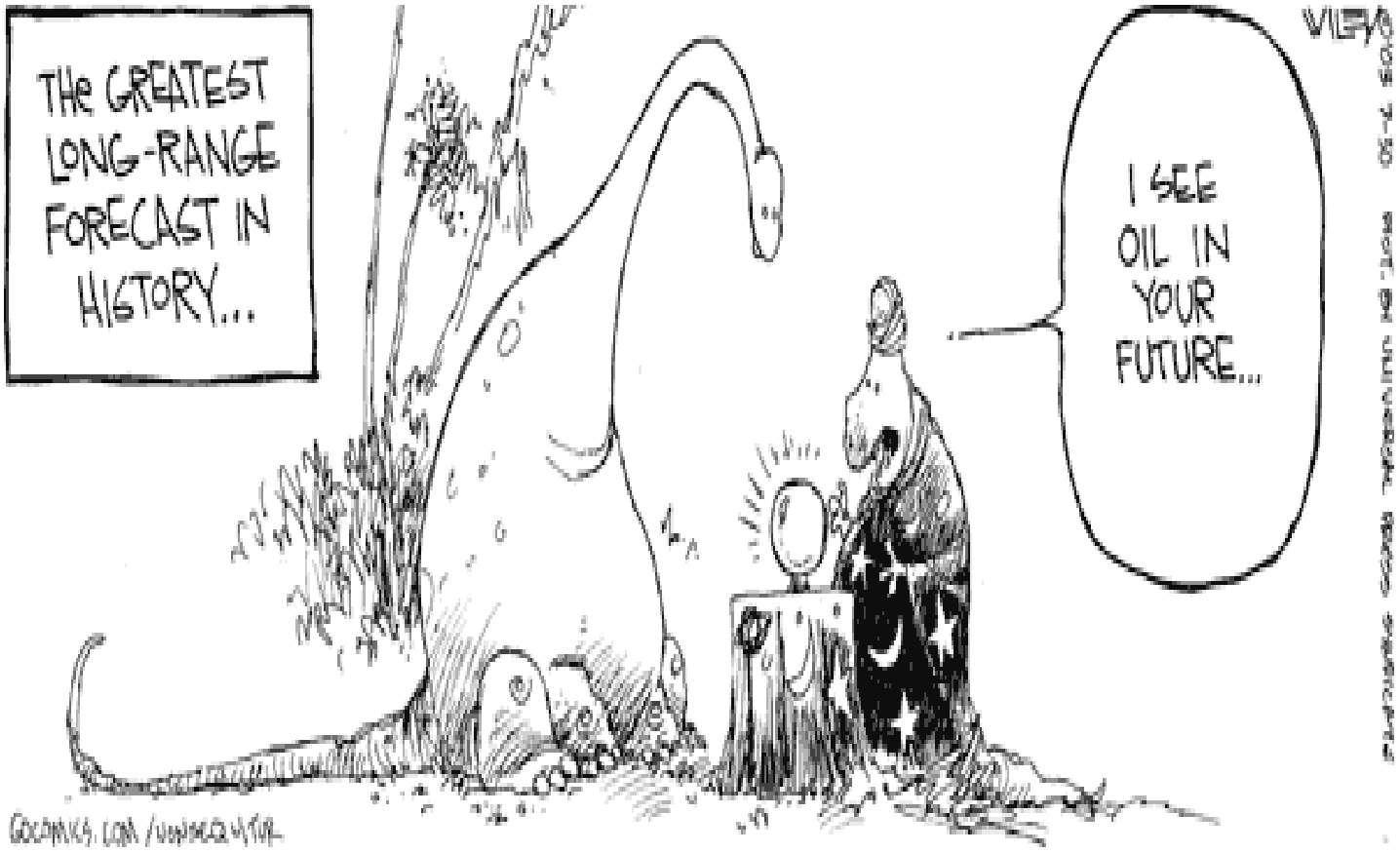
SUPPLY & DEMAND


THE GREATEST LONG-RANGE FORECAST IN HISTORY...
I SEE OIL IN YOUR FUTURE...

MARKETS

- Institution that brings together buyers (DEMAND)
- and sellers (SUPPLY) of resources, goods and services

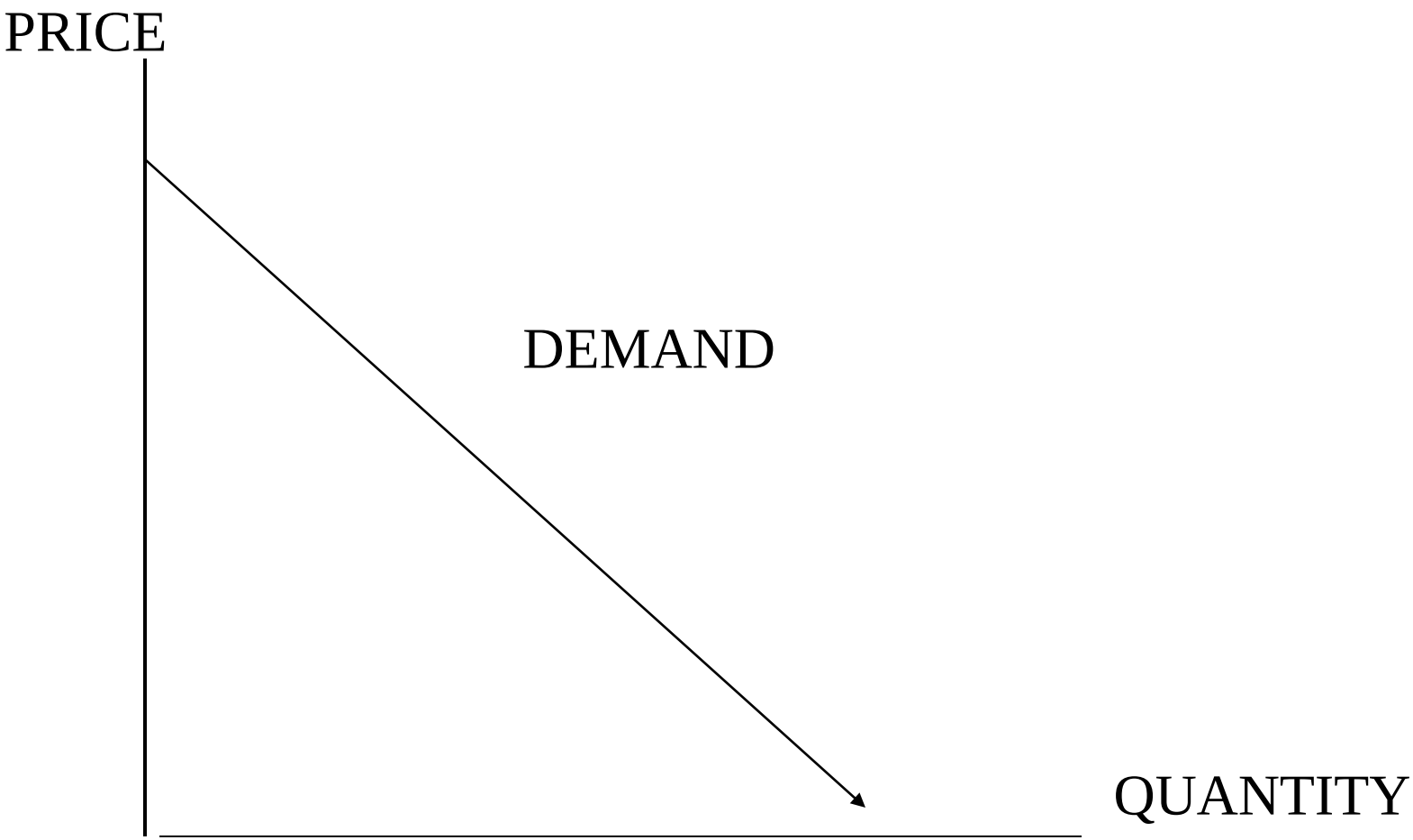
DEMAND is

- Amount of a good or service consumers are **willing and able** to buy
- Major determinant of demand is **PRICE**
- Amount of demand at each price is **quantity**
- Quantity of demand at each price is shown in a “**Demand Schedule**”

DEMAND SCHEDULE (buyers)

PRICE	QTY DEMANDED
$ 1.75	3
$ 1.50	5
$ 1.25	7
$ 1.00	10
$ 0.75	15
$ 0.50	20
$ 0.25	25

DEMAND CURVE



DEMAND CURVE

- P is the vertical axis
- Qty of D is the horizontal axis
- Demand Curve is downward sloping because:
  - Common sense (lower price = buy more)
  - Diminishing marginal utility (the more consumers buy, the less satisfaction they receive)
  - Income & Substitution Effects

INCOME & SUBSTITUTION

- Income Effect – the lower price increases the purchasing power of consumer’s
- Substitution Effect – lower price gives incentive to “substitute” this item for those that are relatively more expensive

Diminishing marginal utility :

- **Consuming successive units of a particular product yields less and less extra satisfaction – consumers will only buy additional units if the price is lowered.** *(the more consumers buy, the less satisfaction they receive)*

LAW OF DEMAND

- Demand varies inversely with price
- If Price goes up – Demand goes down

  Ex: luxury cars
- If Price goes down – Demand goes up

  - Ex: clearance sale

NON-PRICE DETERMINANTS

- **P**REFERENCES – based on popularity or trends by consumers
- **I**NCOME EFFECT – how much money consumers have available to spend
- **P**OPULATION CHANGES – how many consumers are in this market
- **E**XPECTATIONS OF CONSUMERS – what consumers think will happen in the future that affects their actions NOW!!

NON-PRICE DETERMINANTS con't.

- **E**lasticity of demand – how much demand changes to respond to changes in price
  - More elastic when goods are luxuries
    - Ex: steak, diamonds, SUV
  - More inelastic when good is needed
    - Ex: medicine (insulin), soap, milk

NON-PRICE DETERMINANTS con't.

