

What Disrupted Disruption?

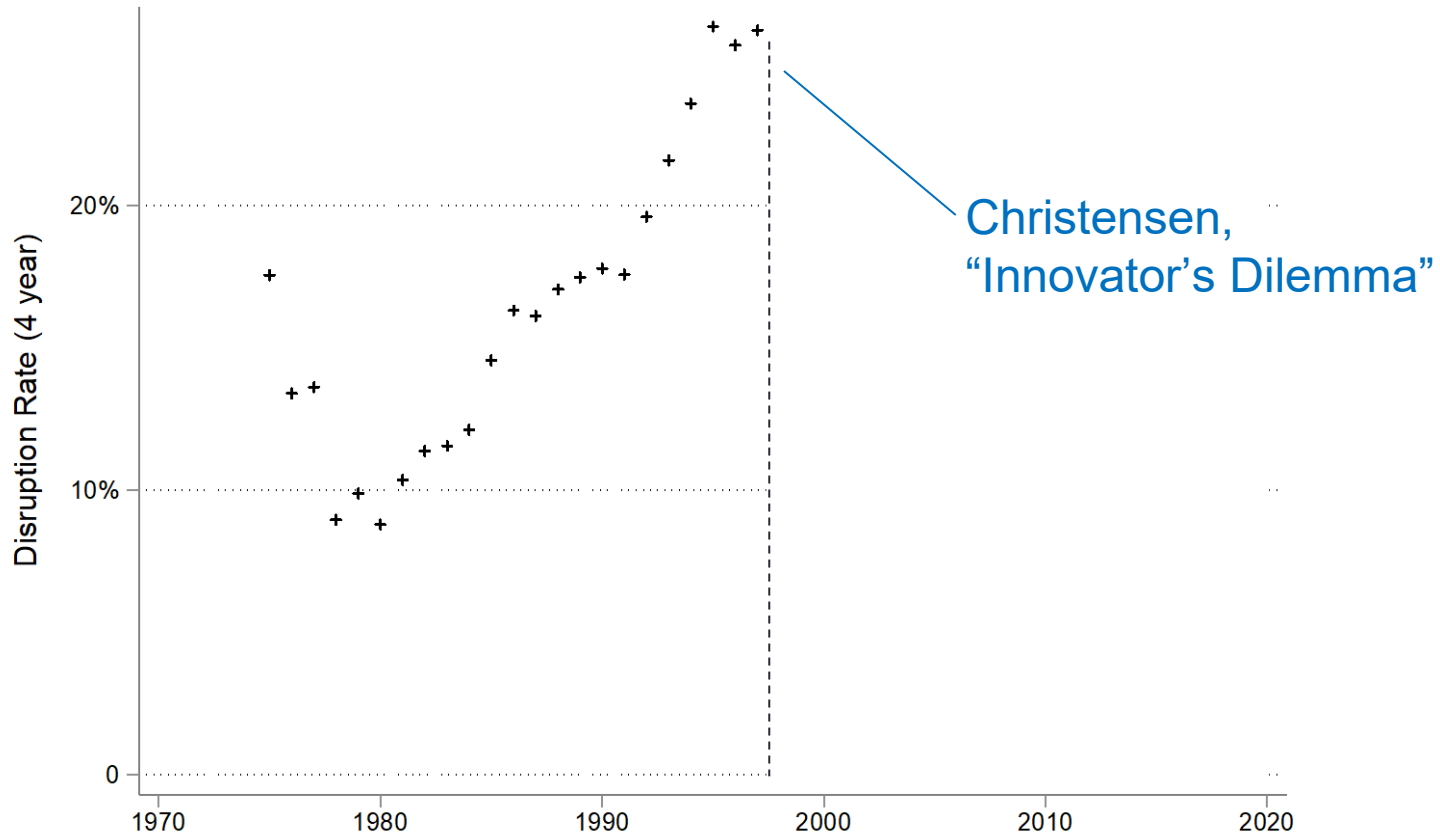
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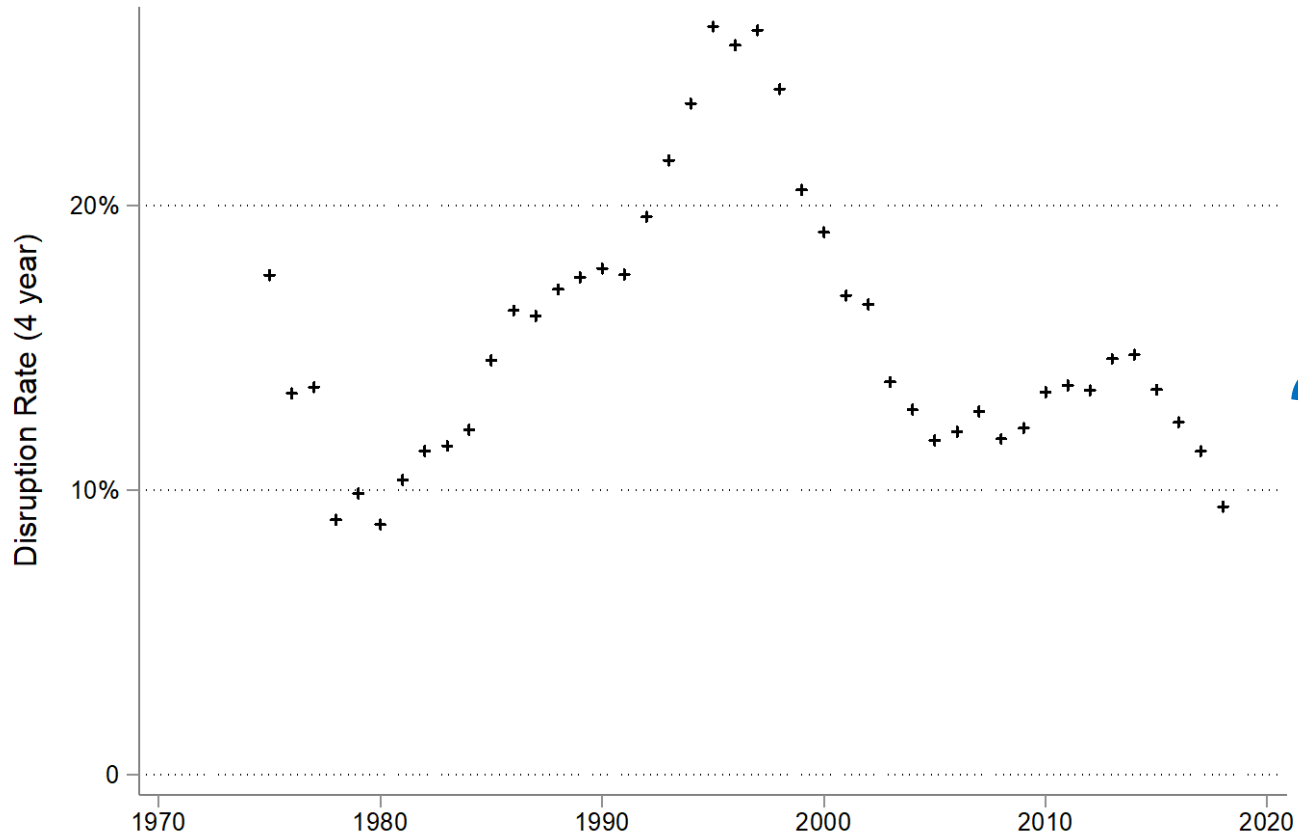
Technology disrupts industries

