The Federal Trade Commission's Hearing on

"The Evolving IP Marketplace"

Robert M. Hunt*
Federal Reserve Bank of Philadelphia

March 19, 2009

*: The views expressed here are the authors', not necessarily those of the Federal Reserve Bank of Philadelphia or the Federal Reserve System.

http://www.philadelphiafed.org/payment-cards-center/hunt/

First Principles

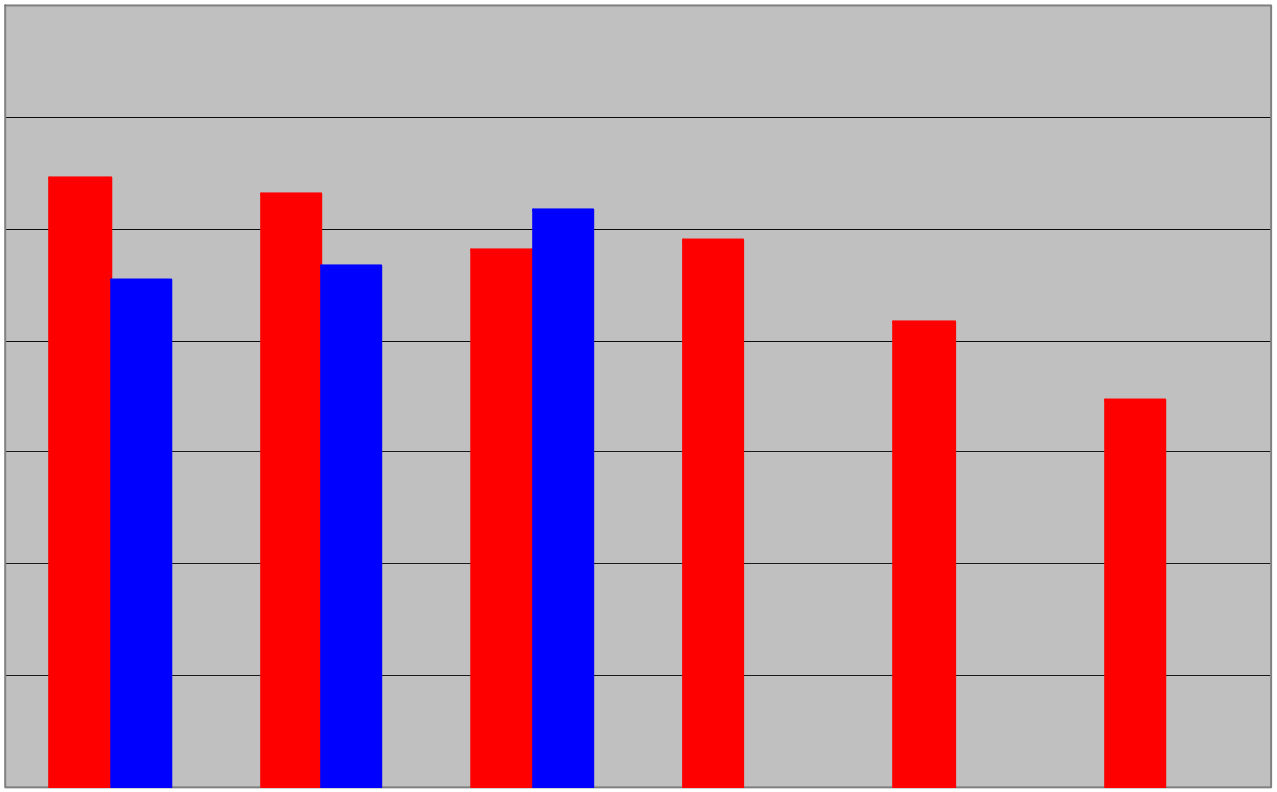
- Our aim is to maximize welfare through time
  - Innovation is about (quality adjusted) productivity growth
- But innovation & productivity can be hard to measure
  - So, instead, we often measure innovation inputs – R&D
- By most measures, the U.S. innovation system works well
  - Private R&D, employment of scientists, patents, productivity growth
- But it doesn't work perfectly
  - We are leaving money on the table
  - The foregone gains could be large, since U.S. R&D is very productive
- Why should we care about patents, litigation, or licensing?
  - First, as a means to an end – increasing innovation
  - Second, because these data can tell us something about efficiency

Can there be too many patents?

