The Laws of Supply and Demand

What are the basic laws of supply and demand?

What causes shifts in the curves of supply and demand?
What is “supply and demand”?

- **Supply and demand** is how economists track the dividing of resources & their value within a society.

- Two (2) goals:
  - How much of a product do we have?
  - Is the demand for that product strong?
What is the “law of supply”? 

- The **Law of Supply** asks: “How much of a good or service is a company willing to produce at a _________ price?”
  - Hypothesis?

- Answer:
  - If nothing changes, a company will produce a greater quantity of products when the price for that good is high. *(WHY?)*
Supply Curve for Xbox 360

Price per Xbox vs. Quantity Supplied in Billions of XBOXes per Year

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What are the factors that determine “supply”?

• “P.I.G. T.O.E.S”
  - **P**roductivity (workers, machines, and/or assembly)
  - **I**nputs (Change in the price of materials needed to make the good)
  - **G**overnment Actions (Subsidies, Taxes, and Regulations)
  - **T**echnology (Improvements in machines and production)
  - **O**utputs (Price changes in other products)
  - **E**xpectations (outlook of the future)
  - **S**ize of Industry (Number of companies in the industry)
How does a supply curves move?

- A supply curve shifts whenever a factor that affects the supply of the good (other than price) changes
  - **RIGHT**: Increase in supply (at all prices)
  - **LEFT**: Decrease in supply (at all prices)
What factors cause a shift in a supply curve?

• Two (2) reasons:
  – A change in cost of production
    • \( \uparrow \downarrow \) in a cost of producing a product = \( \uparrow \downarrow \) in the supply of that product
  – The role of technology in production
    • \( \uparrow \downarrow \) in technology to make a product = \( \uparrow \downarrow \) in ability to supply it
Scenario #1

- Our Xbox factory finds out that our workers are getting a 25% pay raise (increase in the cost of labor)...

- What happens to the supply curve?
Supply Curve for Xbox 360

Increase in labor pay = more production costs = decrease in the number of Xboxes.
Scenario #2

- Our Xbox factory invents a technology that produces twice as many Xboxs in a day as before.

- What happens to the supply curve?
Supply Curve for Xbox 360

Increase technology = more Xboxs produced = increase in the # of Xboxs
Scenario #3

• The CEO of our Xbox factory decides to increase the price of our Xboxes as a way to make more profit.

• What happens to the supply curve?
Supply Curve for Xbox 360

Increase in price = no shift in the supply curve
What is the “law of demand”? 

• The Law of Demand asks: “What is the willingness of consumers to buy a product at __________ price?”
  – Hypothesis?

• Answer:
  – If nothing else changes, the demand of a good is greatest for consumers when the price is low. (WHY?)
Demand Curve for Xbox 360

Price per Xbox:
- $500
- $450
- $400
- $350
- $300
- $250
- $200
- $150
- $100
- $50
- $0

Quantity Demanded in Billions of Xboxes per Year:
- 75
- 70
- 65
- 60
- 55
- 50
- 45
- 0

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What are the factors that determine “demand”?

- **P.**rice of other goods (substitute or complementary)
- **O.**utlook (consumer expectation of the future)
- **I.**ncome (normal goods versus inferior goods)
- **N.**umber of potential customers (pop.of market)
- **T.**aste (fads or trends)
How does a demand curve move?

- A demand curve shifts whenever a factor that affects the demand of the good (other than price) changes
  - **RIGHT**: Increase in demand (at all prices)
  - **LEFT**: Decrease in demand (at all prices)
What factors cause a shift in a demand curve?

• Three (3) reasons:
  – Change in a consumer’s income
    – \( \uparrow \downarrow \) in a worker’s income = \( \uparrow \downarrow \) in a demand for a product
  – Change in the demand for a “substitute” / rival goods vs. your product
    – \( \uparrow \downarrow \) in the price of a “sub” good = \( \uparrow \downarrow \) the demand for your product
  – Change in consumer tastes
    – \( \uparrow \downarrow \) popular taste = \( \uparrow \downarrow \) in a demand for that product
Scenario #1

• A neighboring factory that produces Xbox games drops their price as part of a late winter sale...

• What happens to our demand curve?
Demand Curve for Xbox 360

Price per Xbox

Quantity Demanded in Billions of Xboxes per Year

Price for Xbox games drops = increase in demand for Xbox related products = increase in Xbox demand
Scenario #2

• A rival company cuts the price of their version of the Xbox, making it half the price of our product.

• What happens to our demand curve?
Demand Curve for Xbox 360

Change in the price of a sub. good = decrease in Xbox demand
Scenario #3

• The local paper mill in a small town (where Xbox sales are high) closes, causing many people to lose their jobs.

• What happens to our demand curve?
Demand Curve for Xbox 360

Price per XBox

Quantity Demanded in Billions of Xboxes per Year

Decrease in consumer income = less $$$ for luxury goods = decrease in Xbox demand
What is “equilibrium”?

- **Equilibrium** is when quantity supplied and quantity demanded are equal
  - “Market-Clearing Price”
  - Perfection!!!!

- Many companies strive to reach economic equilibrium
Supply-Demand Market Equilibrium

Price per Xbox 360

$500
$450
$400
$350
$300
$250
$200
$150
$100
$50
$0

Quantity in Billions of Xbox 360 per Year

0
30
60
90

E

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Excess Supply: “Having too much”

- **Excess supply** is when the supplied exceeds quantity demanded at a given price.
  - Also known as a “surplus”
- When this happens, prices tend to fall until equilibrium is restored
  - Little re-sale value
  - Lack of consumer interest
  - Worthlessness
The Pet Rock (1970’s)
Disco Music (1970’s - 1980’s)
Beanie Babies (1990’s)
Price Floor
Excess Demand: “Not Enough”

- *Excess demand* is when the quantity demanded exceeds the quantity supplied at a given price.
  - Also known as a “shortage”

- When this happens, price tends to rise until equilibrium is restored.
  - Black markets
  - Rationing
  - Violence
Prohibition (1920’s)
The 1973 Oil Embargo
Price Ceiling / Price Capping
Price Gouging
States With Anti-Price Gouging Laws