- **R**elated Goods

SUBSTITUTION EFFECT

  - As price increases for a good, demand for its substitute (chicken for beef; generic) goes up

- COMPLEMENTARY GOODS
  - As price goes down for one good, demand for that good & its complement both go up
  - DVD player on sale but DVD bought for regular price

NON-PRICE DETERMINANTS

- REMINDER: “P I P E E R”
  - Preference of consumers (popularity)
  - Income of consumers ($$ to spend)
  - Population (# of consumers)
  - Expectations for future (what to do NOW?)
  - Elasticity (effect of price)
  - Related Goods
    - substitute available?
    - price of complementary good changes- demand for both changes?

A little more on consumer expectations

1. Expect P to go up in the future = D>now
2. Expect P to down in the future = D< now
3. Expect income to > in near future = D > now
4. Expect income to < in near future = D < now

Example: The news announces that the P of CD players will < next week. What does D do?

Substitutes (+ relationship)

- If the P of steak >, then the d for chick >
- If the P of steak <, then the d for chick <
- Pepsi for Coke……..

Complementary goods: *inverse relationship*

- If the price of flashlights goes up, then the Demand of batteries goes down.

- If the price of flashlights decreases, then the D for batteries_____?

Be wary of independent goods. They have no effect on one another

Like Chinese food and chocolate puddin

Hurry Lads – to the white boards!

Change in QD – caused by a CH in the P of the product under consideration now.

1. shown by moving from one point to another along a stable/fixed demand curve.

2. Caused by a change in the P of the product

3. The P of T-shirts >, :. QD <

Change in D

- Caused by a CH in one or more of the non-price determinants of D

  (whats the acronym?)……

- 1. The P of the product does not change now.
- 2. Shown by shifting the Dcurve.
- D> shift to the right
- D< shift to the left

Draw a DC based on the D schedule below these stupid words.

20oz Red Bull	Cans of 20oz Red Bull
$ 1.75	3
$ 1.50	5
$ 1.25	7
$ 1.00	10
$ 0.75	15
$ 0.50	20
$ 0.25	25

What do you do with D if the price moves from $.50 to $1.50?

- A news report has just surfaced that energy drinks will make you smarter, better looking and smell like sunshine.

- Three 4 year old kids drank Red Bull last night and tweeked so hard that they brains froze up like the laptops at Guyer.

- 20 oz Red Bull is selling for $2.00 per can.
- The price of Monster just dropped to 1.00 per 20oz can.

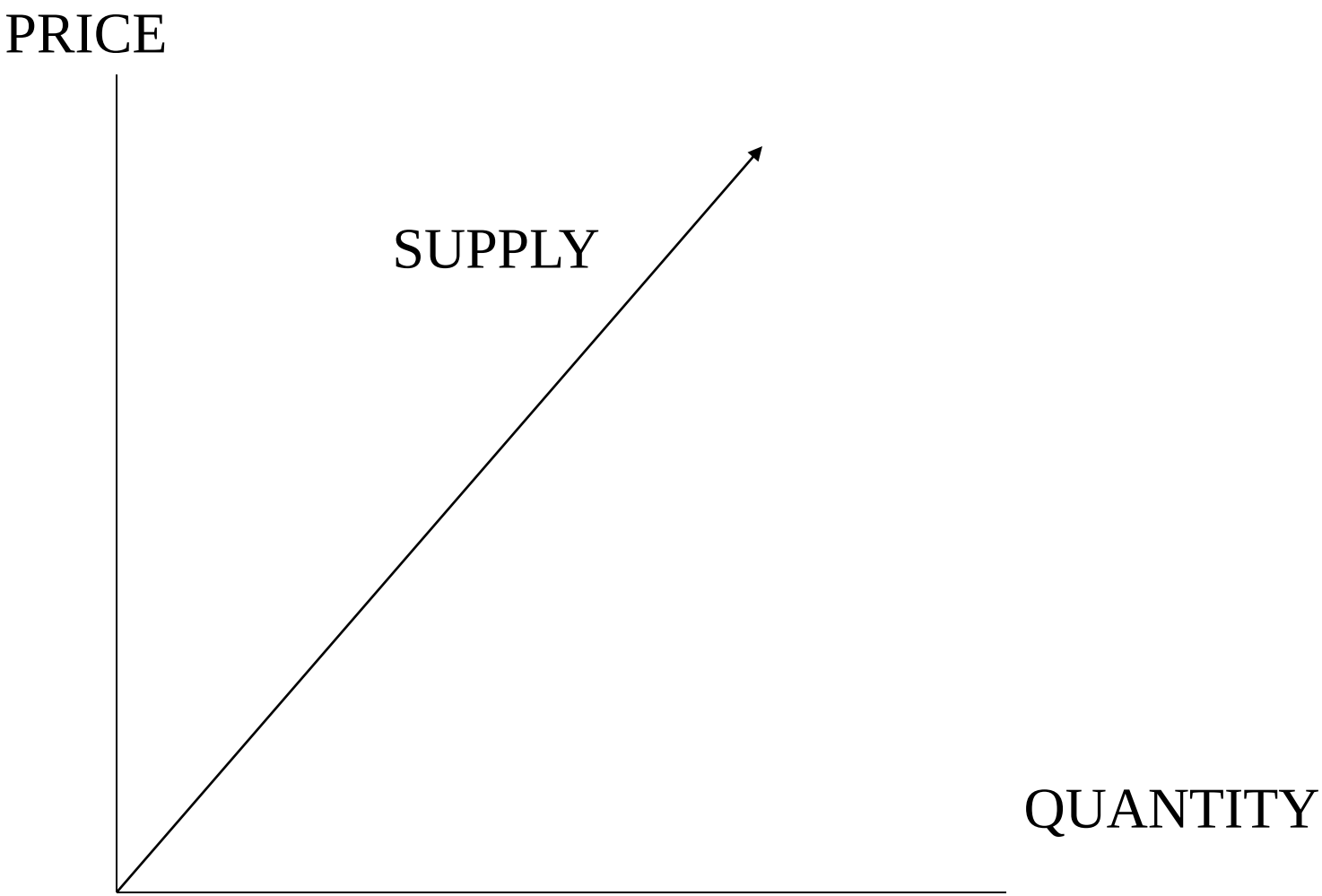
SUPPLY is

- Amount of a good or service producers are **willing and able** to sell
- Major determinant of supply is **PRICE**
- Amount of supply at each price is **quantity**
- Amount of supply at each price is shown in a “**Supply Schedule**”

SUPPLY SCHEDULE

PRICE	QTY SUPPLIED
$ 1.75	25
$ 1.50	20
$ 1.25	17
$ 1.00	15
$ 0.75	10
$ 0.50	7
$ 0.25	5

SUPPLY CURVE



SUPPLY CURVE

- Price is the vertical axis
- Qty of supply is the horizontal axis
- Supply Curve is upward sloping because:
  - Price and quantity supplied have a direct relation
  - Price is an incentive to the producer as they receive more revenue when more is sold

LAW OF SUPPLY

- Supply varies directly with price

- If Price goes up – Supply goes up
- If Price goes down – Supply goes down

NON-PRICE DETERMINANTS

- **Cost of Production**
  - Cost of producing goods & services
  - **Ex: minimum wage for labor goes up**
  - **Ex: Natural disasters make costs go up**
- **Expectations of producers**
  - Predictions on how consumers will act
- **Resources** that can be used to produce different goods
  - Corn instead of wheat

NON-PRICE DETERMINANTS

- **Technology**
  - Improvements increase production
- **Taxes/Subsidies**
  - Pay more tax which increases cost of production
  - Gov pays firm to produce
- Suppliers (# of firms)

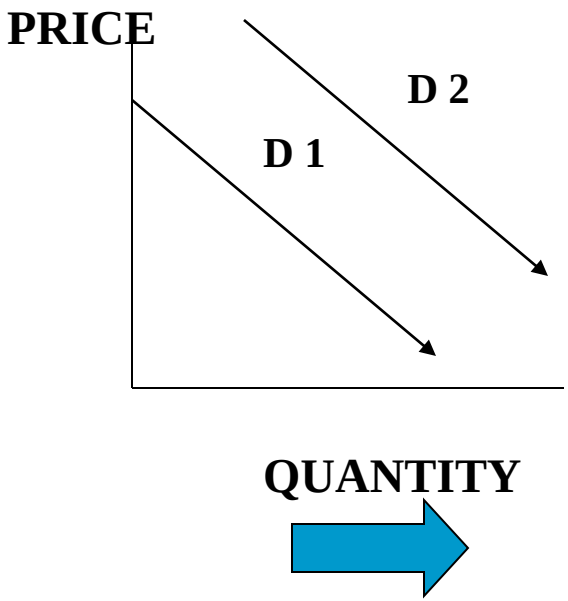
REMINDER: “C E R T T/S S”

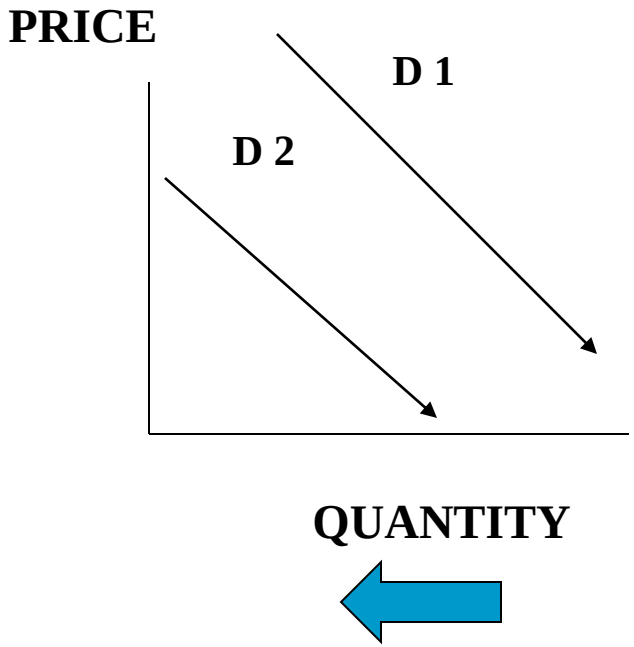
Book Version – page 48

- Resource prices
- Technology
- Taxes and subsidies
- Prices of other goods
- Price expectations
- Number of sellers in the market

