From Behavioral Economics to *Freakonomics*: Economics in a Golden Age

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My Background

- Boston Fed economist

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- Acting Director of new “behavioral economics” center at Boston Fed

Research Center on Behavioral Economics
and Decision-Making

- Former academic

A Golden Age of Economics

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Economics: Sexiest Trade Alive

Newsweek

Dec. 26, 2005 - Jan 2, 2006 issue - Economics, perhaps the geekiest of geek subjects, got a serious makeover this year. Consider the numbers: "Freakonomics," a book by economist Steven Levitt and journalist Stephen Dubner, has spent 34 weeks (and counting) on The New York Times best-seller list; John Perkins's "Confessions of an Economic Hit Man" was on for seven weeks. Meanwhile, economics is the hottest undergrad degree at Harvard and New York University; the number of econ majors is up some 40 percent over the past five years. Still not convinced? Two words: Angelina Jolie. Last fall she teamed with leading economist Jeffrey Sachs in an MTV documentary about Kenya's economy. That's hot.

Story continues below ↓

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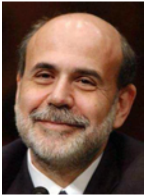
Economically sound: Jolie and Sachs

Disclaimer

- Nothing in this talk is the official position of The Federal Reserve Bank of Boston ...

- ... or the Federal Reserve System.

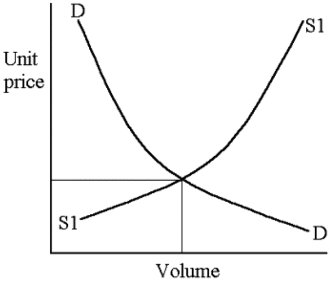


Outline

What is economics (in three words)?

- Individual maximization
- Equilibrium

In the beginning: Supply and Demand



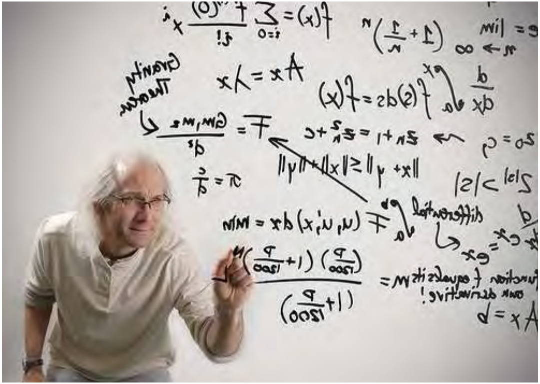
- Individual maximization: As price rises ...
  - Producers have incentive to deliver more goods to the market
  - Consumers have incentive to consume less (can enjoy more “other goods” if they reduce consumption by one unit)
- Equilibrium: Unique price results

The development of *Homo Economicus*

- Individual maximization and equilibrium impose discipline on economics
- This discipline separates economics from other social sciences
- Ideas are often expressed mathematically

The development of *Homo Economicus*

- Example of consumer choice: $\frac{Price_A}{Price_B} = \frac{MU_A}{MU_B}$
- Before long: *Homo Economicus!*



Homo Economicus described

1. He is good at translating problems into mathematical terms, then solving them
2. He has a stable "utility function" that determines his preferences
3. He has no "self control" problems

- Are these assumptions realistic?

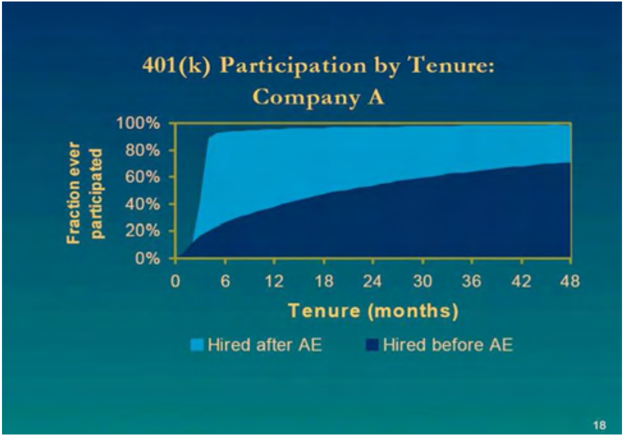
Automatic enrollment in employment pension plans

- A firm decided that it wanted to increase the participation of its employees in its 401(k) program
- Previously: New employees had to opt *in* to the program
- Change in policy: New employees had to opt *out* of the program, or else they would be automatically enrolled
- Question: Should the policy have any effect on participation?

