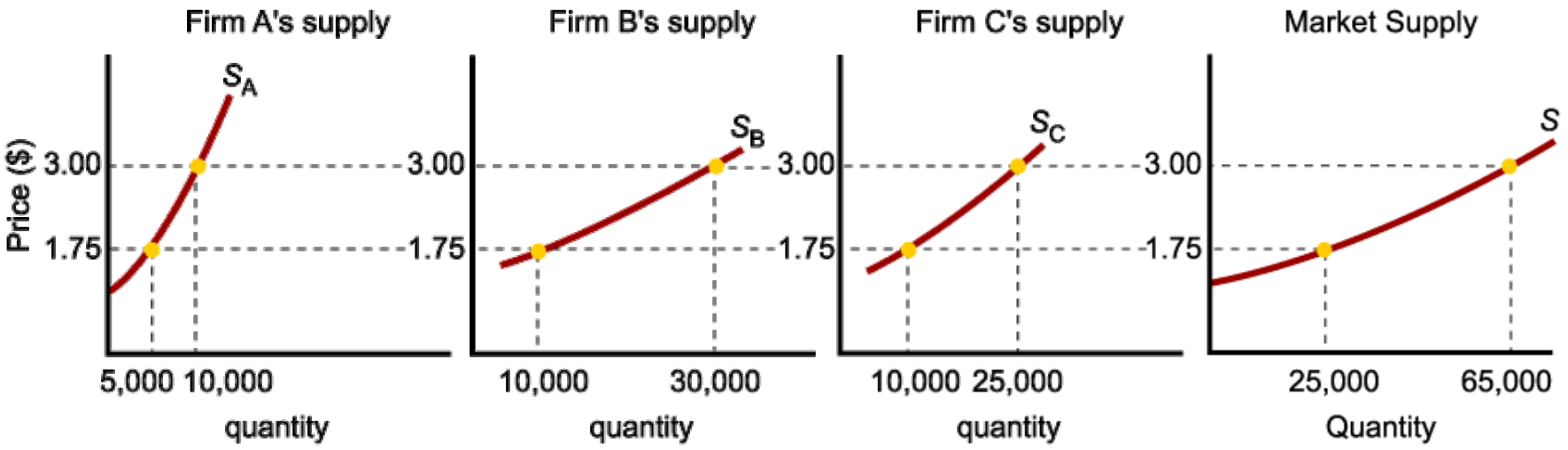


From Individual Supply to Market Supply

- The supply of a good or service can be defined for an individual firm, or for a group of firms that make up a market or an industry.
- ***Market supply*** is the sum of all the quantities of a good or service supplied per period by all the firms selling in the market for that good or service.