Shifts in Supply & Demand Curves

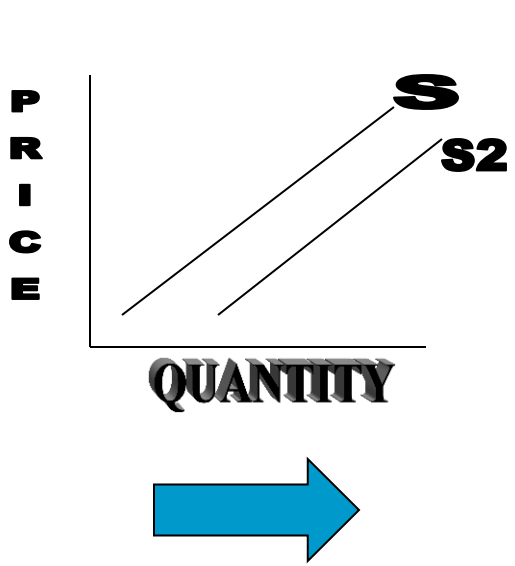
- Increase - shifts to the right
- Decrease - shifts to the left

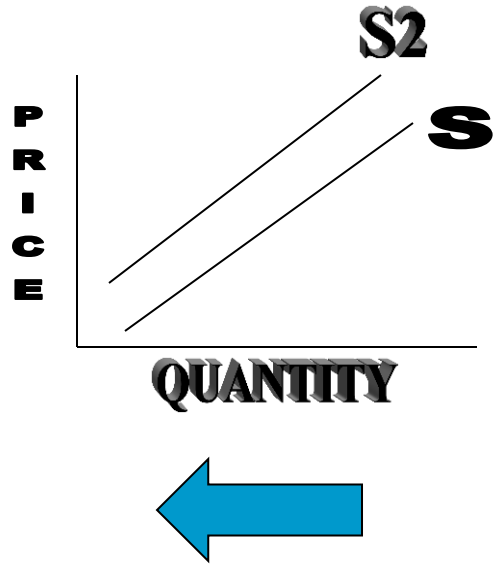




Shifts in Supply & Demand Curves

- Increase - shifts to the right
- Decrease - shifts to the left





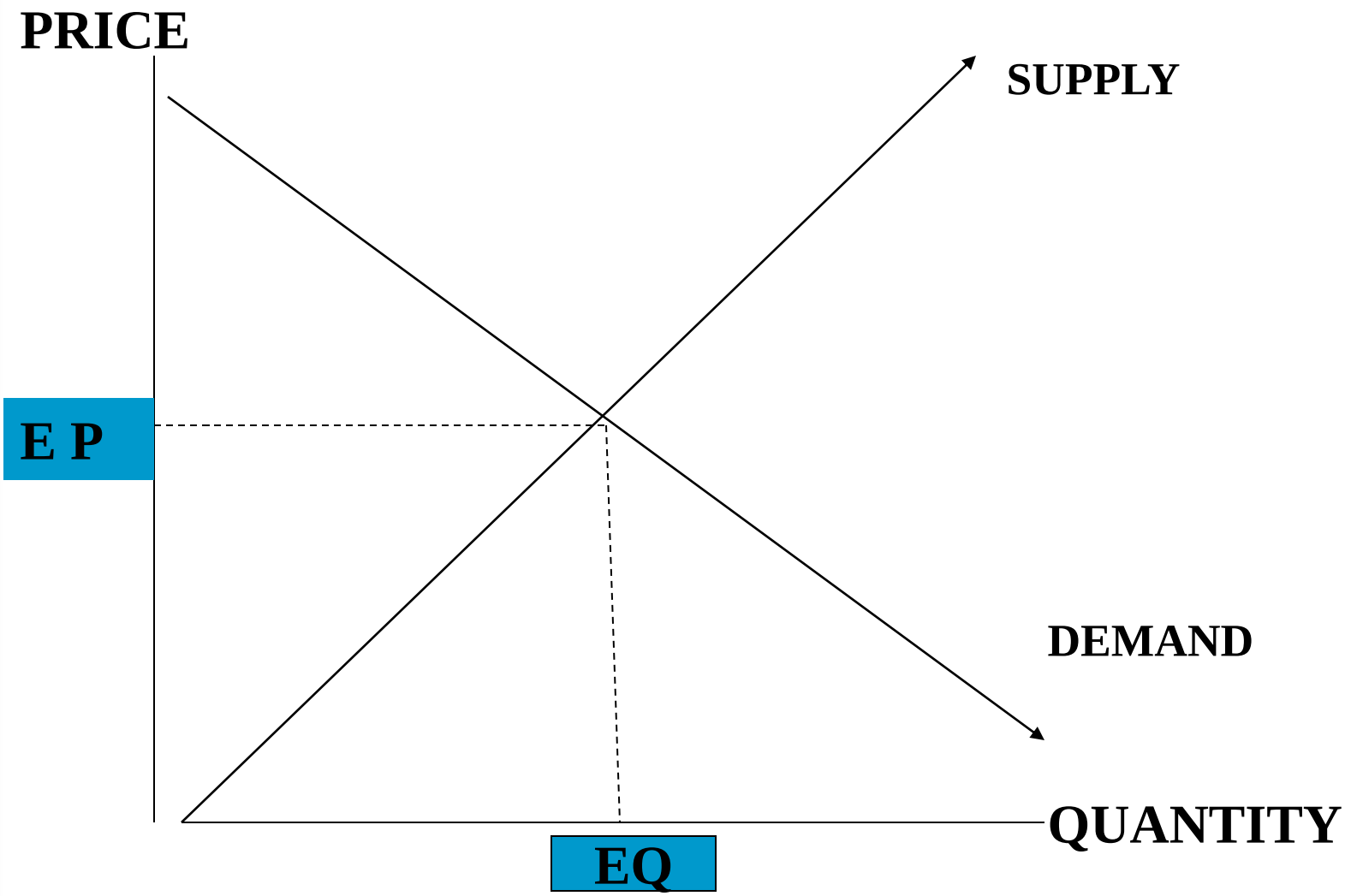
Effects of Changes in both S&D page 53 in the book

S	D	Eq P	Eq Q
>	<	<	Indeterminate
<	>	>	Ind
>	>	Ind	>
<	<	Ind	<

EQUILIBRIUM PRICE

- Point where buyers and sellers are equally satisfied
- Point where D & S curves intersect
- Adam Smith's Invisible Hand Theory
  - Forces of S & D, competition & price make societies use resources efficiently

EQUILIBRIUM PRICE



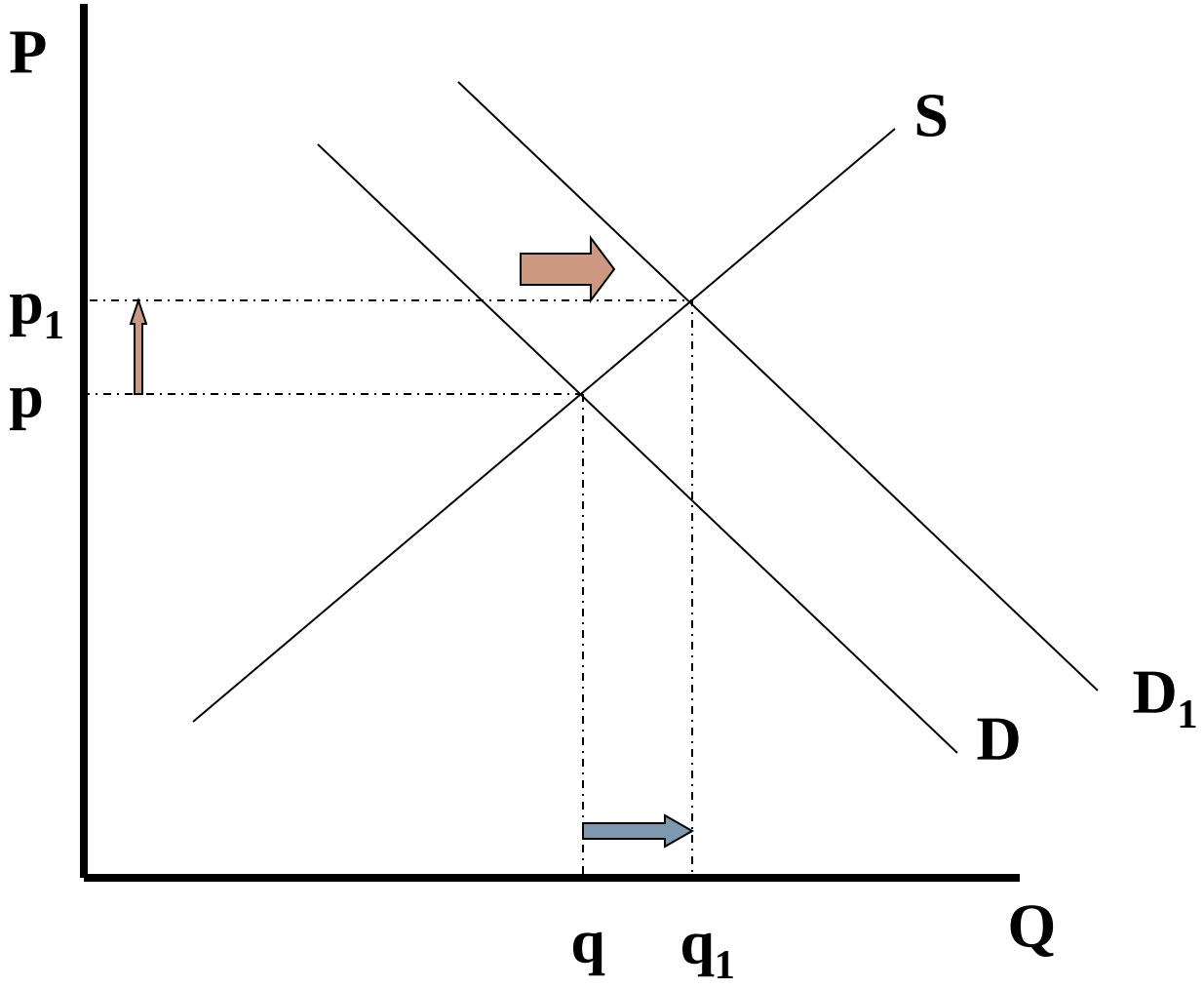
Equilibrium

- When supply = demand, there is equilibrium in the market
- Equilibrium creates a single price and quantity for a good/service

