Economics 1: Fall 2010

J. Bradford DeLong, Michael Urbancic, and a cast of thousands...

http://delong.typepad.com/econ_1_fall_2010/

The Course Nears Its End...

- ~~10/27: Monopoly~~
- ~~11/01: Oligopoly and game theory~~
- ~~11/03: Monopolistic competition~~
- ~~11/10: Externalities~~
- ~~11/15: Asymmetric information~~
- **11/15: Risk aversion**
- **11/17: Silicon valley: increasing returns and information goods**
- **11/22: Poverty and income distribution**
- **11/22: Problem set 7 due**
- 11/29: Mixed economy
- 11/29: Social choice
- 12/01: Economic theory of politics
- 12/06: Problem set 8 due
- 12/06: Applying economics to policy
- 12/10: Sample final review
- 12/14: FINAL 11:30-2:30

Economics 1: Fall 2010: Risk Aversion and Insurance

J. Bradford DeLong

November 22, 2010, 12-1
Wheeler Auditorium, U.C. Berkeley

Let’s Take a Closer Look at Insurance

- What insurance policies do I own?
  - Health insurance
  - Property insurance
  - Diversification in my investment portfolio
- Why do I want to do this?
  - I’m sacrificing expected return—paying somebody to clip some of my money away in expectation. Why?

Decreasing Marginal Utility of Wealth

- First $500/year of consumption is really important
- Next $500/year—not so much.
- Similarly all the way up.
  - The second $5 thousand not as important as the first $5 thousand
  - The second $50 thousand not as important as the first $50 thousand
  - The second $500 thousand not as important as the first $500 thousand
  - The second $5 million not as important as the first $5 million
  - And so on all the way up...

Decreasing Marginal Utility of Wealth, Diversification, and Insurance

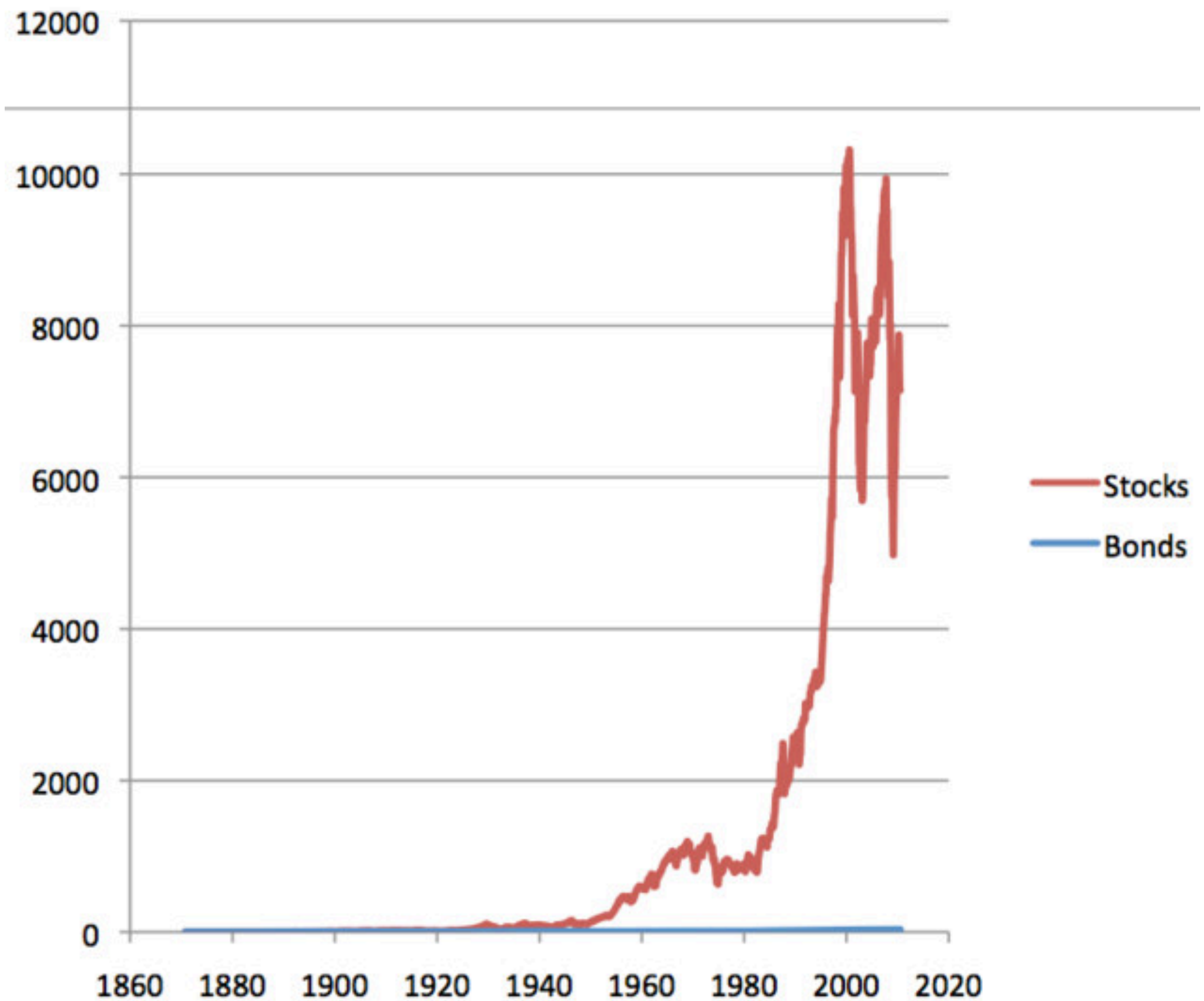
- I am 50 years old. There is about $3M invested for when I am 75...
- If it were all invested in one company, then there are roughly two outcomes:
  - $22M or $2M
  - I would rather have $12M. In fact, I would rather have $8M
- Suppose that we invested it not in one company but in 100...
  - Then the law of large numbers would be on my side...
  - That is the point of insurance; that is the point of diversification; that is the point of risk spreading
- That is why we say: “don’t put all your eggs into one basket”
- The problem: you gotta watch the basket
  - Bernie Madoff

