Notes for ECON 25100 - Microeconomics

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These are lecture notes for spring 2024 ECON 25100 at Purdue. Modify, use, and distribute as you please.

Contents

Course Introduction

This course offers a comprehensive exploration of the principles that govern individual economic decision-making and the interactions within markets.

Introduction to Economic Principles

This section will briefly define several important terms, topics,and principles relevant to the rest of this class.

Economics is the study of allocation of scarce resources to meet the unlimited human wants.

- Microeconomics: decision making by individual economic agents such as firms and consumers.
- Macroeconomics: aggregate performance of the entire economic system.
- Emipirical economics: facts to present a description of economic activity.
- Economic theory: relies upon principles to analyze behavior of economic agents.

Economy has slowly transitioned from mainly theoretical to mainly empirical.
Assumptions are made consistently, sos as to more rigurously create a methodology to analyze the world without overly complicating things.
Model building is the creation of abstractions from reality.

Occam's razor: The best model is that which describes reality and is the simplest.

"Ceteris Paribus": All other things equal. (changing only certain parameters and leaving everything else the same)

The lack of assumptions would make things either to simple or too complicated to viably describe reality.

Economics provides a method to make a rational choice.

Rigurous models are made to predict human behavior through either inductive logic, or deductive logic.
There are two kinds of economics:

- Positive Economics: concerned with reality.
- Normative economics: concerned with what should be. (If a statement has "should" it's probably normative).

The economic problem involves the allocation or resources among comepting wants.

This exists due to scarcity.

Scarcity exists because of unlimited human wants and limited resources.

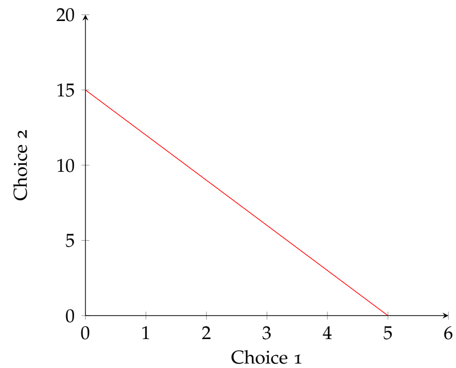
Economic Resources:

- Land - space, natural resources.
- Capital - physical assets like factories or tractors.
- Labor - skills, abilities, knowledge, etc.
- Entrepeneurial talent - the economic agent who creates the enterprise.
- Technology - a manner in which resources are combined to produce commodities (methods of making processes more efficient).

Core Principles of Economics:

- Cost-Benefit Principle: cost and benefits are the incentives. Do something if the benefits outweight the costs. (Convert everything to money, and then calculate).
  The cost-benefit principle is directly related to the willingness to pay, which is precisely, the conversion of benefits to money.
  If the benefit is greater than the cost, one has achieved an economic surplus. This principle aims to maximize the economic surplus.
  It also relates to framing effects, which is when a decision is affected by the method in which the situation or object is framed.
- Opportunity Cost Principle: The allocation of resources imply decisions and choices. For every choice we make, there are other choices we do not, and the next best alternative has a cost, which is known as the opportunity cost.
  This principle focuses on the tradeoffs of particular options.
  The opportunity cost is not the sum of all lost options, only the next best one.
  All choices involve tradeoffs due to scarcity. The usage of resources on one choice limits the amount available for other choices.
  Note: a sunk cost is a cost that cannot be recouped, and should be ignored. They should not be included into the current decision.
- Marginal Principle: Decisions about quantities are best made incrementally. Instead of analyzing how many, one should analyze whether smaller increases are viable and resonable.
  Marginal Benefit: Benefit on an extra unit.
  Marginal Cost: Cost of an extra unit.
  While the marginal benefit of an additional unit exceeds it costs, it should be acquired.
  Anything that asks how many can be analyzed marginally.
  Economic surplus is maximized when the marginal cost equals the marginal benefit.
- Interdependence Principle:

As a subtopic of Opportunity Cost Principle is the Production Possibilities Frontier, which analyzes the different set of attainable gains based on different allocations. Under the assumption that the costs and benefits are constant, the graph will look something like this:



Any allocation of time below the PPF is an inefficient use of resources. Points above it are unreachable unless new productivity increases are found.