- Newspapers
- Brick-and-mortar retail
- Finance

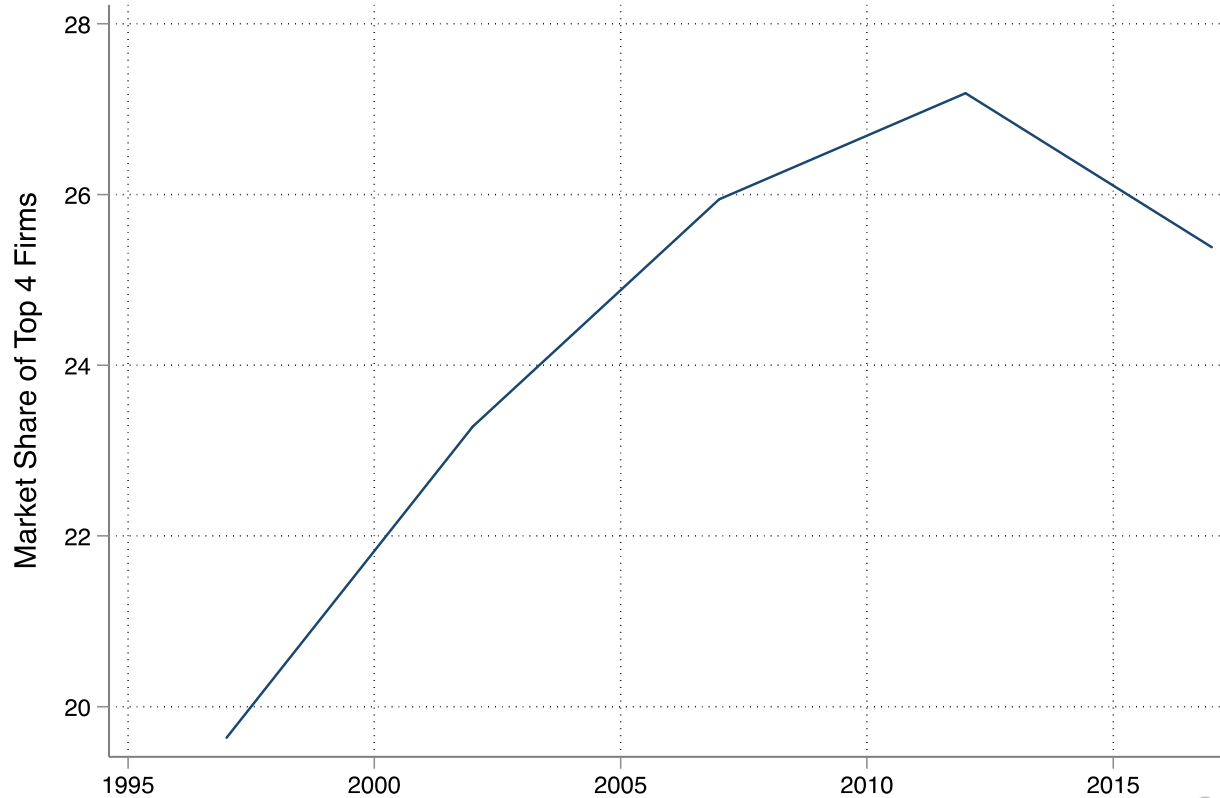
Does technology disrupt leading firms?



Does technology disrupt leading firms?



Rising industry concentration



What disrupted disruption?

- Internet?