How Well Does This Work?

- Badly
  - People are mysteriously averse to small risk
    - (games against nature vs. games against opponents, perhaps?)
  - There is risk, and there is uncertainty
    - The top executives of Citigroup had literally no idea that their exposure to subprime mortgages was as large as it was
- We can see how badly it works in the equity premium puzzle

The Equity Premium Puzzle

- 30 vs. 7000
  - Is it 5000, 7000, or 10000?
- Three eras of decline
  - 1929 to 1950
  - 1968 to 1986
  - 2000 to ????
  - Is this time different?



The Equity Premium Puzzle

- Stocks? 6% per year with a standard error of 15%
- “Safe” Treasury bonds? 1% per year
- Sharp ratio of 1/3 over a one year horizon.
  - Over nine years: 45% mean difference; 45% s.d.—one chance in 6 of doing better with bonds
  - Over forty-nine years: 245% mean difference; 105% s.d.—one chance in 50 of doing better with bonds
    - And that’s not 3.5-fold: that’s 12-fold
- But the equity premium persists
  - And people trade against themselves
    - Buy stocks and just go away: earn 6% per year
    - Invest in an actively-traded mutual fund run by a professional: earn 5% per year
    - Buy and sell on your own with a broker: earn 4% per year
    - Day trading: 0% per year
  - Somebody is on the other side soaking up these returns
    - At least, they think they are: “You never know whether your returns are due to alpha or beta until it’s too late to do anything about it...”

Economists Invest...

- Tom Keene interviews Robert Lucas:
  - LUCAS: Our economy’s got a remarkable ability to return to its long term growth trend. And for most of the depressions we’ve had or recessions, the return has been quick. Two or three, four years...
  - [...]
  - LUCAS: [T]here is no question that fear is what this liquidity crisis is. I mean the reason I got into money [with my portfolio] is that I got afraid to leave my pension fund in other securities. So I’m sitting there with a portfolio full of zero-yield stuff just because I’m afraid to do anything else. I think there are millions of people like me.
  - KEENE: What will be the signal for Robert Lucas to go back into the markets...?
  - LUCAS: I don’t know. Robert Rubin made a joke about that in the first session today. Nobody knows...

Alex Tabarrok of George Mason Emails...

- Michael Lewis's *The Big Short*.... Steve Eisman wants to bet against subprime. Greg Lippmann wants to sell him that bet. But Eisman and his partners hold back.... [W] what does this guy know that we don't? Why is he selling us this great deal? Could it really be this obvious? Could it really be this simple? Over and over again they question Lippmann and themselves. "Greg," says Eisman's partner
  - Don't take this the wrong way. But I'm just trying to figure out how you're going to f--- me...
- Everything is telling Eisman that this is the bet of the century but fear that he is missing something.... Finally, Lippmann hits on an unusual idea, he invites Eisman, who wants to short subprime, to meet with the buyers of subprime.
  - The teppanyaki room inside the Okada restaurant consisted of four islands, each with a large, cast iron hibachi and dedicated chef. Around each island Lippmann seated a single hedge fund manager whom he had persuaded to short subprime bonds, along with investors who were long those same bonds. The hedge fund people, he hoped, would see just how stupid the investors on the other side of those bets were and cease to worry that the investors knew something they did not.
- Lippmann's plan works. Eisman meets the buyers and for the first time groks the stupidity that is ruling the market and he makes the trades that will make him and his partners rich...

