

**The First Law of Economics: For every economist, there exists an equal and opposite economist.**

**The Second Law of Economics: They're both wrong.**

## **CHAPTER 1 LECTURE – WHAT IS ECONOMICS?**

**ECONOMICS** can be defined as the study of how society allocates its scarce (limited) resources to satisfy unlimited wants.

### **The Use of Theories**

The economic world is very complex: many economic decisions must be made and somehow coordinated. We want to develop methods to understand the mechanism that coordinates all of this economic activity: judicious simplification is required.

Economic behavior is vastly complicated, so we construct theoretical models to represent the workings of economic mechanisms. Our theories and models represent "**judicious simplifications**" of the real world.

**Theories** are tentative explanations of the causal relationships among variables that we observe statistical relationships among. **Models** allow us to abstract from reality and thus simplify our task. We impose assumptions that isolate the important features of reality and isolate the relationships among important variables. Our models will provide an analytical framework for thinking about economic problems. Using theories and models enables us to apply analytical precision to the study of central problems faced by every society.

### **POSITIVE AND NORMATIVE ECONOMICS**

**Positive Economics**- Deals with objective or scientific explanations of the working of the economy. Emphasis here is on EXPLANATION with OBJECTIVITY.

**Normative Economics** - Offers prescriptions or recommendations based on personal value judgements. The emphasis here is more SUBJECTIVE, or what we think OUGHT to be.

Although the study of economics covers many different fields such as international trade, money and banking, and labor economics, to name just a few, basic economy theory can be classified into the two areas of macroeconomics and microeconomics

**MICROECONOMICS or Price Theory** is concerned with individual economic units such as consumers and firms.

**MACROECONOMICS** is concerned with the overall economy such as the effect of government spending, taxation and monetary policy.

An easy way to distinguish the two is to think of macroeconomics as the study of the forest and microeconomics as the study of the trees.

The **economic agents** of our models will include:

- A) **Consumers** who decide how much of each good they want. The strength of their demand is indicated by the price they are willing to pay. Producers respond to the price signals.
- B) **Producers** who perceive prices that consumers are willing to pay (demand) and channel resources into the production of those goods.
- C) **Resource owners** who sell their resources to producers. This yields income, so that resource ownership and prices determine the income distribution.
- D) **Government**
  - circumscribes consumer choices.
  - regulates producers.
  - modifies the income distribution.
  - provides the appropriate legal structure, infrastructure, defense system, etc.

The "Economy" or "Economic System" coordinates all of the decisions of all of these decision-makers.

**FACTORS OF PRODUCTION** are the inputs that produce the outputs of society. They can be broken down into the following categories:

| <b>Factor</b>   | <b>Return</b>                  |
|---|--------------------------------|
| <b>LAND</b> - physical resources other than labor         | <b>RENT</b>                    |
| <b>LABOR</b> (L) - productive ability of human beings     | <b>WAGE</b> (W)                |
| <b>CAPITAL</b> (K) - produced means of further production | <b>INTEREST</b> ( $i$ or $r$ ) |
| <b>ENTREPRENEURSHIP</b> -risk taker                       | <b>PROFIT</b> ( $\pi$ )        |

### **WE MUST ASSUME RATIONAL SELF-INTEREST**

- Economists believe that people choose options that give them the greatest satisfaction.
- This means that people:
  - use all available time and information,
  - weigh the costs and benefits of all available alternatives,
  - and choose the alternative that they believe will bring them the most benefit at the lowest cost.
- This does **not** mean that people are innately selfish. Self-interest is **not** greed.

### **IMPLICATIONS**

- People weigh the costs and benefits of various alternatives, choosing the alternative that makes them best off.
- This behavior is called "**economic decision making**".
- Costs and benefits are sometimes referred to as negative and positive **incentives**.

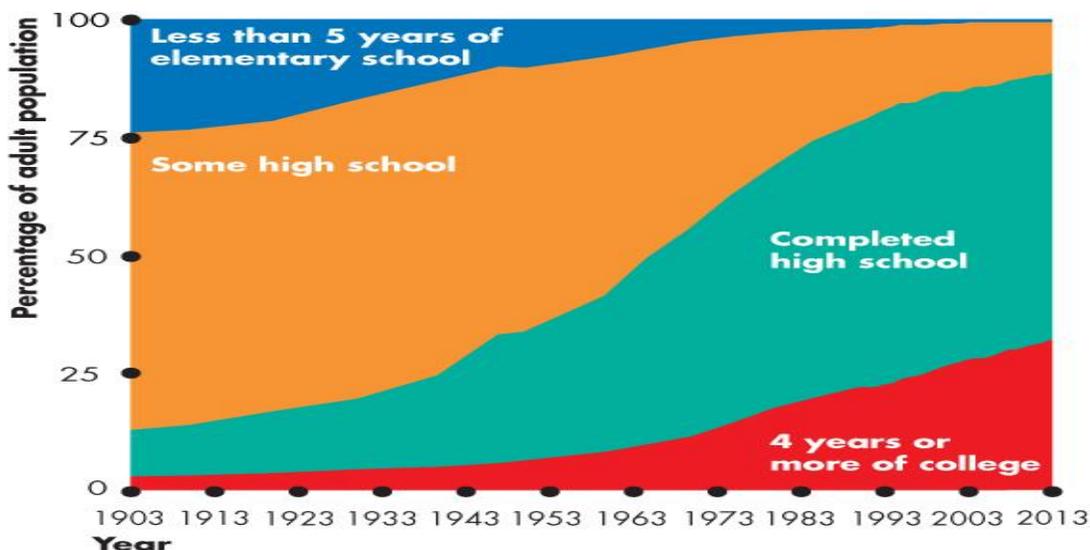
Hence **INCENTIVES MATTER**.