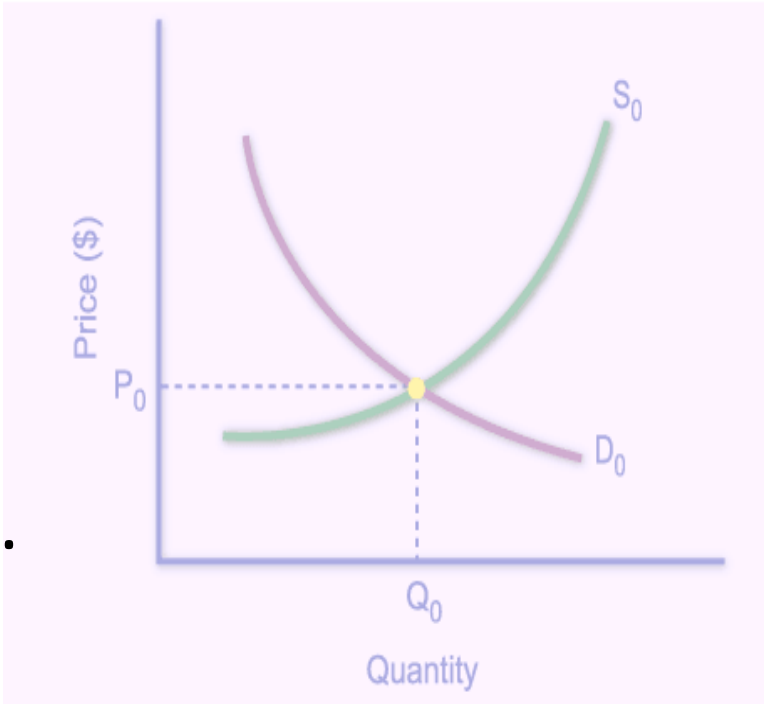
Market Supply

- As with market demand, ***market supply*** is the horizontal summation of individual firms' supply curves.

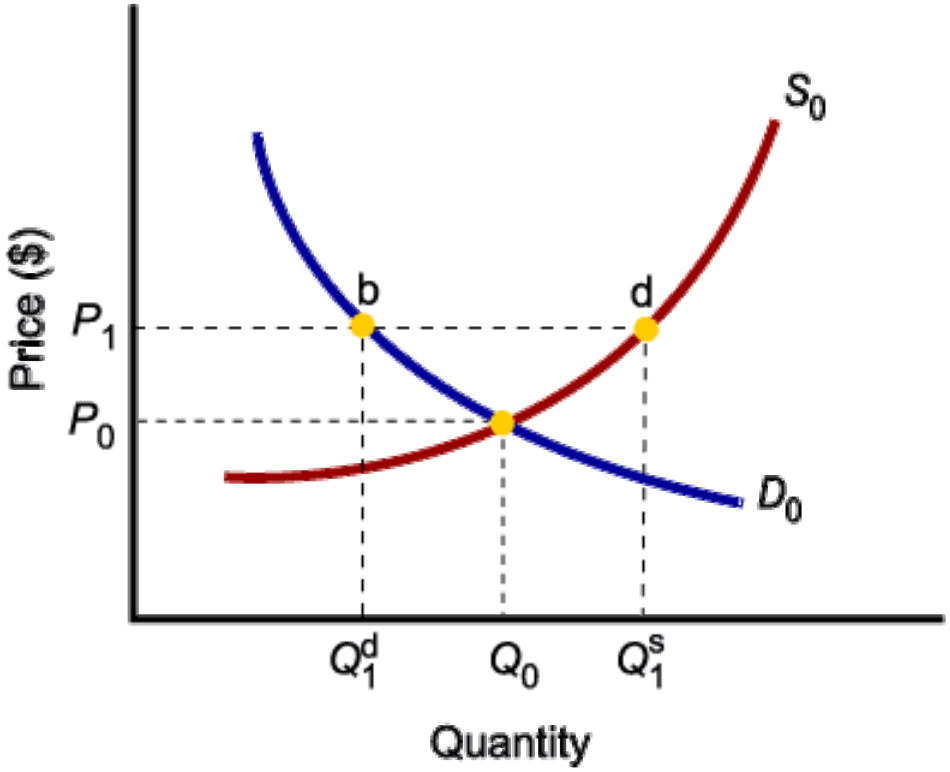


Market Equilibrium

- The operation of the market depends on the interaction between buyers and sellers.
- An ***equilibrium*** is the condition that exists when quantity supplied and quantity demanded are equal.
- At equilibrium, there is no tendency for the market price to change.