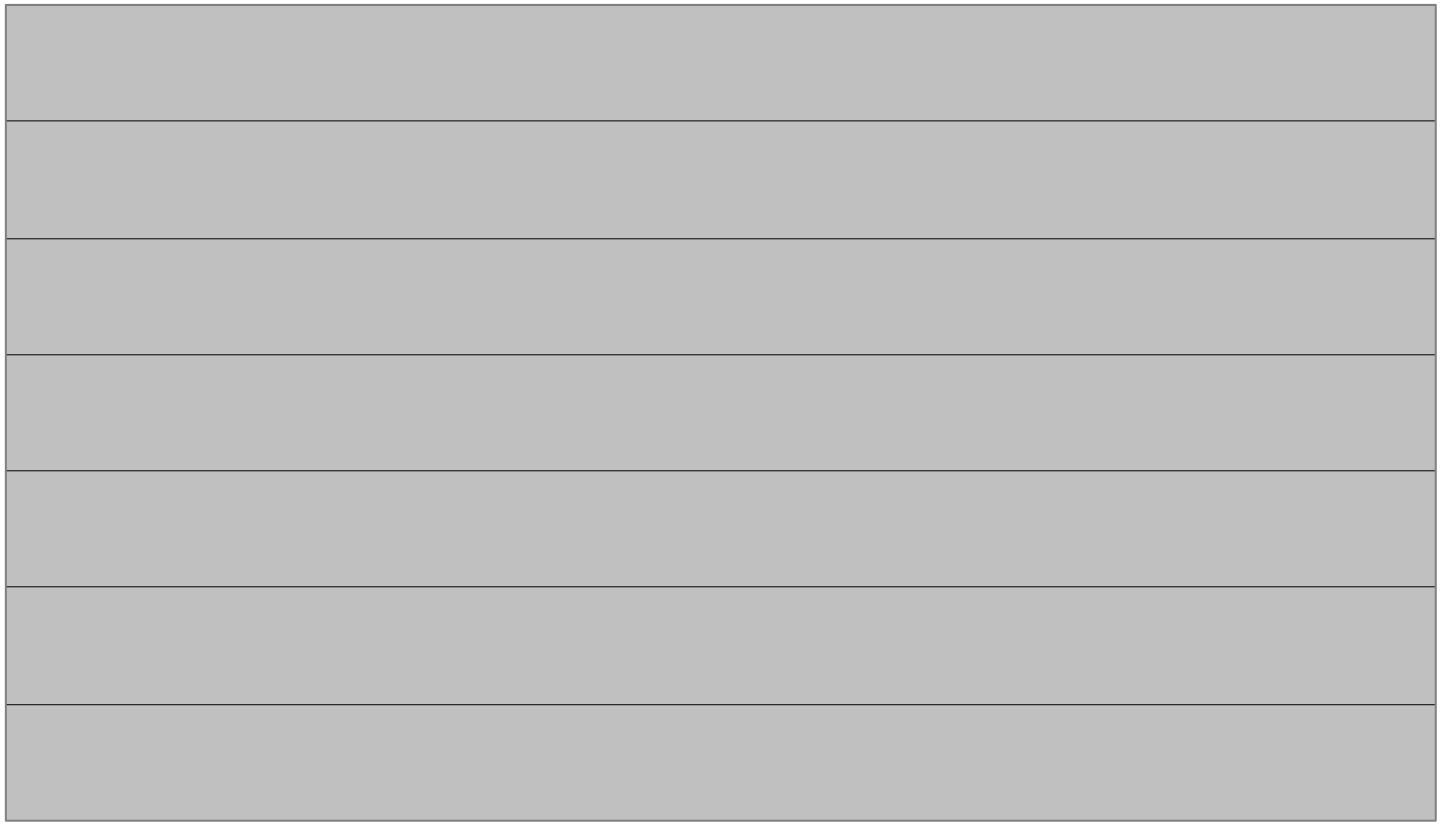
- Yes, in the following environment*
  - R&D is very productive—there are many inventions
  - Patents are cheap relative to R&D & industry revenues
  - There is considerable overlap in property rights
    - Technology? Claim construction?
  - Invention is not essential to patenting
- In such an environment ↓ patent costs can ↓ R&D
  - Because it reduces cost of investing in a *tax* on others' R&D
  - The result is a substitution of patenting for R&D
- Could licensing help?
  - Ex ante licensing could reduce wasteful spending on patents
  - But it might also reduce the intensity of R&D competition