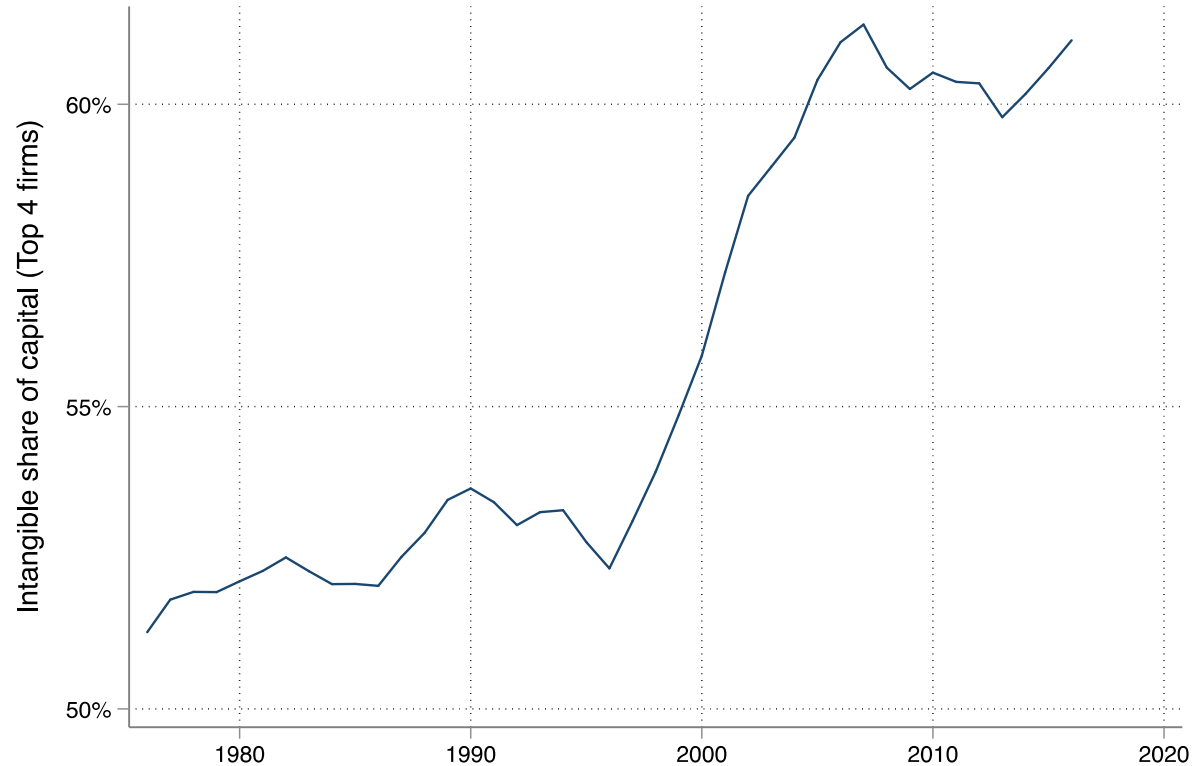
What disrupted disruption?

- ~~Internet?~~
- China shock?

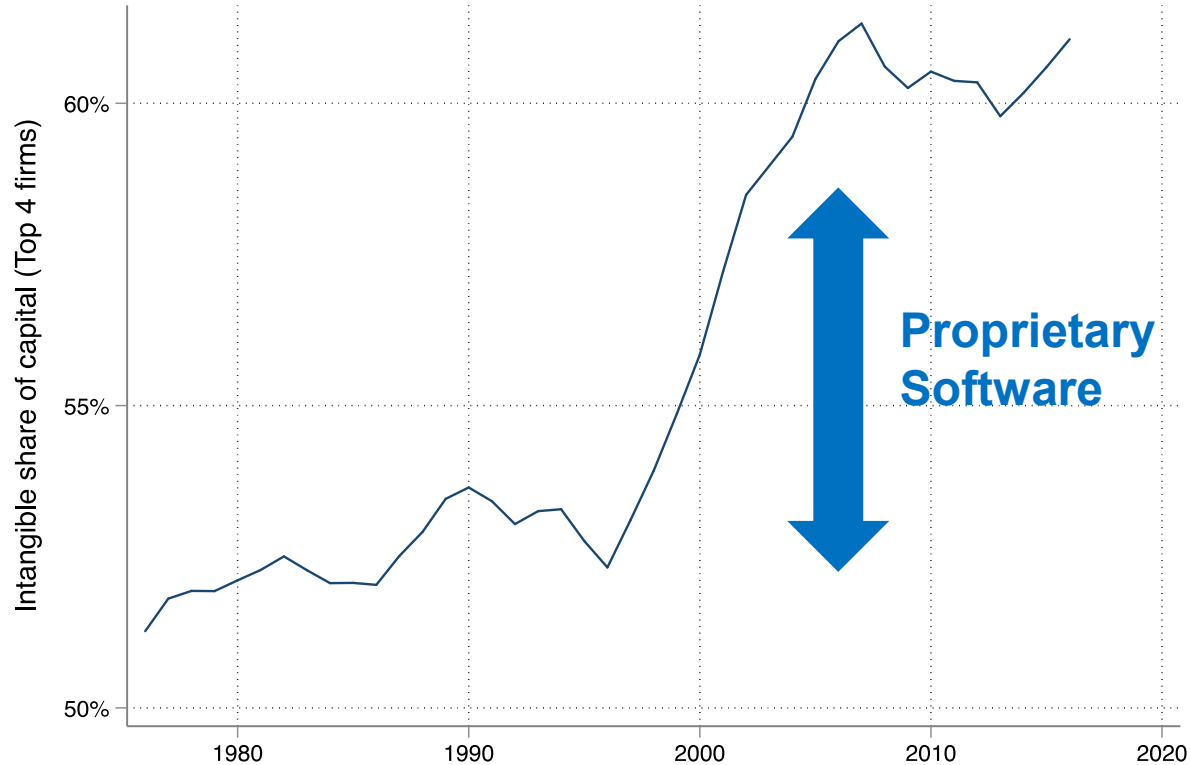
What disrupted disruption?