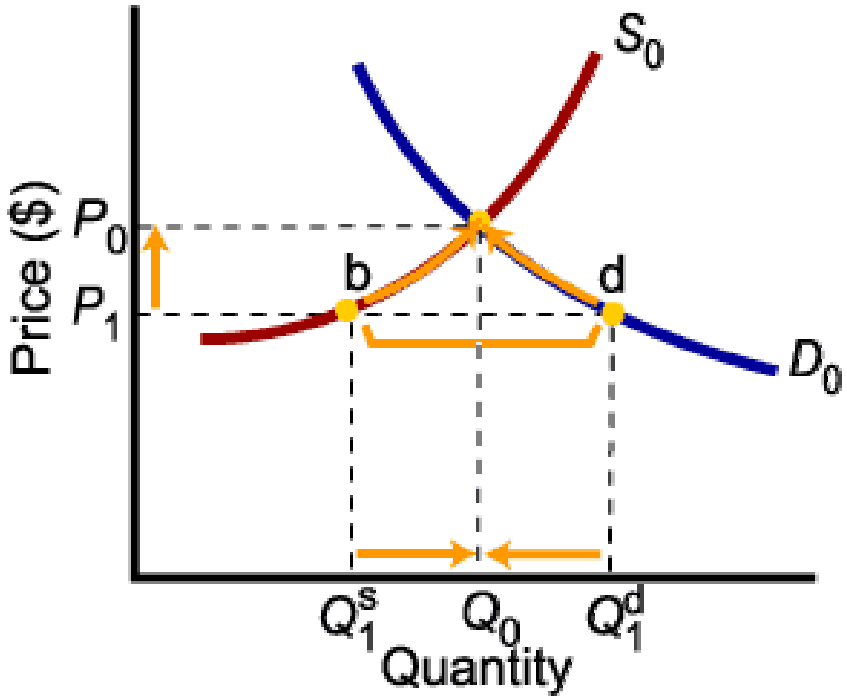


Market Equilibrium



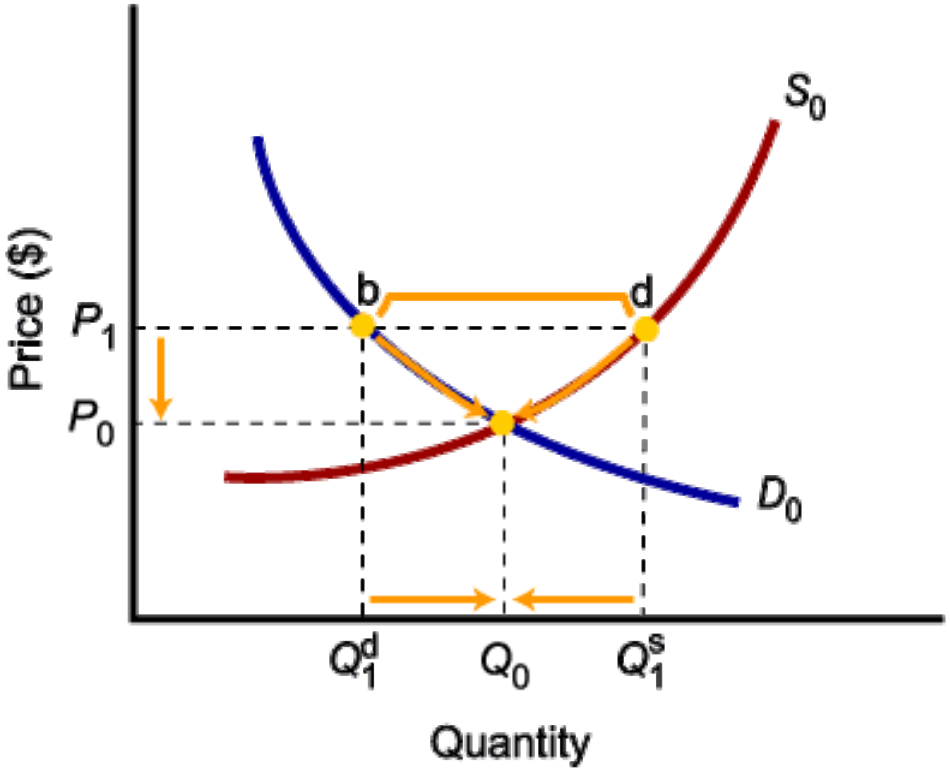
- Only in equilibrium is quantity supplied equal to quantity demanded.
- At any price level other than P_0, the wishes of buyers and sellers do not coincide.

