

The Economic Paradigm

APEC 3001

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Readings: Chapter 1 in Frank

Objectives

- Define Microeconomics
- Fundamentals of Cost/Benefit Decision Making
- Opportunity & Sunk Cost
- Positive Vs. Normative Economic Analysis
- Marginal Analysis

Microeconomics

- What is microeconomics?
 - The study of how people fulfill unlimited wants with limited means.
- Fundamental Assumptions
 - Unlimited Desires/Nonsatiation
 - Limited Means/Scarcity

Fundamentals of Cost/Benefit Decision Making

Question: How does someone choose which wants to fulfill when they cannot fulfill them all?

Economists Answer: By weighing the cost and benefit of fulfilling a want.

If the benefit outweighs the cost, just do it!

If the cost outweighs the benefit, don't do it!

Everything in microeconomics boils down to this simple cost benefit comparison!

Rationality

- Rational Decisions:
 - Decisions based on a cost/benefit comparison.
- Rationally Self-Interested Decisions:
 - Decisions based on a cost/benefit comparison where only the costs and benefits to an individual are considered, and not the costs and benefits to other individuals.

Much of economic theory is developed around the assumption of *rational self-interest*, but there are economic theories that relax this assumption.

What makes something so simple, so hard?

- Identifying what benefits are relevant to a decision can be difficult.
- Identifying what costs are relevant to a decision can be difficult.
- Adding up benefits and costs can be difficult.

Example: Suppose you are considering moving to Iowa from California to go to graduate school.

- Pros

- Program Fits Interests
- Cheaper Living Expenses
- Less Traffic
- Time For Recreation
- Change of Seasons
- Less Family Support

- Cons

- Program Less Prestigious
- Cost of Moving
- No Turn Lanes
- Less Recreation Opportunities
- Cold Winters
- Less Family Support

How do we add these things up?

How do we compare them?

Opportunity & Sunk Cost

- Opportunity Cost:
 - The cost of engaging in one activity instead of another.
 - Understanding and weighing opportunity costs is paramount for good decision making.
 - But, opportunity costs are often neglected.
- Sunk Cost:
 - Costs incurred regardless of whether or not you engage in an activity.
 - Understanding and ignoring sunk costs is paramount for good decision making.
 - But, opportunity cost are not always ignored.

Example: Suppose you are thinking of trading in your old car for a new one.

- Opportunity Costs
 - More Modest Living Accommodations
 - Fewer Dinners Out
 - Less Recreation
- Sunk Costs
 - Insurance
 - Gas
 - Registration
 - Maintenance

Positive Vs. Normative Economic Analysis

- Economist like to ask two different types of questions:
 - How do people behave?
 - How should people behave?
- Positive economic analysis seeks to answer the first type of question.
 - Predictive
 - Objective
 - Testable Hypotheses
- Normative economic analysis seeks to answer the second type of question.
 - Prescriptive
 - Subjective
 - No Testable Hypotheses

Marginal Analysis

- Many decision we make in life are all or nothing propositions.
 - Should I buy a house or rent?
 - Should I go to college?
 - Should I get Married?
 - For these types of decisions, the basic cost/benefit comparison is a relatively straightforward yes or no answer.
- But, many decisions are not all or nothing propositions.
 - How many cans of soup should I buy?
 - How much money should I put in a savings account each month?
 - How many Prius will Toyota manufacture next year?
 - Marginal analysis extends our fundamental cost/benefit decision making framework to decisions where we must choose how much of an activity to engage in.

How much of an activity should be done?

- To determine how much of an activity we should engage in, we can break up our decision into smaller all or nothing propositions.
- For example, if Toyota wants to know how many Prius to produce it can answer a series of all or nothing propositions:
 - Should I produce 1 instead of 0?
 - If no, produce 0.
 - If the answer is yes, should I produce 2 instead of 1?
 - If no, produce 1.
 - If the answer is yes, should I produce 3 instead of 2?
 - If no, produce 2.
 - ...
- This series of all or nothing proposition continues until the answer is “no.”
- For each of these question, Toyota must determine if the benefit of producing one more Prius outweighs the cost.

Marginal Costs & Benefits

- Marginal Cost:
 - The increase in the total cost that results from carrying out one additional unit of an activity
- Marginal Benefit:
 - The increase in the total benefit that results from carrying out one additional unit of an activity.

Marginal Analysis says that we should increase our level of activity as long the marginal benefit exceeds the marginal cost!

To Be More Specific

Number of Prius	Marginal		Net Benefit		
	Benefit	Cost	Total	Average	Marginal
None	\$0,000	\$0,000	\$0,000		
First	\$30,000	\$15,000	\$15,000	\$15,000	\$15,000
Second	\$25,000	\$15,000	\$25,000	\$12,500	\$10,000
Third	\$20,000	\$15,000	\$30,000	\$10,000	\$5,000
Fourth	\$13,000	\$15,000	\$28,000	\$7,000	-\$2,000
Fifth	\$10,000	\$15,000	\$25,000	\$5,000	-\$5,000
Sixth	\$0,000	\$15,000	\$10,000	\$1,667	-\$15,000

Summary

- Up to the fourth car, the marginal benefit exceeds the marginal cost, so Toyota should produce three cars.
- For all levels of production, the total benefit is positive, so Toyota is better off producing some number of cars.
- But, the total benefit is greatest for producing three cars.
- It is also worth noting that the greatest average net benefit occurs with the production of one car, yet this is still not the best decision.
 - The second and third cars do not add as much to Toyota's bottom line as the first car did, but they still add to the bottom line, so Toyota is better off producing them.
 - Later we will see that average costs and benefits are important for determining whether or not to produce at all. They are just not a good indicator of how much to produce.

Important Concepts

- Fundamental Assumptions of Microeconomics
- Cost/Benefit Approach to Decision Making
 - Rationality & Rational Self-Interest
- Opportunity & Sunk Costs
- Positive & Normative Economic Analysis
- Marginal Analysis
 - Marginal Benefits
 - Marginal Costs