

# Lecture 3 & 4:

## Demand, Supply and Market

- Demand
- Supply
- Equilibrium

Ref:

1. Economics (8e), Roger A. Arnold

# Demand

The word demand has a precise meaning in economics.

It refers to:

1. the willingness and ability of buyers to purchase different quantities of a good
2. at different prices
3. during a specific time period (per day, week, etc.)

Remember:

- Unless both willingness and ability to buy are present, there is no demand and a person is not a buyer.
- Want does not mean Demand in Economics

# Law of Demand

The law of Demand: As the price of a good rises, the **quantity demanded** of the good falls, and as the price of a good falls, the quantity demanded of the good rises, *ceteris paribus*.

In short,

$$\begin{array}{l} P \uparrow Q_d \downarrow \\ P \downarrow Q_d \uparrow \text{ ceteris paribus} \end{array}$$

where  $P$  = price and  $Q_d$  = quantity demanded.

Quantity demanded:

$Q_d$  is the number of units of a good that individuals are willing and able to buy at a particular price during some time period.

Ceteris Paribus:

A Latin term meaning “all other things constant” or “nothing else changes.”

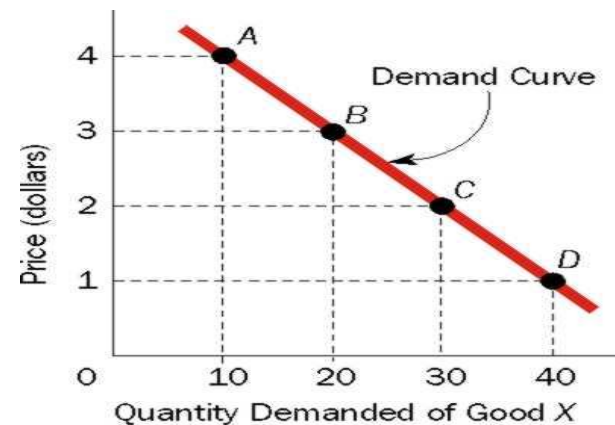
# Representing the Law of Demand

## Four Ways to Represent the Law of Demand-

1. In Words
  2. In Symbols
  3. In a Demand Schedule
  4. As a Demand Curve
- Already shown in previous slide
- Shown in (a) and (b)

Demand Schedule for Good X		
Price (dollars)	Quantity Demanded	Point in Part (b)
4	10	A
3	20	B
2	30	C
1	40	D

(a)



(b)

# Inverse relation between $Q_d$ and $P$

Why quantity demanded moves in the opposite direction of price?

Or why are demand curves downward sloping?

We identify two reasons -

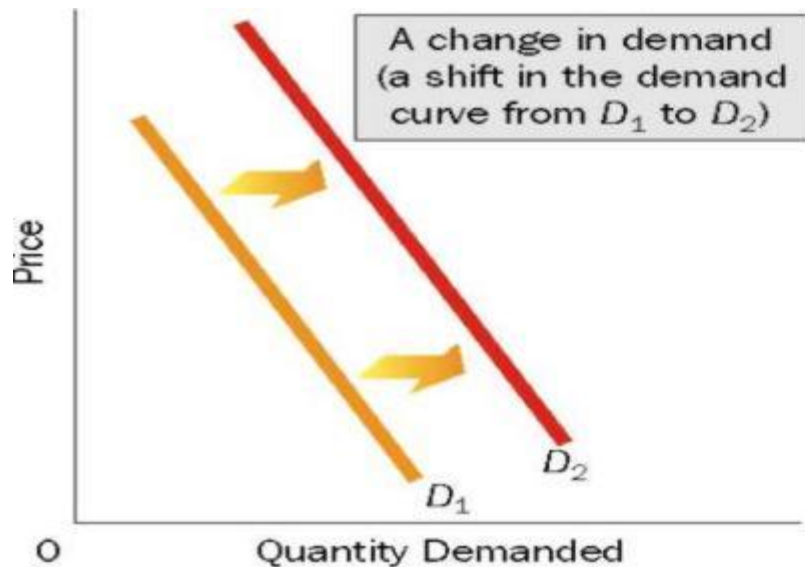
First reason: People substitute lower priced goods for higher priced goods

Second reason: Law of diminishing marginal utility

Law of diminishing marginal utility:

For a given time period, the marginal (additional) utility or satisfaction gained by consuming equal successive units of a good will decline as the amount consumed increases.