*: Hunt, *American Economic Review*, Vol. 96 (2006), pp. 87-91

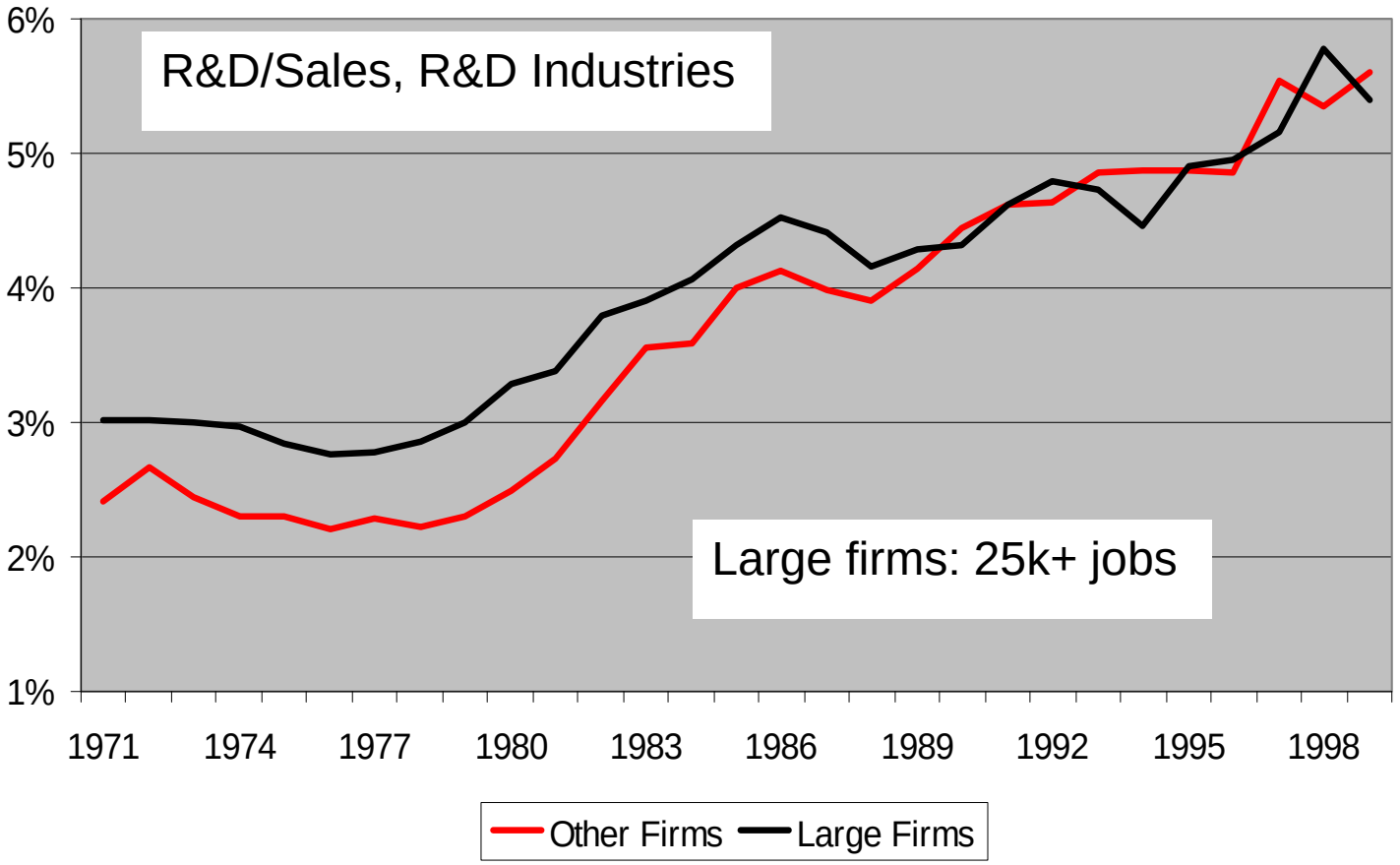
U.S. Industrial R&D has *De-concentrated*