- ~~• Internet?~~
- ~~• China shock?~~
- Intangibles / Software

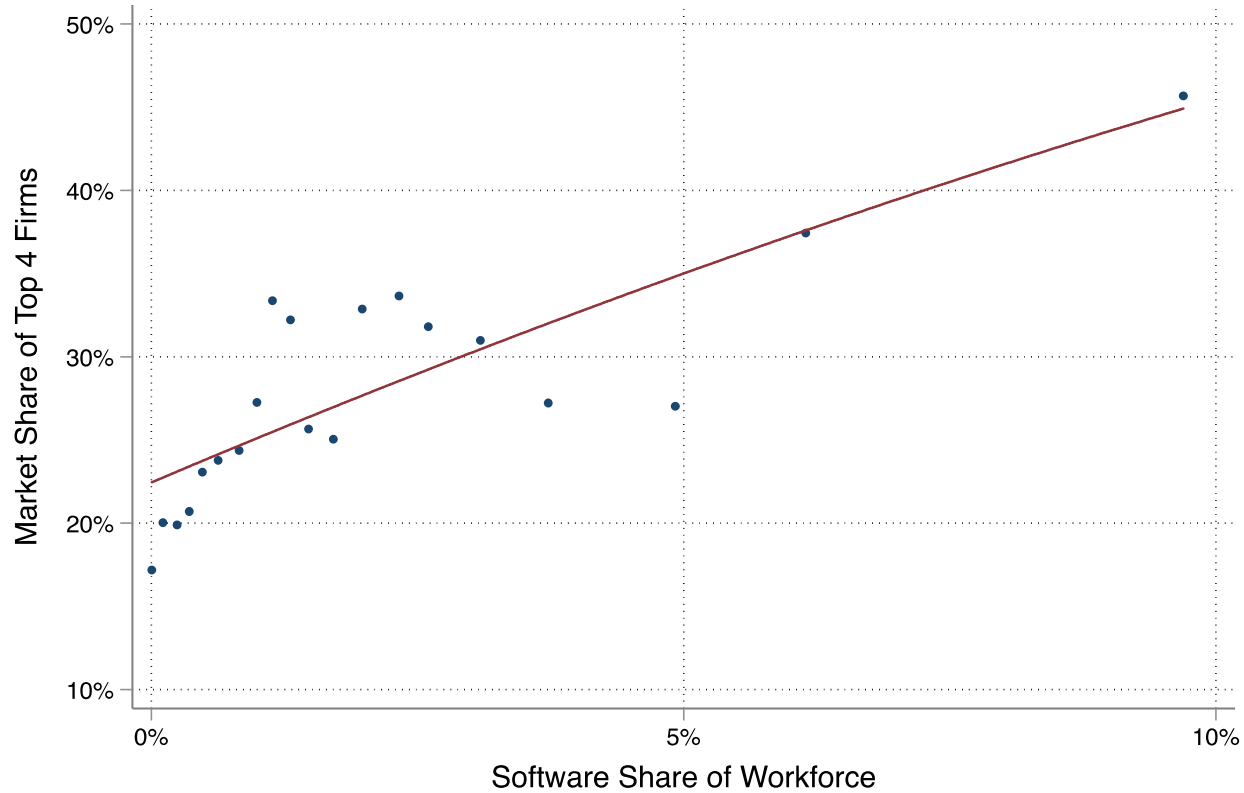
Top firm intangibles



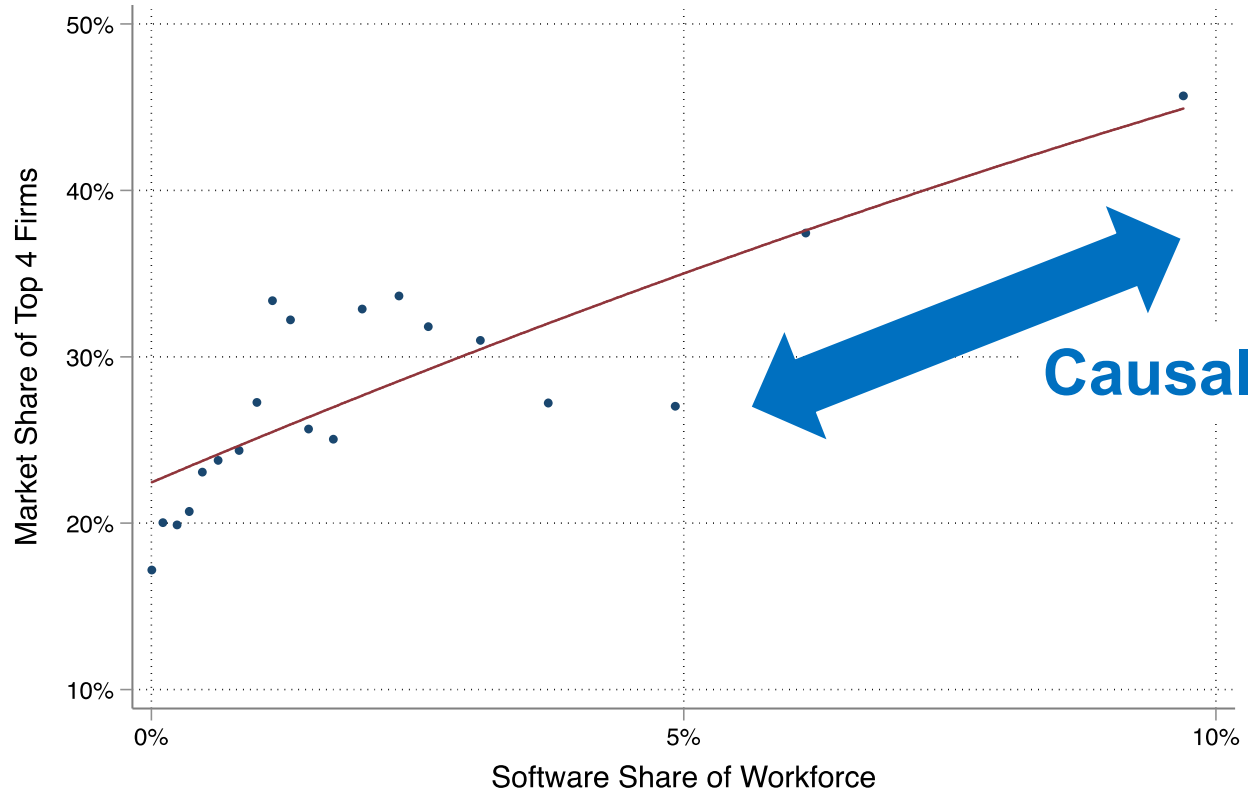
Top firm intangibles



SW → Market share



SW → Market share



WHY?

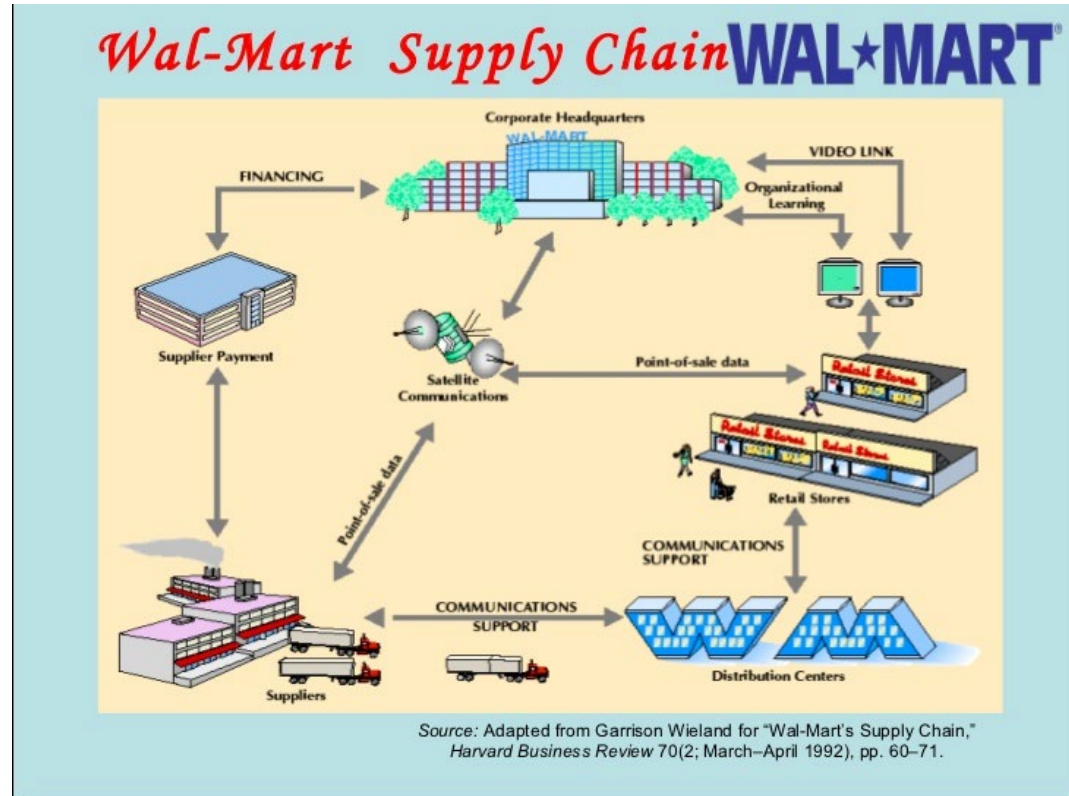
Barcode scanner

- Accessible
 - Independent >> National chains
 - Productivity gains
 - Revenue / worker: + 5%
 - Grocery prices: -1.4%
- Small competitive advantage



Walmart

- Integrated system
 - Suppliers / stores / distribution centers / headquarters
- Differentiation:
 - Greater selection
 - More responsive
 - Lower prices
- Market share: **3%, 1982**
 ➔ 52%, 2012
-