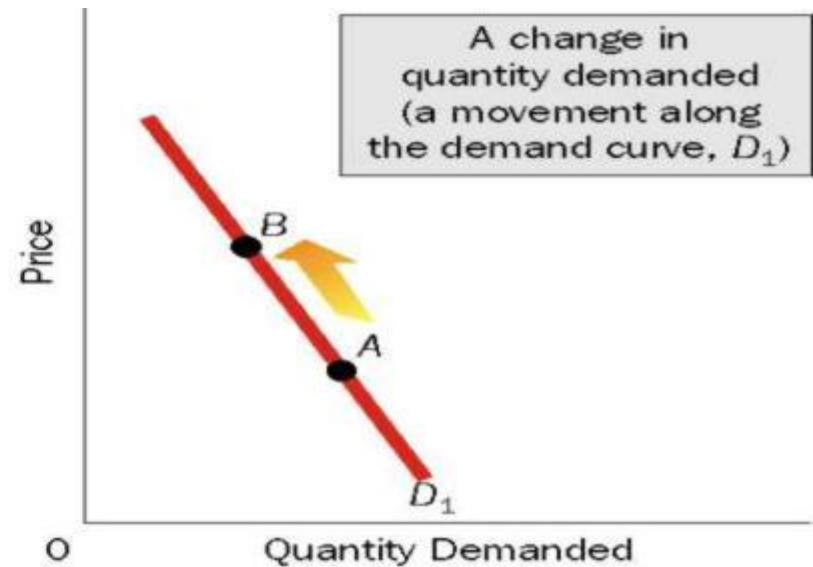
# A Change in Demand versus a Change in Quantity Demanded



A change in these factors can cause a change in demand:

1. income
2. preferences
3. prices of related goods
4. number of buyers
5. expectations of future price

(a) Shift Factor



A change in this factor will cause a change in quantity demanded:

1. (a good's) own price

(b) Movement Factor

# What Factors Cause the Demand Curve to Shift?

An increase (decrease) in demand means consumers are willing and able to buy more (less) of a good at every price. So, shift in Demand Curve.

Factors or variables cause the demand curve to shift are –

1. Income
2. Preference
3. Price of related goods
4. Numbers of buyers
5. Expectation of future price

# Income and Demand Curve

As a person's income changes (increases or decreases), his or her demand for a particular good may rise, fall, or remain constant.

## Normal Good:

A good the demand for which rises (falls) as income rises (falls). So, shift rightwards.

