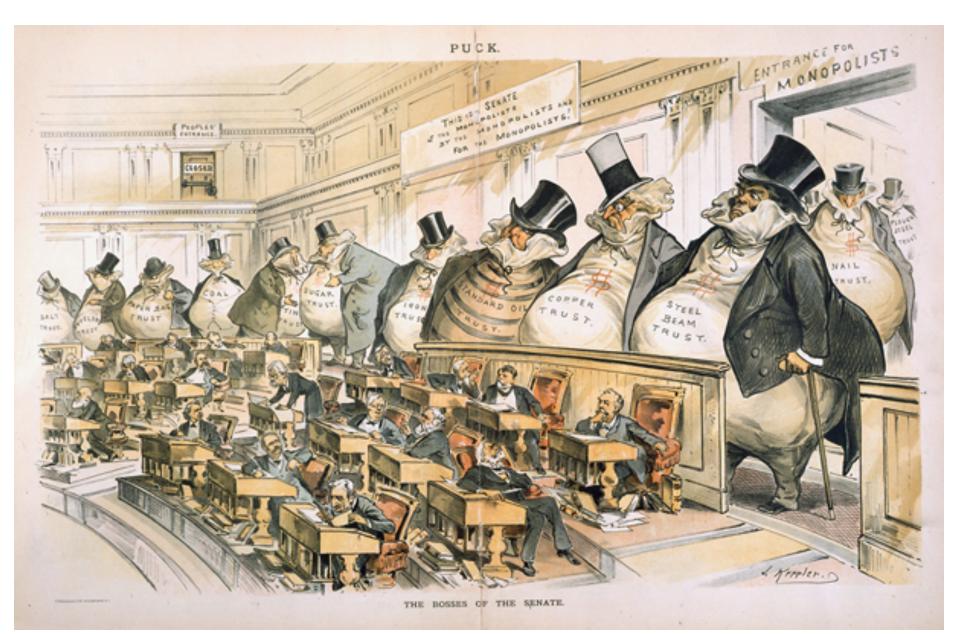
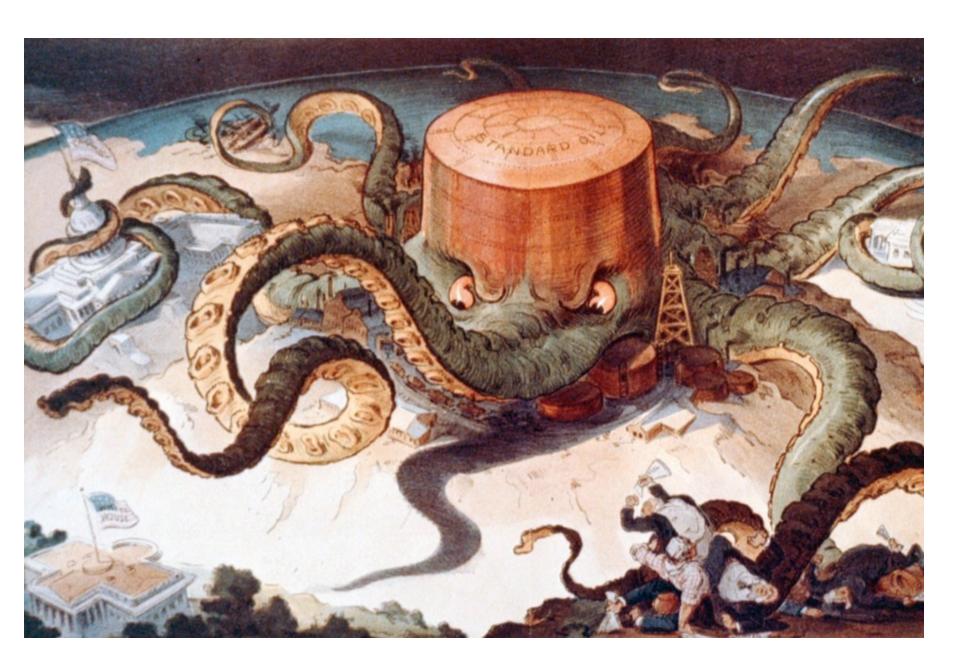
High-Tech Antitrust in a Time of Populism

Professor Carl Shapiro
University of California at Berkeley

Information Technology & Innovation Foundation

26 October 2017













Economist.com

Drumbeat in the Press: Consolidation and High Profits



"Markets work best when there is healthy competition among businesses. In too many industries, that competition just doesn't exist anymore."

New York Times Editorial, 31 October 2015

"With competition in tatters, the rip of inequality widens."

