Lec. #2

Demand, Supply, and Market Equilibrium

The Basic Decision-Making Units

- A ***firm*** is an organization that transforms resources (inputs) into products (outputs). Firms are the primary producing units in a market economy.
- An ***entrepreneur*** متعهد -منظم is a person who organizes, manages, and assumes the risks of a firm, taking a new idea or a new product and turning it into a successful business.
- ***Households*** are the consuming units in an economy.

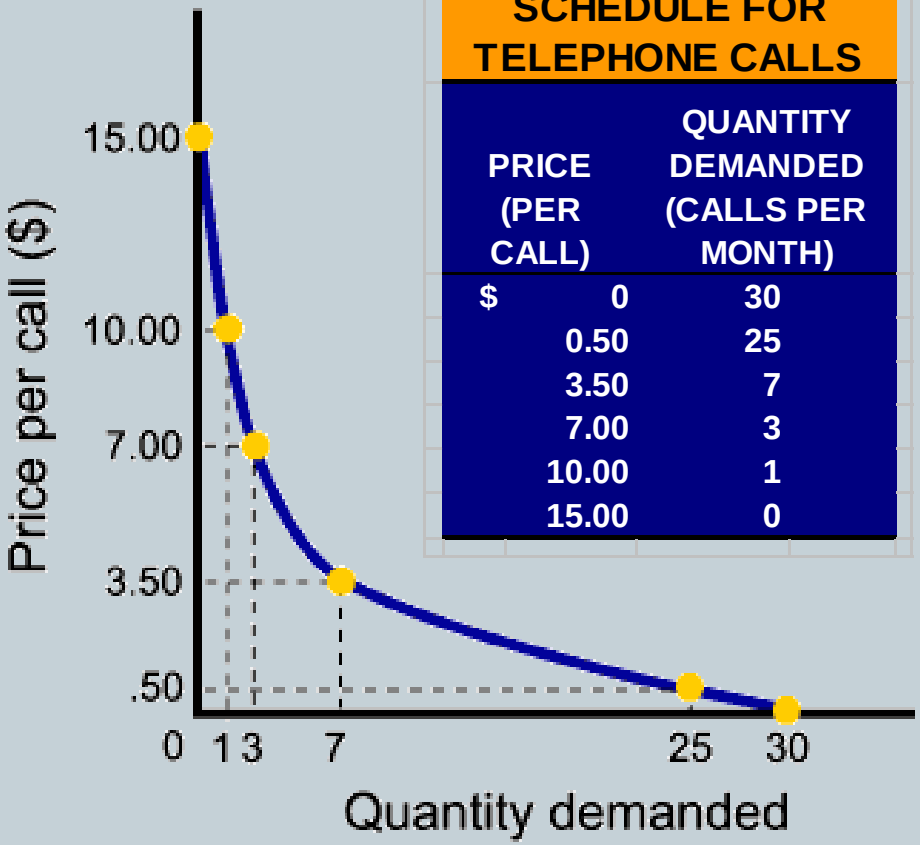
Input Markets and Output Markets

- ***Output, or product, markets*** are the markets in which goods and services are exchanged.

- ***Input markets*** are the markets in which resources—labor, capital, and land—used to produce products, are exchanged.

- **Quantity demanded** is the amount (number of units) of a product that a household would buy in a given time period if it could buy all it wanted at the current market price.

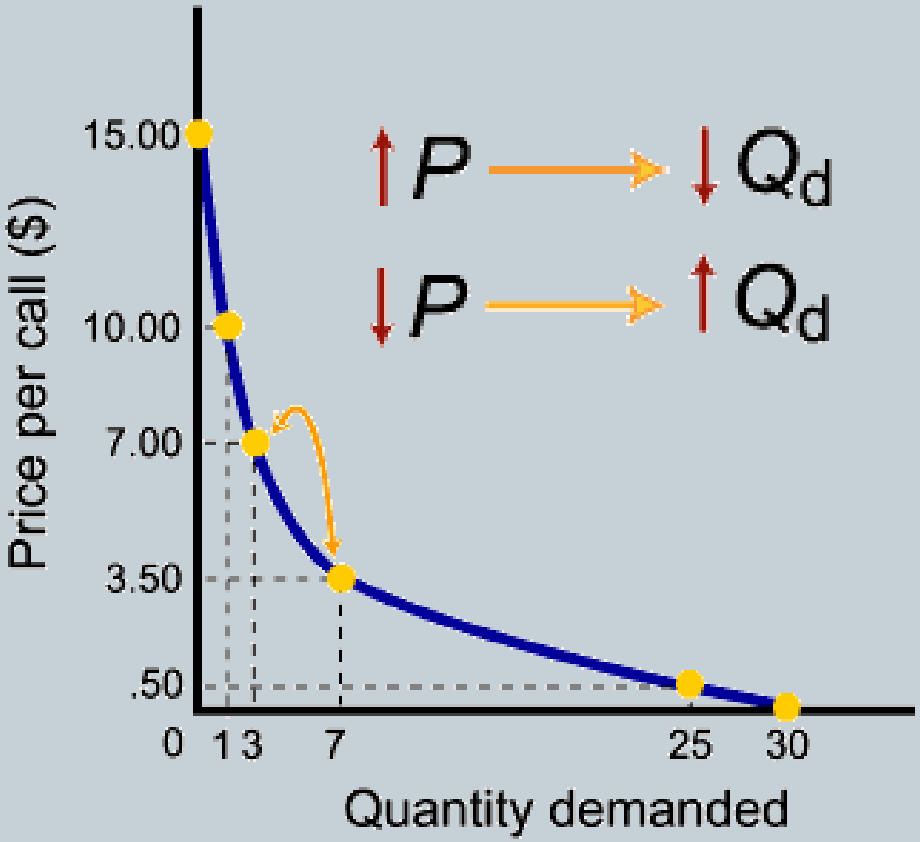
The Demand Curve الطلب



ANNA'S DEMAND SCHEDULE FOR TELEPHONE CALLS	
PRICE (PER CALL)	QUANTITY DEMANDED (CALLS PER MONTH)
$ 0	30
0.50	25
3.50	7
7.00	3
10.00	1
15.00	0

- The ***demand curve*** is a graph illustrating how much of a given product a household would be willing to buy at different prices.

