BANK FOR INTERNATIONAL SETTLEMENTS

Reassessing the impact of finance on growth

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Financial development: a double-edged sword

- **Contributes to growth**
  - Reduces transactions costs
  - Improves distribution of capital and risk
- **Detracts from growth**
  - Competes for resources
  - Creates vulnerability
  - Can misallocate resources

When does the dark side of finance dominate?

1. Can the **size** of the financial sector be bad for productivity?

2. Does the **growth rate** of the financial sector become damaging?

3. Are some sectors more exposed than others?

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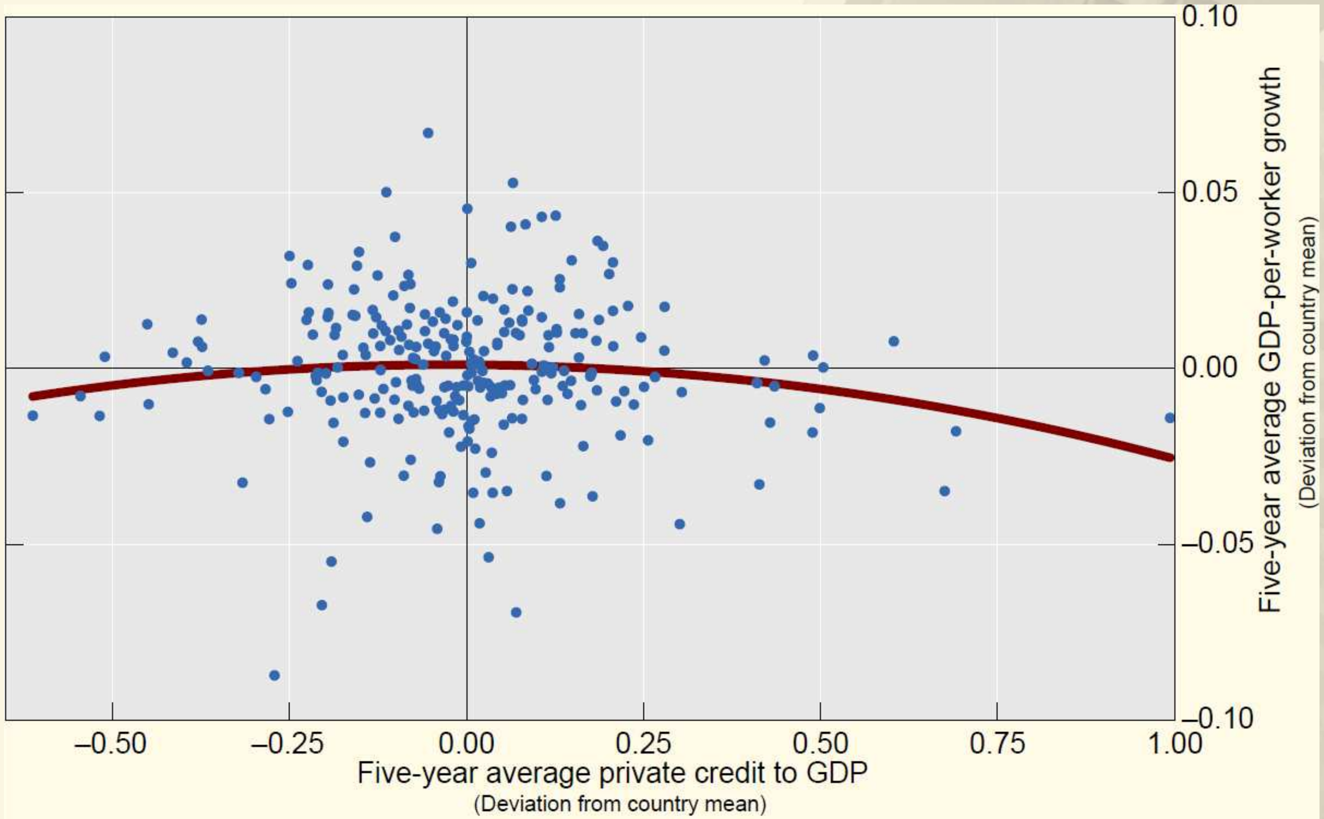
   Yes, financially dependent and R&D intensive industries

Productivity growth & financial sector size

- Size cuts both ways:
  - Fixed costs → increasing returns → bigger more efficient
  - But it diverts resources, reducing growth

- The empirical questions: Can we find a turning point?