- Answer from *Homo Economicus*: No.

Automatic enrollment in employment pension plans (con't)

Answer from the data: **Yes!**



What is going on?

- People might find it costly to make a 401(k) decision
- "I'll sit down and think about this ... tomorrow."
- Problems of self-control, difficulty with financial planning
- *Psychology* is coming into play

What it is behavioral economics?

- It often asks “old questions”
  - What determines savings and consumption?
  - Why don’t wages fall in recessions?
  - What influences the housing market?
  - How are asset prices determined?
- ... but it uses some “new tools”
  - Individual maximization *that allows for psychological forces*
  - Equilibrium

Psychological Force No. 1: Default Bias

- Economists have long studied ways of increasing saving
- Traditional answer: Change the incentives (e.g., complex tax breaks)
- New answer from 401(k) research: Change the defaults!
- Could it be that easy?

Psychological Force No. 2: Fairness

- Ultimatum game
  - First player offers to "split a pie" by offering some percentage to second player
  - Second player accepts or rejects
  - If second player rejects, neither player gets anything
- *Homo economicus* solution: First player offers 0.000001%, second player accepts
- Typically not what happens
- "Fairness" could play an important role in labor markets

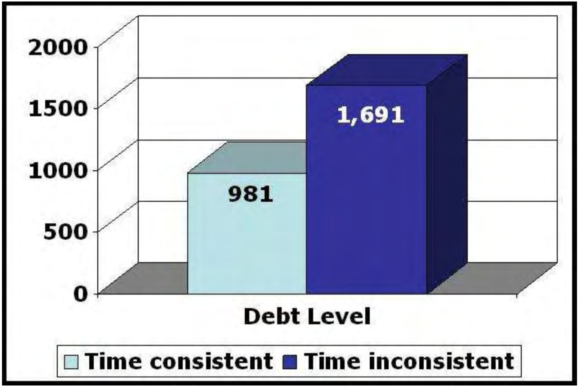
Psychological Force No. 3: Self Control

- Many decisions have an *intertemporal* element
  - Costs come today
  - Benefits come tomorrow
- People often have problems sticking with previous plans
- “I started my diet last week ... but those sugar cookies look great!”
- *Dynamic Inconsistency* of preferences
- Perfect example: Me in college

Force No. 3: Self control (con't)

- Boston Fed research project at a local income tax assistance site
- Researchers measured preferences of participants with questions about potential future payoffs
- Some respondents were more likely to be "dynamically inconsistent" than others
- Turns out that this matters for respondents' real-world behavior

Force No. 3: Self control (con't)



NOTE: Debt Level = Outstanding Balance on Revolving Accounts on Credit Report. N = 556. Difference is statistically significant on the 1 percent level.

The research agenda for behavioral economics

- Can the lessons of psychology be integrated into economics?
  - Not enough to say only that people are “irrational”
  - Need to identify the *systematic* and *predictable* ways that people deviate from rationality
- Can behavioral insights improve economic policy?