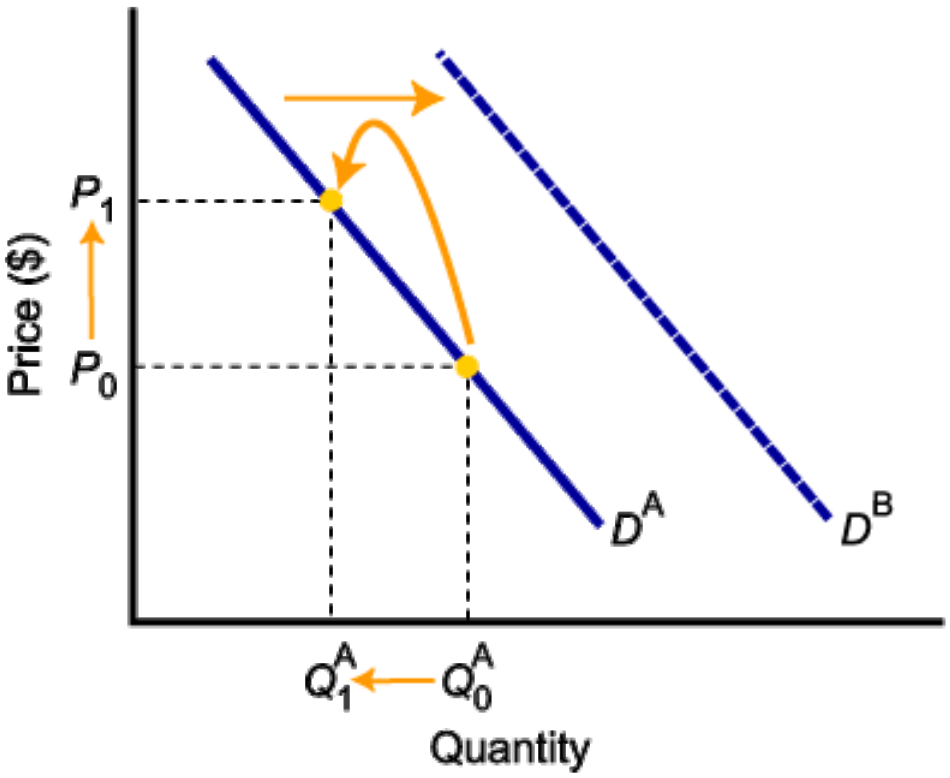
The Law of Demand



- The ***law of demand*** states that there is a negative, or inverse, relationship between price and the quantity of a good demanded and its price.

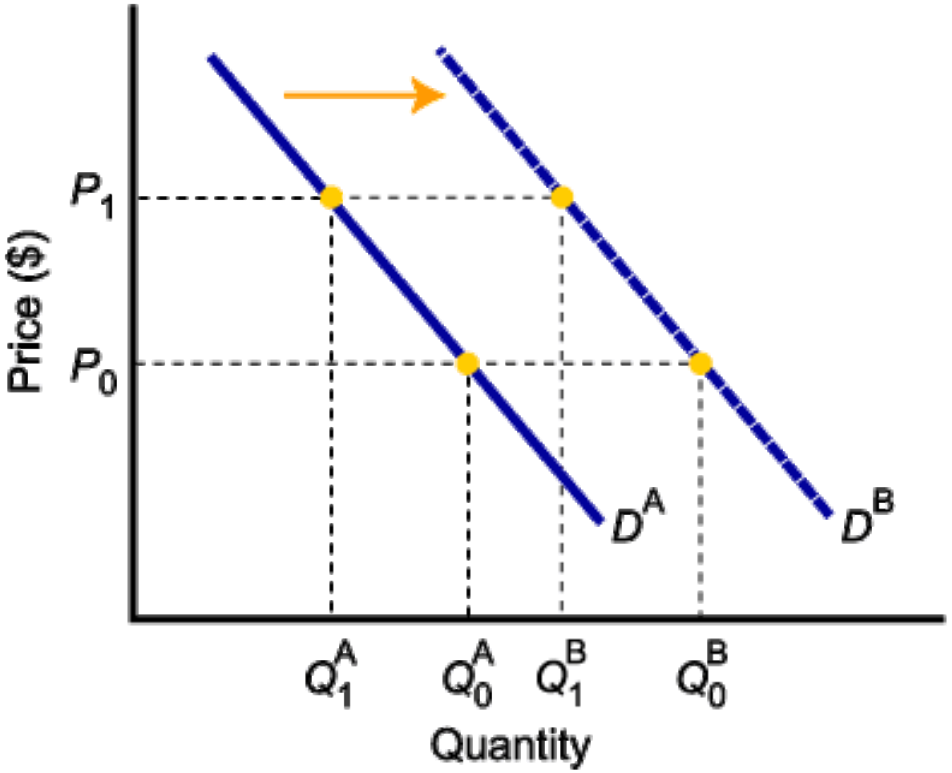
- This means that demand curves slope downward.

Shift of Demand Versus Movement Along a Demand Curve



- A change in ***demand*** is not the same as a change in ***quantity demanded***.
- In this example, a higher price causes lower ***quantity demanded***.
- Changes in demand, cause a ***shift*** of the entire demand curve, from D_A to D_B.

A Change in Demand Versus a Change in Quantity Demanded



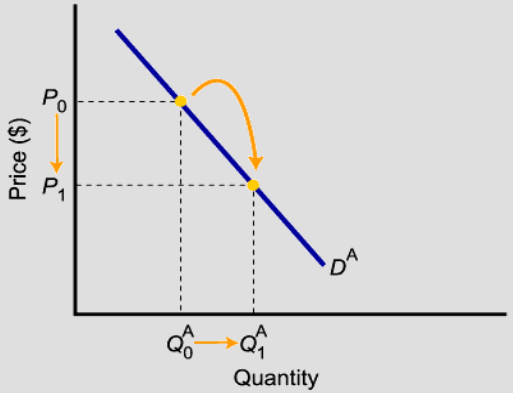
- When ***demand shifts*** to the right, demand increases. This causes ***quantity demanded*** to be greater than it was prior to the shift, ***for each and every price level.***

A Change in Demand Versus a Change in Quantity Demanded

To summarize:

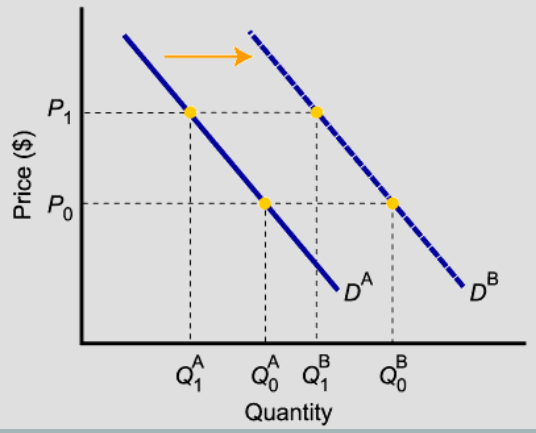
Change in price of a good or service
leads to

