

# Quantifying the Impact of Financial Development on Economic Development

Greenwood, Sanchez, and Wang

Discussion by Yongs Shin

- Empirical evidence on finance and economic development
- Output, TFP, capital-output ratio, intermediation spreads

Explanation involves two components:

1. A qualitative economic mechanism
2. A quantitative assessment of the proposed mechanism (i.e., measurement and an assessment of the quantitative effects of the measured differences)

In spite of the challenge, contributions come in several dimensions:

1. Model development to better capture the mechanism: intermediation and costly state verification
2. Better measurement for evaluating the mechanism: intermediation spreads
3. Quantitative assessment: rich micro-level heterogeneity

# Place in the Literature

1. Quantitative assessment with imperfect enforcement
  - Erosa (2001), Amaral and Quintin (2010), Buera et al. (2010): Comparable magnitude on TFP
2. Asymmetric information
  - Khan and Ravikumar (2001), Castro et al. (2004)

# Contribution

- Quantitative analysis with asymmetric information
- Financial intermediation
- Capital-output ratio

# Finance and Development

Much empirical work establishes a robust and significant causal relationship between finance and development. Nevertheless, caveats:

- Studies do not isolate what factor is interfering with financial intermediation (e.g., lack of competition, taxation/regulation, inefficient intermediary)
- Studies do not isolate what role of financial sector is most important (e.g., allocation of capital, risk sharing)

- In quantitative models, causation is “assumed”.
- An indirect way of substantiation is through “over-identifying restrictions.”



- Size distribution
- Firm size and volatility
- Firm size and spreads

- Average spreads
- Correlation between spreads and productivity (Korea in the 70s, China in the 90s)

# Effect of Finance on Development

## Broader classes of models

The effect of financial frictions is large when there is a need for large reallocation from over-capitalized mediocre firms to under-capitalized productive firms.

1. Persistent shocks and internal funds (Buera and Shin, 2010; Moll, 2010; Midrigan and Xu, 2010)
2. Persistent shocks and repeated relationship
3. Slow-moving organizational capital or high adjustment costs

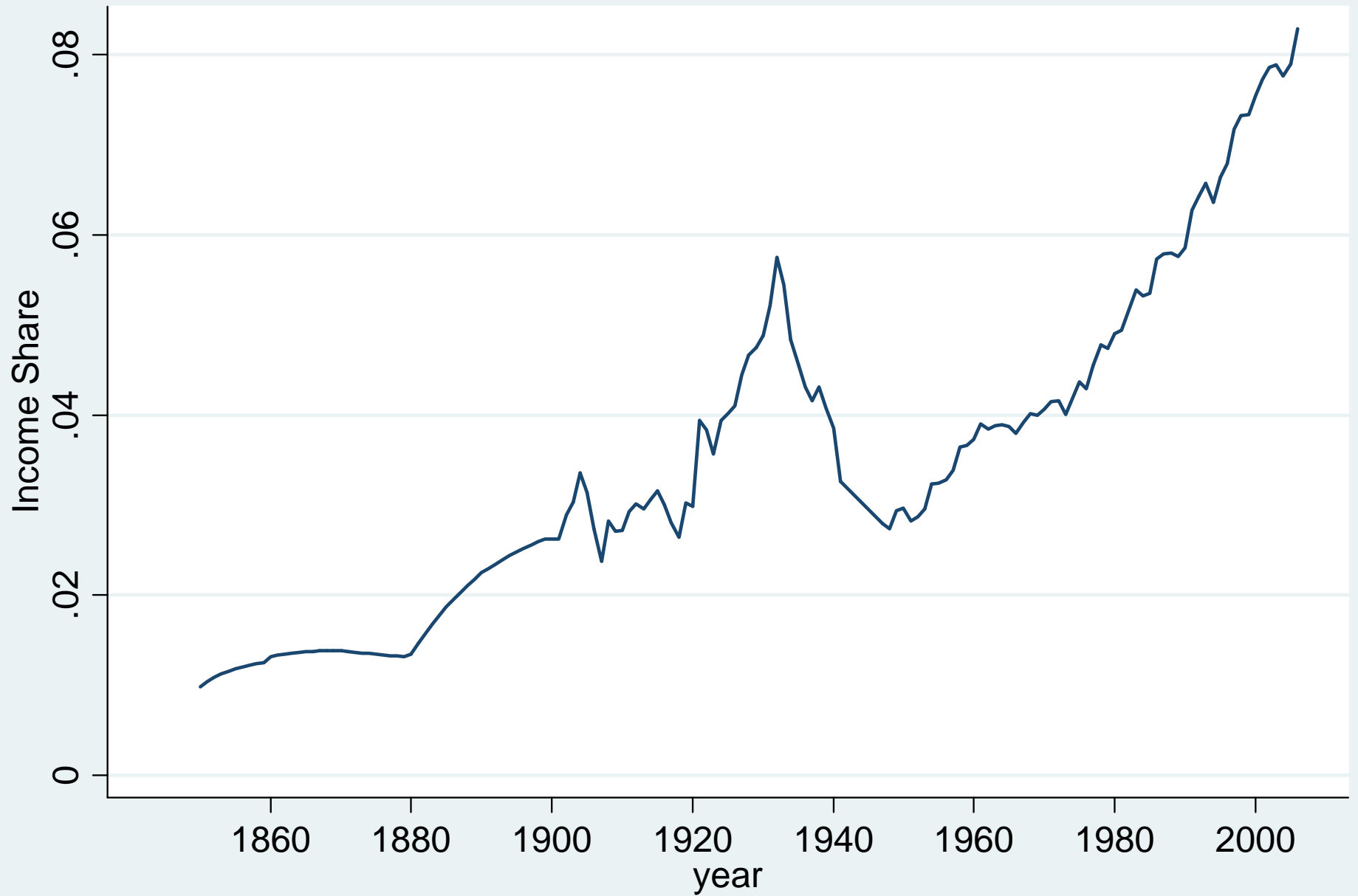
It is important to better understand firms' productivity process.

