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# Introductory Lecture

For many of you, this course is your first introduction to a subject that many people summarize as boring and hard. Let me start by saying that many people do not remember it this way. In fact, some say that it was one of the most important classes they ever took. Why the great discrepancy? I think that economists are mostly to blame. They have developed a great number of complex analytical tools, and some of us tend to like to teach with them a bit too much. To a certain extent this is good, because learning to use these tools will serve a student well beyond their college years. But, like anything, there can be too much of a good thing. My goal in this course is to keep to that old marketing admonition of KISS (keep it simple students). Even then at times you may wonder about (and struggle with) some of the complexities. But I want assure you that, after a while, these analytical tools will become easier for you to use and apply.

So, why do economists use these complex tools? Believe it or not, we use them to simplify a vastly more complex world. In fact, sometimes you’ll begin to think that we are oversimplifying. Let me give you an example I ran across in a collection of essays, The Accidental Theorist by Paul Krugman. He too was discussing the tools of economic analysis, and wanted to talk about technological advances and unemployment. Many people think that machines that replace workers will hurt the economy. But, Professor Krugman engages in the following *mind game* to help explain why technological advances allow for more production of everything. Suppose there is an economy that only makes two goods, hot dogs and hot dog buns, and there are fifty workers in each industry. Now suppose that a new machine comes along that makes hot buns twice as fast as the old one. At first glance one would say that half the workers in the hot dog bun industry would be laid off. But what could just as well happen is workers could be shifted into the hot dog industry to fill all those new hot dog buns.

In this class we will make use of many mind games like the one above to try to get you to understand the issues we face in our complex economy. The first one will be called “The Island Economy.” In this game you are washed up on a desert island and have to make several choices as to what you are going to do with your time. At first this may seem like a silly task but what I’m trying to do is to get you to understand what an economy is at the most basic level by using a mind game.

## **Definitions**

Let’s get a bit formal here in trying to define economics and some economic terms you’ll need in your first assignment. Keep in mind that every specialized field tends to develop its own vocabulary. Mounds of snow on a ski slope are called moguls. When a composer wants a musician to play softy, she will write pianissimo. When a horseman sees a horse walking funny, he may think it has foundered. Economics does the same thing. But what is most challenging for the economics student is that we tend to take terms you are already familiar with and give them very specific and different definitions. In this class, you’re really going to have to constantly check yourself to make sure you’re using the economic definition and not a definition you are more familiar with (see scarcity, saving, investment and capital below). I’ve put the concepts and terms you need to know in red.

**Economics studies how individuals and societies use scarce resources to satisfy material needs and wants. Meeting these material needs and wants is called economic activity.**

**Material needs and wants**. These can be as simple as milk for my coffee, gas for my car or shoes for my kids. These can be as important as chemotherapy for one of my loved ones or as superfluous as the tassels on my loafers.

**Resources**. These are the things that we use to make (produce) the things (goods and services) that we need or want. By tradition, we economists tend to divide resources into four categories:

1. **Land**. Natural resources (including water) are resources that we find in our environment to meet our needs/wants.
2. **Labor**. Human effort when it is engaged in meeting our needs/wants.
3. **Capital.** Human made items that we use when we are engaged in the act of production. I will say more about capital later.
4. **Entrepreneurship**. The effort and risk involved when we undertake the organization of the other three resources for production.

**Scarcity** is when the desire for something is greater than the amount freely available. Scarcity is used in almost every definition of economics written by economists. We had better spend some time exploring the definition of it. First off, I was very careful in saying desire instead of need. I need air but since it is virtually free (all I need do is expand my chest) it is not scarce. I don’t need a candy bar, but if there were twenty candy bars on a table in the student union, there would be more than twenty students who would want them. Therefore, a candy bar is scarce.

**Choice**. Whenever anything is scarce it means that some choice is going to have to be made. We don’t have to choose who gets to breathe or not, but choice will have to made as to who will get the candy bar.

**Opportunity Cost**. When a choice is made, another choice is given up. The next best alternative to the choice made is called the opportunity cost. Your time tonight is scarce. It is limited to a few hours and the desire for it exceeds the amount available. Wouldn’t you like to study, see a movie, watch a bit of TV, eat a great dinner, spend time with your friends, spend time with your family, go to the top of theEiffel Tower, debate the nature of the human soul AND wash your hair? Well, you can’t...you don’t have enough time to do all this in one evening. So, you make a choice. If the top two choices you come up with are studying (my favorite as long as its econ) or going to a movie, then the opportunity cost of going to a movie is studying and the opportunity cost of studying is going to a movie. I’m sure you’ve heard the statement “there ain’t no such thing as a free lunch.” Well, that’s a very economic statement. Even if somebody buys me lunch I still must give up something (working on my tan) or, as you should now say, pay the opportunity cost.