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

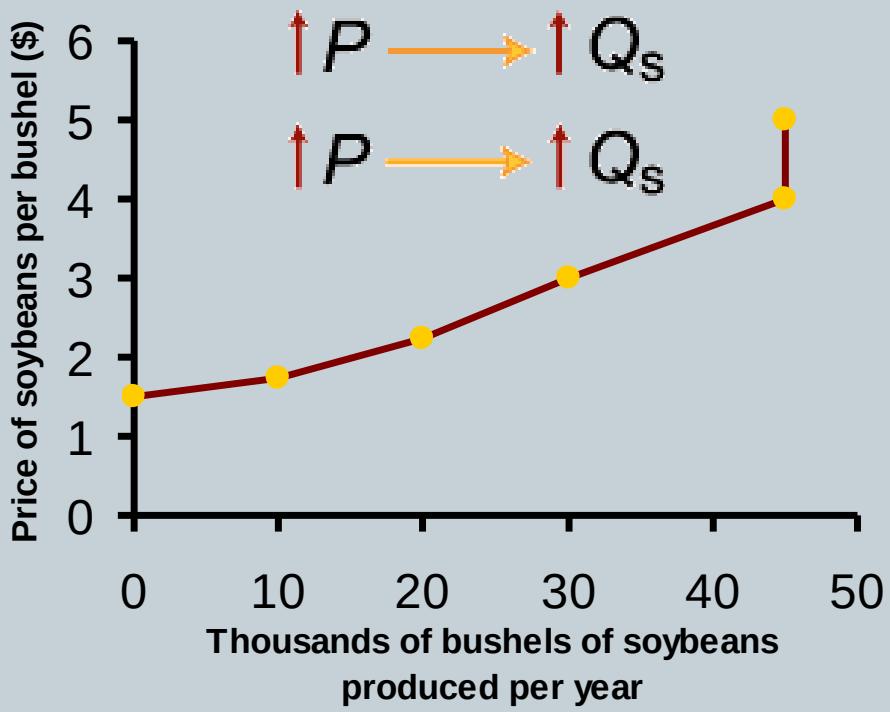


Change in income, preferences, or
prices of other goods or services
leads to

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



The Law of Supply العرض

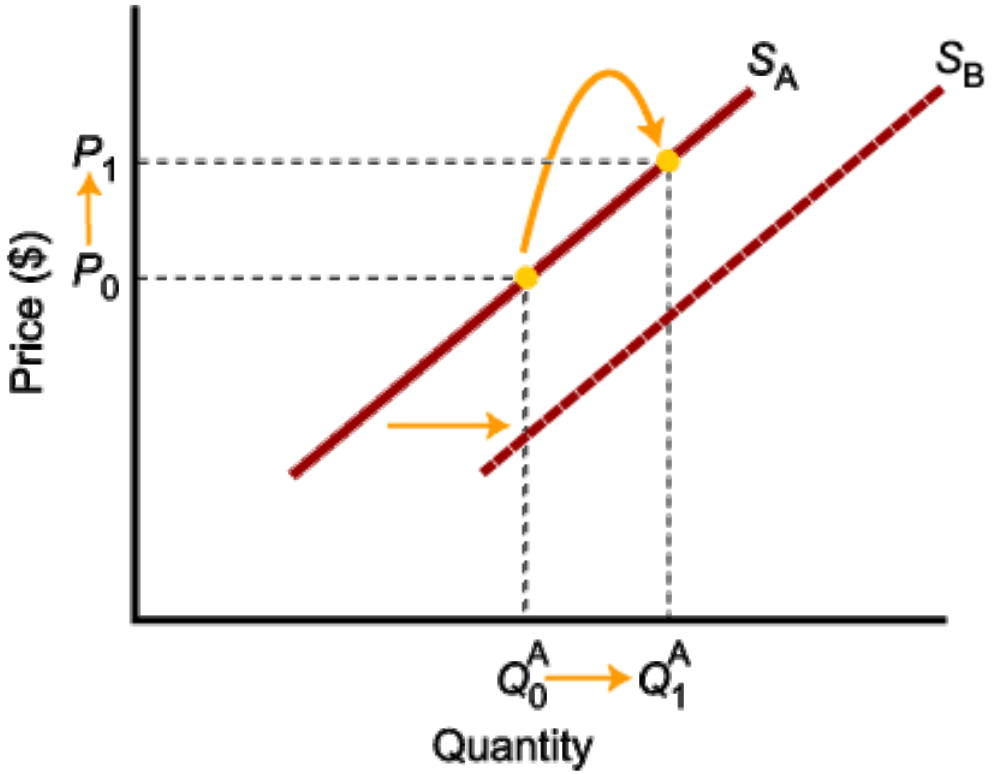


- The ***law of supply*** states that there is a positive relationship between price and quantity of a good supplied.
- This means that supply curves typically have a positive slope.

Determinants of Supply محددات العرض

- 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.***

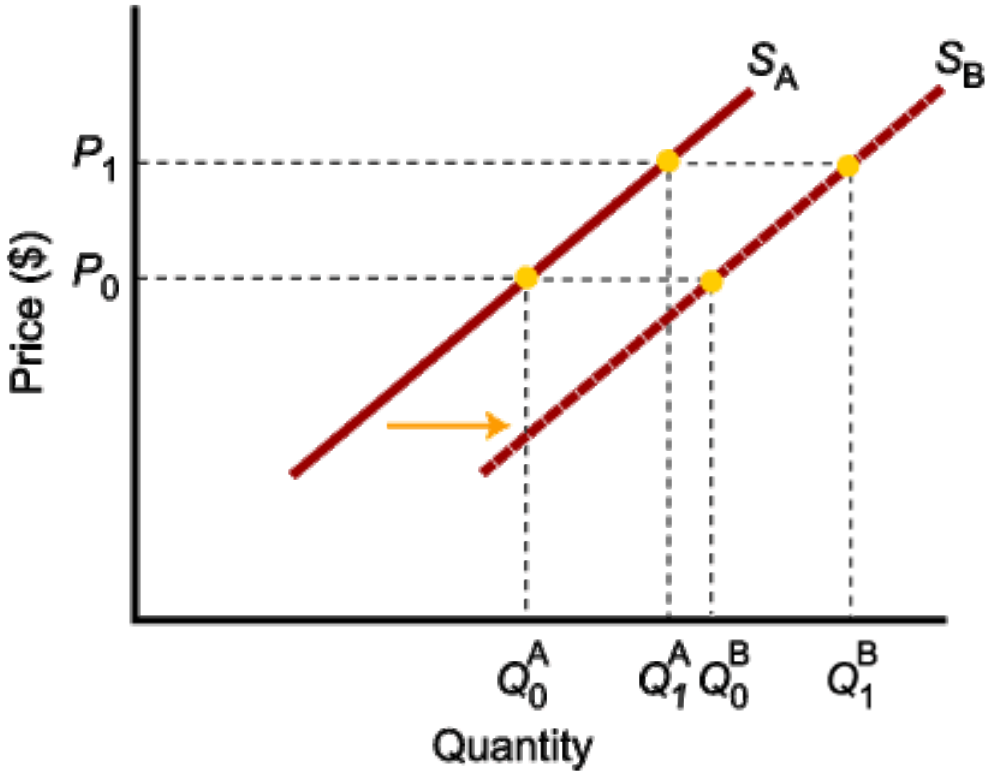
A Change in Supply Versus a Change in Quantity Supplied



- A change in ***supply*** is not the same as a change in ***quantity supplied***.
- In this example, a higher price causes ***higher quantity supplied***, and a ***move along*** the supply curve.

