Econ 101: Principles of Microeconomics

Ch. 1: First Principles

Fall 2010

Outline

1. Principles that Underlie Individual Choice

2. Principles that Underlie Interactions of Individual Choices

3. Principles That Underlie Economy-Wide Interactions
Recall What Economics is

- **Economics** is the social science studying how people make decisions given scarcity
  - scarcity of income
  - scarcity of time
  - scarcity of resources

- **Scarcity** is a situation in which the amount of something available is insufficient to satisfy the desire for it.

Note: This is different that the definition used by Krugman and Wells, which defines economics as “...the social science that studies production, distribution, and consumption of goods and services.”

In this chapter, we focus on some key economic principles that underlie much of what we will discuss in this course, broken down into three categories: Principles that underlie

1. the economics of choice
2. the interactions of individual choices
3. economy-wide interactions

Principles that Underlie Individual Choice

**Principle #1. Resources are Scarce**

- For the individual, there are many types of scarcity, but they all stem from two basic limitations
  1. Scarce time
  2. Scarce spending power

- These limitations force each of us to make choices
- Economists study how we make these choices as individuals and consequences of those choices
- Economists also study more subtle and indirect effects of individual choice on our society
Principle #1. Resources are Scarce (cont’d)

- For society as a whole, scarcity takes a variety of forms:
  1. **Scarcity of labor**: i.e., time human beings spend producing goods and services.
  2. **Scarcity of capital**: i.e., something produced that is long-lasting, and used to make other things that we value, including
     - Physical capital
     - Human capital
  3. **Scarcity of land/natural resources**: i.e., the physical space on which production occurs and the natural resources that come with it.

- As a society our resources (land, labor, and capital) are insufficient to produce all the goods and services we might desire

Principle #2: The Real Cost of Something is What You Must Give Up to Obtain It.

- We are used to thinking of the cost of an item in monetary terms.
  - The cost of an IPod Touch 32G is $299.
  - The cost of the course textbook package is $127.30.
  - The cost of a Toyota Prius is roughly $30,000.

- While monetary measures of cost suffice for many “goods,” it can be very deceptive for others.

- Economists emphasize that the true cost of a choice that we make is it’s **opportunity cost**: i.e., what you must give up in order to obtain the item in question.
Example #1: Breakfast

- Consider the opportunity cost of a complete homemade breakfast, say including eggs, bacon, a scone, fresh coffee, and orange juice?

  1. Materials cost (conservatively)
    - 2 eggs at 12 cents/egg
    - 3 slices of bacon at 25 cents/slice
    - 1 scone at 60 cents/scone
    - 1 glass of OJ at 30 cents/glass
    - 1 cup of coffee at 20 cents/cup
    Totalling $2.09

  2. Production cost (probably less than 50 cents) - did anyone make themselves such a breakfast this morning? Why not? What costs did we miss?

  3. The cost of time, which you could spend doing something else; e.g.,
    - sleeping
    - listening to music
    - studying economics...

- Opportunity cost measures includes both the monetary and non-monetary cost of a choice.

Example #2: The Cost of a College Education

- What is the cost of a college education at ISU (resident)?

  1. Explicit Monetary Costs:
    - Tuition and fees: $6,997 per year
    - Books and fees: $1,014
    - Room and Board: $7,472
    - Personal Expenses: $3,438
    Gross Out-of-Pocket costs: $18,920 per year

    Subtracting out living costs (would have paid anyway) yields a Net Out-of-Pocket costs: $11,448 per year
Example #2: The Cost of a College Education (cont’d)

2. Implicit or Indirect Costs:
   - Time
     - Forgone income: year round $21,948
       Allowing for summer jobs: -$3,000
     - Net Forgone income: $18,948
   Of course, there may be other ways to spend that time that would be even more valuable.

3. Total opportunity cost of college
   - $30,396 per year
   - $121,584 for four years

How do you think the current recession would impact the opportunity cost of college?

4. The flip side of this is that there are significant benefits from a college education as well.

Example #3: White-water Rafting in Alaska

- Two summers ago, my wife and I went to Alaska.
- We booked ahead of time a white-water rafting trip costing $96 each.
- No refunds were allowed less than 2 weeks prior to the raft trip.
- On the morning of the trip, the weather turned cold (40 degrees) and rainy.
- When considering whether to go on the trip that morning, what was the “cost” of skipping rafting trip and returning to the lodge (and it’s nice warm fire)?
- Was it the $96 we had each paid for the white-water trip?
Principle #3: "How Much?" is a Decision at the Margin.

