University of Pacific-Economics 53
Lecture Notes #1

I. Introduction to Economics

Economics is defined as the study of how individuals and society choose to use scarce resources. In essence, economics is a study on how individuals make choices.

There are two branches of economics: (1) **Microeconomics** and (2) **Macroeconomics**

Microeconomics looks at the decision making behavior of individual decision making units: Households, firms, industries, etc…

Macroeconomics looks at the entire (aggregate) economy. Table 1 illustrates the difference between the type of questions addressed by microeconomics vs. macroeconomics.

Table 1

	PRODUCTION	PRICES	INCOME	EMPLOYMENT
Micro	How many hamburgers does In N' Out produce?	What is the price of an In N' Out hamburger?	What are the wages of the workers at In N' Out?	How many workers are employed at In N' Out?
Macro	How much goods and services does the United States produce each year?	What is the price of all consumer goods in the economy?	What are the total wages and salaries of workers in the economy?	What are the total number of workers in an economy?

II. Three Principles of Economics

1. **Opportunity Cost:** All decisions involve trade-offs. Opportunity cost measures the cost of the next best alternative that we give up when making a choice.

For example, when calculating the cost of college, economists think not only about the direct costs such as tuition, textbooks, living expenses, etc…, but also the opportunity cost. What is the opportunity cost for going to college? This varies from individual to individual as people have different alternatives to going to college. Presumely for many individuals, they could have worked instead of going to college. The wages one could have earned is the opportunity cost of going to college.

See if you determine what would be the potential opportunity cost of the following:

Ex) The opportunity cost of going to class this morning
Ex) The opportunity cost of the war in Afghanistan

2. **Marginalism:** When making a decision, one should only consider the additional (not total) cost or benefits that will arise from that decision. We'll introduce two terms here, which we will discuss more fully later on in the course.

   Marginal Cost: Additional cost of producing one more unit of a good
   Marginal Benefit: Additional benefit of producing one more unit of a good

Example: Suppose Tiger Woods is flying to Honolulu to participate in a charity golf event (He has to pay for his own ticket to Hawaii). Suppose that after the charity event, he wants to spend a week in Maui with one of his cocktail waitress mistresses. When making a decision whether or not to spend a week in Maui, what are the costs that Tiger should consider? In this example, Tiger should only consider the additional cost of flying from Honolulu to Maui.

Example: To drive home the point of marginalism, consider an example where you are taking a class that has 2 midterms and a final. After taking the two midterms your average was a 90. Suppose you wanted an A in the course. That would mean on the final exam you would need to score a 90 or above. At the end of the semester, what really matters for your grade is not the two midterms, but rather the marginal grade (the grade on the final exam).

3. **Efficient Market:** This principle of economics simply states that there is no such thing as a free lunch. In other words, profit opportunities are eliminated almost immediately.

Example: Suppose you are driving to San Francisco and are approaching the toll plaza to the Bay Bridge. There are 24 different toll lanes to choose from. Which lane should you choose? According to the principle of efficient markets, it doesn't matter which lane you choose all lanes should have the same waiting time! This should make intuitive sense, if one toll booth had fewer cars than the others, drivers will quickly notice this and move to that lane until there is no advantage.

See if you can use the principle of efficient markets to explain why "hot" stock tips will usually not lead to guaranteed profits.

III. The Method of Economics

A. Positive vs. Normative Economics

Economists try to answer to type of questions: positive and normative. It's straightforward to differentiate between the two.

(1) **Positive economics** is an approach to economics that seeks to understand behavior of the economic system without making judgments. It describes what exists and how it works.

(2) **Normative economics** is an approach to economics that analyzes outcomes of economic behavior, evaluates them as good or bad, and may include recommendations on how to improve outcomes. It is also called policy economics. When economists disagree, the points they disagree about are often normative points (differences of opinion and values).

For example: Raising the minimum wage will lower employment of high school age workers is a positive statement. Raising the minimum wage is the best way to get families out of poverty is a normative statement.

B. Descriptive Economics and Economic Theory

We will focus primarily on positive economics in this course. We will slowly build the analytical tools necessary so you can learn to analyze the behavior in the economy. Towards that end, economists have two general ways to describe economic behavior.

(1) Descriptive Economics complies data that describe economic phenomena and facts. For example the Bureau of Labor Statistics collects unemployment data for the country every month. Economists use that date to analyze the job picture in the economy.

(2) Economic Theory attempts to interpret the data gathered. It is a statement about cause and effect. For example, data has shown that gasoline prices often rise during the summer months. Economists have developed theories explaining what causes this rise in oil prices during the summer.

C. Economic Theory and Models

Economic models are a formal representation of economic theory. Economic models follow the principle of **Ockham's Razor** which state that irrelevant detail should be cut away. Like a road map, economic models are simplified generalization of reality that helps explain economic behavior. Models can be expressed in words, graphs or mathematical equations. In this course, we'll be using mathematical equations to illustrate relationships between two or more variables. A **variable** is a measure that can change over time or across observations.

Oftentimes, there can be many variables that could explain an outcome you observed. For example, if there is an increase in auto sales at the local car dealership. The upsurge in sales could be due to a host of factors such as lower prices, increase in consumer income, higher prices in a competing dealership, etc… How do we know which variable caused the higher sales at the dealership? Economists will look at only one variable at a time and try to isolate its effect. This idea is called **ceteris paribus (all else equal).** In the economic model, we will assume that only 1 variable is changing at a time and hold all other variables as fixed. By doing this we can clearly analyze the relationship between two variables, by holding all other variables unchanged.

When examining the relationship between two variables you should keep the following pitfalls in mind:

(1) **The Post Hoc Fallacy:** This is a common error made in thinking about causation between two variables. If Event A happens before Event B, it is not necessarily true that A caused B. The *post hoc fallacy* is the incorrect belief that because event B occurs after event A then A caused B. This is closely related to correlation and causation. *Correlation* refers to things happening together. Just because two variables move closely together doesn't mean one *causes* the other.

Example: The following statement shows the post hoc fallacy at work. This summer when I got out of bed at 5:45 a.m, the sun would be rising. The act of getting out of bed caused the sun to come up. This example shows two things. First, just because two actions happen together does not mean one caused the other. Second, make sure you have gathered enough data. If I woke up at 5:45am in January, the sun will certainly not have been rising.

(2) **The Fallacy of Composition.** The idea that what might be true for one individual is true for the whole (aggregate). Theories that might work when applied to individuals might not work when applied to the whole.

Like physical scientists, economists are constantly testing theories and models to see if economic theories and models are good representation of observed behavior. **Empirical economics** is the collection and use of data to test economic theories. Researchers look at data collected over time and across different categories or conditions (e.g., age groups, locations) and try to draw conclusions. Controlled experiments are difficult in economics (and other social sciences), but are not impossible.