- In this example, changes in supply, cause a ***shift*** of the entire supply curve, from S_A to S_B.

A Change in Supply Versus a Change in Quantity Supplied



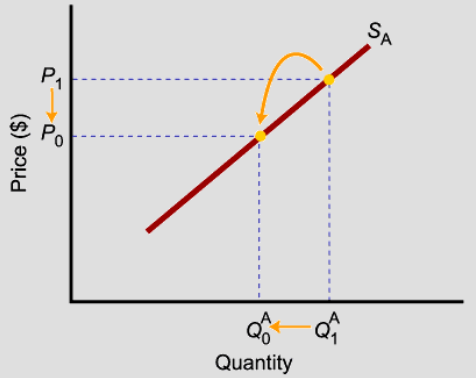
- When ***supply shifts*** to the right, supply increases. This causes ***quantity supplied*** to be greater than it was prior to the shift, ***for each and every price level.***

A Change in Supply Versus a Change in Quantity Supplied

To summarize:

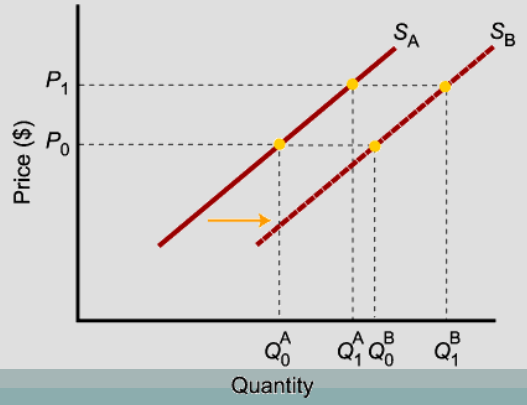
Change in price of a good or service
leads to

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

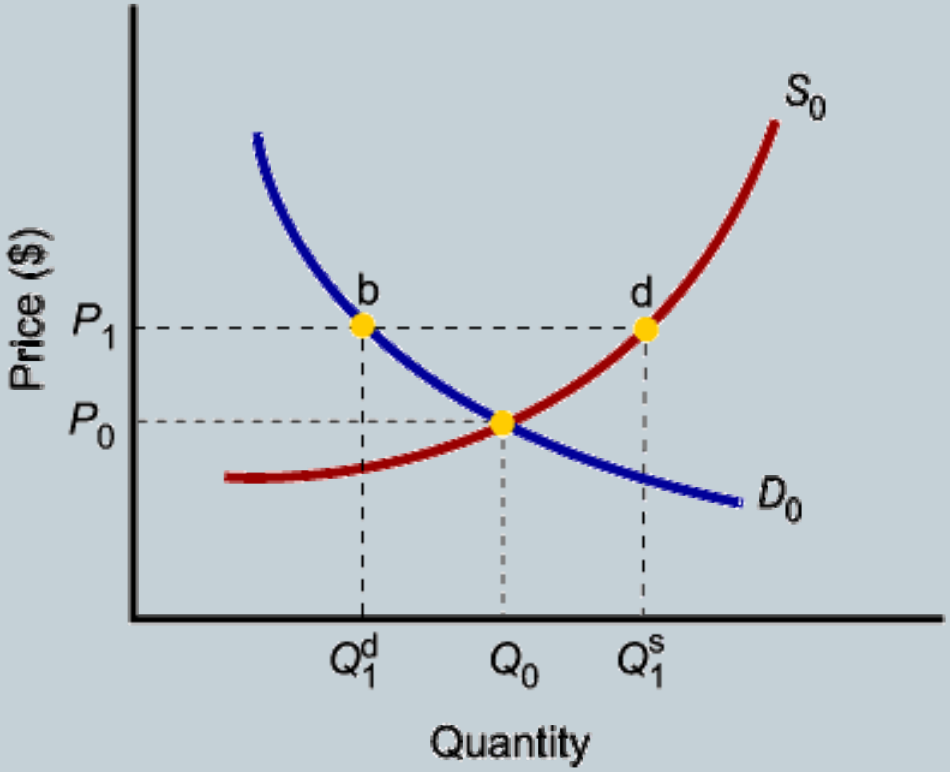


Change in costs, input prices, technology, or prices of related goods and services
leads to

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

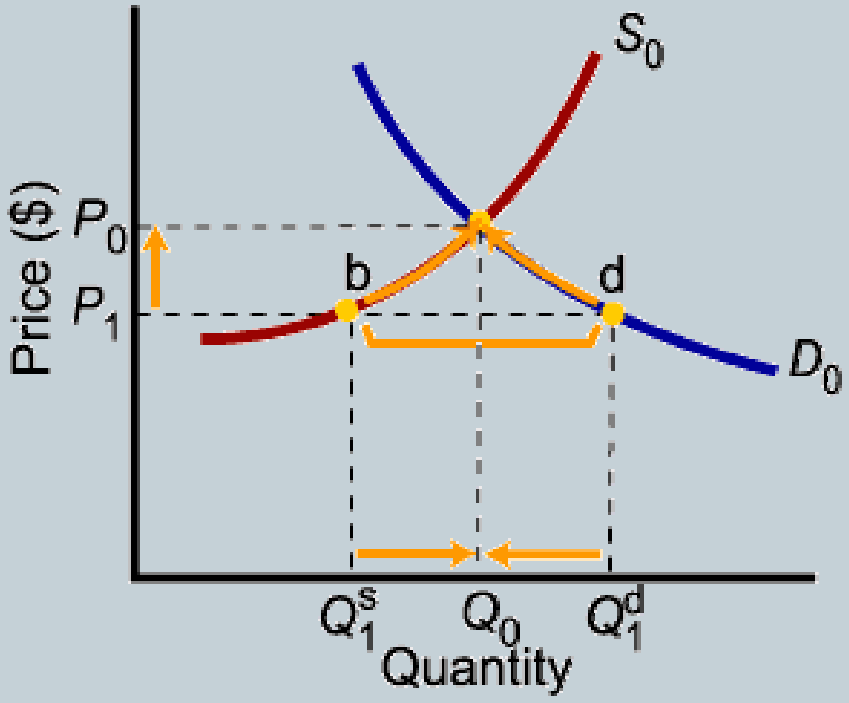


Market Equilibrium



- 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.يتزامن

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.