New York Times, 12 July 2016



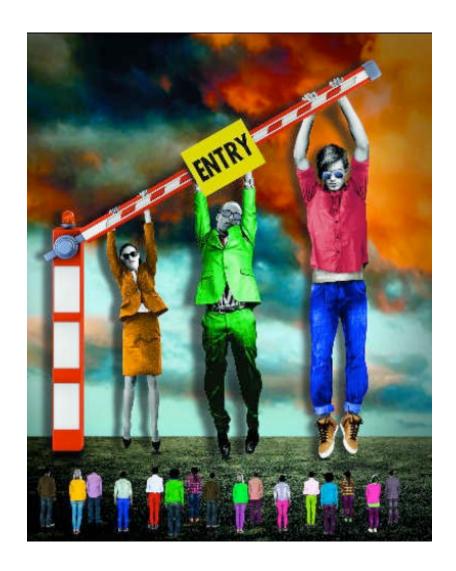
"The rise of the corporate colossus threatens both competition and the legitimacy of business."

Economist, 17 September 2016





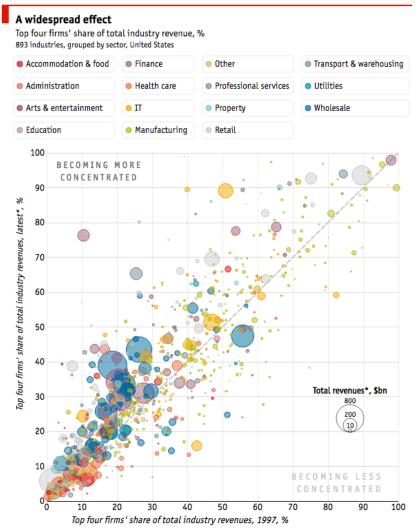
Exclusionary Conduct?



Concentration

Growing Concentration: The Economist

- Four-FirmConcentrationRatio, 1997 & 2012
- > 893 U.S. Sectors
 - Wireless Telecom
 - Motor Vehicles
 - Pharmaceuticals
 - Health Insurance
 - Software Publishers
 - Electric Power Dist.
 - Supermarkets



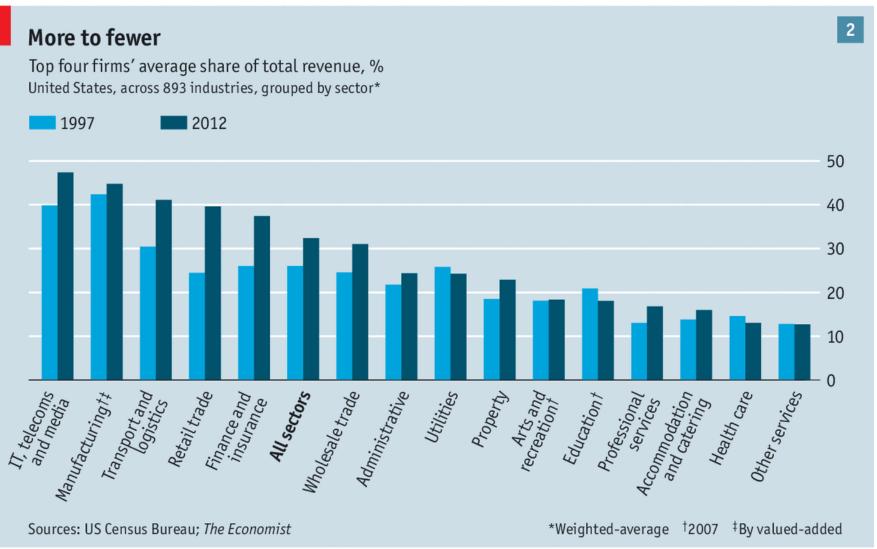
Sources: US Census Bureau; The Economist

*Latest available, 2007 or 2012

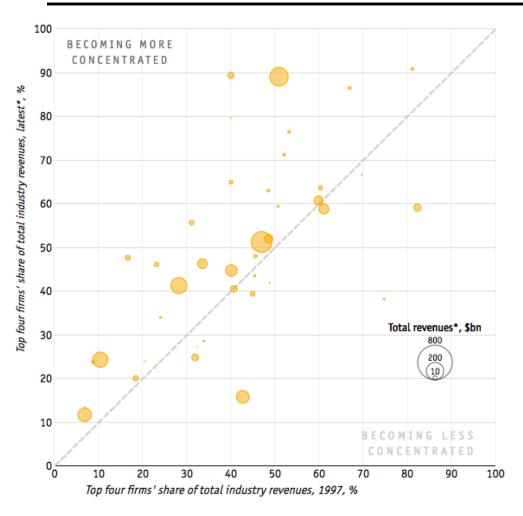
Slide 11

Carl Shapiro

Increases in CR4, 1997 to 2012: Average Across "Markets" by Sector



Information Technology in the U.S.