Implications for Financial Market Regulation—and for Your Portfolios

- Three ways to make money in finance
  - Do better research and back better executives and projects
  - Figure out ways to bring people with risk-bearing capacity into the market and sell them risks they can afford to bear
  - Figure out ways to sell risks to people who do not understand what they are

Test Your Knowledge: Risk Aversion

- Why should we be averse to risks?
- To what kinds of risks should we be averse?
- What are the benefits of insurance?
- What are the benefits of diversification?
- Why do we think that people do not do terribly well at dealing with situations of risk and uncertainty?

Economics 1: Fall 2010: Silicon Valley: Increasing Returns and Information Goods

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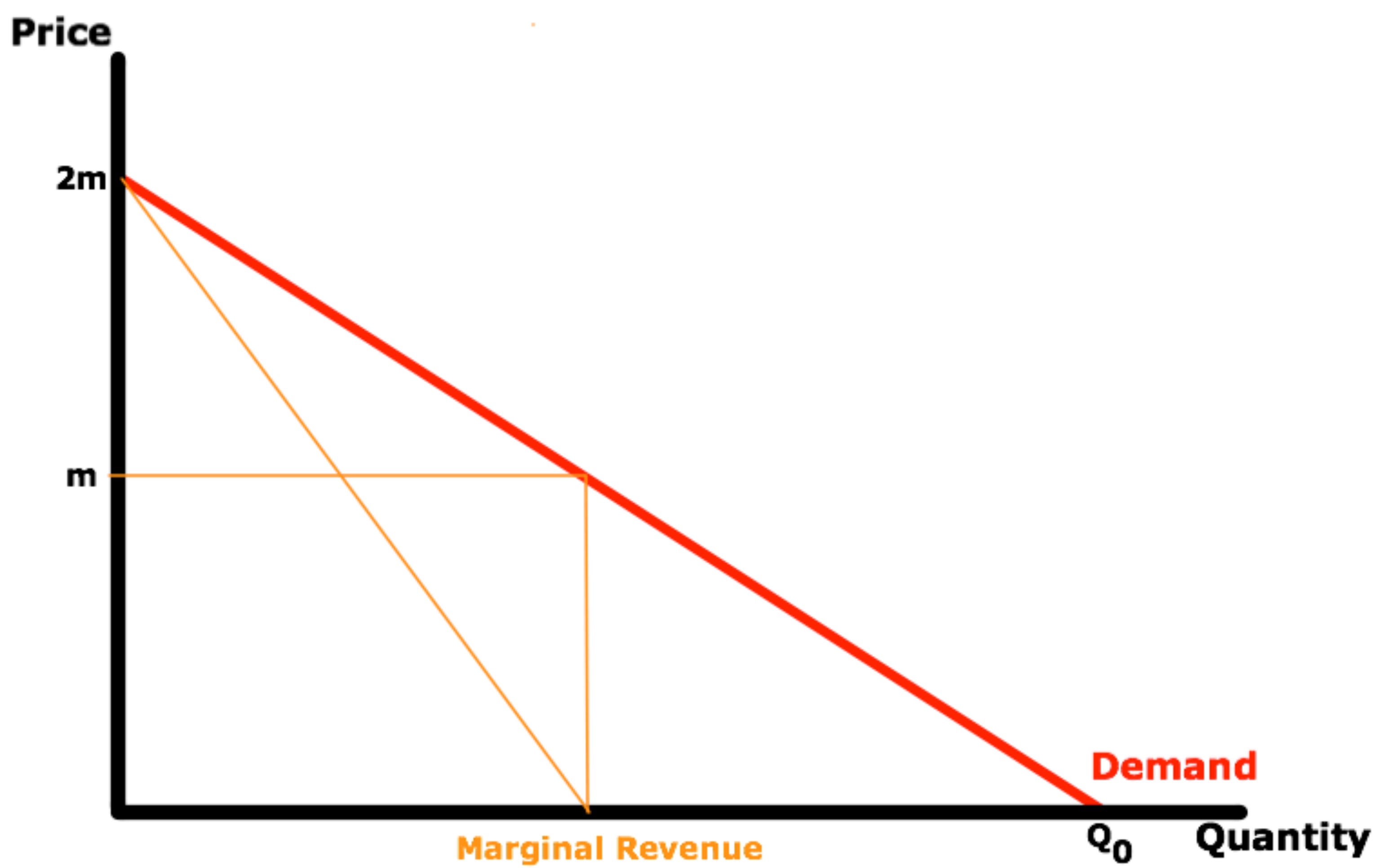
An Increasing Returns Situation...