Changes in equilibrium

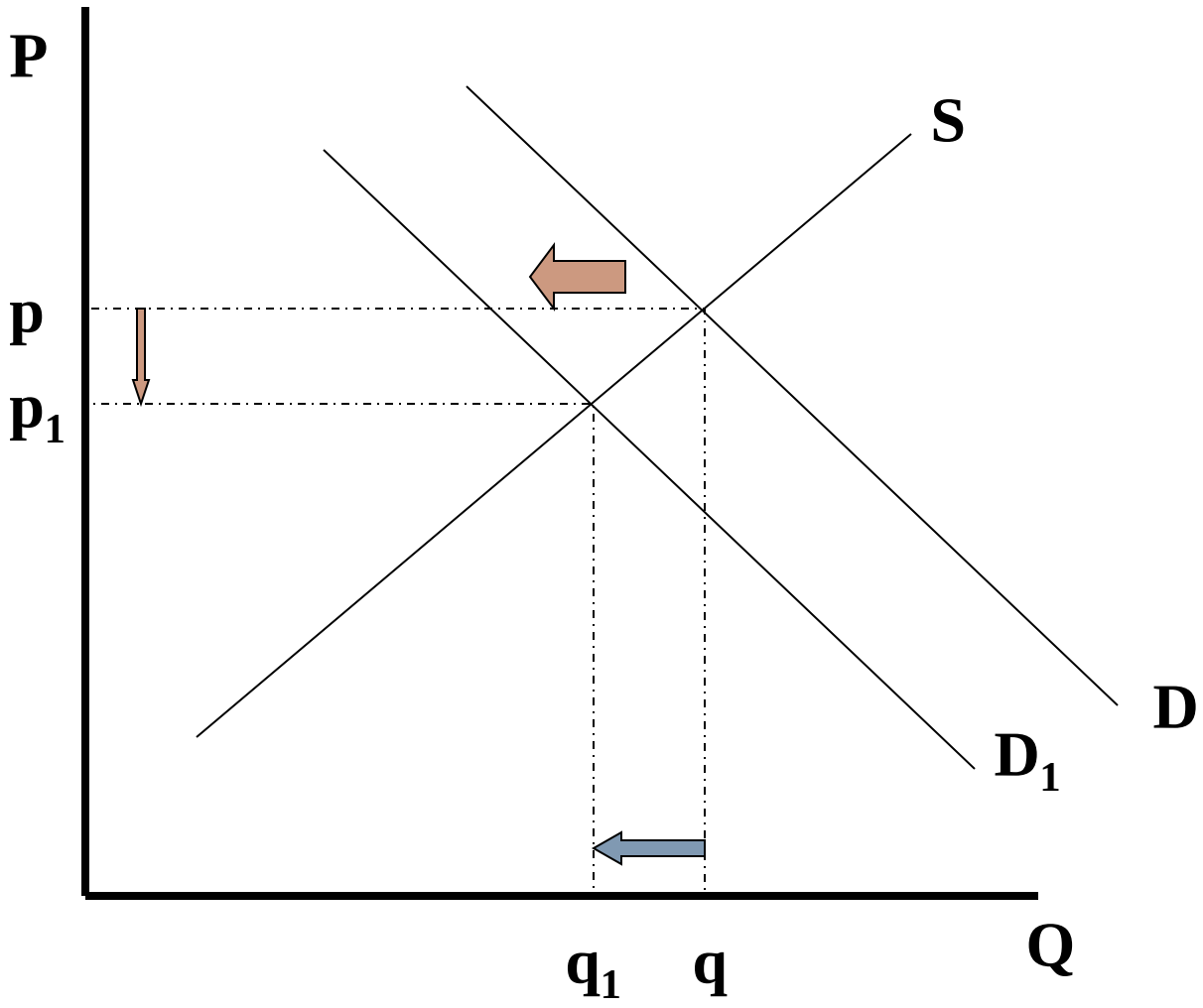
- When supply or demand changes, the equilibrium price and quantity change
- If demand increases then price increases and quantity increases
- If demand decreases then price decreases and quantity decreases
- If supply increases then price decreases and quantity increases
- If supply decreases then price increases and quantity decreases