## Inferior Good:

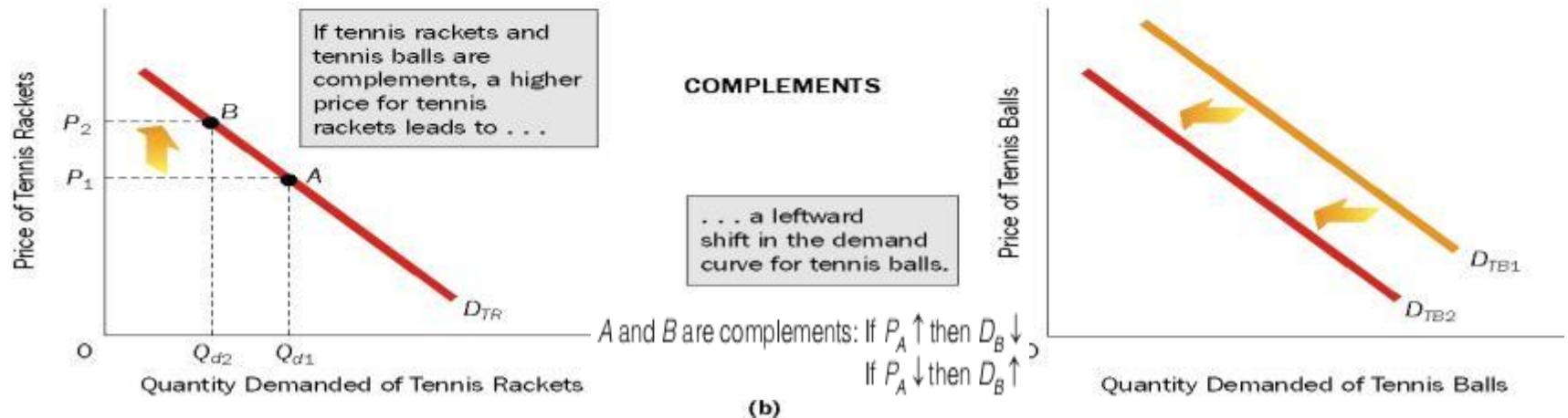
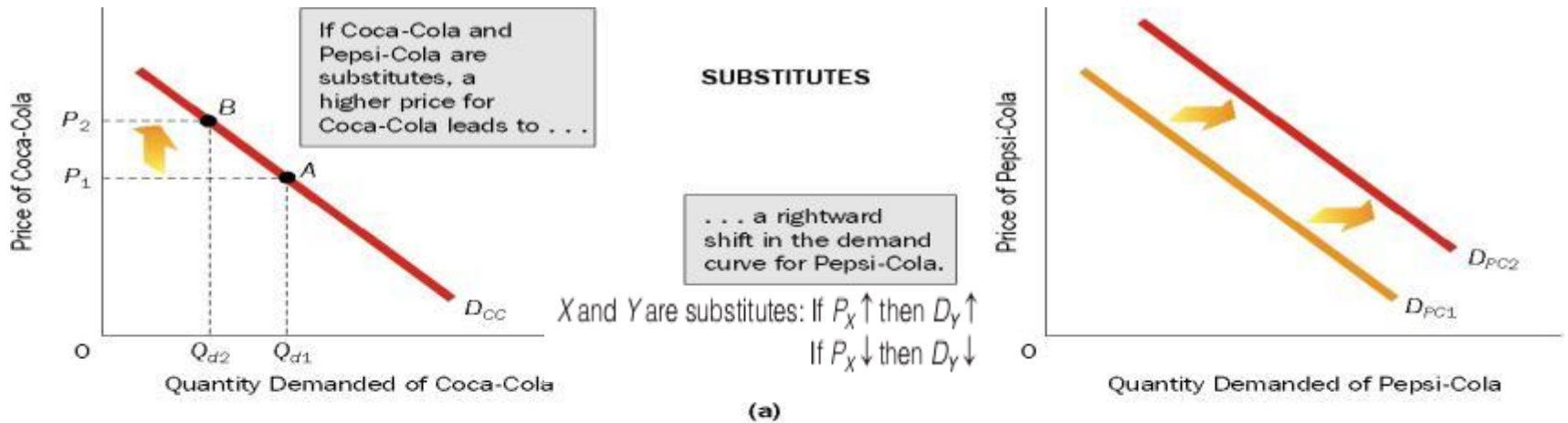
A good the demand for which falls (rises) as income rises (falls). So, shift leftwards.

## Neutral Good:

A good the demand for which does not change as income rises or falls. So, no shift.



# Price of related goods and Demand Curve



# Supply and Law of Supply

Supply: The willingness and ability of sellers to produce and offer to sell different quantities of a good at different prices during a specific time period.

Law of Supply: As the price of a good rises, the quantity supplied of the good rises, and as the price of a good falls, the quantity supplied of the good falls, *ceteris paribus*.