- A fixed cost to start up
- A downward-sloping demand
- A variable cost that is relatively low
  – In the limit of a pure “information good”, the per unit variable cost, the marginal cost, is zero.
- You cannot support a competitive market equilibrium here
  – P = MC means that the fixed cost is not covered

An Increasing Returns Situation...



The Tasks of a Good Societal Calculating Mechanism

- To undertake those projects for which $mQ_0 > C$, where C is the fixed cost
- To produce Q_0
- To keep the surplus as widely distributed as possible to those who have large marginal utilities of income
  - Not necessarily opposed to pre-tax monopoly profits
    - Progressive tax systems
    - Charities
- "Shoulders of giants" effects: what we decide in one case may change the fixed costs C for future projects
- We will want to think about the right mix of institutions in order to accomplish these four goals

Possible Institutional Setups

- Public provision financed out of tax revenues
- A non-profit funded out of public revenues
- A cost-covering non-profit
- A cost-plus contract
- A lump-sum prize
- A per-unit prize
- A regulated monopoly (after a competitive struggle)
- A limited monopoly (after a competitive struggle)
- A monopoly (after a competitive struggle)

Possible Considerations

- P = MC vs. monopolistic restriction of output
- Government bureaucracy vs. private initiative
- Non-profit capture vs. private initiative
- Government as risk bearer
- “Stepping on toes”
- “Shoulders of giants”

What Institutions Do We Use in Silicon Valley?

- Public provision of basic research
- Research universities
- Venture-capital firms
- Limited monopolies in intellectual property (after a competitive struggle)
  - Limited by patent
  - Limited by copyright
  - Limited by piracy

Robert Barro on Microsoft

- Barro:
  - Bill Gates... may not understand the vital role wealth creation plays in society.... Mr. Gates... commencement address... theme was that so far what he has accomplished may have been good for him and Microsoft shareholders, but it has been no great contribution to society.... I find this perspective hard to understand. By any reasonable calculation Microsoft has been a boon for society and the value of its software greatly exceeds the likely value of Mr. Gates's philanthropic efforts.... [Microsoft's] revenue was $44 billion... generated by creating something consumers value.... A conservative estimate... is that the social benefit of Microsoft's software is at least the $44 billion Microsoft... capitalized with the same ratio (22) that the market applies to earnings, this flow corresponds to a valuation of $970 billion...
- Microsoft/Intel strategy:
  - Go for maximum volume
  - Commodify the complements
- The open-source alternative...
- Competition across platforms

Test Your Knowledge: Information Goods

- Why does market competition not work for information goods?
- What are the advantages and disadvantages of public provision of information goods?
- What are the advantages and disadvantages of the provision of information goods by nonprofits?
- What are the advantages and disadvantages of the provision of information goods by monopolies?
- How should monopolies providing information goods be limited or regulated?

