Ec 11: Introduction to Economics

Professor Jean-Laurent Rosenthal

Goals Of This Course

Introduce you to

- Economic language (jargon)
- Major concepts
- Economic reasoning and analysis
  - ability to apply
  - tools
  - Intuition
- Hopefully point you to areas of further study

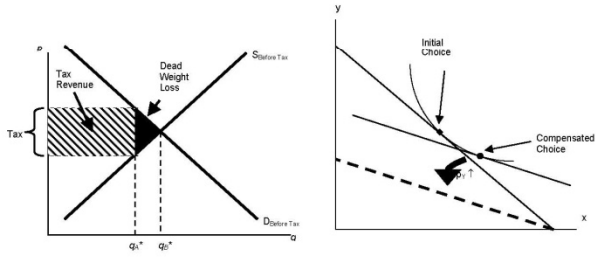
Who Am I?

- Ph.D. Caltech, 1988, B.A. Reed College, 1984
- Taught at UCLA 1988-2005
- Executive officer for the Social Sciences
- Co-Editor, *Journal of Economic History*
- Research
  - Property rights and investment
  - Credit markets
  - Wealth inequality
  - Law and the organization of business firms

Textbook

- *Introduction to Economic Analysis*, version 2.0
- Free online:
- http://www.introecon.com/

- Can also use John Taylor
  - Microeconomics 6th edition
    - but not necessary.



Introduction to Economic Analysis

by

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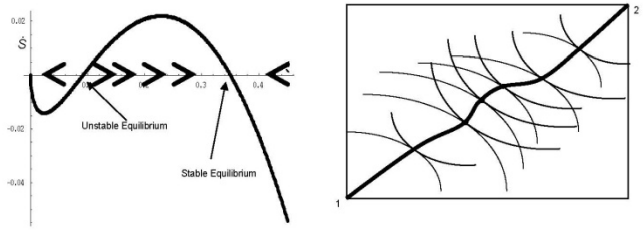


Assessment

- Midterm 26%
- Final 50%
- 8 quizzes from Homeworks 24%
- Responsible for website material
  - http:http://www.hss.caltech.edu/~jlr/courses/Syllabus011.htm
  - Check at least weekly for updates
- Responsible for material presented in class
- Responsible for material in book

Week	Quiz Posted	Quiz due 6 pm	Answers posted
1	No Quiz		
2	APR 3	APR 8	APR 10
3	APR 10	APR 15	APR 17
4	APR 17	APR 22	APR 24
5	APR 24	APR 29	MAY 1
6	MAY 1	MAY 6	MAY 8
7	MAY 8	MAY 13	MAY 20
8	MAY 20	MAY 22	MAY 24
9	MAY 24	MAY 27	MAY 29
10	No Quiz		

TA sections

Attendance is necessary!

Slots are scarce--we will allocate if possible by order of preference. Please mark ballot as order of preference. If on time not feasible please mark why.

Thursdays	7-8 PM	127 Baxter
Fridays	9-10 AM	237 Baxter
Fridays	11-12 AM	210 Baxter
Fridays	1-2 PM	127 Baxter

THE PLAN

30-Mar	Scarcity, budgets, preferences		4-May	Markets and firms Monopoly
1-Apr	Supply and demand		6-May	Public goods
6-Apr	Utility and constrained optimization		11-May	Public bads and taxation
8-Apr	Demand, price effects, income effects		13-May	Property rights and investment
13-Apr	Exchange economies		18-May	Risk and the market for insurance
15-Apr	Firms and Production		22-May	Information and the market for Lemons
20-Apr	Production and cost function		25-May	International trade Ricardo
22-Apr	Technical change and efficiency		27-May	International trade Hecksher-Olin
27-Apr	Economies of scale and scope		1-Jun	Investment and Growth
29-Apr	Markets and firms Competition		3-Jun	Endogenous growth and Human capital