In Short,

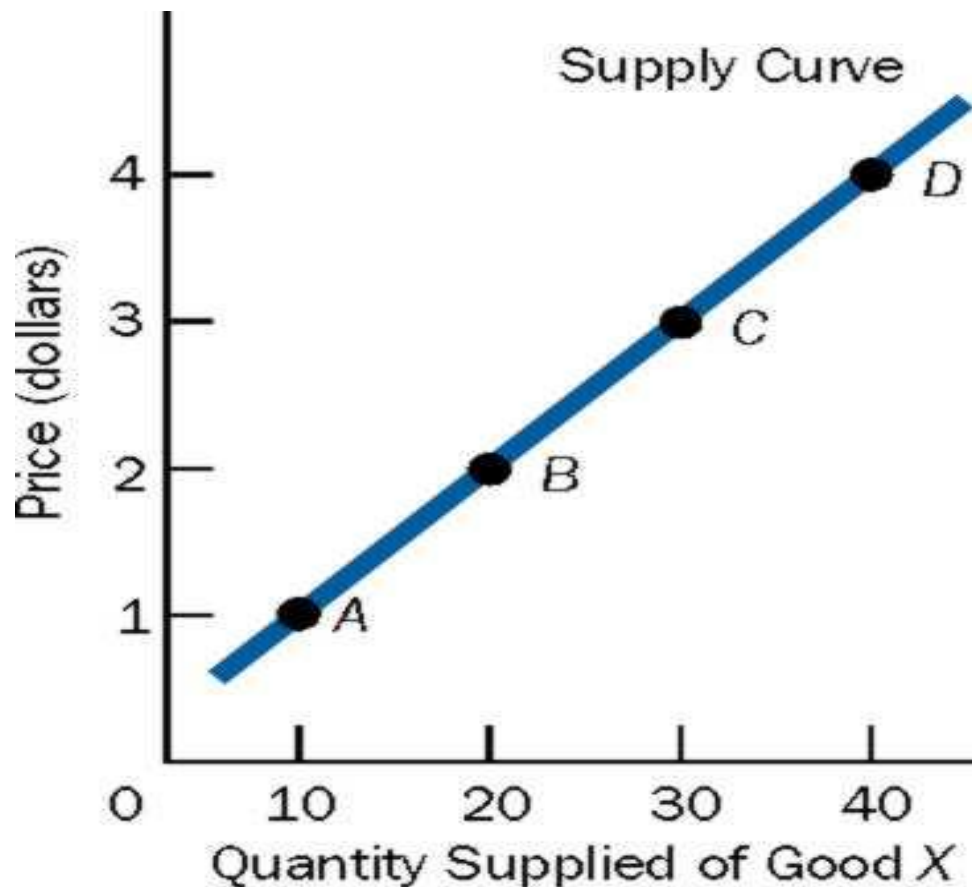
$$\begin{array}{l} P \uparrow Q_s \uparrow \\ P \downarrow Q_s \downarrow \text{ ceteris paribus} \end{array}$$

where  $P$  = price and  $Q_s$  = quantity supplied.

# Supply Schedule and Curve

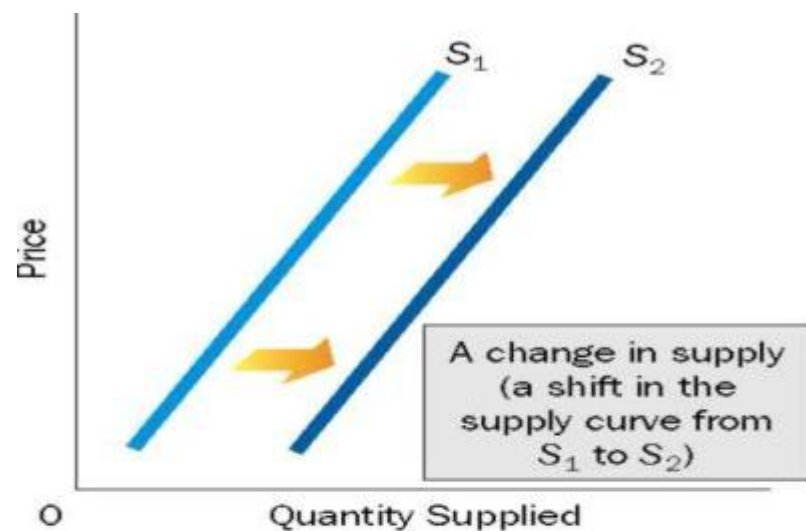
Supply Schedule for Good X		
Price (Dollars)	Quantity Supplied	Point in Part (b)
1	10	A
2	20	B
3	30	C
4	40	D

(a)



(b)