Increase in Demand



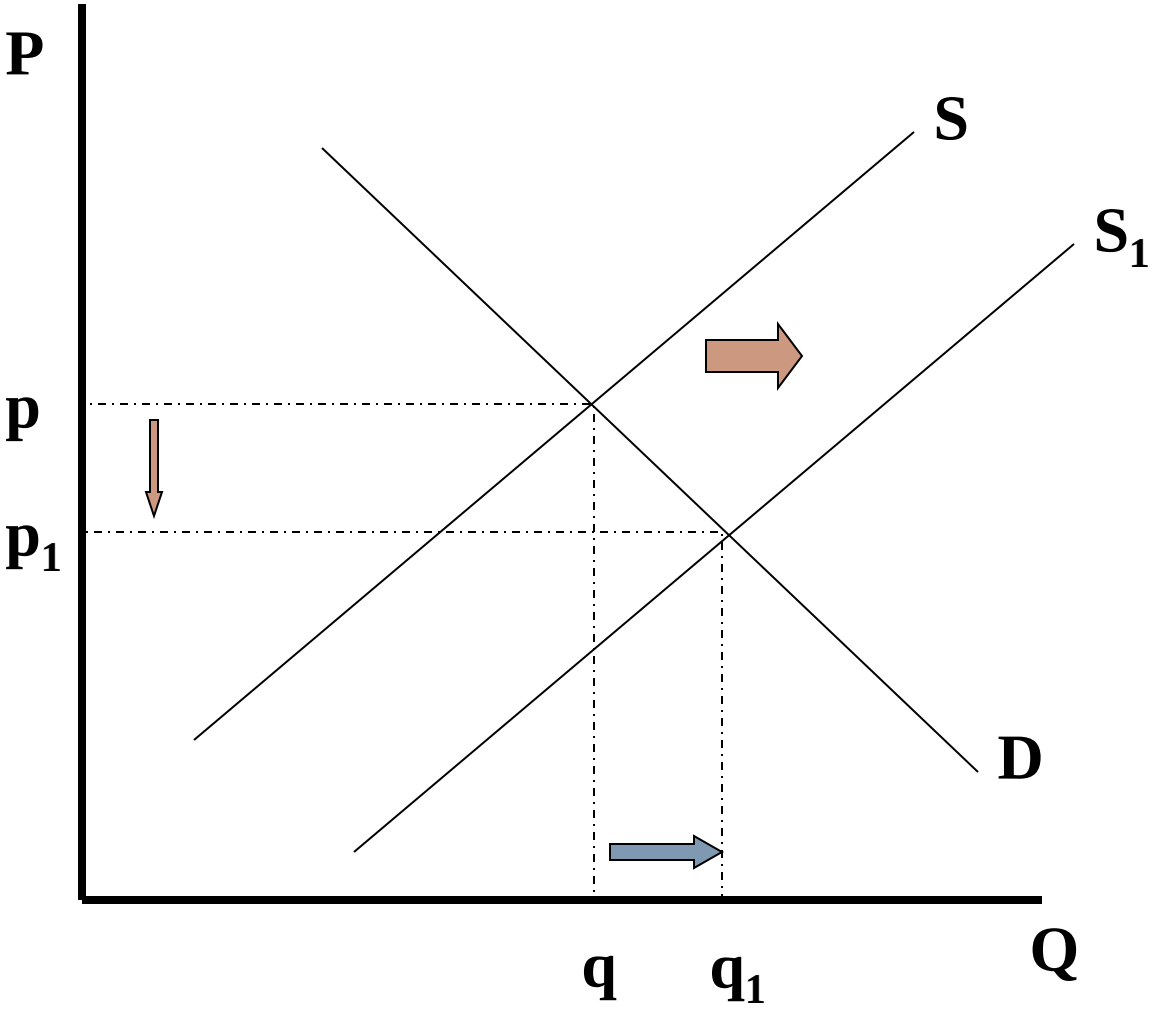
D → .: P ↑ & Q ↑

Decrease in Demand



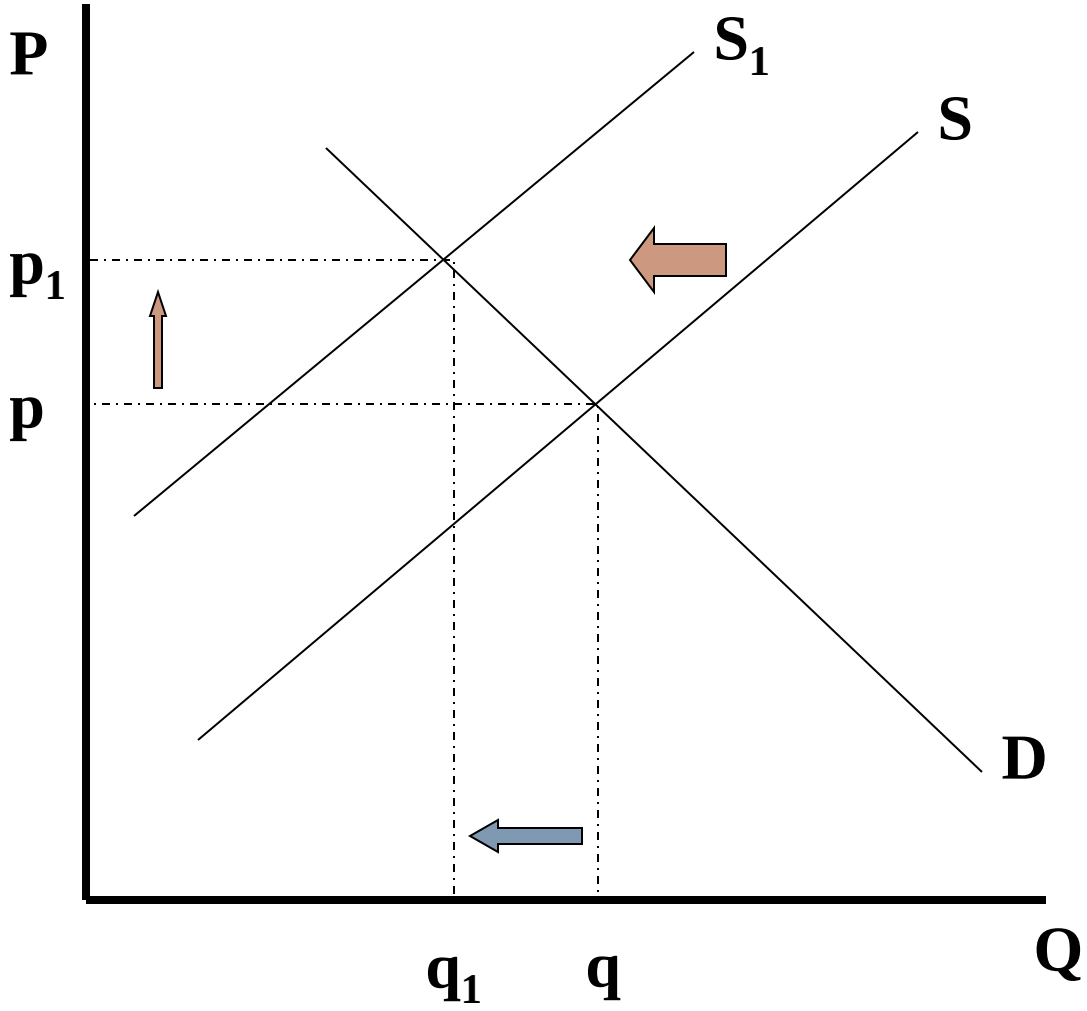
D ← .: P↓ & Q↓

Increase in Supply



S → .: P ↓ & Q ↑

Decrease in Supply



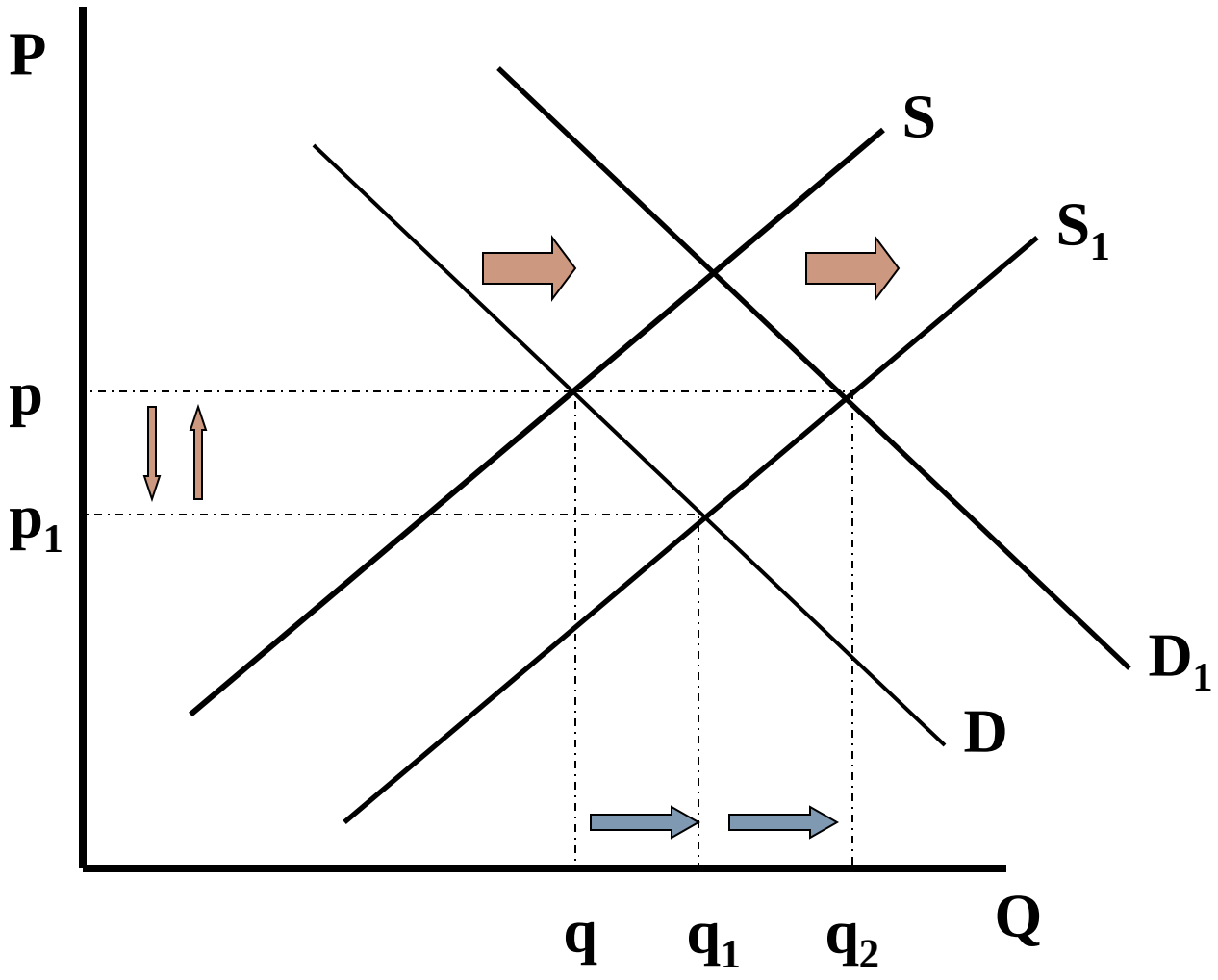
S ← .: P↑ & Q↓

Simultaneous Changes in Supply and Demand

- If supply and demand both increase then price is indeterminate, but quantity definitely increases

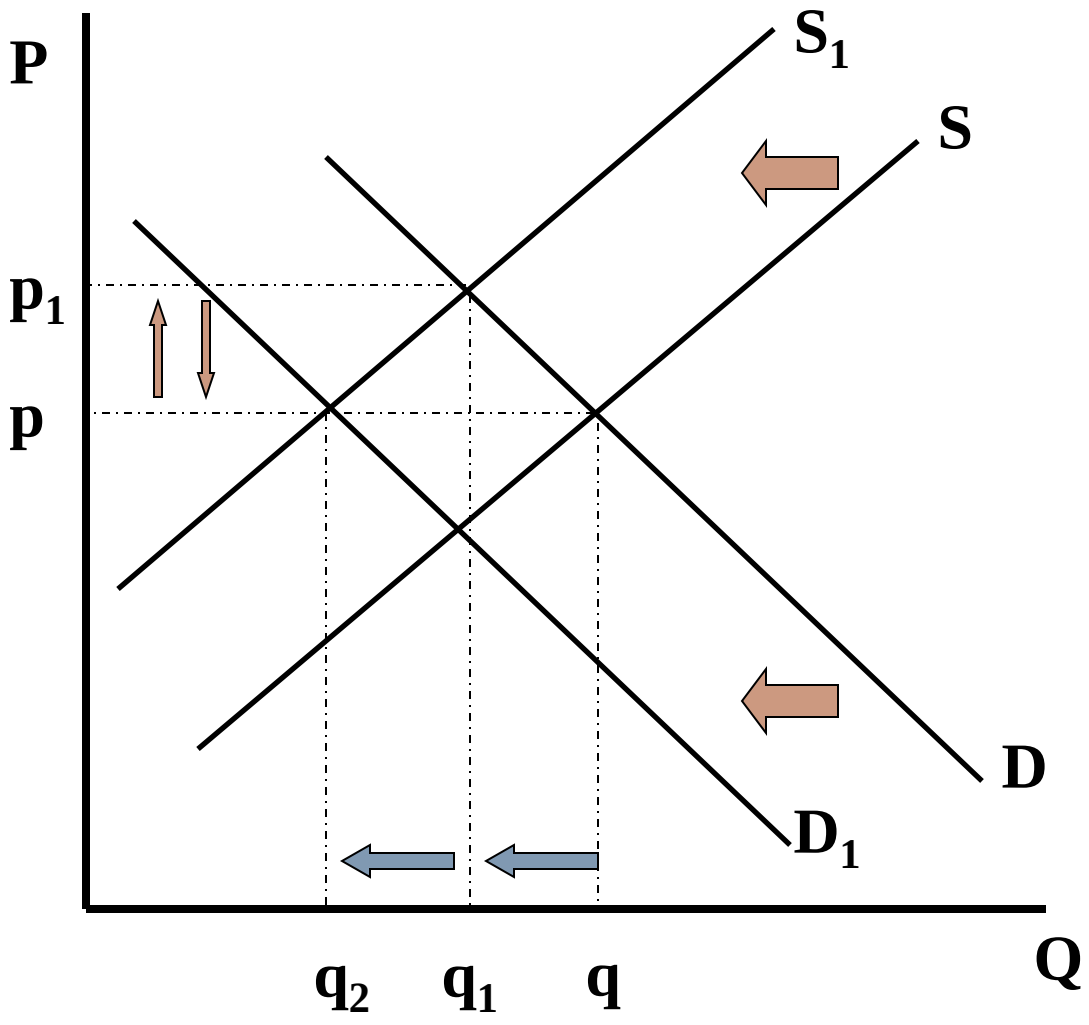
- If supply and demand both decrease then price is indeterminate, but quantity definitely decreases