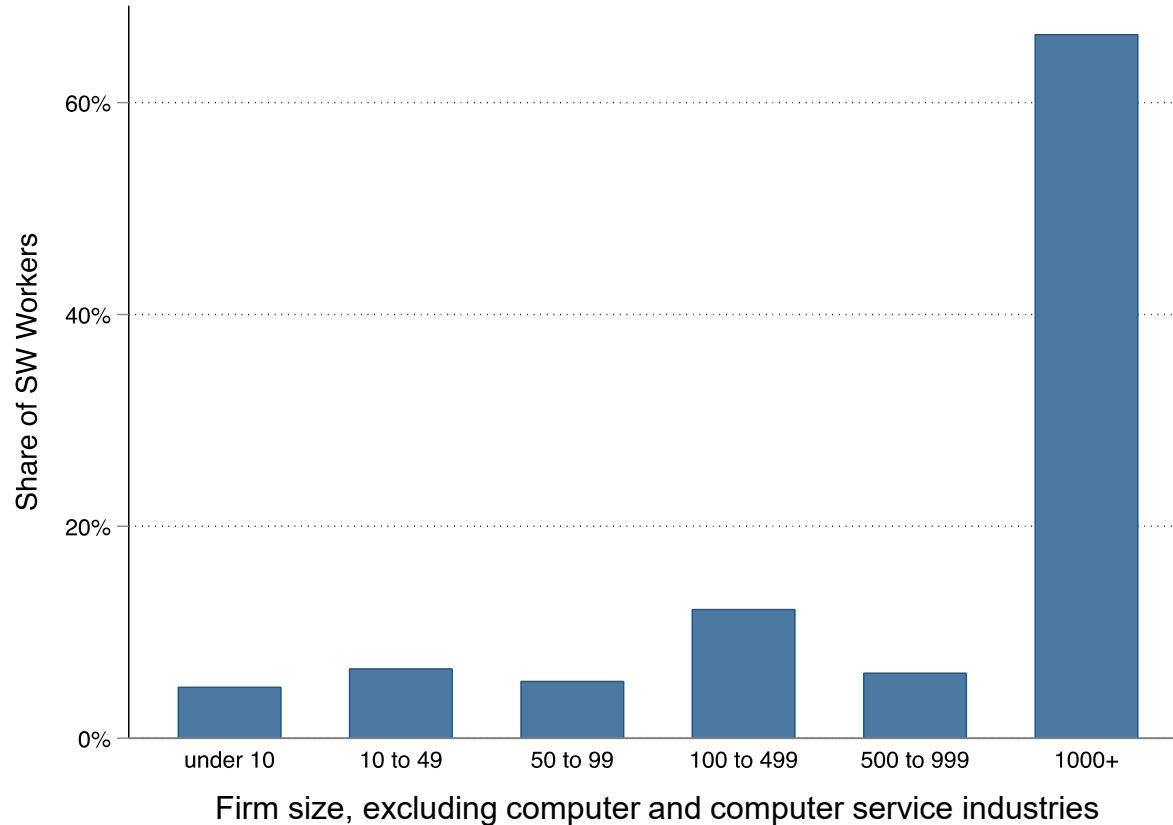
Big SW → Big firm *differentiation*

- Retail logistics & inventory, better selection & response
- Waste management logistics, faster response
- Manufacturing CAD/CAM, more features
 - Aircraft, autos
- Targeted advertising, finer targeting
 - Google, Facebook
- Targeted credit offers, finer risk targeting
 - Top 4 banks: 57% credit cards issued

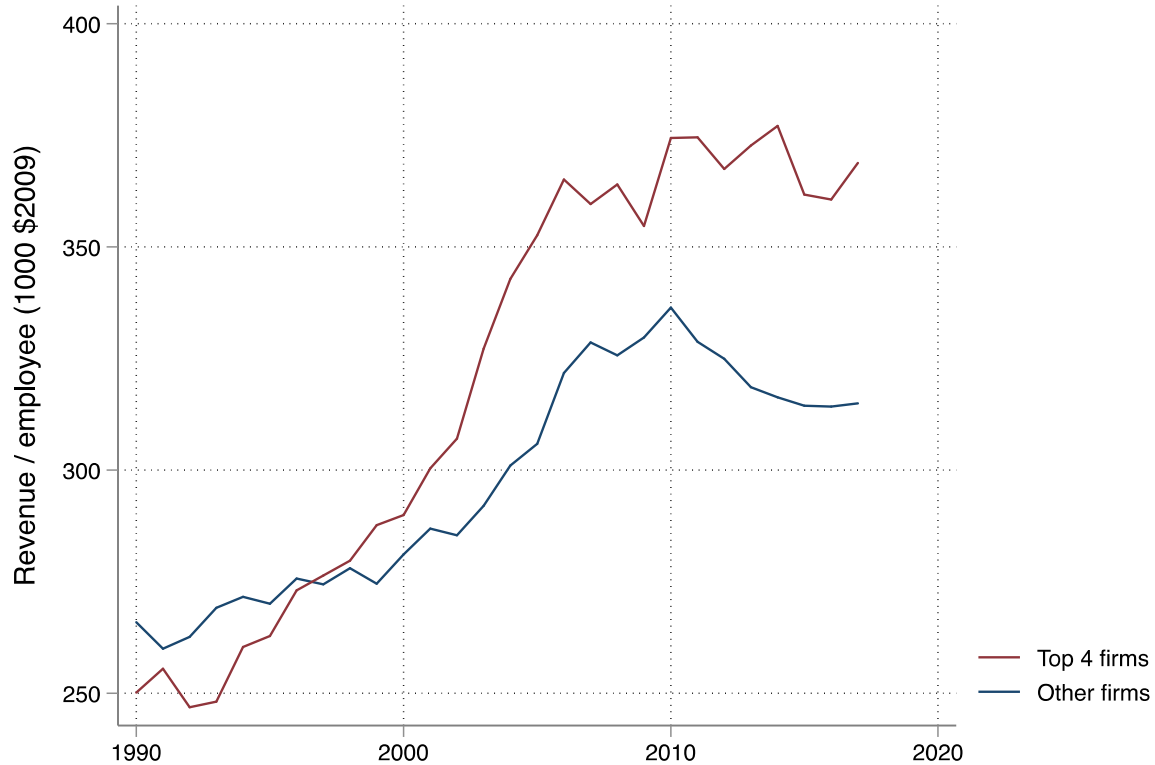
Vertical differentiation...

