

The Economic Paradigm

Readings: Chapter 1

Objective: Understand what microeconomics is.

Question: What is microeconomics?

Answer: The study of how people fulfill unlimited wants with limited means.

Fundamental Assumption #1: Unlimited Desires/Nonsatiation.

People have wants/goals: cars, houses, clothing, health, recreation, professional advancement, professional recognition, etc.

Fundamental Assumption #2: Limited Means/Scarcity.

People have limited means by which to achieve their wants/goals: money, time, genetics, knowledge, etc.

Objective: Understand the fundamentals of the cost/benefit approach to decision making.

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

Economists Answer: By weighing the cost and benefit of fulfilling a want. If the benefit outweighs the cost, a person will fulfill the want. If the cost outweighs the benefit, a person will not fulfill the want.

In laymen's terms, people make a list of the pros and the cons of doing something. If the pros are greater than the cons, a person will do it. If the cons are greater than the pros, a person will not do it.

Lets be concrete. Each of you had some desire to sleep in this morning instead of coming to class at 8:30 am. For some of you, the desire was certainly stronger than for others. For those of us in attendance, the cons of sleeping in outweighed the pros, but what were these pros and the cons?

All of microeconomics boils down to a simple cost/benefit rule:
If the benefit is greater than the cost, do it. If not, don't do it.

People who act in this fashion are called *rational*. If people only consider the cost and benefit accruing directly to them, they are called *rationally self-interested*. Much of economic theory is based on the assumption that people are *rationally self-interested*.

Economists are often criticized for the assumption of rational self-interest, but economic theory is rarely vested in it. The assumption serves as a useful benchmark that can be generalized where appropriate and insightful.

Objective: Understand the concepts of opportunity and sunk costs.

If it is so simple, why does this course take a whole semester?

What makes microeconomics so interesting, challenging, and a semester long course is that identifying and weighing the relevant and irrelevant costs and benefits of a decision is anything but simple.

Scarcity implies that for every action we take there is an unfulfilled want or forgone opportunity. Economists call this unfilled want or forgone opportunity the opportunity cost. Opportunity costs are easy to forget about because they are implicit and often hard to measure.

Definition

Opportunity Cost: the cost of engaging in one activity instead of another.

Before making a decision, it is important to think about what you are giving up. Take for example, the decision to buy a new car.

What are the explicit costs?

The price, insurance, taxes and registration, maintenance, gas, etc.

What are the opportunity costs?

An apartment or house that is not as nice.

Fewer dinners out with friends.

Fewer trips to the movies, concerts, etc.

How do we measure these opportunity costs?

While it is important to identify the opportunity cost of a decision, it is equally important to identify and ignore the sunk cost.

Definition

Sunk Cost: A cost incurred regardless of whether or not you engage in an activity.

What are the sunk costs of purchasing a new car?

If you already have a car, you are already paying insurance, registration, maintenance, gas, etc.

To the extent these cost do not change they should not affect your decision.

How do we measure these sunk costs?

Sunk costs are irrelevant and should be ignored, but often people do not ignore them.

Objective: Understand the difference between positive and normative economic analysis.

Economists typically ask two kinds of questions:

- i) How will people behave?
- ii) How should people behave?

Positive economic analysis is predictive and focuses on answering the question of how will or did people behave given their wants and means. Positive economic theory also produces a testable hypothesis about human behavior. Information about the choices people make can then be used to test the hypothesis.

Examples of the types of questions positive economic analysis addresses:

Will an increase in gas prices affect the demand for the Toyota Prius next year?

How will a 25 percent increase in the production of the Toyota Prius affect its price?

Did the Randy Moss trade increase ticket sales for Viking games?

Normative economic analysis is prescriptive and focuses on answering the question of how people should behave to achieve their wants given their means. To answer a normative question, economists must be told a person's wants and means. The answer is subjective and could be different for different people.

Examples of the types of questions normative economic analysis addresses:

Should Toyota increase production of the Prius given increasing gas prices?

By how much *should* Toyota increase production?

Objective: Understand the notion and importance of marginal analysis.

Many decisions we deal with are all or nothing:

Will an individual go to college or not?

Should a renter buy a house or not?

Should you come to class on Friday or not?

However, there are many decisions we deal with that are not all or nothing propositions:

How many Prius should Toyota produce?

How much will a person eat at an all you can eat buffet?

How often should you attend class?

Economists deal with these more complicated decisions by breaking them up into a set of smaller decisions.

Should Toyota produce no Prius or one?

If one, how about two?

If two, how about three?

If three, how about four?

Etc.

Breaking up more complicated decisions into a sequence of incremental decisions forms the basis of marginal analysis. If the benefit of producing just one more Prius outweighs the cost, then do it. If not, don't do it.

To understand the importance of marginal analysis, it is useful to make our example more concrete.

Suppose the cost of producing a Prius is \$15,000. Toyota can sell the first for \$30,000, the second for \$25,000, the third for \$20,000, the fourth for \$13,000, the fifth for \$10,000, and it can only give the sixth away.

Question: How many Prius should Toyota produce?

A common error in answering this type of question is focusing on the total or average net benefit. For six cars, the total and average net benefit is positive. But, should Toyota produce six cars?

It should produce six cars instead of no cars, but what about six cars instead of five cars?

Alternatively, the highest average net benefit comes from producing just one car.

Should Toyota produce just one car?

Toyota should produce one car instead of no cars, but what about two cars instead of one?

If we make the systematic type of incremental comparisons discussed above, we see that the net benefit of producing one versus zeros cars is positive. The net benefit of producing two versus one car is also positive, as is three instead of two. But, producing four instead of three, five instead of four, or six instead of five produces a negative marginal net benefit. Therefore, Toyota should stop at three cars. Looking at total net benefits, we see that producing three cars results in the highest total net benefit.

Number of Prius	Marginal Benefit	Marginal Cost	Net Benefit = Benefit - Cost		
			Total	Average	Marginal
None	\$0,000	\$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

Now we can extend our simple decision rule to case where we must decide how much of an activity to engage in.

Definition

Marginal Cost: The increase in the total costs that result from carrying out one additional unit of an activity.

Definition

Marginal Benefit: The increase in the total benefits that result from carrying out one additional unit of an activity.

With the definitions of Marginal Cost and Marginal Benefit, we can now specify our simple decision making rule as:

If the marginal benefit from engaging in an activity is greater than the marginal cost, do more of the activity. If not, do less.

While average benefits and cost are important (as we will see later this semester), it is the marginal cost and benefit that tells us how much of an activity to engage in. As long as the marginal benefit exceeds the marginal cost, we should engage in more of an activity.

Making these incremental comparisons can be quite tedious. Fortunately, for many decisions we face, there are some reasonable simplifying assumptions we can make to speed up the comparison. We will talk about these assumptions and their implications throughout the rest of the semester.