Simultaneous Increase in Supply & Demand



S → & D → .: P ? & Q ↑

Simultaneous Decrease in Supply & Demand



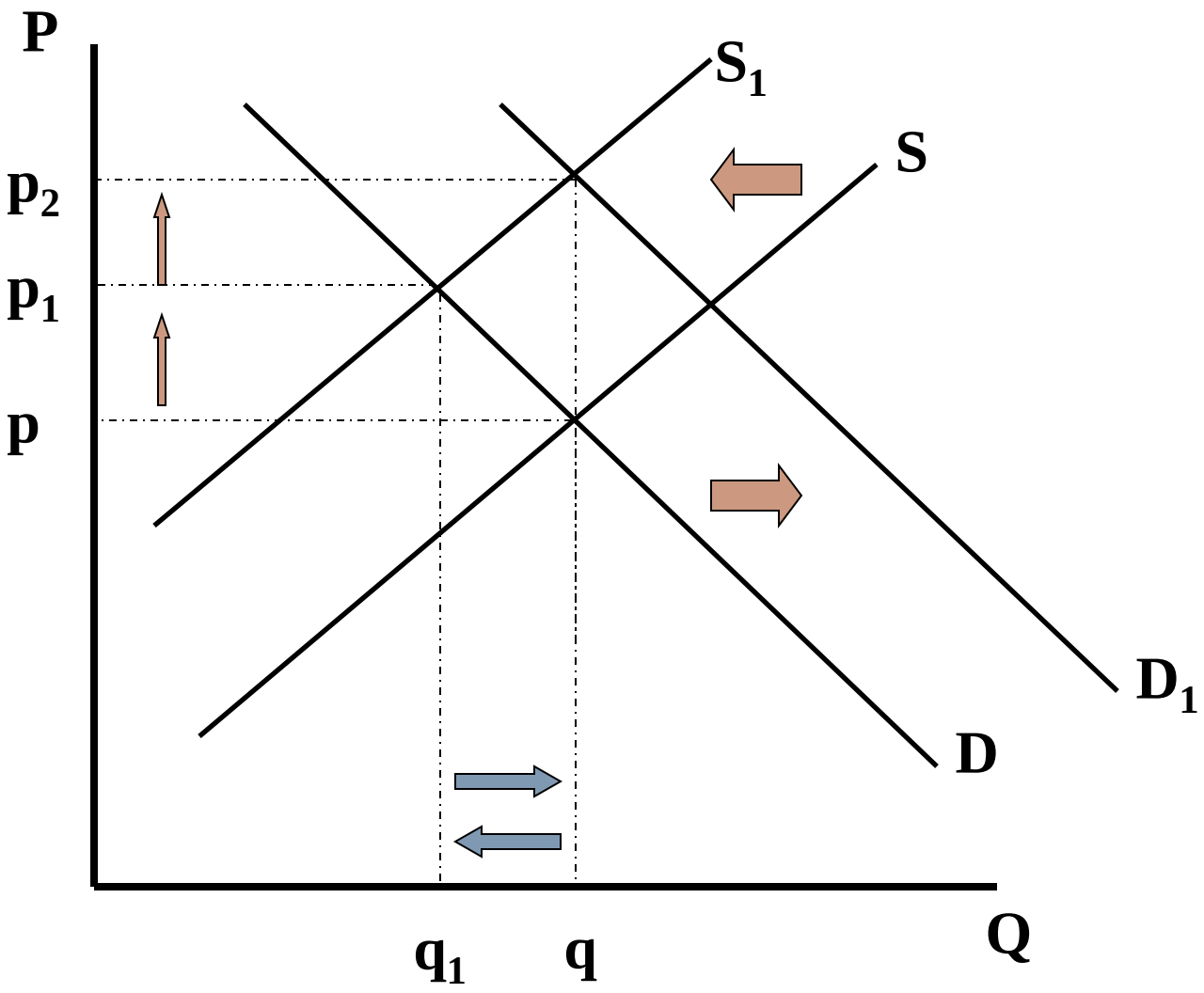
S ← & D ← .: P ? & Q↓

Simultaneous Changes in Supply and Demand

- If supply decreases while demand increases, then price definitely increases while quantity is indeterminate

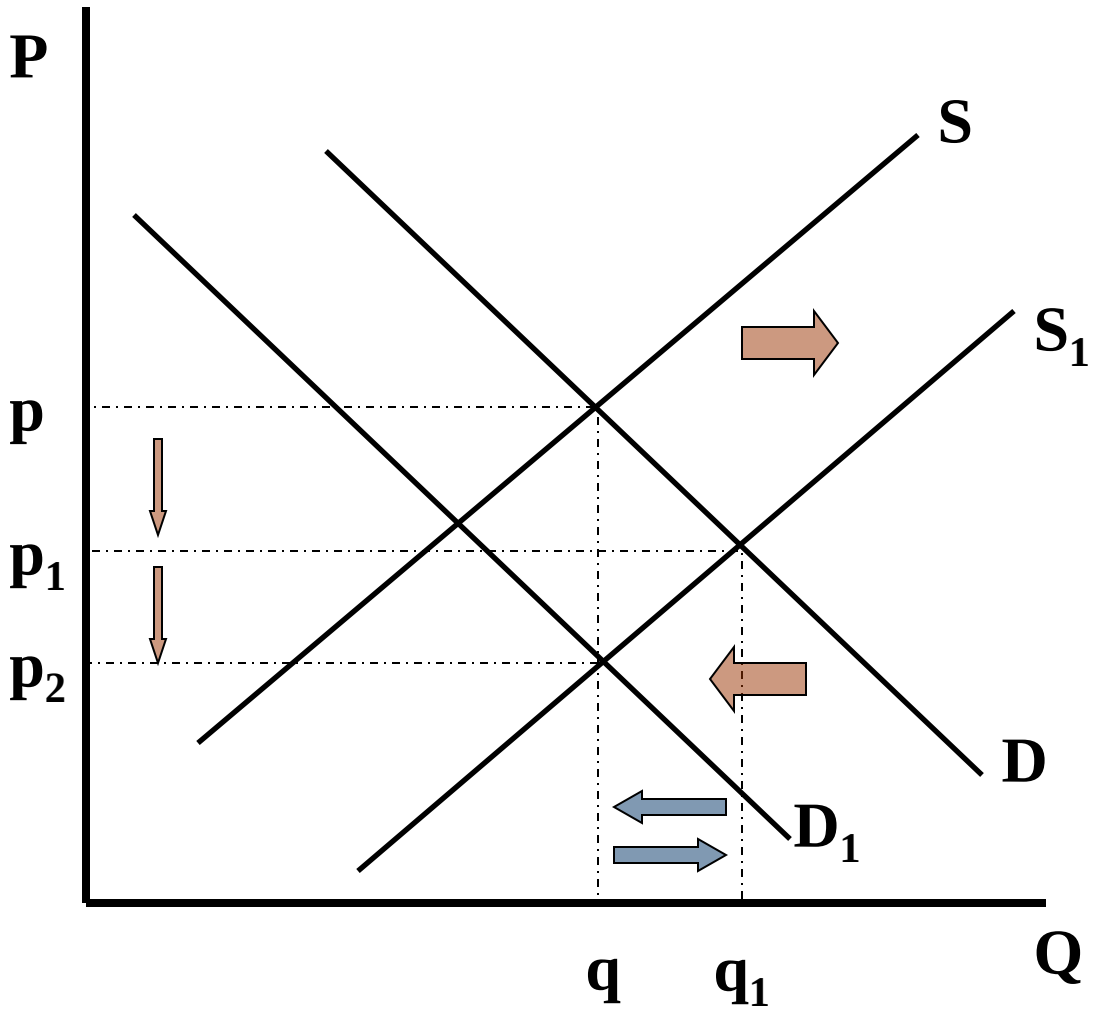
- If supply increases while demand decreases, then price definitely decreases while quantity is indeterminate

Decrease in Supply w/ Simultaneous Increase in Demand



S ← & D → .: P↑ & Q ?

Increase in Supply w/ Simultaneous Decrease in Demand



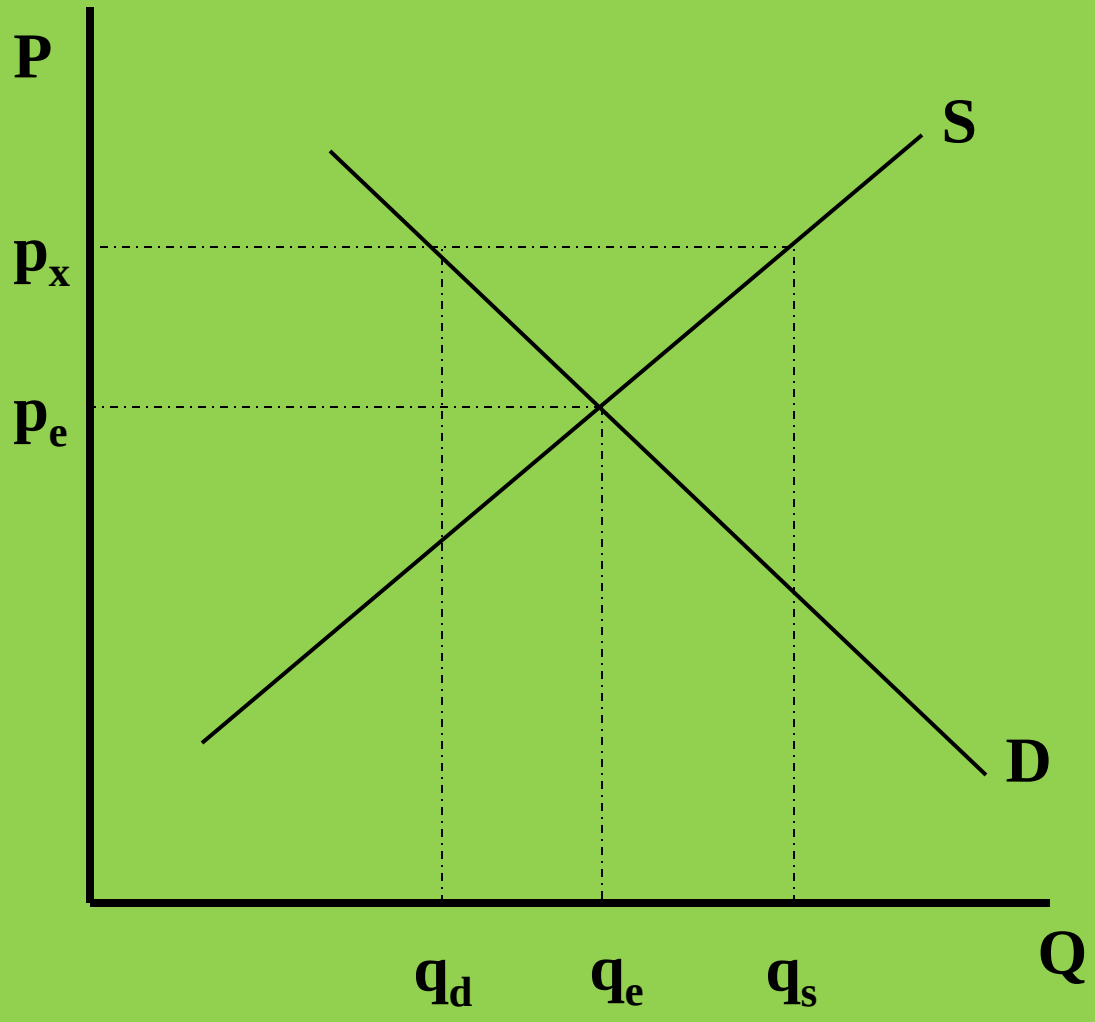
S → & D ← .: P↓ & Q?