Economics 1: Fall 2010:
Poverty, Income Distribution, and Social Welfare

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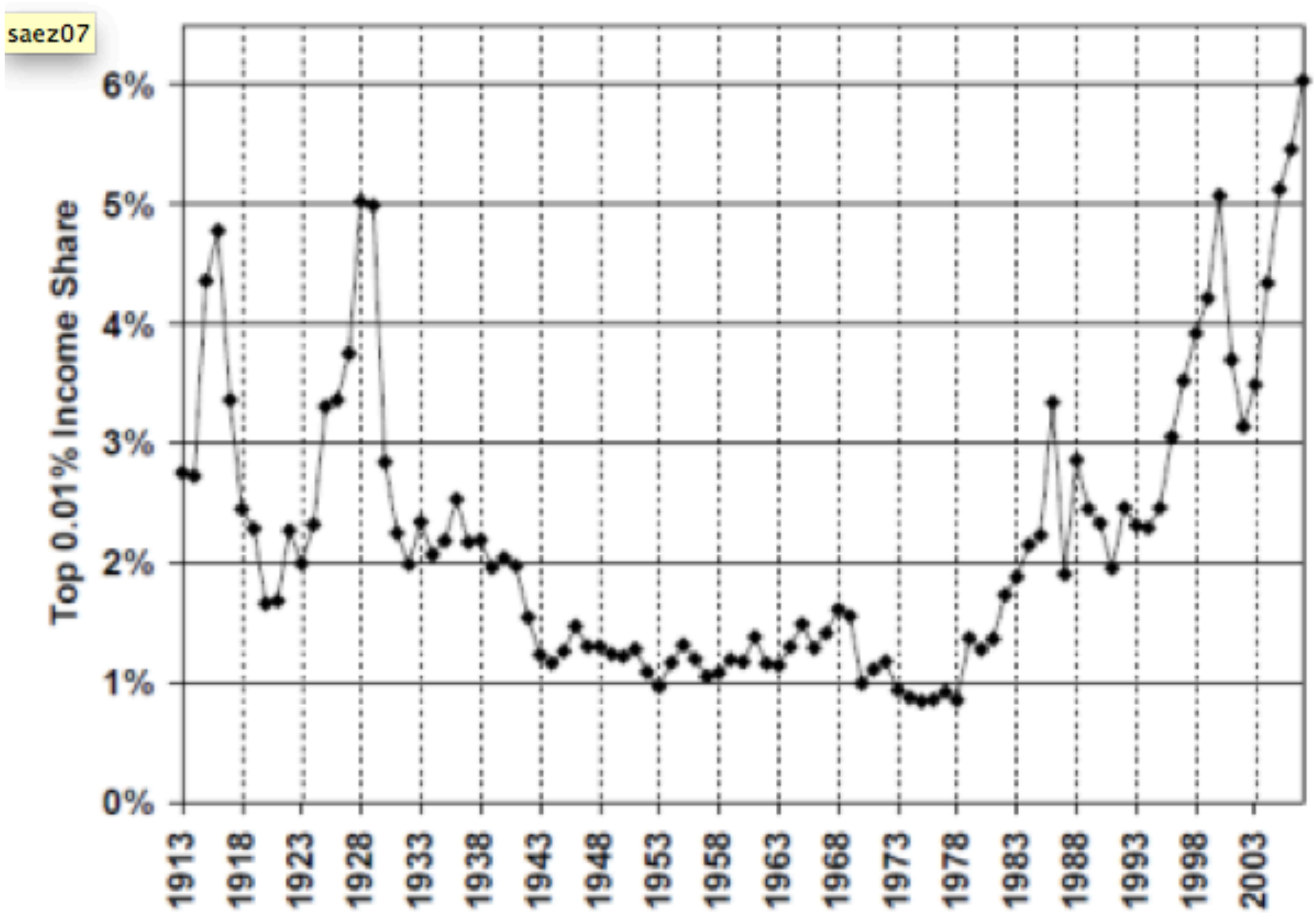
The Distribution of Income in America



Income Shares since 1980...

- Top 0.01%—13,000 households—6% of income up from 1% ($60,000,000 per year each)
- Next 0.99%—1.3 million households—24% up from 9% ($1.8 million per year each
  - Bottom of top 1%: $450,000 per year
- Bottom of top 10% makes $110,000 per year
- These numbers exaggerate inequality
  - Incomes go up and down over time
  - Consumption spending is shared

How Much Should a Society Count the Income of the Top 1% (or 10%) in Assessing Its Performance?

- From behind the veil of ignorance...
  - Inequality at the top would seem to have value only insofar as it raises the middle and the bottom...
  - Decent provision at the bottom would seem to have a heavy weight...
  - But we are not behind the veil of ignorance, are we?
  - On the other hand, our great^6-grandparents were behind a veil of ignorance with respect to us, and filial piety is supposed to be a virtue

An Empirical Question: How Much Does Inequality at the Top Boost Economic Performance?

	Top 1% Income Share	Next Decade's Non-Top Growth
1920	15%	0.96%
1930	17%	2.20%
1940	15%	4.42%
1950	12%	1.91%
1960	10%	2.99%
1970	9%	2.00%
1980	10%	1.88%
1990	14%	1.36%
2000	22%	0.48%

Test Your Knowledge

- What are the major patterns in income inequality in the U.S. over the past century?
- What does a standpoint behind the “veil of ignorance” suggest that economists should say about the desirability of income and wealth inequality?
- Are there sound reasons that we should care about the “behind the veil of ignorance” perspective?
- Does more inequality seem to produce faster growth because it provides better incentives for innovators and entrepreneurs?