## Channels affecting aggregate TFP:

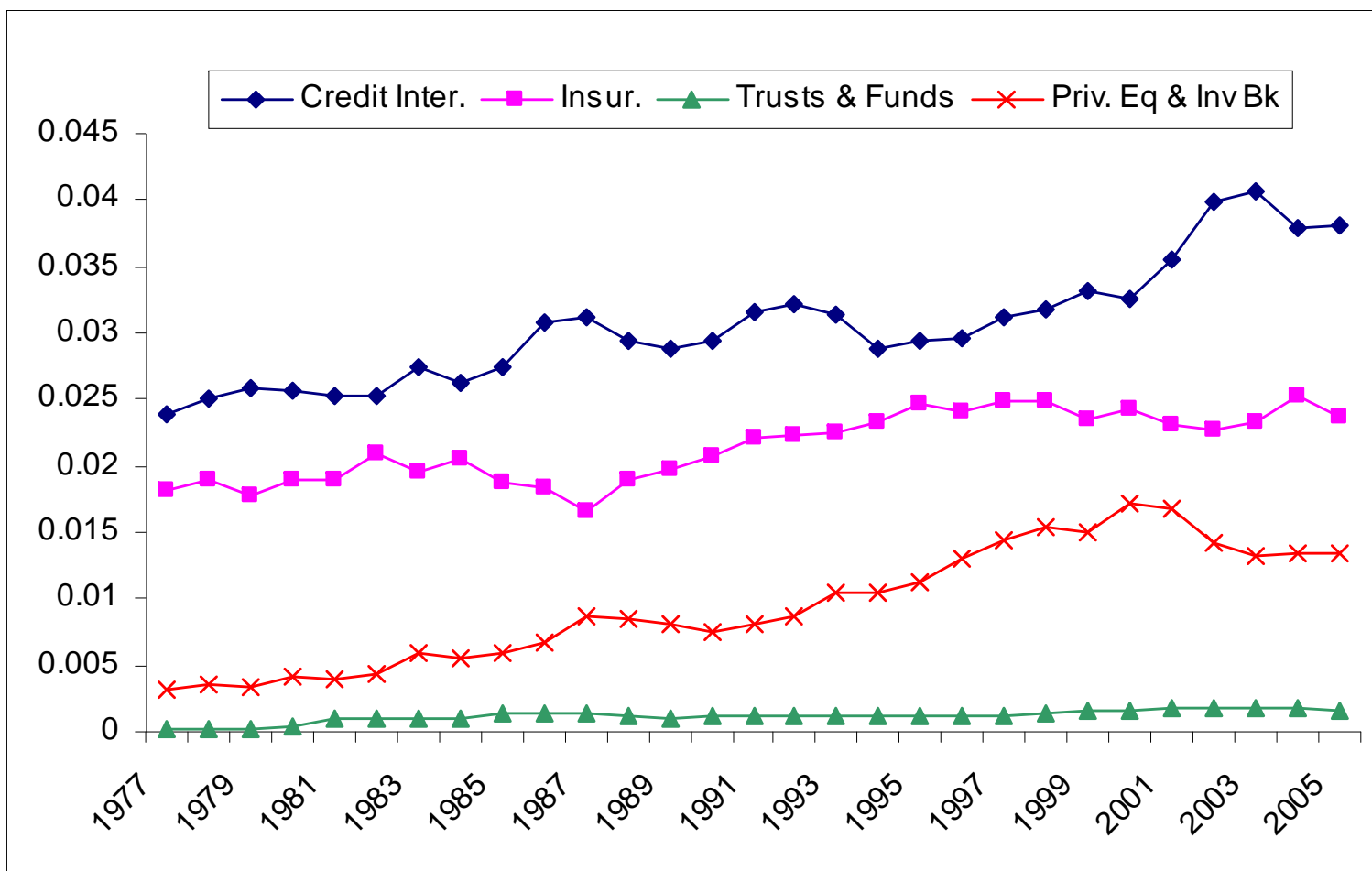
- use of less efficient technologies
- inefficient allocation of resources across a given set of technologies