Productivity growth & financial sector size

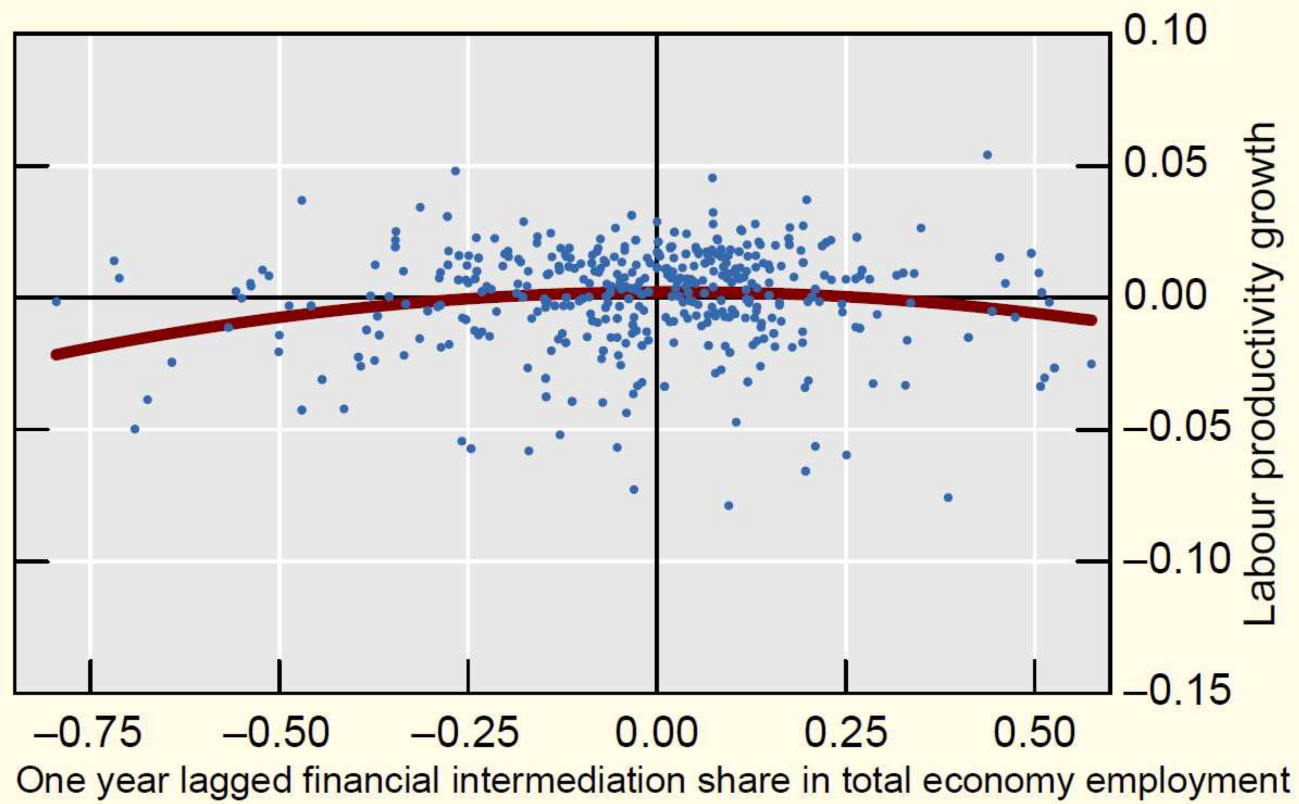


Real growth & financial sector size

- Turning point: private credit around **100%** of GDP

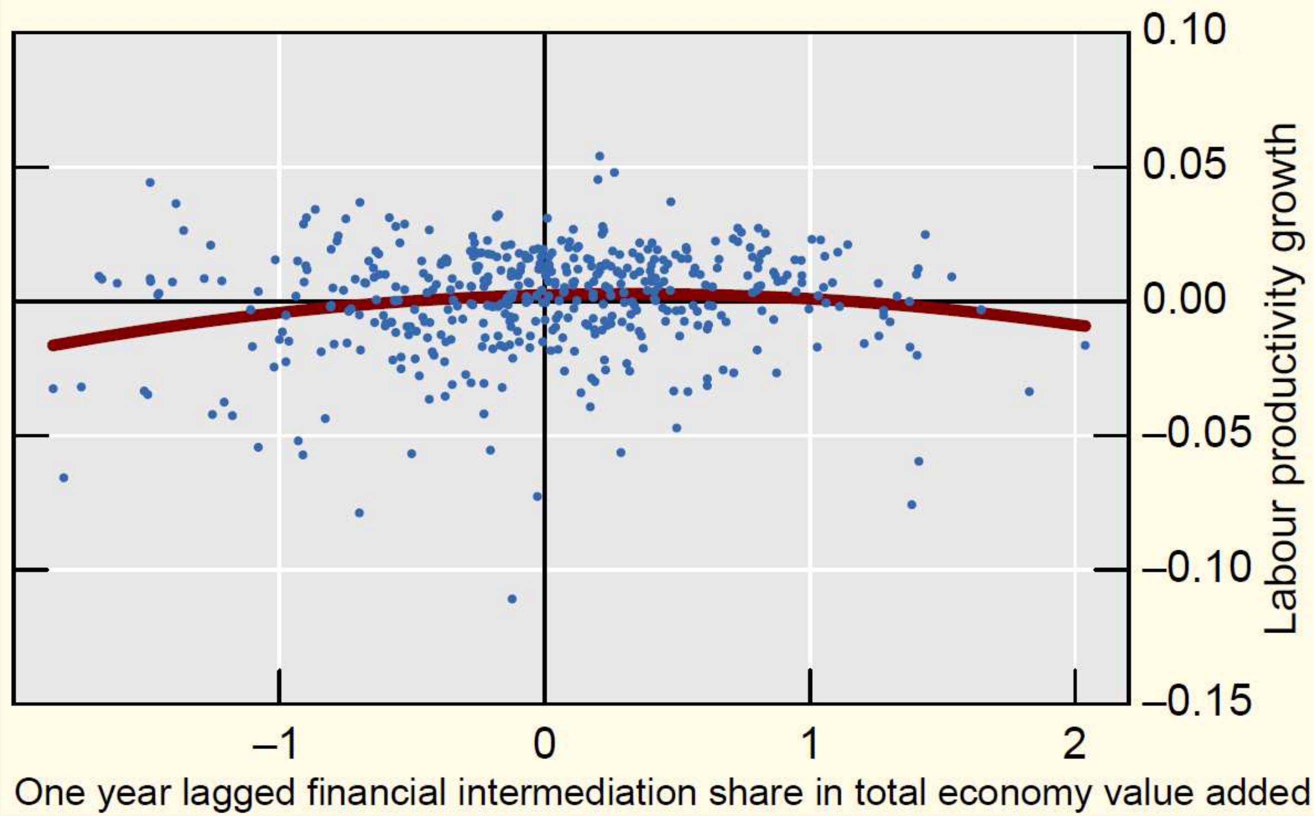
- Impact is large:
  - New Zealand:
    - Mid-1990s to 2006: Credit from 90% to 150% of GDP
      $\Rightarrow$ Drag of nearly -**0.50** percentage points
  - Thailand:
    - Post-crisis: Credit from 150% to 95% of GDP
      $\Rightarrow$ Benefit of +**0.50** percentage points
  - United States:
    - 2007: Credit >200% of GDP
      $\Rightarrow$ Returning to 100% $\rightarrow$ +**1.50** percentage points

Productivity Growth and Financial Sector Employment



Controls: Investment to GDP, employment growth, openness to trade, initial labour productivity, country dummies.

Productivity Growth and Financial Sector Value Added



Controls: Investment to GDP, employment growth, openness to trade, initial labour productivity, country dummies.