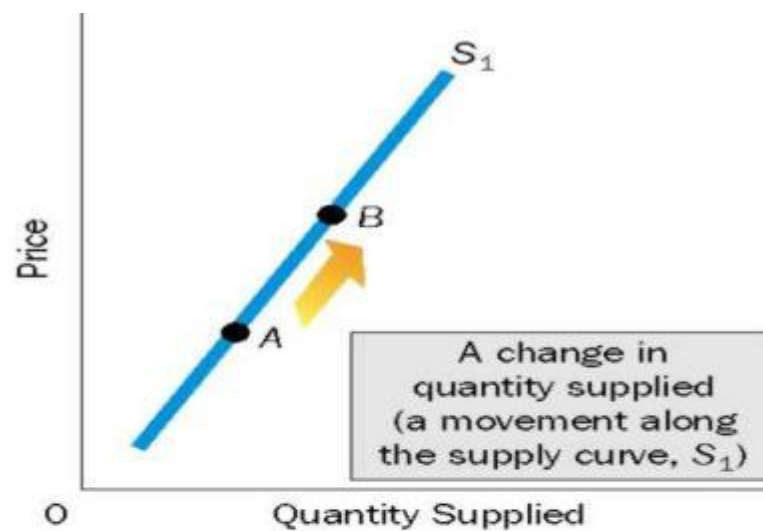
# A Change in Supply Versus a Change in Quantity Supplied



A change in these factors can cause a change in supply:

1. prices of relevant resources
2. technology
3. number of sellers
4. expectations of future price
5. taxes and subsidies
6. government restrictions

(a)



A change in this factor will cause a change in quantity supplied:

1. (a good's) own price

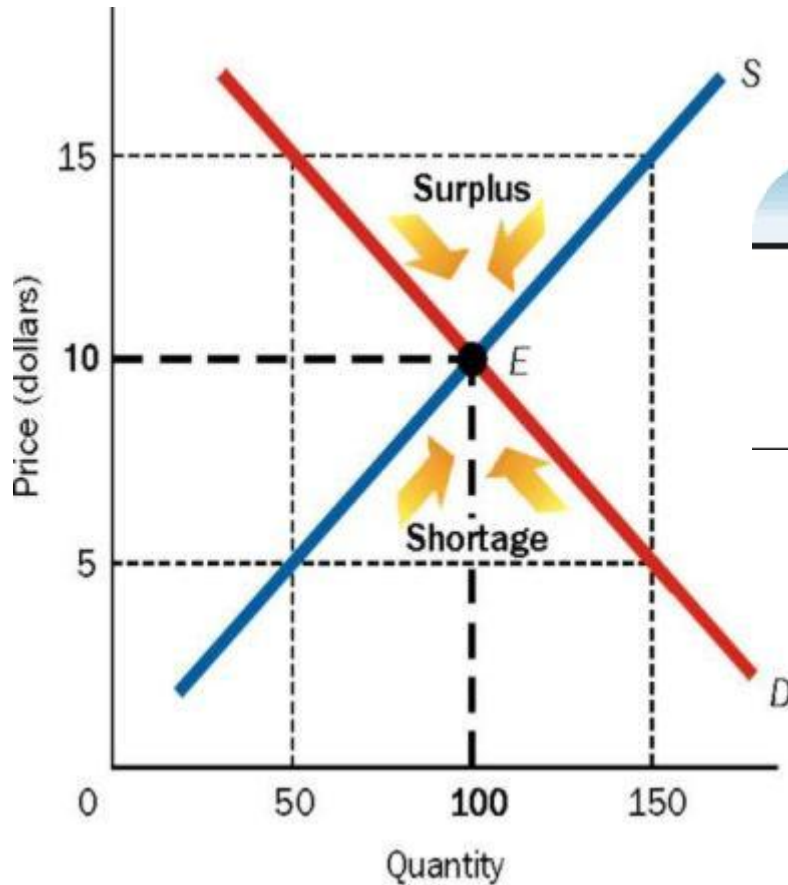
(b)