- Passive firms, passive intermediaries
- Financial development

# Economic Share of Finance Industry

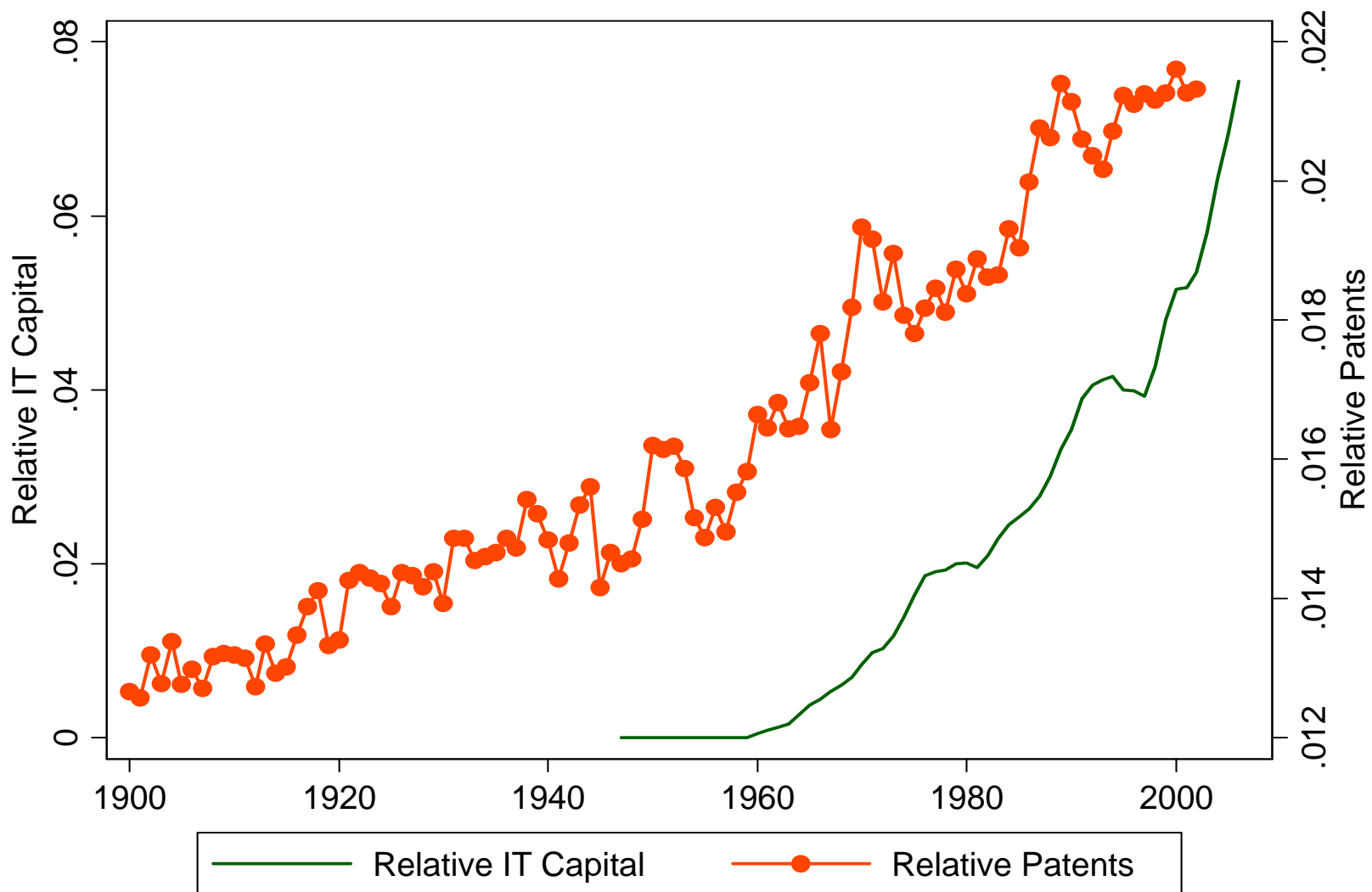


## Figure 2: GDP Shares of Finance Industries



Source: U.S. Annual Industry Accounts, Bureau of Economic Analysis

Figure 4: IT Capital and Financial Patents



Notes: Relative IT intensity is the IT share of capital in finance minus the IT share of capital in the economy. Relative patents is the ratio of financial patents to all patents.