Market Disequilibria



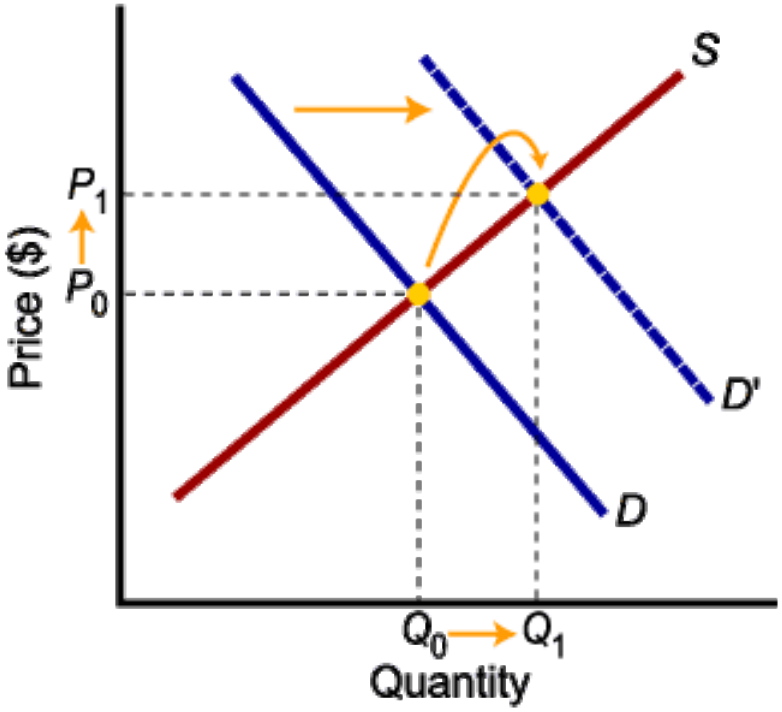
- ***Excess demand***, or shortage, is the condition that exists when quantity demanded exceeds quantity supplied at the current price.
- When quantity demanded exceeds quantity supplied, price tends to rise until equilibrium is restored.

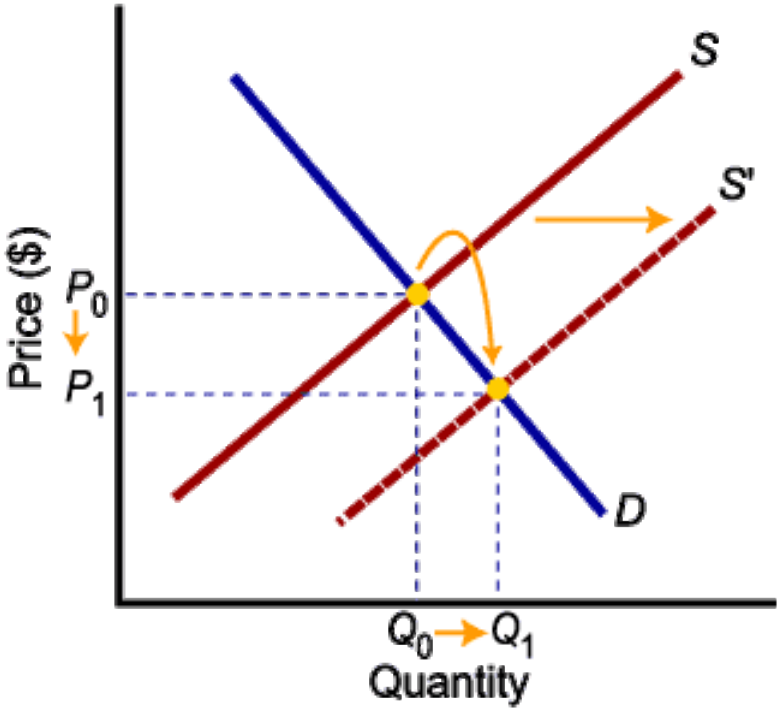
Market Disequilibria



- ***Excess supply***, or surplus, is the condition that exists when quantity supplied exceeds quantity demanded at the current price.
- When quantity supplied exceeds quantity demanded, price tends to fall until equilibrium is restored.