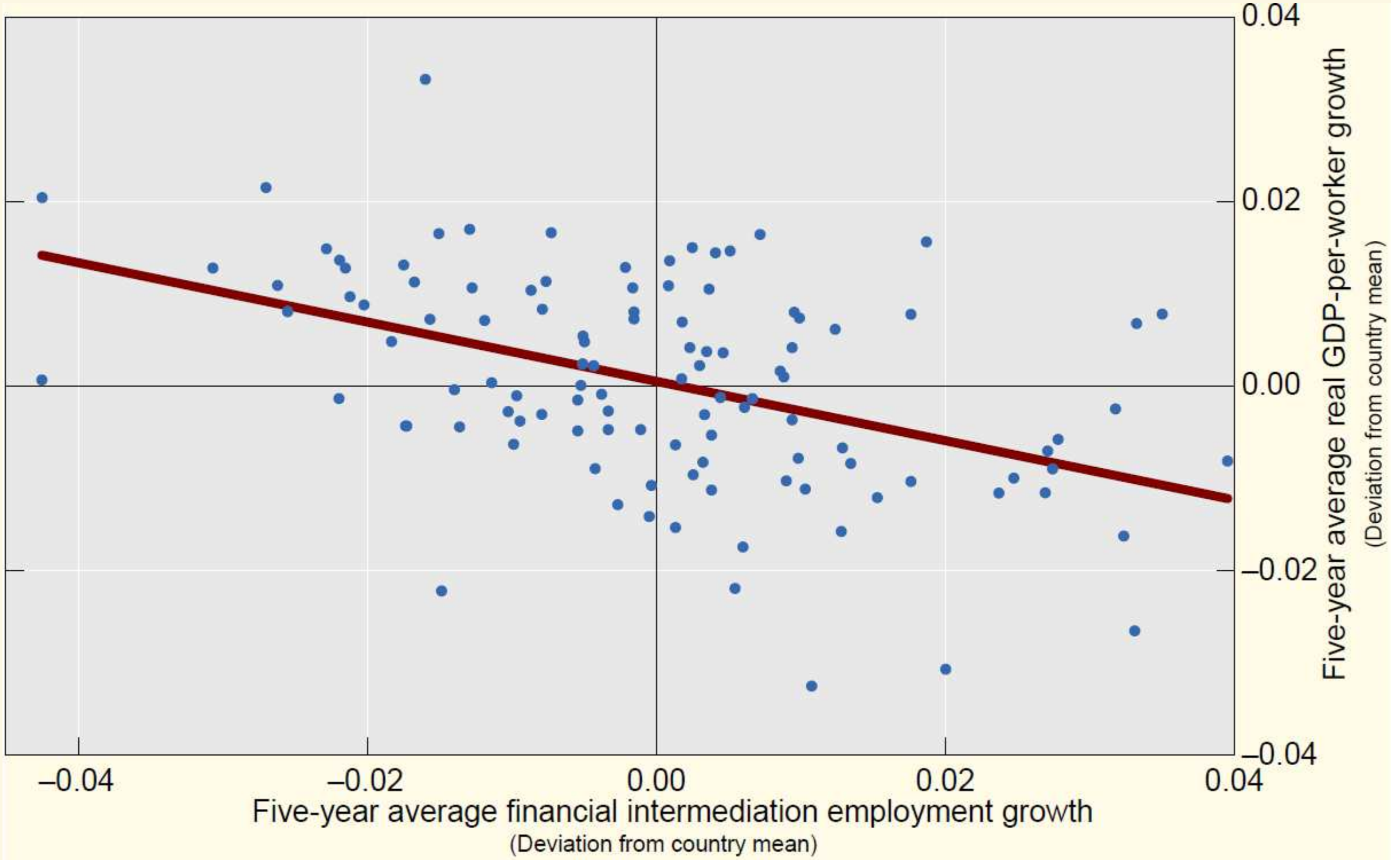
The size of the financial sector and growth

- Turning point:
  - 3.2% of employment
  - 6.5% of value added
- In 2008:
  - Employment:
    - Canada: 5.7%
    - Ireland: 4.5%
    - US: 4.1%
    - UK: 3.5%
  - Value added:
    - Ireland:10.4%
    - US: 7.7% $\Rightarrow$ Reduce value added from 7.7% to 6.5%: Productivity growth + 0.14 pp/yr

Productivity growth & financial sector growth

- Finance consumes scarce resources
- Competes for inelastically supply inputs
- What is the relationship of trend growth to employment growth?

Productivity growth & financial sector growth



Productivity growth & financial sector growth

- Typical boom:
  - Financial Sector Share in Total Employment grows +1.6 pp

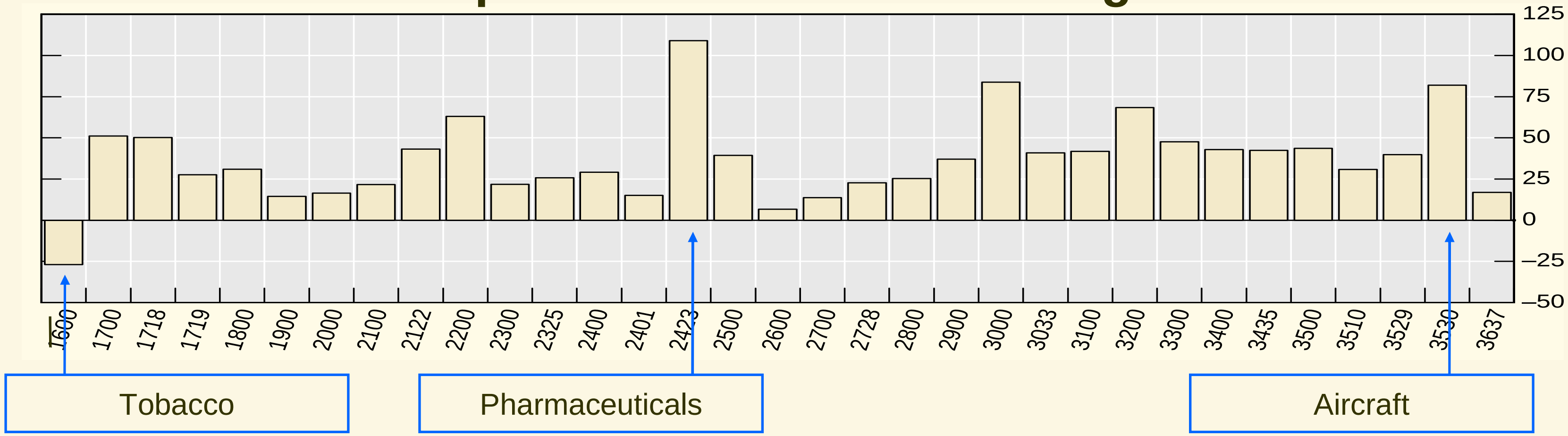
    $\Rightarrow$ 0.50 pp decline in trend productivity growth