Disequilibrium

- If price occurs at some point where supply and demand are not =, then disequilibrium exists.
- If the price is higher than the equilibrium price, then a surplus ($Q_s > Q_D$) occurs
- If the price is lower than the equilibrium price, then a shortage occurs ($Q_s < Q_D$)

Market Disequilibrium

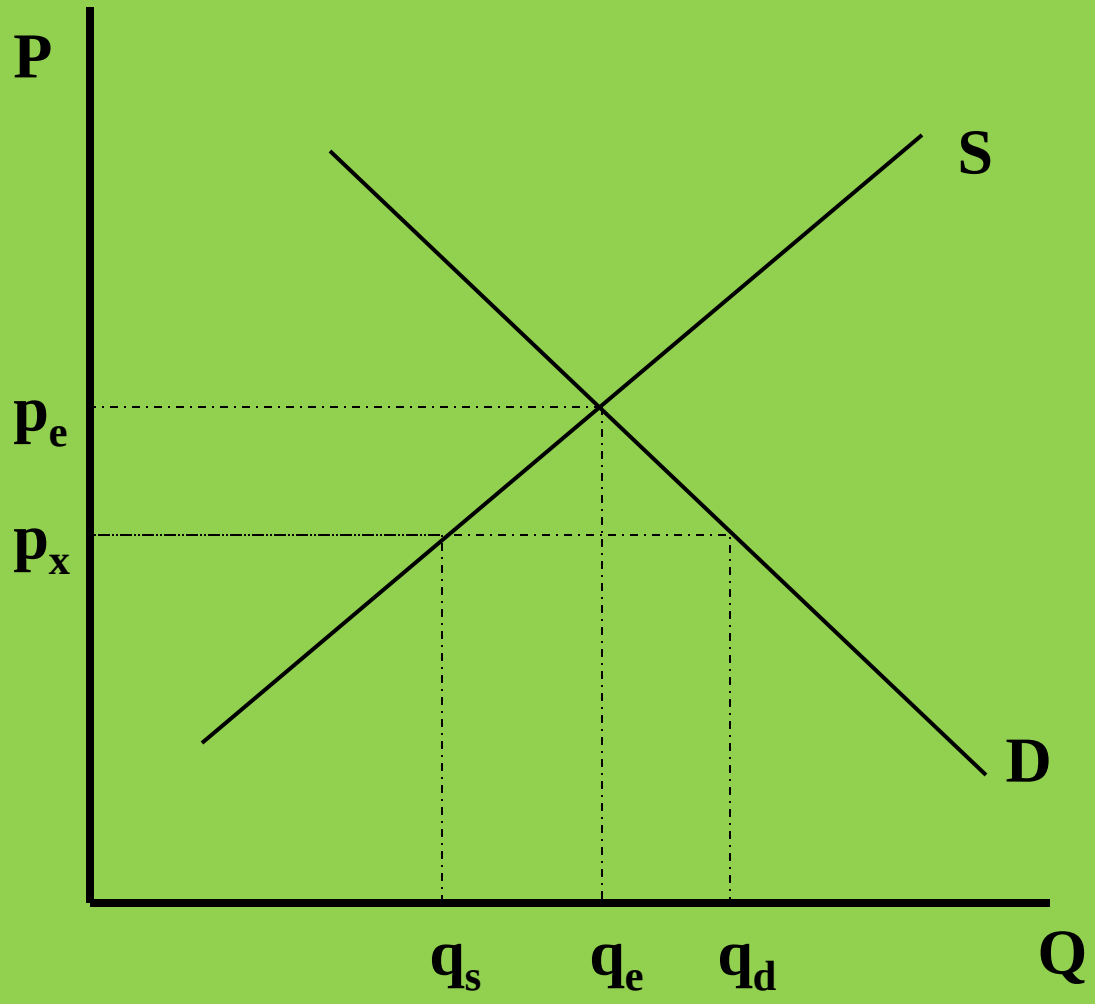
(Price, p_x, above Equilibrium Price, p_e)



If price is p_x, then $q_d < q_s$.: surplus exists (surplus = $q_s - q_d$)

Market Disequilibrium

(Price, p_x, below Equilibrium Price, p_e)



If price is p_x, then $q_s < q_d$.: shortage exists (shortage = $q_d - q_s$)

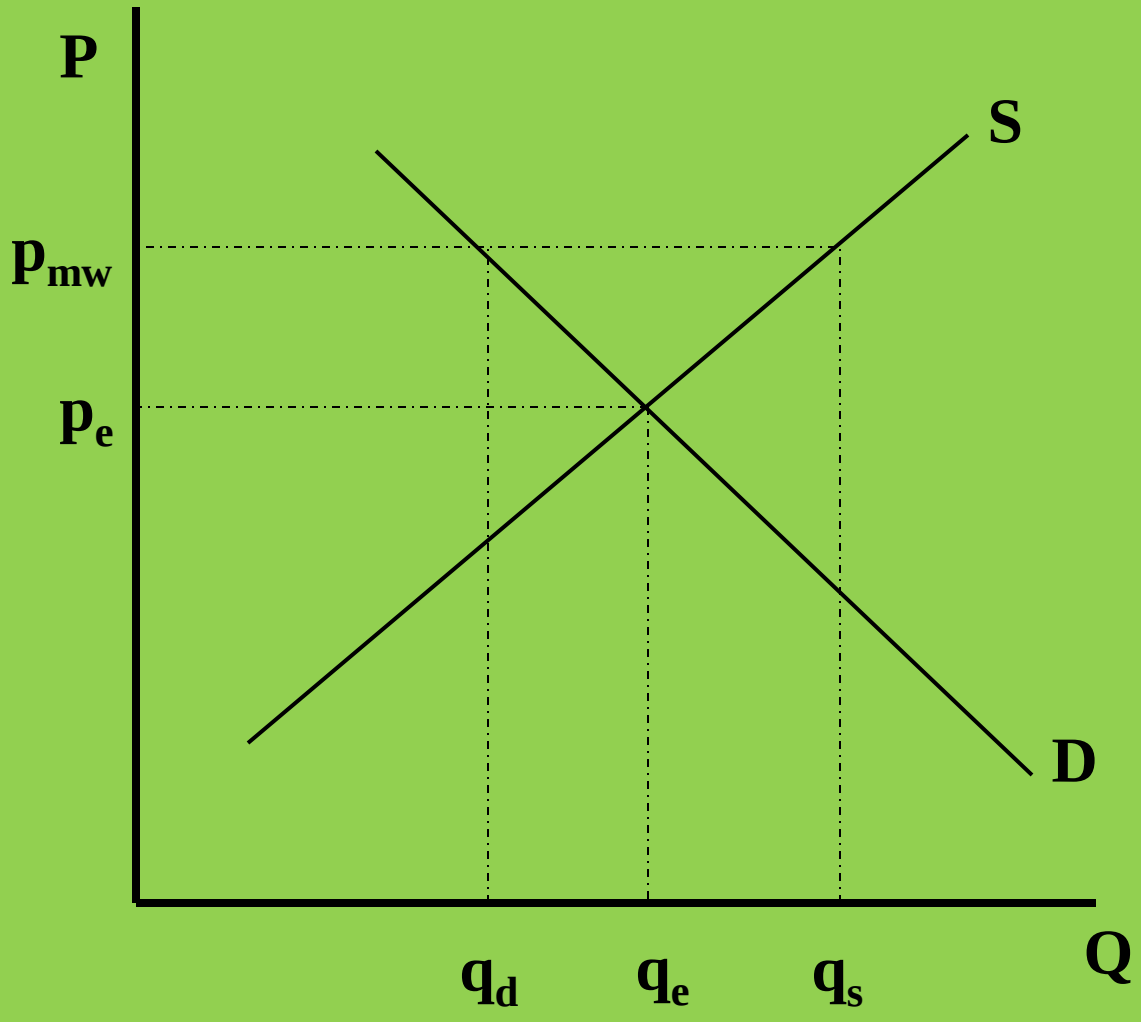
Causes of Disequilibrium

- Price floor – a minimum price for a good/service or resource determined outside of the market
  - Ex. Minimum wage

- Price ceiling – a maximum price for a good/service or resource determined outside of the market
  - Ex. Concert tickets sold by Ticket-master

