Chapter 1 "Principles & Practice of Economics"

Economics - the study of how agents make choices among scarce resources and how those choices affect society

- Positive = what is
- Normative = what should be

Costs can be explicit or implicit

Principles of Economics:

1. Optimization - making the best choice possible with the given information
2. Equilibrium - everyone is in optimization; no one can be made better off with another choice
3. Empiricism - using data/analysis that is evidence based

Cost-Benefit Analysis: decision making mechanism that adds up costs and benefits using a common unit of measurement

Cost = explicit cost + opportunity cost (net benefit of the best alternative)

Chapter 2 "Economic Methods & Economic Questions, Empiricism (use of data & models)

The Scientific Method is Used To:

1. develop models of the world
2. test models with data

Model - a simplified description/representation of the world (simple and useful)
Data - facts, measurements, and statistics that describe the world and can check models
Hypotheses - a model's predictions

Causation - one thing directly affects another
Correlation - mutual relationship between 2 things that may or may not be a causation

- positive - 2 variables tend to move in the same direction
- negative - 2 variables tend to move in opposite directions
- zero - 2 variables are not related

Causes of Correlation:

- Omitted Variable - something disregarded from a study that explains a correlation
- Reverse Causality - mixing up of the direction of the cause and effect

Experiment - a controlled method of investigating causal relationships among variables
Natural Experiment - not controlled by an experimenter

Chapter 3 "Optimization: Doing the Best You Can"

Levels: calculates the total net benefit of different alternatives

- uses comparative statistics (comparison of economic outcomes before and after an economic variable is changed)

1. Translate all costs and benefits into common units
2. Calculate total net benefit of each alternative
3. Pick the alternative with the highest net benefit

Differences: calculates the change in net benefits when 1 alternative switches to another using marginal comparisons to determine the best option

- Marginal Analysis - cost-benefit calculation that focuses on differences between a feasible choice and the next best feasible alternative
- Marginal Cost - Extra cost generated by moving from 1 alternative to another
- Principle of Optimization at the Margin - the optimal feasible alternative has the property that moving to it makes you better off and moving away from it makes you worse off

1. Translate all costs and benefits into common units
2. Calculate marginal consequences of moving between alternatives
3. Apply the Principle of Optimization when choosing the best alternative

Chapter 4 "Demand, Supply, and Equilibrium"

Market - a group of economic agents trading a good or service (buyers and sellers)
Market Price - price that all buyers and sellers face

Perfectly Competitive Market:

1. any one individual buyer or seller isn't powerful enough on own to affect the price (price takers - can't bargain for better price)
2. sellers in the market produce identical goods
3. there is free entry and exit in the market

Demand:

- Quantity Demanded - amount of a good/service that buyers are wiling to purchase at price X
- Law of Demand - quantity demanded rises when price falls P up QD down P down QD up
- Demand Schedule - table that shows the quantity demanded at different prices
- Demand Curve - a plot of the demand schedule
- Market Demand Curve - aggregate of individual demand curves
- Demand Curve Can Shift For a Change In The:
    1. tastes and preferences of buyers
    2. availability and prices of related goods
    3. buyers' beliefs
    4. income and wealth of buyers
    5. number and scale of buyers
- Willingness to Pay - highest price a buyer will pay for 1 extra unit
- Diminishing Marginal Benefit - as you consume more your willingness to pay for an additional unit decreases
- Normal Good - QD increases when income increases
- Inferior Good - QD decreases when income increases
- Substitutes - fall in price of 1 leads to a decrease in QD for the other
- Compliments - fall in price of 1 leads to an increase in QD for the other

Supply:

- Quantity Supplied - amount of a good/service that sellers are willing to supply at a given price
- Law of Supply - quantity supplied rises when price rises (P & Q are positively related)
  P up QS up P up QS up
- Supply Schedule - table that shows the quantity supplied at different prices
- Supply Curve - a plot of the supply schedule
- Market Supply Curve - aggregate of individual supply curves
- Supple Carve can Shift For:
    1. changes in technology
    2. changes in the number and scale of sellers
    3. changes in the future beliefs of sellers
- Willingness to Accept - lowest price a seller is willing to get paid to sell 1 extra unite of a good/service
- Input - good/service used to produce another good/service