# What Factors Cause the Supply Curve to Shift?

The factors that can change supply include

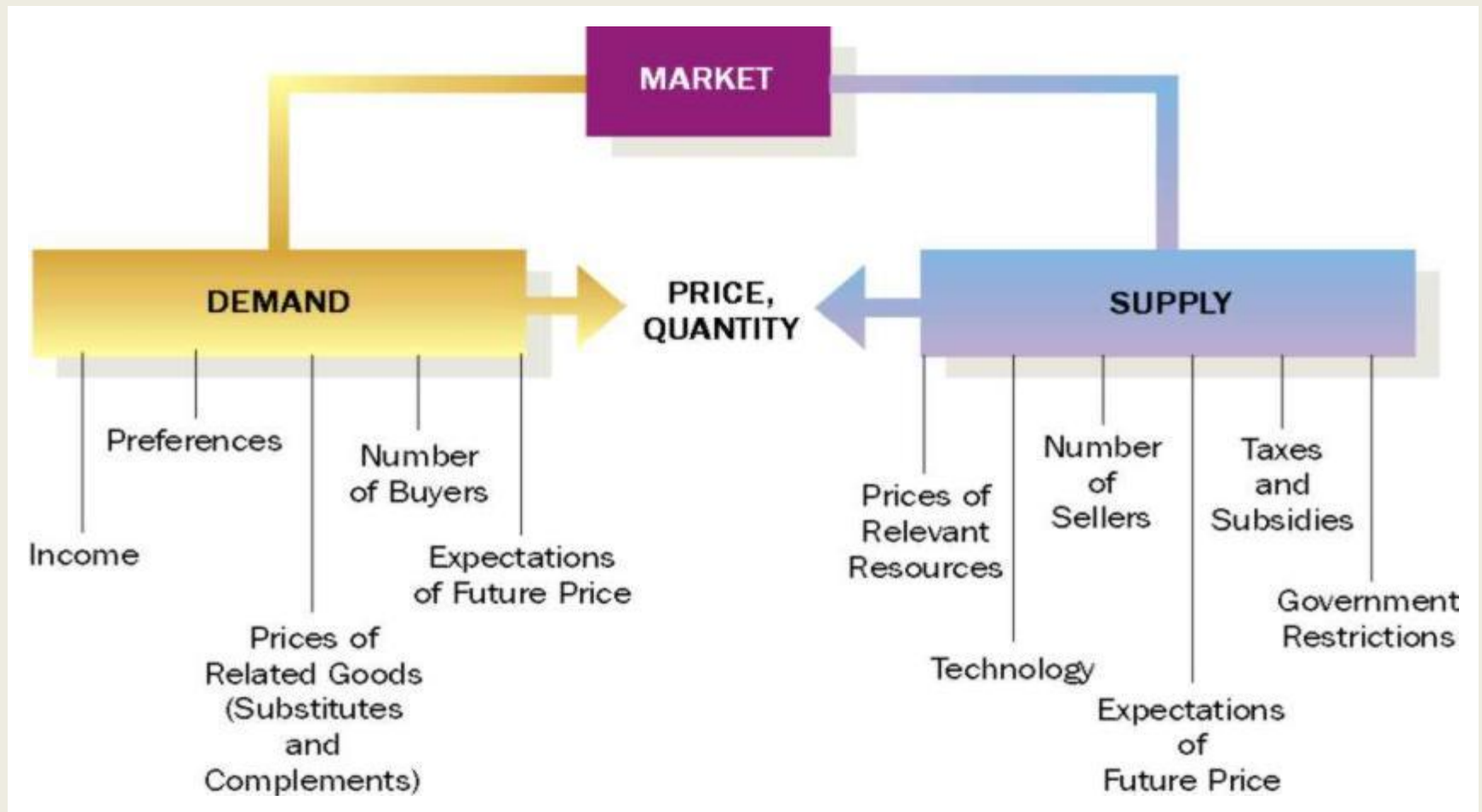
1. Prices of relevant resources
2. Technology
3. Number of sellers
4. Expectations of future price
5. Taxes and subsidies and
6. Government restrictions