What is Economics

- Founded in the 18th Century
- Two issues
  - How do individuals and organizations make decisions that avoid waste?
    - Minimize costs
    - Maximize profits
  - Why are some individuals, groups, societies more successful?
    - Second half of the course
  - Now ask a whole variety of actions about individual behavior

Scarcity and Economics

- Making decisions that are not wasteful matters only if there is scarcity
- If not then what
- If there is scarcity then
  - someone ought to get access to scarce resources
  - Some activity ought to get access to scarce resources
  - They have to be allocated

Scarcity => allocation

- What is scarce
  - Land
  - Energy
  - Time
  - And pretty much everything else sooner or later
- Allocation methods
  - Markets
  - Government
  - Crime
  - Clubs
  - Gifts

Ask two kinds of questions:

•Positive: how do credit markets work?

•Normative: how should the right to pollute be allocated?

Economic Analysis

- To answer questions:
  - Heavy use of mathematical models
    - Simplify a complex world
    - Early on avoided the pb of very bad very scarce data.
  - Positive and normative theories
  - Self-interested behavior
    - Maximization paradigm
  - More recently resurgence of an empirical side
    - Data has become abundant.

A simple example

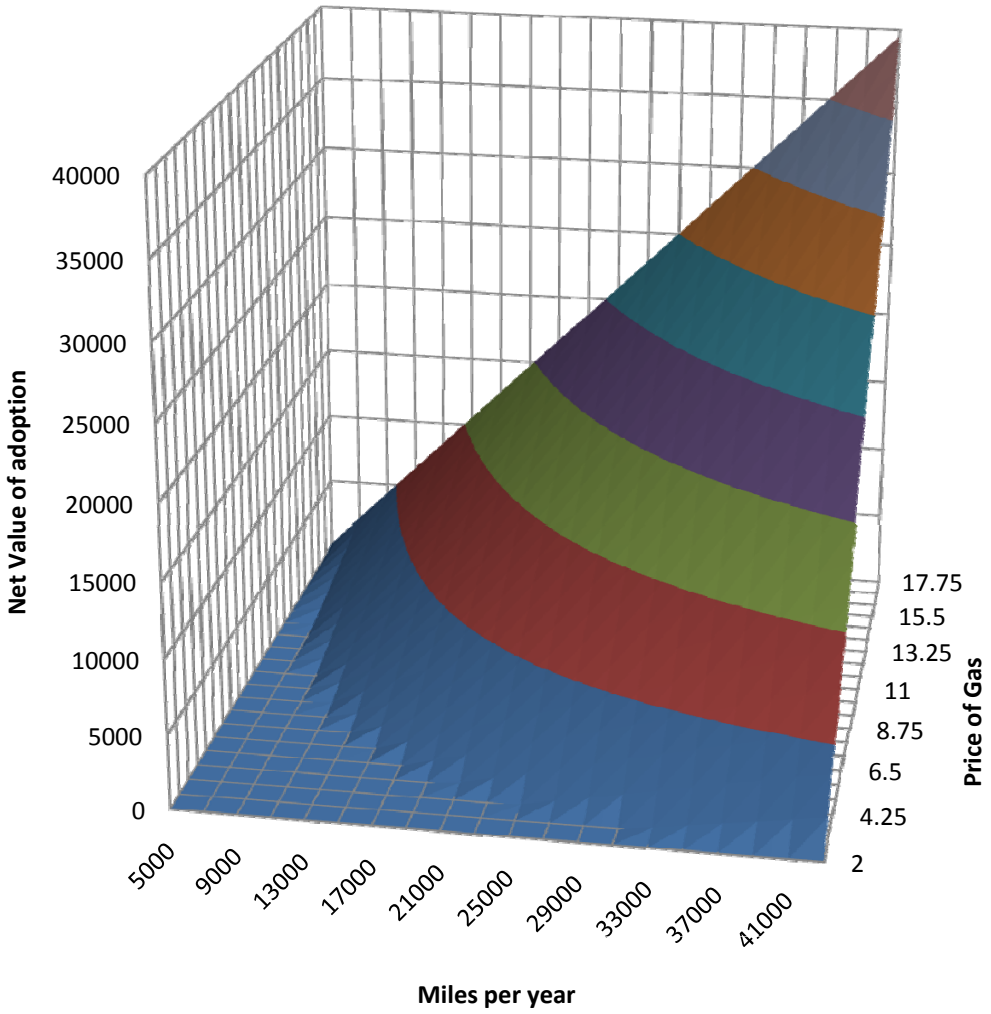
- Should you buy a hybrid car? How should the government encourage the sale of Hybrid cars?
  - Start with private benefits and private costs