Example (1)

1) For the next two equations, determine the equilibrium price and quantity (analytical and graphical)

- $Q_d = 28 - P_d$
- $Q_s = 10 + P_s$

Answer

In equilibrium, $Q_d = Q_s = Q_{equ}$ and $P_d = P_s = P_{equ}$

$28 - P_{equ} = 10 + P_{equ}$

$2\,P_{equ} = 28 - 10 = 18$ ----------→ $P_{equ} = 9$

$P_{equ} = 9$ & $Q_{equ} = 19$

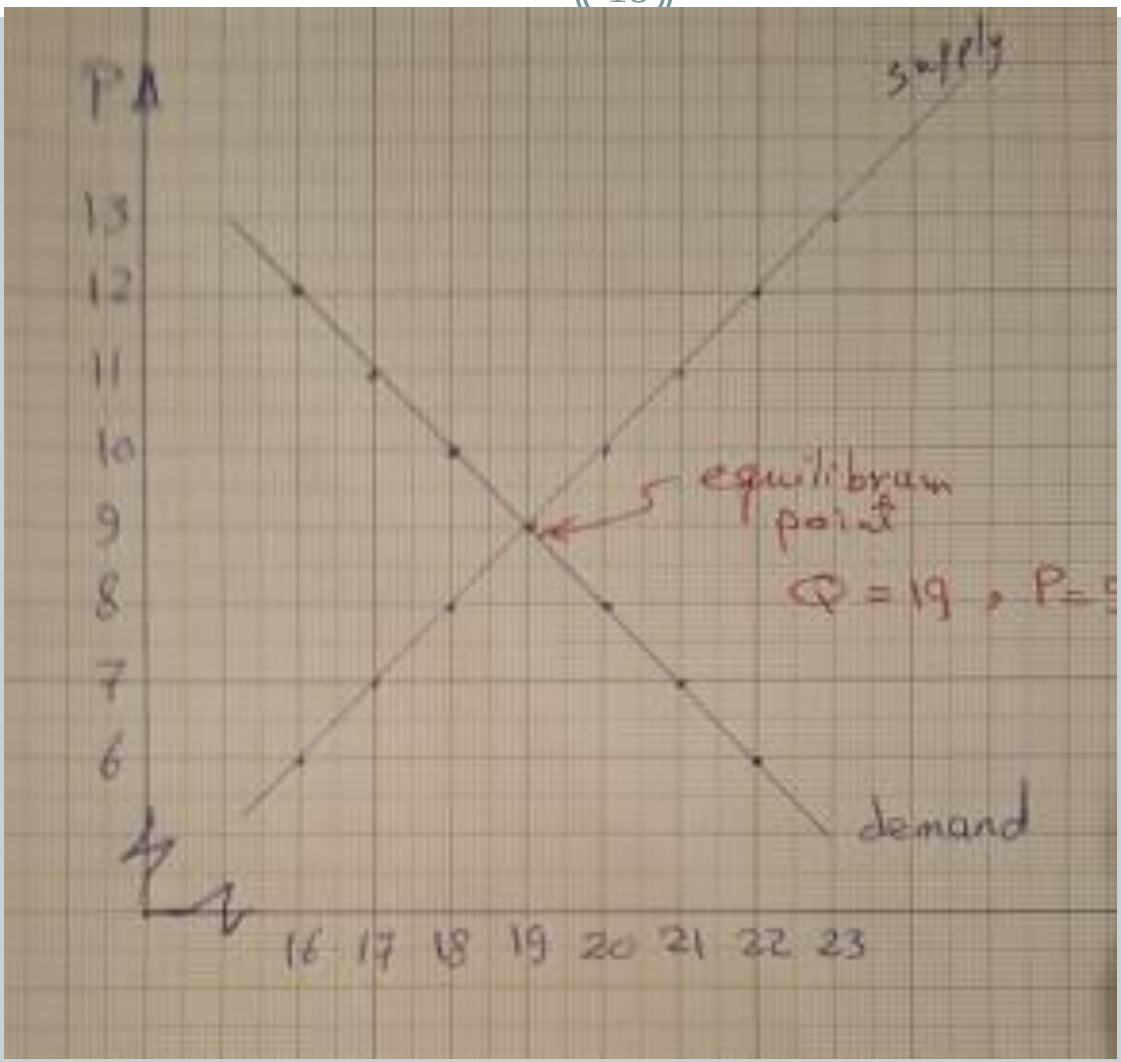
- $Q_d = 28 - P_d$

P_d	6	7	8	9	10	11	12
Q_d	22	21	20	19	18	17	16

- $Q_s = 10 + P_s$

P_s	6	7	8	9	10	11	12
Q_s	16	17	18	19	20	21	22

Equilibrium point Q = 19 & P = 9


P
13
12
11
10
9
8
7
6
supply
equilibrium point
demand
16 17 18 19 20 21 22 23

Example (2)

2) For the next two equations, determine the equilibrium price and quantity (analytical and graphical)

