



Graph Basics

- Movement change along the curve
 - Shift the curve moves
 - Increase to the right
 - Decrease to the left
 - Intersection of curves Price
 - Label: both axis, curves, intersections and new curves

MARKET

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

DEMAND

- Amount of a good or service consumers are <u>willing and able</u> 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

- Diminishing marginal utility
 - the more consumers buy, the less satisfaction they receive

Diminishing marginal utility



Diminishing marginal utility



INCOME & SUBSTITUTION

Income Effect

– lower P = more purchasing power

Substitution Effect

 lower P > incentive to "substitute" cheaper alternatives

LAW OF DEMAND

 D varies inversely with P
 If Price goes up – Demand goes down Ex: luxury cars

If Price goes down – Demand goes up

- Ex: clearance sale

NON-PRICE DETERMINANTS

- PREFERENCES based on popularity or trends by consumers
- INCOME EFFECT how much money consumers have available to spend
- POPULATION CHANGES how many consumers are in this market
- EXPECTATIONS OF CONSUMERS what consumers think will happen in the future that affects their actions NOW!!

NON-PRICE DETERMINANTS con't.

Elasticity of demand – how much D changes to respond to changes in P

- 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.

Related 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: "PIPEER"

- 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
 - Substitutes
 - compliments

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



Change in QD = movement along D curve 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 (what's the acronym?).....
- I. The P of the product does not change now.
- 2. Shown by shifting the D curve.
- D> shift to the right
- D< shift to the left</p>

Hurry Lads – to the white boards!



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 <u>willing and able</u> 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 PRICE





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: "CERTT/SS"

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



QUANTITY



Shifts in Supply & Demand Curves

Increase - shifts to the right
 Decrease - shifts to the left
 S2
 S3
 S4
 S4



Effects of Changes in both S&D page 53 in the book <u>S</u> EqP Eq Q D Indeterminate > < < Ind < > > Ind > > > Ind < < <

DEMAND

Price causes movement

PIPEER causes shifts



SUPPLY

Price causes movement CERT T/S S Causes shifts



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

- 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



Draw correctly labeled S&D graphs showing.... >D< D>S< Smark new equilibrium P&Q and tell the "story"

Decrease in Demand



Increase in Supply









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



 $S \rightarrow \& D \rightarrow :: P ? \& Q \uparrow$

Simultaneous Decrease in Supply & Demand



 $S \leftarrow \& D \leftarrow .: P ? \& Q \downarrow$

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



 $S \leftarrow \& D \rightarrow :: P \uparrow \& Q ?$

Increase in Supply w/ Simultaneous Decrease in Demand



 $S \rightarrow \& D \leftarrow :: P \downarrow \& Q?$

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/e conqui2.htm

TIME TO PRACTICE GRAPHS!

Effect of Import Tariff

Effects of a Subsidy