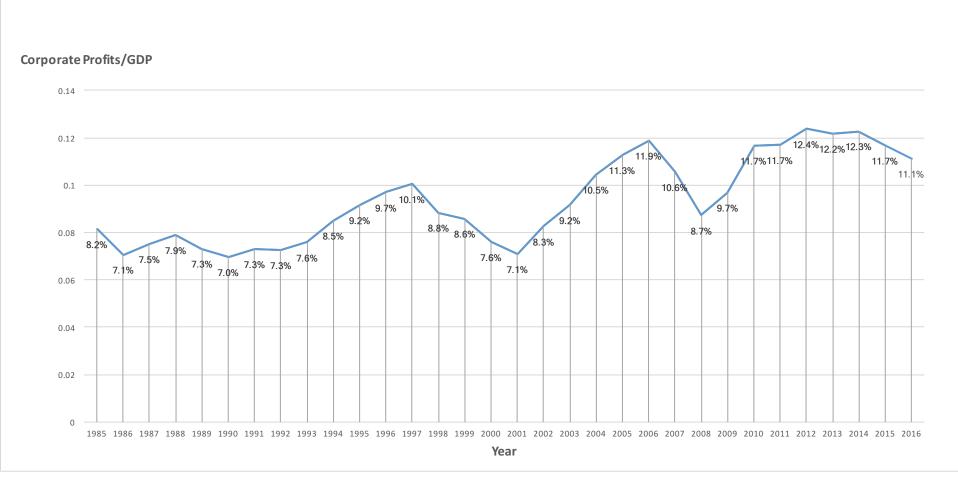
- Wireless Carriers \$225B
 - CR4 = 89% (up 38%)
- Wired Carriers \$286B
 - CR4 = 52% (up 4%)
- Data Hosting \$108B
 - CR4 = 15% (down 27%)
- ➤ Software Publishing \$171B
 - CR4 = 42% (up 13%)
- Computer Design \$153B
 - CR4 = 25% (up 14%)
- Custom Programming \$121B
 - CR4 = 12% (up 5%)

Profits

"Profits are too high. America needs a giant dose of competition."



Corporate Profits/GDP: 1985 to 2016



Source: Bureau of Economic Analysis, Table 1.7.5, "Relationship of Gross Domestic Product, Gross National Product, Net National Product, National Income and Personal Income," Last Revised September 28, 2017

Corporate Profits by Sector: Share of All Domestic Profits

Sector	1998	2016
Utilities	5.3%	1.1%
Construction	4.2%	5.1%
Manufacturing	29.7%	22.1%
Wholesale Trade	8.1%	7.0%
Retail Trade	9.9%	10.2%
Information	5.3%	7.8%
Finance & Insurance	13.6%	18.3%
Health Care & Social Assistance	2.1%	5.2%
Accommodation & Food Services	1.5%	2.6%

Information: publishing, software, motion pictures, sound recordings, broadcasting, telecommunications, information and data processing services

Source: Bureau of Economic Analysis, Table 6.17D, "Corporate Profits Before Tax by Industry," Revised August 3, 2016

Corporate Profits: Three Big Questions

- 1. Why Did Corporate Profits Grown Nearly 50% as a Share of GDP from 1998 to 2015?
- 2. How Persistent Are High Profits at the Firm and Industry Levels?
- 3. Have Entry and Expansion Become Less Effective at Eliminating Rents to Incumbents?

What Does This Evidence Tell Us?

One Interpretation of All This Evidence

- Widespread Decline in Competition
 - Mergers & Consolidation
 - Barriers to Entry Getting Higher
 - Exclusionary Conduct by Dominant Firms,
 Especially in the Tech Sector
- Contributing to Declining Productivity Growth
 - Sluggish Improvements by Incumbents
 - Failure of Competition to Root Out Inefficiency
- Contributing to Increases in Inequality
 - High Profits Mostly Going to the Wealthy
 - Regular Consumers and Workers Harmed

A Contrary Interpretation

- Growing Economies of Scale
 - Has Been Happening for 100 Years
 - Big Scale Economies in Info Tech Sector Due to Fixed Design Costs and Network Effects – Very Innovative
- Consumers Benefit When Giants Do Battle
- Geographic Consolidation is Often Efficient
 - Market Shares at National Level: Misleading Picture
 - Example: Retailing Sector Consolidation & Efficiency
- Globalization and Declining Trade Barriers
 - Consumers Are Big Winners, Tech and Beyond

Antitrust and Innovation

- Antitrust Must Not Attack Large Firms Simply Because They Obtain Dominant Positions
 - Doing So Would Discourage Innovation
- Today's Large Tech Companies Warrant Antitrust Scrutiny
 - Focus Attention on Specific Conduct that Harms
 Consumers and Excludes Disruptive Competitors
- Antitrust Cannot Substitute for Regulation
- Please, Let Us Not Forget What We Have Learned Over the Past 50 Years