- $Q_d = 20 - P_d$
- $Q_s = 10 + P_s$

Answer

In equilibrium, $Q_d = Q_s = Q_{equ}$ and $P_d = P_s = P_{equ}$

$20 - P_{equ} = 10 + P_{equ}$

$2\,P_{equ} = 20 - 10 = 10$ ----------→ $P_{equ} = 5$

$P_{equ} = 5$ & $Q_{equ} = 15$

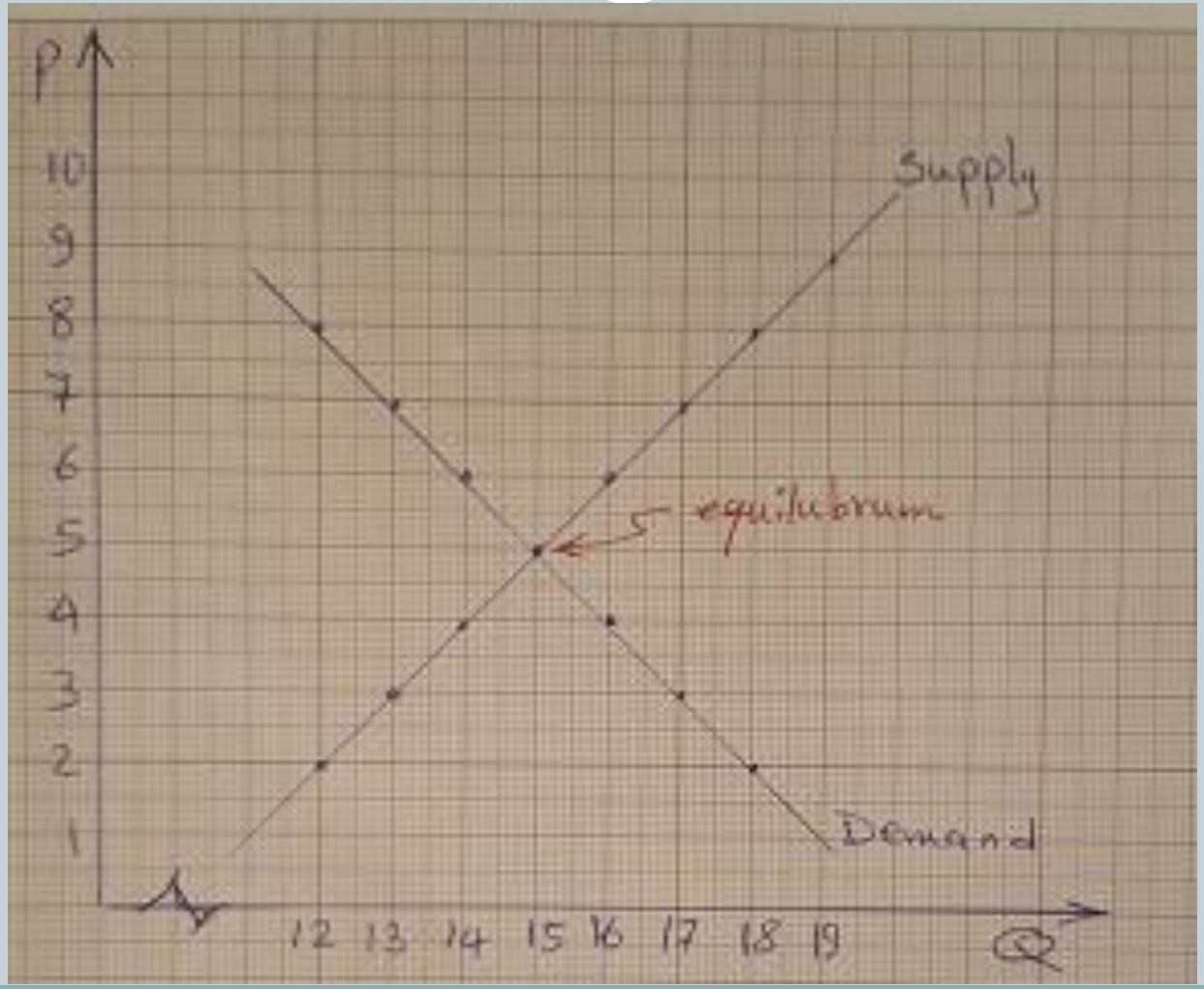
- $Q_d = 20 - P_d$

P_d	2	3	4	5	6	7	8
Q_d	18	17	16	15	14	13	12

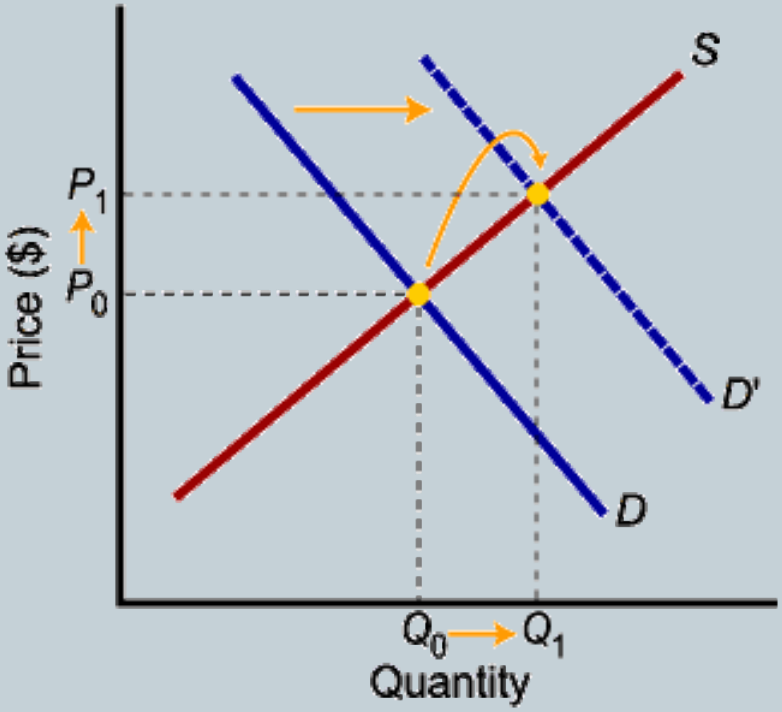
- $Q_s = 10 + P_s$

P_s	2	3	4	5	6	7	8
Q_s	12	13	14	15	16	17	18