# Moving towards Equilibrium

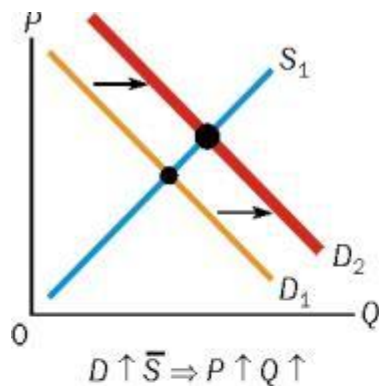


Price	$Q_s$	$Q_d$	Condition
\$15	150	50	Surplus
10	100	100	Equilibrium
5	50	150	Shortage

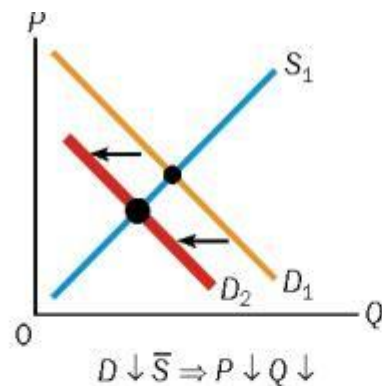
# A Summary Exhibit of a Market (Supply and Demand)



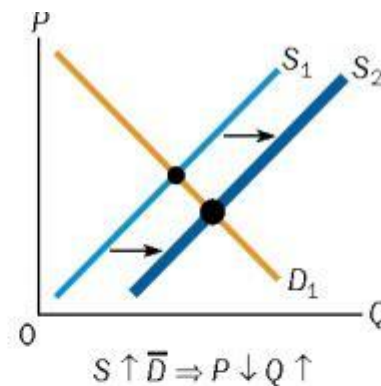
# Equilibrium Price and Quantity Effects of Supply-Curve and Demand-Curve Shifts



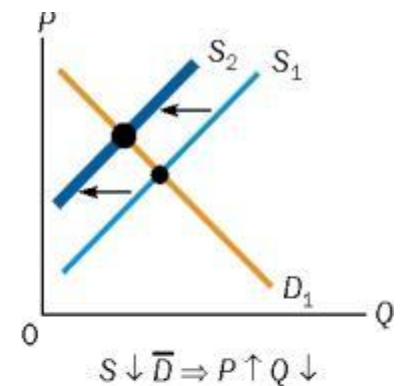
(a)



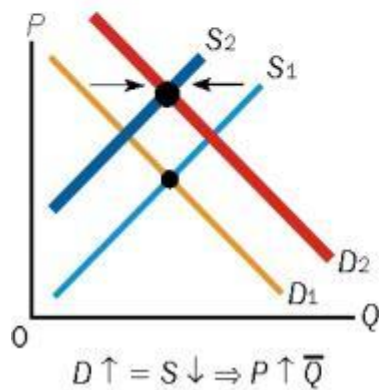
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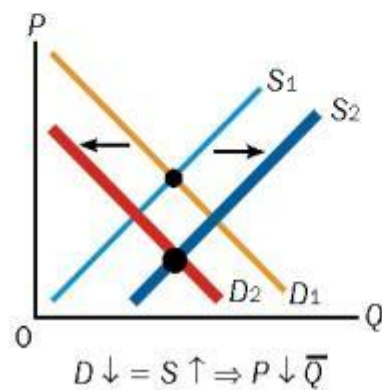
(c)



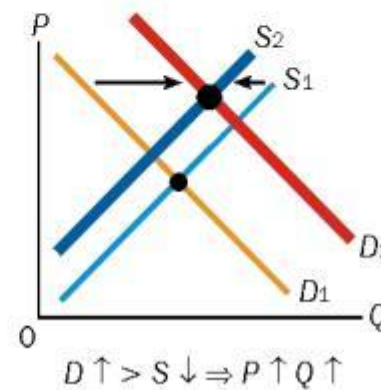
(d)



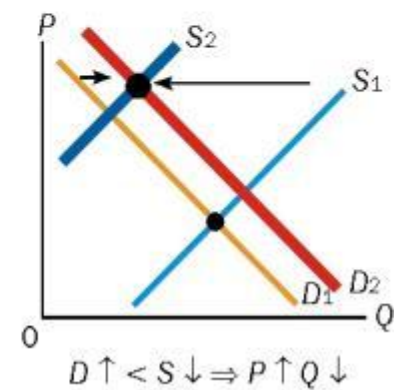
(e)



(f)



(g)



(h)