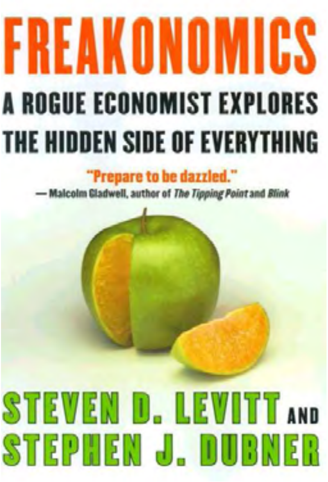
Research Center on Behavioral Economics
and Decision-Making

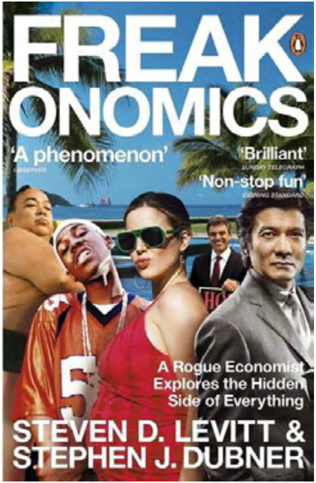
  - Market regulation
  - Macroeconomic forecasting
  - Consumer education
  - Goals of the Fed: Low inflation and maximum sustainable growth

“New” questions and old tools

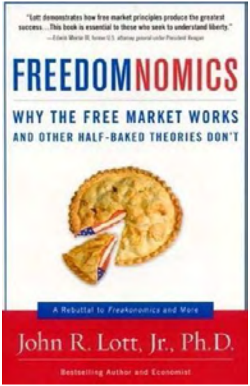
- “New questions” really aren’t so new
- Since the work of Gary Becker in the 1950s, economists have analyzed “non-economic” topics using the tools of *individual maximization* and *equilibrium*
  - Marriage market
  - Discrimination
  - Economics of the family
  - Crime
- Lately, this work has intensified

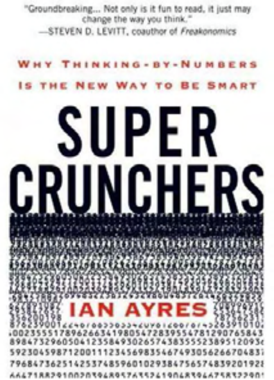
“New” questions and old tools (con’t)

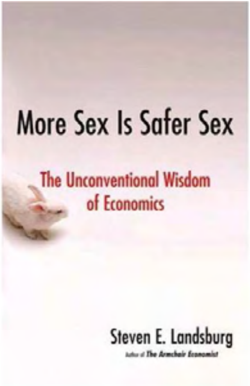




"New" questions and old tools (con't)







Why are economists at the forefront of this research?

- **Theory:** Economists think of social problems in terms of *individual* incentives, which is usually correct
  - Little emphasis on "top down" explanations that depend on nebulous "social forces"
  - Incentive stories in *Freakonomics* are often very straightforward
- **Data:** Economists have long struggled with establishing *causation*, not just *correlation*
  - Problem is related to distinguishing between demand shifts and supply shifts
  - How does one *prove* that abortion lowered the crime rate ...
  - ... or that police spending reduces crime?

Can we integrate these insights into the high-school classroom? **Yes!**

Four goals for personal finance teachers

Note: these are not official Fed positions – only my opinions!

1. Get students to start saving early ("miracle" of compound interest)
2. Turn your students into savers, not investors
   - Their biggest enemies will be inertia and lack of self-control ...
   - ... not a lack of knowledge about which stock to pick or how to "time the market"
3. Stress the basics of financial markets
   - Diversification, efficient markets hypothesis, volatility of bonds vs. stocks
4. Teach them to understand risk
   - Owning a well-diversified portfolio that includes stock *index* funds is appropriate
   - Putting all of their retirement savings into the stock of a single company (even their employer) is not

Three goals for economics teachers

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1. Give your students a sense of the strengths and weaknesses of economic reasoning
   - When are the assumptions of *homo economicus* likely to be satisfied?
   - When are they likely to be violated?
   - Potential example: Fairness and living-wage campaigns
2. Scour the blogs for interesting economic tidbits to discuss in class
   - Greg Mankiw; Paul Krugman; Econbrowser; *Freakonomics*
3. Look for examples in the press where correlation is being confused with causation

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