**Sunk Cost**. You’ve got to be careful when you are trying to identify an opportunity cost. The most common mistake is to confuse an opportunity cost with a sunk cost. A sunk cost is a cost that already has been incurred. Let’s say you pay $10.00 to see a four-hour movie and half way through you decide it is no good. During the intermission, you go to the theater manager and ask for your money back. He says “no” while pointing to the sign that reads “no refunds.” Now you’ve got to decide whether to go back in and see the rest of the movie or go do something else. In trying to figure out what the cost of leaving is, you might make the mistake of saying that if you don’t go back in you’ll be loosing your $10.00 and the two hours you’ve spent watching the first half of the movie...wrong. You can’t get them back no matter what you do. They’re irrelevant, gone...they’re sunk. The only real cost (opportunity cost) is what you could do with the next two hours.

**Risk**. Every time you make a choice you incur some sort of a risk. Because you cannot know the future perfectly, when you make a choice, to some degree, you’re guessing about the outcome of the choice. Suppose you choose to go to the movies instead of studying. If the movie is really awful, or if the professor gives a pop quiz the next day, you might not have made the choice you did. This is one of the reasons why information is so important to an economy like ours that emphasizes individual choice. To make the best choice, you may read the movie reviews in the newspaper or ask the professor if she is planning to give a quiz the next day.

**Consumption**. When you use a good or service for the sole intention of just using it (final use) that is called consumption. When you watch a movie or eat the candy bar you bought at the snack stand, you are enjoying it for its own sake. When you use a good or service to make something else, it is not consumption. For example, the film in the camera that used in “shooting” a movie is not consumption but capital.

**Saving**. When you choose not to consume something, it is referred to as saving. When I choose not to use some resource for consumption I am saving. When I eat kernels of corn, I am consuming it. When I hold off eating the corn, I am saving it. Now I may well be saving it for future consumption, to eat it tomorrow, but I am still saving it today. Today, most of us save by holding money so we define savings as that part of your income you don’t use for either consumption or paying taxes. The important idea here is that you’re holding off consuming some of potential output of your resources.

**Investment**. When you use resources to produce capital, you are investing. Notice that this is very different from the common definition of investment. It is not doing something in hopes that you’ll get a greater return in the future. Investment is actually producing, or acquiring, something that will be used in the future to produce something else. If you buy stock in Amazon.com in the hopes that the price will go up, you are speculating, not investing. If you buy a computer in order to type term papers for other students, you are investing.

**Forms of capital**. There are many forms that capital can take:

**Physical capital** is a tangible product that is used to produce something else, like the computer to type term papers. But what about the skills you have developed over time in using the computer? Certainly those skills are being used to produce something? They are human capital.

**Human capital** is the skill or knowledge you have acquired and use in the act of production. So right now you are investing in human capital. Right now we are creating (producing) knowledge that may be used later in production...possibly in a future job. So, don't think of yourself as a student, but as an investor!

**Technology**. Every time you invest, you choose to produce some type of capital that has differing levels of technology. If I want to communicate with some distant person, I can do it in several ways (levels). I could use pen and paper, telephone, telegraph or e-mail. Each is a different level of technology. The economy must decide which level is the best to meet the task at hand, given the relative scarcity of resources.

**Three questions every economy must answer**. Because of scarce resources, every economy must make some very basic decisions.

* First, it must figure out **what** it is going to produce. Resources are scarce, so you can’t do everything.
* Second, once it figures out what it is going to make, the society must figure out **how** it’s going to make it.
* Third, the society must make a choice as to **who is going to get the result of the production effort**.

For example, suppose your society decides it wants some entertainment (what), because of scarce labor, it will have to sacrifice (opportunity cost) what those people could be doing if they were not providing entertainment, medical care or housing. Next, it’s going to have to figure out how it is going to provide this entertainment; singing, story telling, plays, movies, TV, etc. Finally, we need to figure out who gets to enjoy the entertainment: the most bored, the most ill (who really need cheering up), or the wealthiest? All these choices must be made because the desire for the resources and production outstrips the amount freely available.

\* a captial gain is when a person buys something and later sells it for more, i.e., buying a stock like Amazon.com for $20 and selling it for $200 or buying a beanie baby for $5 and selling it for $500.