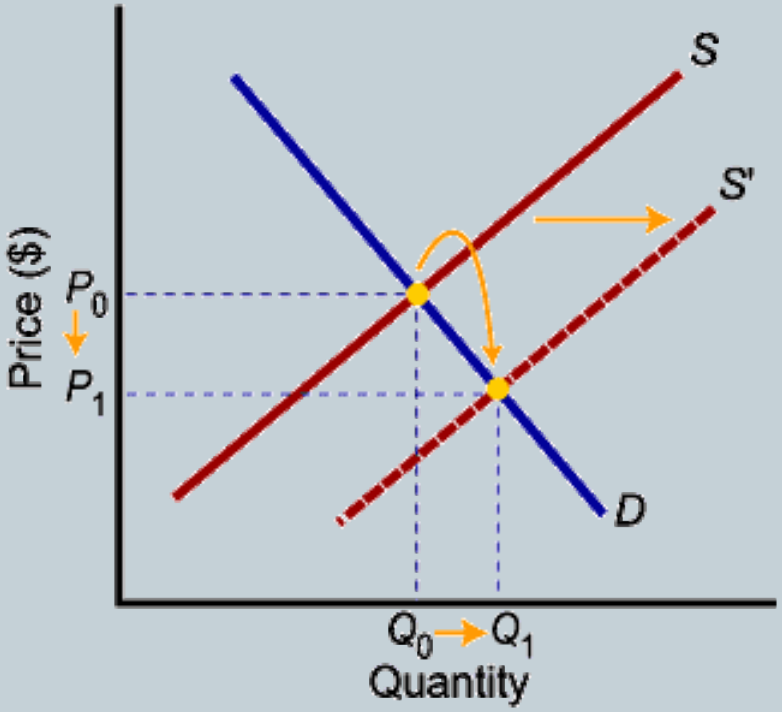
Equilibrium point Q = 15 & P = 5


P
10
9
8
7
6
5
4
3
2
1
Supply
equilibrium
Demand
12 13 14 15 16 17 18 19
Q

Increases in Demand and Supply

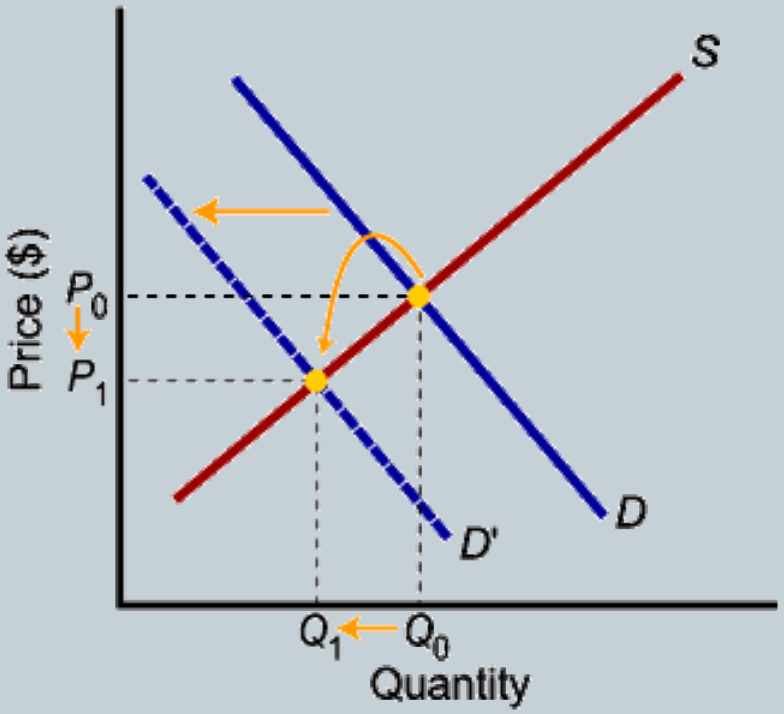


- ***Higher demand*** leads to higher equilibrium price and higher equilibrium quantity.

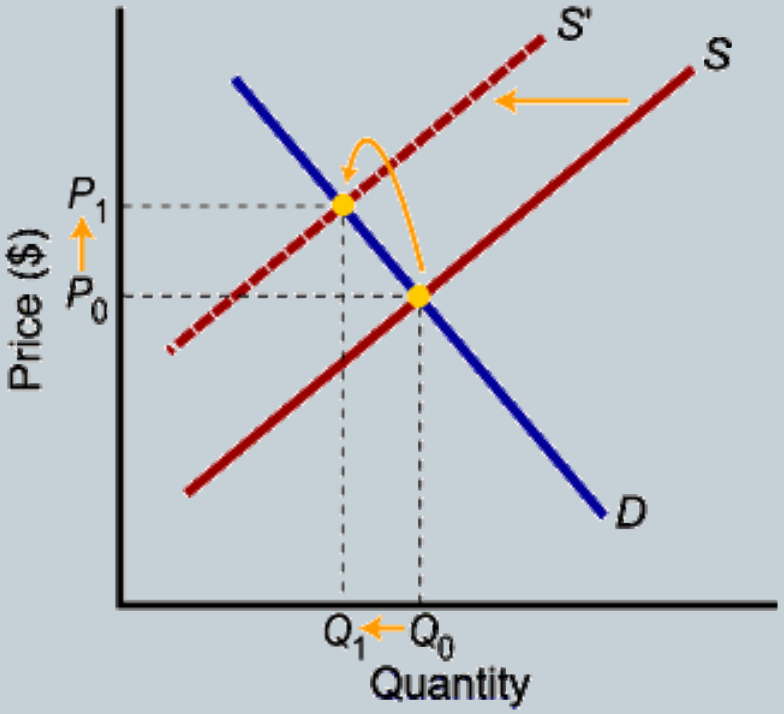


- ***Higher supply*** leads to lower equilibrium price and higher equilibrium quantity.