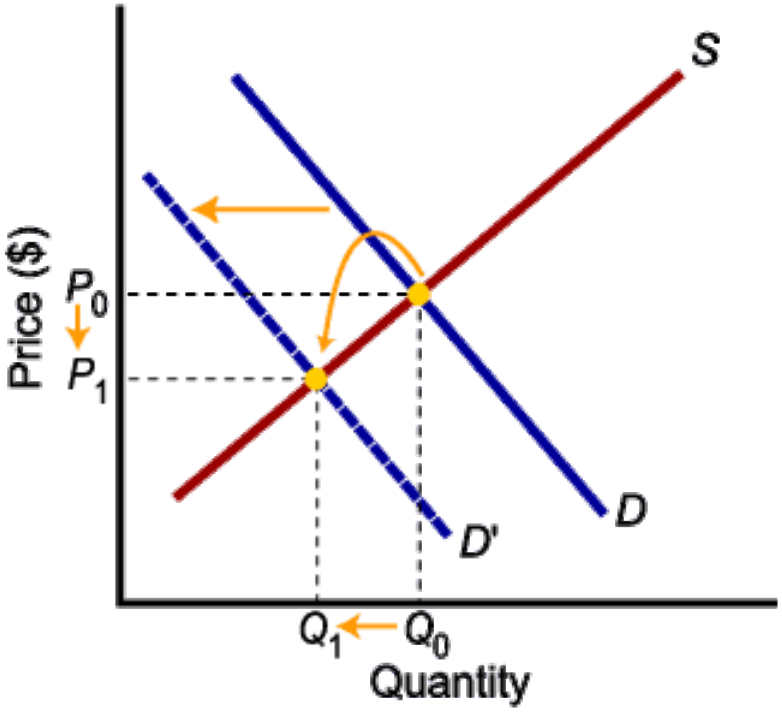
Increases in Demand and Supply

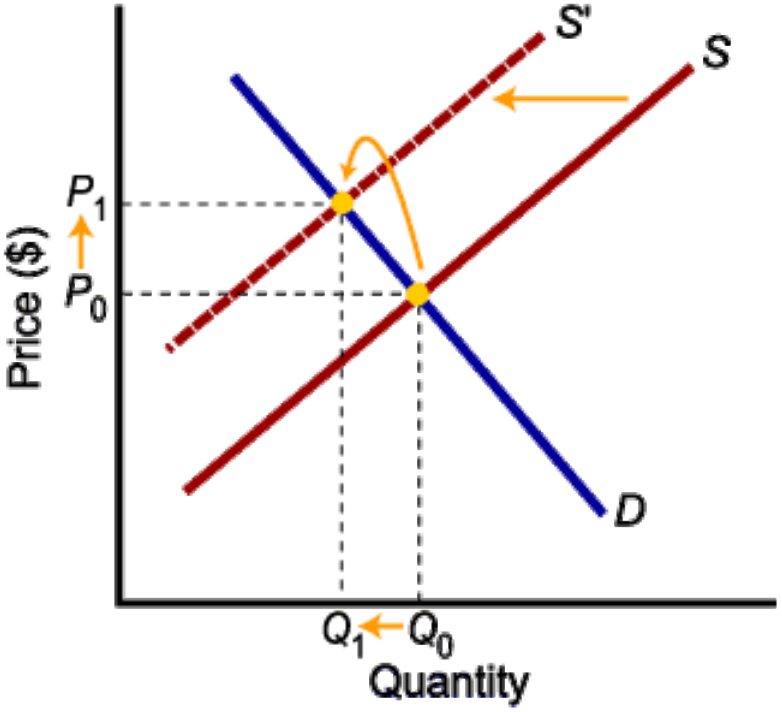




- ***Higher demand*** leads to higher equilibrium price and higher equilibrium quantity.
- ***Higher supply*** leads to lower equilibrium price and higher equilibrium quantity.

Decreases in Demand and Supply





- ***Lower demand*** leads to lower price and lower quantity exchanged.
- ***Lower supply*** leads to higher price and lower quantity exchanged.

Thanks