- Weakens incentives for smaller firms
 - Product improvements *decrease* differentiation
 - Large firm “business stealing”
 - Too much selection
 - Too many features
 - Natural oligopoly
 - Stable market shares
- Firms restrict access
 - Limit licensing
 - Restrict knowledge flows

Large firms dominate software



Technology gap



Technology gap

- Higher “moat”
 - Less disruption
 - Greater concentration
- Slows firm growth from productivity

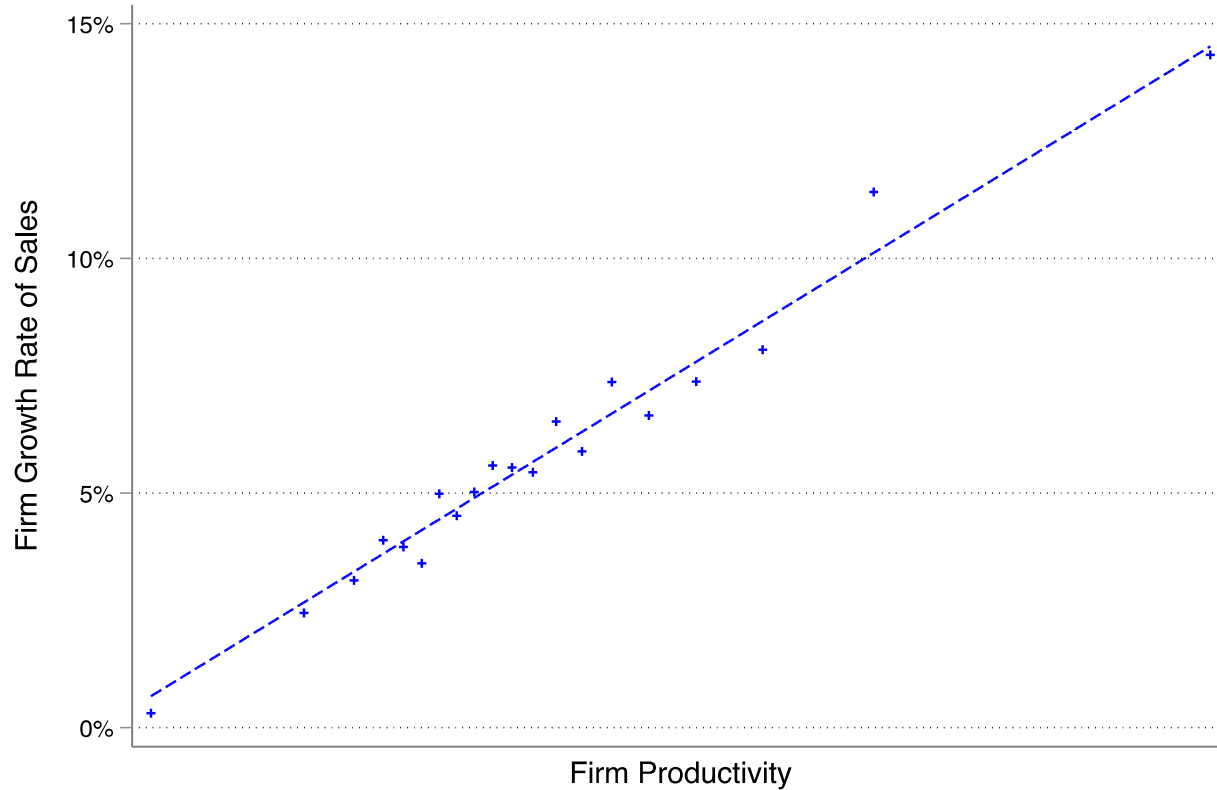
Disruption & productivity

- Productive firms grow faster
 - → overtaking market leaders = disruption

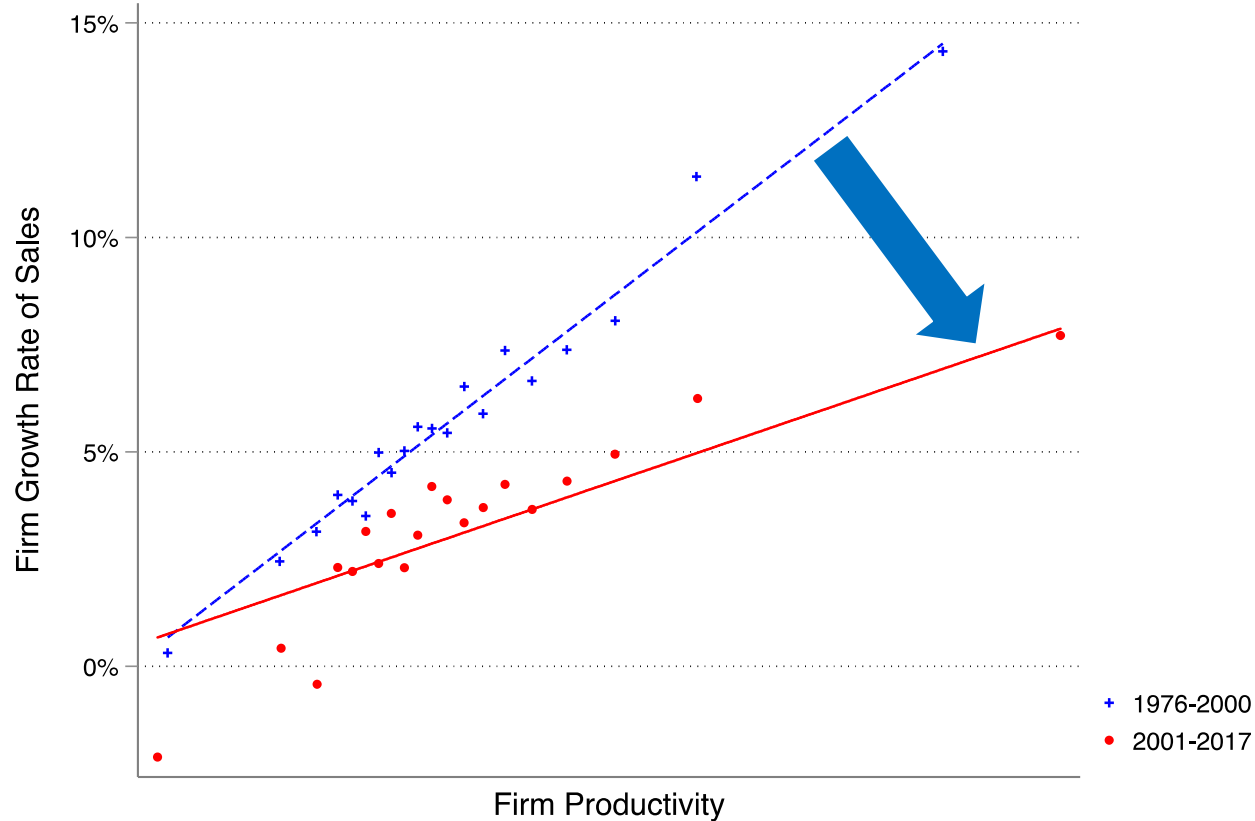