$$Savings = \sum_{t=1}^{10} \left(\left(\frac{Miles\ driven}{HybridMPG} \right) - \left(\frac{Miles\ driven}{Alt\ MPG} \right) \right) * GasPrice \frac{1}{1+r}^{t} - 5000$$

  - Standard Honda Civic $18,000 (34MPG)
  - Hybrid Honda Civic $23,000 (45MPG)

1. You drive 15000 miles a year gas is 3$ a gallon. Save $323 a year 10 year PV of saving $2618 do not buy
2. You drive 20000 miles a year gas is 5$ a gallon. Save $718 buy! 10 year PV of saving $5930 buy!

It depends



Could re do with Humer2 @ 18mpg

Or Range Rover @16mpg

- People have more incentive to switch
- But would they (since they did not buy a low mpg vehicle to begin with)

For more amusement

- http://www.fueleconomy.gov/feg/findacar.htm

Beyond private costs

- Social gain CO_2 emission?
  - Hybrid saves 71 gallons of gas per 10,000 miles driven. Or between 300 and 2700 discounted per decade.
  - Per gallon of gas emit 2.421 Kilos of CO_2. Price at current carbon buy back of $12 per ton of CO_2
  - Between $8 and $75.
- Car emission are not a cost effective way to reduce carbon footprint if the alternative is carbon buy backs.=> Cars for Clunkers bad idea from the environment's point of view

Government intervention

- So maybe Carbon Buyback prices are not a good indicator of the social value of adopting hybrids.
- Suppose the government wants to get a million vehicles off the road. How should it do it?
  - Provide tax incentives for people who buy hybrids
  - Raise the price of gasoline?
  - Have a first come first serve “get on the carpool lane alone.”
  - Provide free parking to people who buy Hybrids

Costs

- Hybrids have benefits, but no everyone adopts because they also have costs
- The most obvious are purchase costs, and these come from production costs
- Less obvious are cost of disposing of those pesky batteries
- Still less obvious may be the incentive effects on driving.
  - Anti-lock brakes and distance to the next car.

Opportunity cost

- But why might the government prefer
  - Gasoline taxes over tax incentives?
  - Because the lost revenue has an opportunity cost.
- Opportunity cost is the value of the best foregone alternative
  - Humane society puppy
  - Caltech education
- Opportunity cost often translated into $
  - Willingness and ability to pay
  - Value of human life

From the example back to theory

- Resources are scarce and things have costs then I have to figure out what to buy.
- Budget
  - The value of resources at my command.
    - Income
      - Labor => wages
      - Wealth => rents, dividend, interest
    - Capital life time wages….
  - Either way these are finite.
- Preferences
  - What do I want? The hummer or the hybrid?
  - basic idea is that individuals can and do rank.
    - How?

Jargon

- Ceteris paribus
- Marginal
- Homo economicus
- Self-interested behavior
- Normative and positive theories
- Maximization paradigm
- Comparative static

Next time!

- Assume markets.
  - Individuals will observe prices and make decisions
  - The decisions can be summarized as
- Demand and Supply
- Market equilibrium

The bigger question.

- Why people want to use markets?
  - Rather than government, crime, lotteries, or gift giving.
  - Or at least why do they do so more often than not!