- Studies have shown that the regulations enacted under the original Clean Air Act have led to overall benefits that significantly outweigh the associated overall costs.
- Does this imply that we should further reduce air pollution?
- Not necessarily, it depends upon whether the additional (marginal) benefits from the further reductions off-set the additional (marginal) costs of achieving them.
- We will see throughout this course the importance of marginal analysis.

Principle #4: People Usually Exploit Opportunities to Make Themselves Better Off

- While this seems like an obvious idea, the point here is that understanding people’s behavior in any economy requires understand the incentives they face.
- An incentive is anything that offers rewards to people who change their behavior.
- Consider the following examples:
  1. The electric power company offers a $100 rebate for individuals purchasing an efficient refrigerator.
  2. Firms, prior to much of the Clean Water legislation, would simply dump waste into a nearby river or stream.
  3. Individuals on welfare programs would historically lose much, if not all, of their benefits if they got a job.
  4. Ethanol content requirements in gasoline contributes to a increase in the price of corn.
Principle #5: There are Gains from Trade

- A market economy relies upon this basic principle; i.e., that people can get more of what they want through trade than by being self-sufficient.
- These gains stem from the fact that total output can be increased with specialization.
- This idea applies to:
  - the household
  - the firm
  - communities
  - nations
- There can be off-setting considerations making specialization undesirable.

Principle #6: Markets Move Towards Equilibrium

- As the book defines it, an economic situation is in equilibrium when no individual would be better off doing something different.
- Changing conditions create opportunities (incentives) that a market economy encourages individuals to take advantage of, moving us to a new equilibrium.
- Consider the supermarket analogy.
- What are some examples of new equilibria?
  - The emergence of Toyota and Honda during the OPEC oil embargo.
  - Cable TV requires a large investment, typically limiting the number of cable companies in a region, giving cable companies market power to keep rates high.
  - A similar story emerges for land-line phone companies.
  - Medicare and Medicaid cap reimbursements to physicians.
Principle #7: Resources Should be Used as Efficiently as Possible to Achieve Society’s Goals

- An economy is efficient (or Pareto Optimal) if there is no way to make anyone better off without making others worse off.
- As we shall see later on in the class, recessions are an example of a situation of inefficiency.
- It is important to note that efficiency is not a very strong criteria. It says nothing about the equity of the situation.

Principle #8: Markets Usually Lead to Efficiency

- A market economy creates incentives for each individual, acting in their own self interest, to increase efficiency.
- This is Adam Smith’s so called Invisible Hand.
- As we will see in detail in subsequent chapters, if there is unmet demand for a commodity at current price, individuals will bid up the price for the good, creating an incentive for producers to increase production until that demand is met.
Principle #9: When Markets Don’t Achieve Efficiency, Government Can Improve Society’s Welfare

- While markets tend to lead to efficiency, they do not always.
- There are many types of market failures, including:
  - externalities
  - market power
  - public goods
  - common property resources
- When market’s don’t achieve efficiency, governments can (but do not necessarily) improve society’s welfare.
- Understanding the source of the market failure can be key to resolving the inefficiency.
- In many cases, the problem stems from poorly defined property rights or an incomplete market for the good.

Principle #10: One Person’s Spending is Another Person’s Income

- If one group of individuals decide to spend less, the impact will spread through the economy.
- We are currently experiencing this in terms of the global recession.
- These interactions are not simply local. They spread
  - across communities (sometimes exacerbated by “buy local” campaigns).
  - internationally through protectionism.
- This principle also suggests how recoveries emerge.
Principle #11 and 12

- **Principle #11:** Overall Spending Sometimes Gets Out of Line with the Economy’s Productive Capacity
  - Again, the current recession is an example of this.
  - Many argue that it was WWII that largely brought the US out of the Great Depression.
  - Spending can also lead to *inflation*.

- **Principle #12:** Government Policies can Change Spending
  - The Economic Stimulus Package is an example of such an effort.