## TWO BIG QUESTIONS SUMMARIZE THE SCOPE OF ECONOMICS

How do choices end up determining *what*, *how*, and *for whom* goods and services get produced?

When do choices made in the pursuit of *self-interest* also promote the *social* interest?

**The figure below shows a measure of the growth of human capital in the United States over the last century—the percentage of the population that has completed different levels of education. Economics explains these trends.**



### Some Basic Definitions

**TECHNOLOGY** - State of the arts regarding production.

**Example:** Suppose 4 units of capital and 5 units of labor are required to produce 12 units of output. An increase in technology implies 4K and 5L would now produce more than 12 units of output.

**POST HOC ERGO PROPTER HOC** (fallacy) - Translated from Latin as after this, because of this. This is usually a false or mistaken idea that because one event follows another, the first event has caused the second. It is important to avoid making this mistake when attempting to explain economic events.

**FALLACY OF COMPOSITION** (fallacy) - What is true for the individual or part is necessarily true for the group or whole. (This is an erroneous statement.)

**CETERIS PARIBUS** (assumption) - Translated from the Latin as all other things being equal or holding everything else constant.

**NOMINAL VERSUS REAL VALUES** - Nominal is defined as in name only. For example, we know the value of 10, 100 or 10,000 dollars. In Japan, if you are shown a 10,000 yen note would you know what it was worth?

**Example:** What about if you are in Vietnam where the currency is the dong. The exchange rate is about 1\$ = 20,000 dong. If the price of a coke is 5,000 dong, then the real value of 100,000 dong is twenty cokes. If the price of a cup of tea is 1000 dong, then the real value of 100,000 dong is 100 cups of tea.

**NOMINAL INTEREST RATE VERSUS REAL INTEREST RATE** - The actual return to lending (or cost of borrowing) versus the monetary return to lending (or cost of borrowing). The formula for determining the real rate of interest is:

$$r = i - p^* \quad \text{where, } i = \text{nominal rate of interest} \quad r = \text{real rate of interest} \\ p^* = \text{rate of inflation or expected rate of inflation}$$

**Example:** Imagine for a moment that you borrow \$5,000 at 10% interest for one year. After one year you pay back the original \$5,000 plus \$500, which is the interest on the amount borrowed. The nominal rate of interest is 10% or \$500. However, the real rate of interest can only be determined by taking into consideration the price of goods over the time period. For simplicity, let's assume the good we are concerned with is a cup of coffee. If the price of a cup of coffee is \$5.00 at the time of borrowing, you are effectively borrowing 1000 cups of coffee. The real rate of interest will depend on the change in the price of coffee over the period of borrowing.

**Case I** - the price of a cup of coffee remains constant at  $P_c = \$5.00$ . The individual pays back \$5,500 or the original 1000 cups of coffee borrowed, plus 100 cups of coffee. The real rate is 100 cups of coffee.

$$p^* = 0\%, \quad i = 10\%, \quad \text{given } r = i - p^*, \quad \text{then } r = 10\% - 0\% \quad \text{or } r = 10\%.$$

**Case II** - the price of a cup of coffee rises to  $P_c = \$5.50$ . The individual pays back \$5,500, but since the  $P_c$  has risen to \$5.50 the individual pays back only 1000 cups of coffee which is the original amount borrowed.

$$p^* = 10\%, \quad i = 10\%, \quad \text{given } r = i - p^*, \quad \text{then } r = 10\% - 10\% \quad \text{or } r = 0\%$$

**Case III** - the price of a cup of coffee rises to  $P_c = \$5.25$ . The individual pays back \$5,500, but since  $P_c$  has risen to \$5.25 the individual pays back a little less than 1050 cups of coffee.

$$p^* = 5\%, \quad i = 10\%, \quad \text{given } r = i - p^*, \quad \text{then } r = 10\% - 5\% \quad \text{or } r = 5\%$$

**Opportunity Cost** - The next best forgone alternative or the cost of resources used to produce a product. **TANSTAAFL**

**Example:** A ton of steel used to produce a car can no longer be used to produce two machines. Thus, the opportunity cost of producing the car is two machines.

**Four topics that generate discussion and that illustrate tension between self-interest and social interest are**

- Globalization
- The information-age economy
- Climate change
- Economic instability