Industrial R&D Intensity Has Increased (especially so among younger & smaller firms)

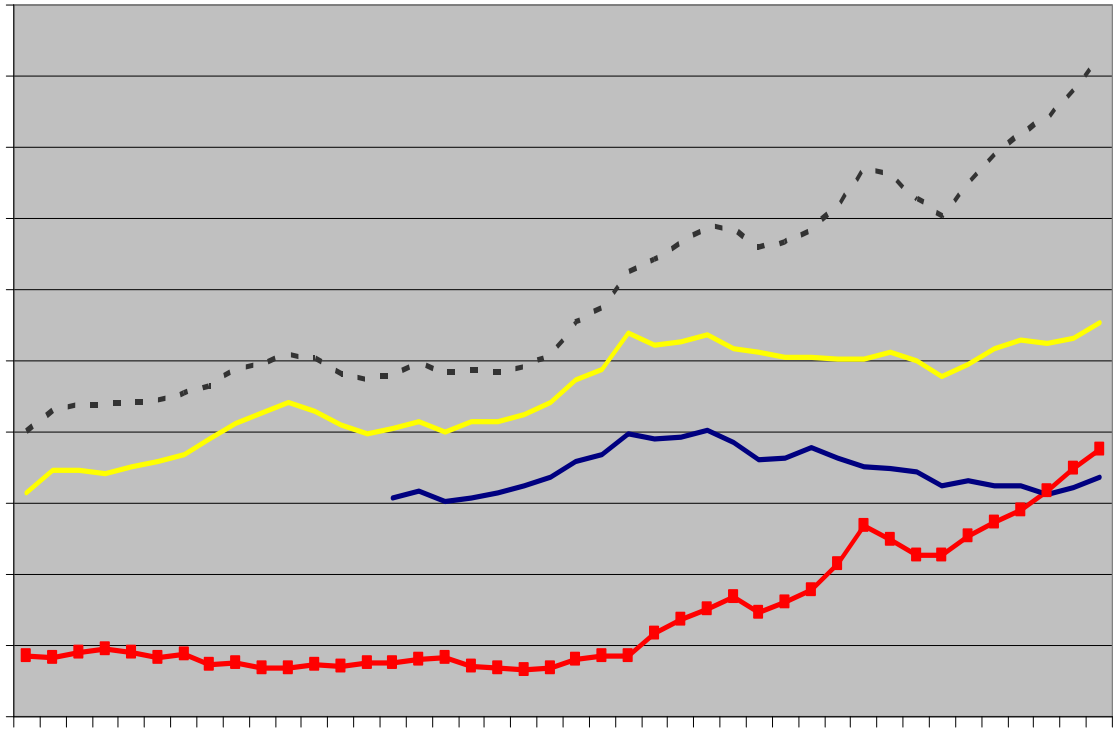


R&D Intensity is Rising, Especially Among Smaller Firms



Source: NSF Survey of Industrial R&D

Rising R&D Intensity of the Economy is Due to Smaller Firms



Explanations & Implications

- Economic analysis suggests a decline in barriers to entry*
  - But which barriers?
  - A decline in fixed costs sunk *after* innovation has occurred
  - Declining fixed costs of reaching final markets – *marketing capital*
  - These appear to be correlated with adoption of personal computers
- We need to think about reverse causation
  - Markets for technology may not explain de-concentration of R&D
  - Rather, de-concentration may explain growth in markets for technology
- So is our patent system optimized for de-concentrated R&D?
- Efficient markets for technology are more important than ever
  - They Influence the terms of trade between young and old firms
  - Any deadweight losses in licensing implies less entry & R&D

*: Hunt & Nakamura, “The Democratization of R&D in the U.S.,” mimeo, 2007

We Need (much more) empirical data on licensing

- Very high costs imply litigation is the exception
  - Demand letters, settlements, & licensing should be more common
  - But we have little information on these activities
- We can't do a full assessment of technology markets at present
  - We have good studies of a few industries at a few times (e.g. Arora)
  - We have little in the way of more comprehensive data
  - We have practically no information outside manufacturing
- We should survey more
  - We should evaluate the CIS type surveys used in Europe & Japan
  - We should include non-manufacturing industries, especially finance
- Should we compel limited disclosures of licenses?
  - Such a move should be considered very carefully before adoption