Disruption & productivity

- Productive firms grow faster
 - → overtaking market leaders = disruption
- Productive firms grow faster
 - Reallocating resources
 - → raising aggregate productivity

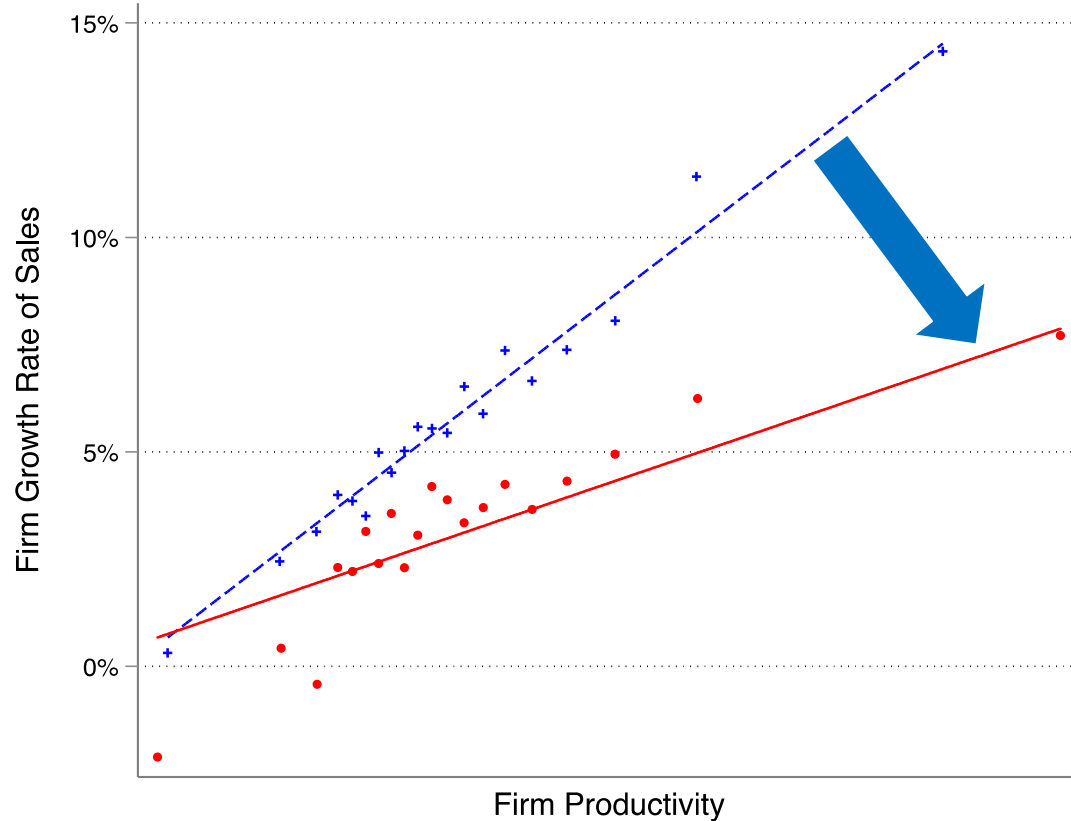
Productive firms grow faster



Slower after 2000



Slower after 2000



Decker et al. (2020):
Explains *much* of
productivity slowdown

+ 1976-2000
• 2001-2017

Information technology

- Disrupts industries

Information technology

- Disrupts industries
- **Suppresses** disruption of leading firms

Information technology

- Disrupts industries
- **Suppresses** disruption of leading firms
- Disrupts economy