Decreases in Demand and Supply

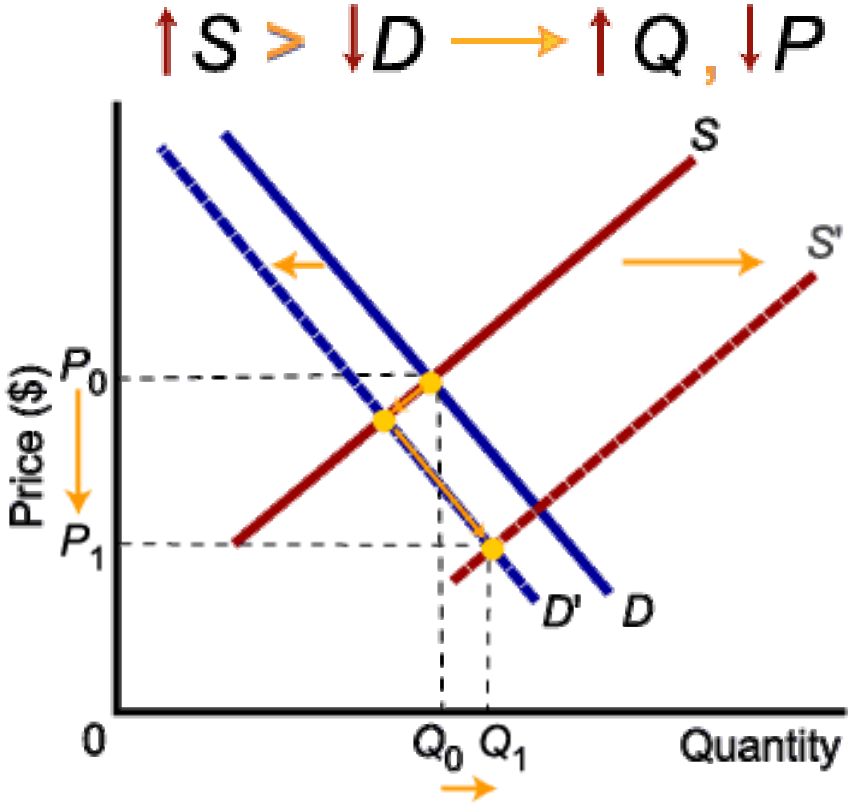


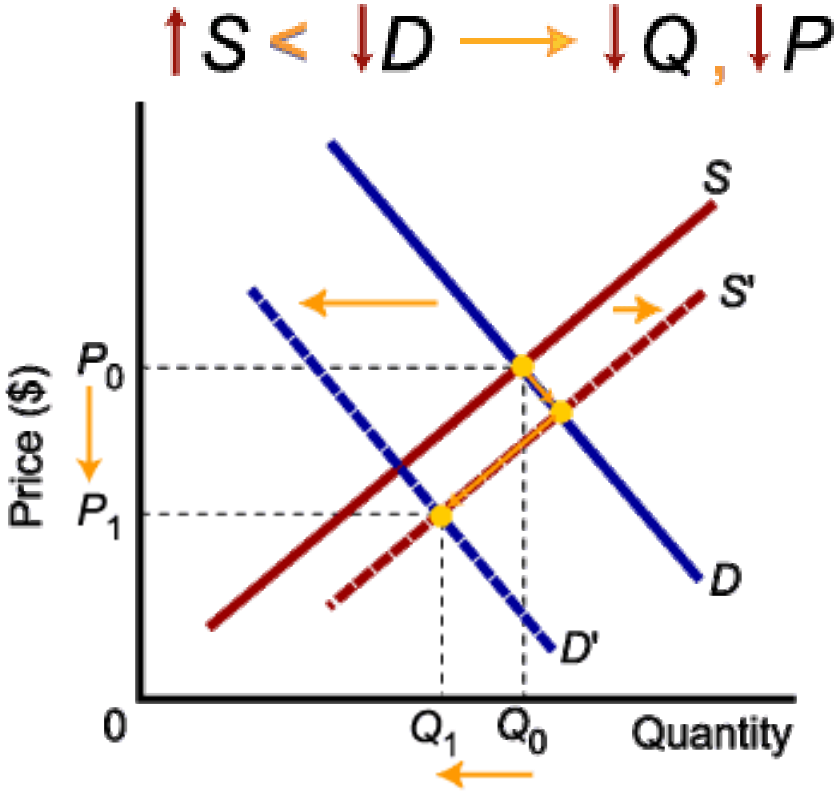
- ***Lower demand*** leads to lower price and lower quantity exchanged.



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

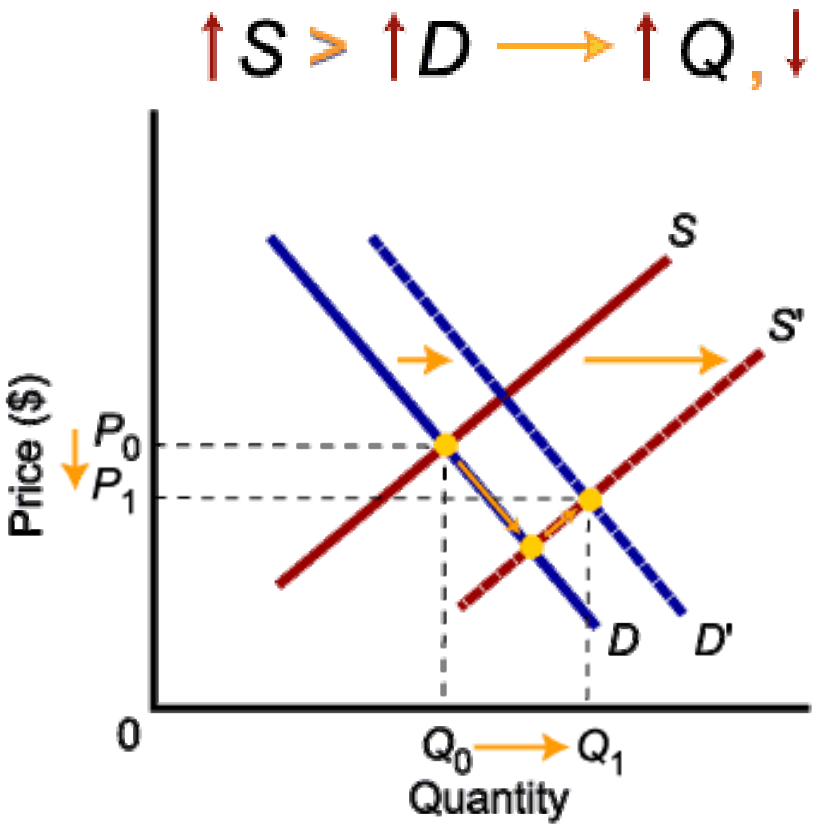
Relative Magnitudes of Change

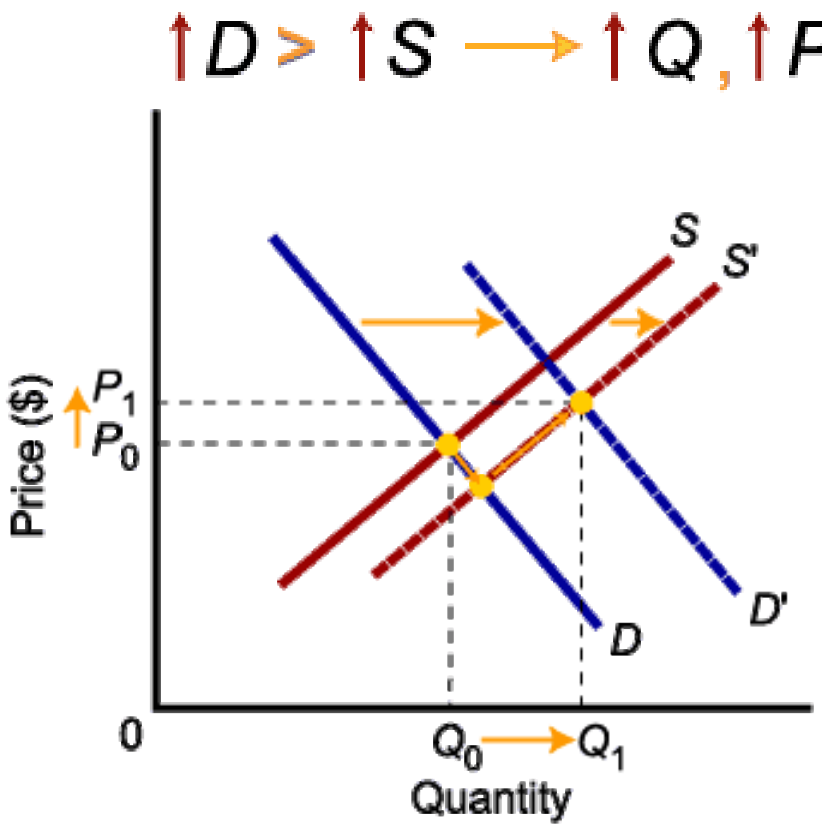




- The relative magnitudes of change in supply and demand determine the outcome of market equilibrium.

Relative Magnitudes of Change





- When supply and demand both increase, quantity will increase, but price may go up or down.

Sheet 2

1. Write brief notes about demand and its behavior, support your answer with charts and examples
2. Write brief notes about supply and its behavior, support your answer with charts and examples
3. Explain market equilibrium and disequilibrium, support your answer with charts and examples
4. For the next two equations, determine the equilibrium price and quantity (analytical and graphical)
   - $Q_d = 32 - P_d$
   - $Q_s = 18 + P_s$