Effective Price Floor

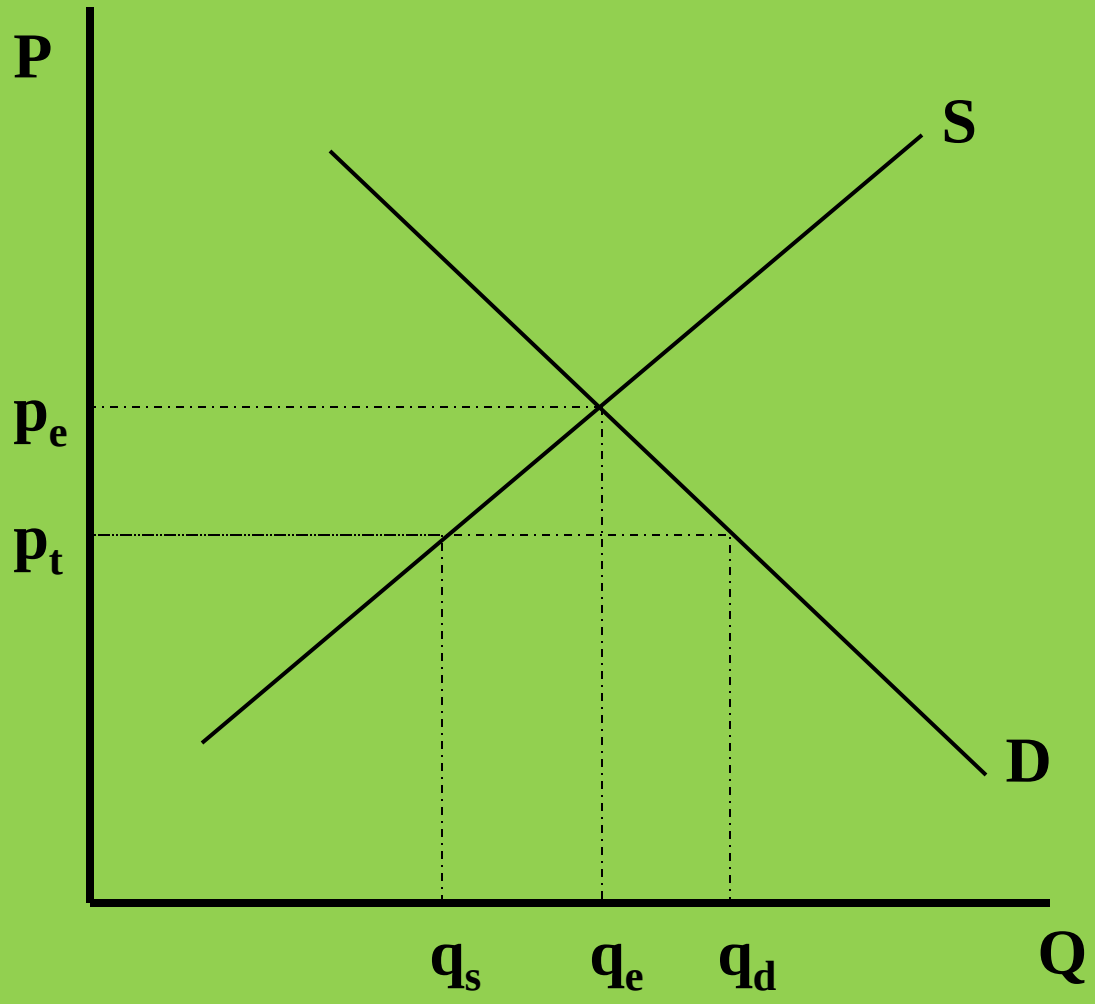
(ex. Minimum wage in competitive unskilled labor market)



If price floor is effective, then $q_d < q_s$.: surplus labor exists

Effective Price Ceiling

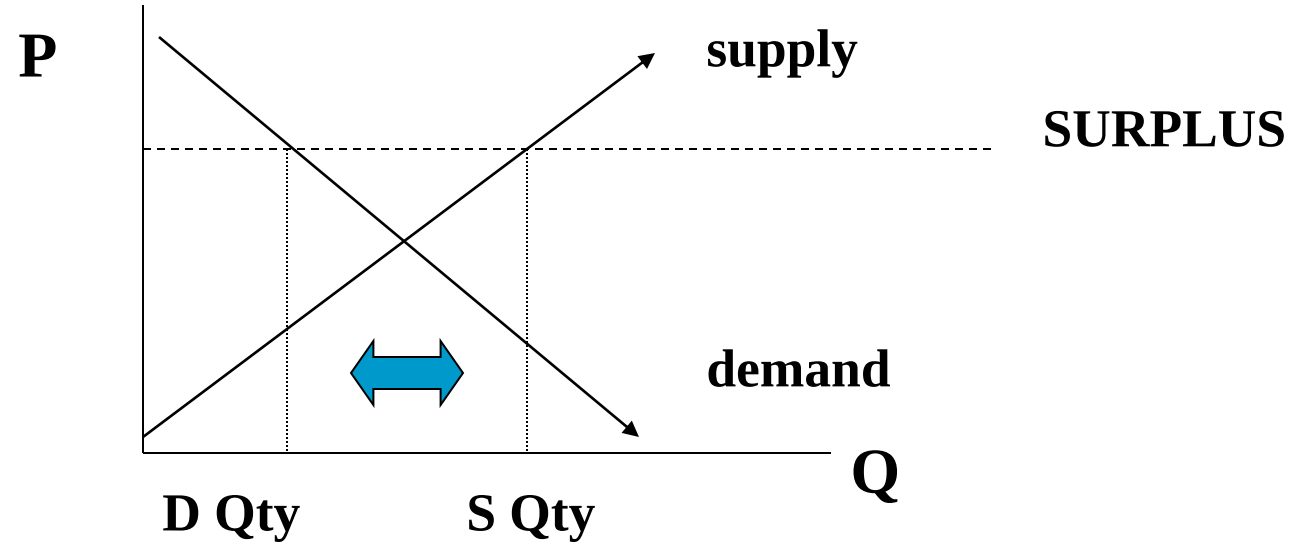
(ex. Single price for admission to a popular concert)



If price ceiling is effective then $q_s < q_d$.: ticket shortage exists

SURPLUS

- Supply is greater than demand at this price
- Must adjust by lowering price to reach equilibrium



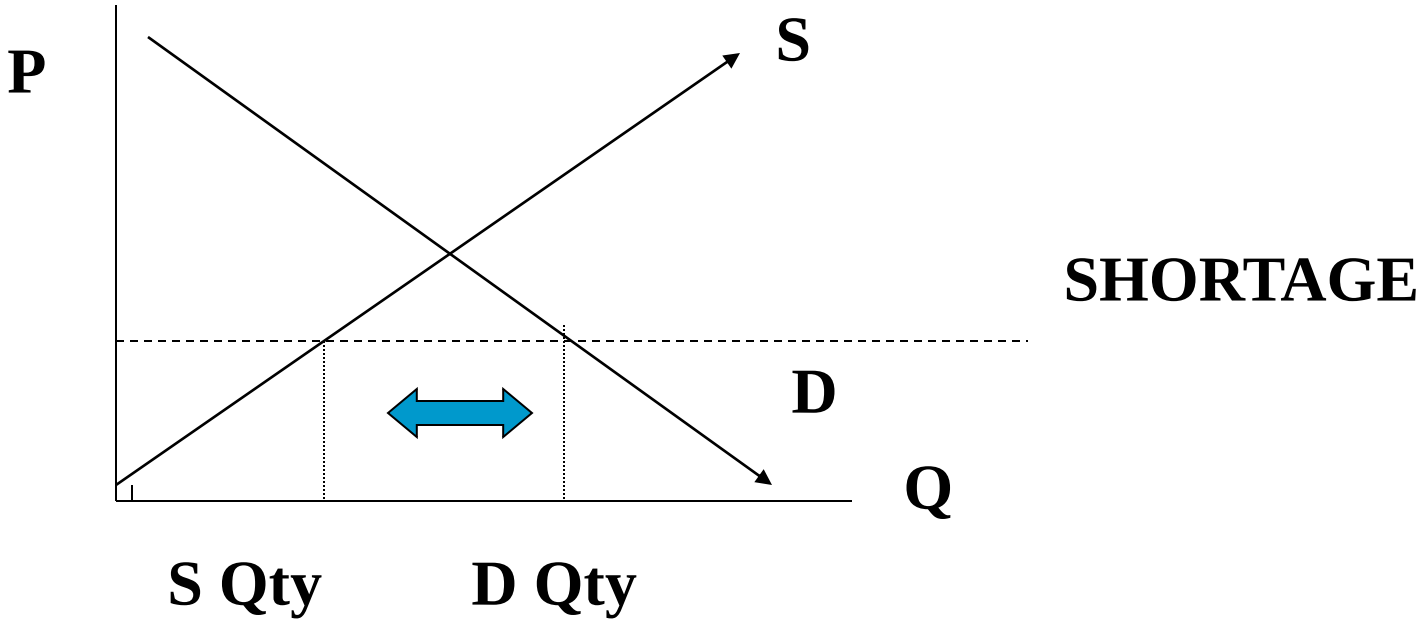
Price Floors

- Government sets minimum price
  - Price can't go lower
  - Causes surplus
  - Market can't adjust

Ex: Minimum wage causes surplus of workers at set price

SHORTAGE

- Demand is greater than supply at this price
- Must adjust by increasing the price



Price Ceilings

- Government sets maximum price
  - Price can't go higher
  - Causes shortage
  - Market can't adjust

Ex: Rent controls, Price controls, Utility rates set by gov't.

What else……

- Inferior goods - is a good that decreases in demand when consumer income rises
- Superior goods - make up a larger *proportion* of consumption as income rises, and therefore are a type of normal good
- Normal goods - are any goods for which demand increases when income increases and falls when income decreases but price remains constant
- $ is not a productive resource – doesn't produce
- Ppc – the origin
- Ppc – perfectly shiftable

Conclusion

- Markets work best when supply and demand determine the price of goods/services or resources.
- When forces other than supply and demand determine the price of goods/services or resources, surpluses and shortages result.
- Over time, the forces of supply and demand undermine artificial price controls
  - Ex. Black markets, ticket scalping, undocumented workers

Supply and Demand Curves

http://ecedweb.unomaha.edu/Dem_Sup/econqui2.htm

TIME TO PRACTICE GRAPHS!