    (sample average productivity growth rate: 1.3%)
- From 2005 to 2009:
  - Productivity growth and financial sector share in employment growth:
    - Ireland: -2.7% and +4.1%
    - Spain: -1.4% and +1.4%
  - What if financial sector share in employment had been stable?
    - Ireland: -1.3% instead of -2.7%
    - Spain: -0.8% instead of -1.4%

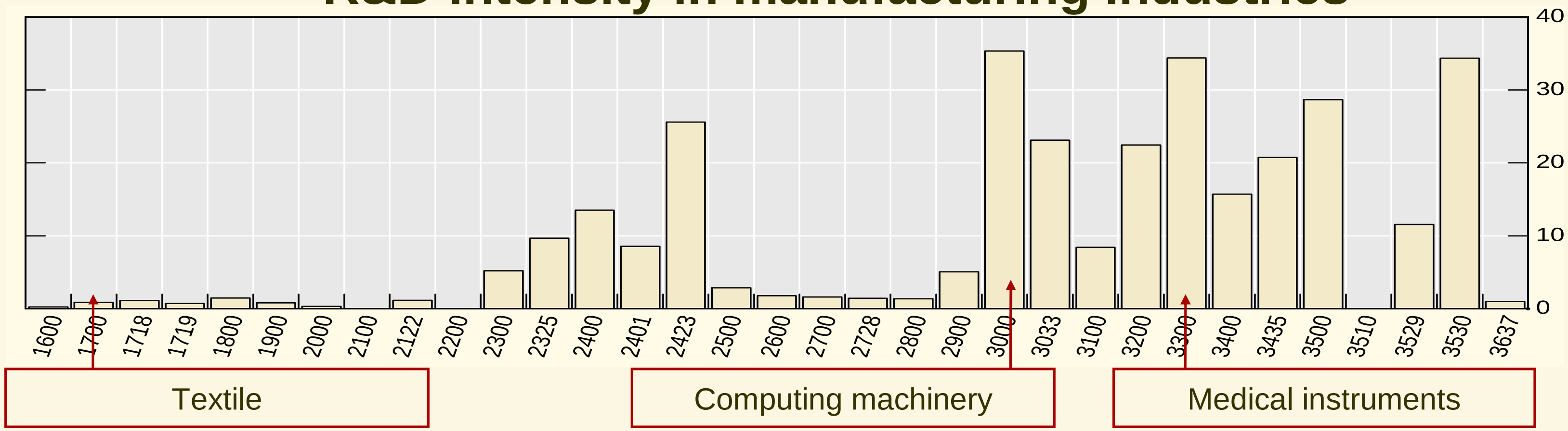
Industry growth and financial sector growth

- Financial sector growth affects sectors that compete for inputs
  - Finance is capital intensive:
    Financially dependent sectors, likely more affected.
  - Finance is skilled-labour intensive:
    R&D intensive sectors
    (most likely to be skilled-labour intensive)

Financial dependence in manufacturing industries



R&D intensity in manufacturing industries



Industry growth and financial sector growth

- Main result: Financially dependent or R&D intensive industries are more harmed by financial sector booms.
- Compute difference in productivity growth b/w:
  - Financially dependent or R&D intensive industry
    in a country w/ a financial sector boom
  - Financially independent or low R&D intensive industry
    in a country w/ a slow growing financial sector
- Difference is **2 to 3 pp**! (av. of 2.1%, std.dev. of 4.3%)
- Example:
  Spanish transport vs Swiss chemical industry: 4.5pp difference
  Almost all (4pp) due to Spain's financial sector boom

Conclusions

- Financial sector can be a drag on productivity growth
  - When private credit exceeds 100% of GDP
  - When the financial sector grows quickly
  - Financial booms are especially bad for
    - Financially dependent sectors
    - R&D intensive industries
- More finance is definitely not always better

Thank you.