

# SLOWING BUSINESS DYNAMISM AND PRODUCTIVITY GROWTH

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# Introduction

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- ▶ Aggregate productivity growth is the fundamental source of long-run economic growth...
  - ▶ ... sustained by business dynamism and factor reallocation.
  
- ▶ Striking trends in the U.S. over the past several decades (Akcigit and Ates, 2020)
  - ▶ a decline in business dynamism and entrepreneurship
  - ▶ a slowdown in aggregate productivity growth.

**QUESTION** Why is there a productivity growth slowdown and a decline in business dynamism?

# Motivation

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1. *Market concentration has risen.*
2. *Average markups have increased.*
3. *Average profits have increased.*
4. *The labor share of output has gone down.*
5. *Market concentration and the labor share are negatively associated.*
6. *The labor productivity gap between frontier and laggard firms has widened.*
7. *Firm entry rate and the share of young firms in economic activity have declined.*
8. *Job reallocation has slowed down.*
9. *The dispersion of firm growth has decreased.*
10. *The productivity growth has fallen, except for a brief pickup in the late 1990s.*
11. *A secular decline in real interest rates has occurred.*

# Results

- ▶ The model emphasizes strategic competition between leader and laggard firms.
- ▶ We run a horse race between alternative explanations.
- ▶ The decline in knowledge diffusion / implementation accounts for most.

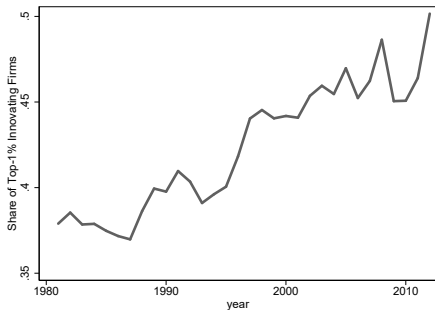
FIGURE: EFFECTS OF CHANNELS

	Data (1)	Lower corporate tax (2)	Higher R&D subsidies (3)	Higher entry cost (4)	Lower knowledge diffusion (5)	Declining interest rate (6)	Ideas getting harder (7)	Weaker power of workers (8)
Concentration	↑	↔	↔	↔	↑	↔	↓	↔
Markups	↑	↔	↔	↔	↑	↔	↓	↑
Profit share	↑	↔	↓	↔	↑	↓	↓	↑
Labor share	↓	↔	↑	↔	↓	↑	↑	↓
Frontier vs. laggard gap	↑	↔	↔	↔	↑	↔	↔	↑
Entry	↓	↑	↔	↓	↓	↑	↓	↑
Young firms' empl. share	↓	↔	↓	↓	↓	↔	↓	↔
Gross job reallocation	↓	↑	↑	↔	↓	↑	↓	↑
Dispersion of firm growth	↓	↓	↓	↑	↓	↓	↑	↓

Source: Akcigit and Ates (2019)

# Empirical Evidence on Knowledge Diffusion

*Patent concentration has risen and inventors shift to mature firms.*



A) Share of Patents of the Top 1% Patenting Firms

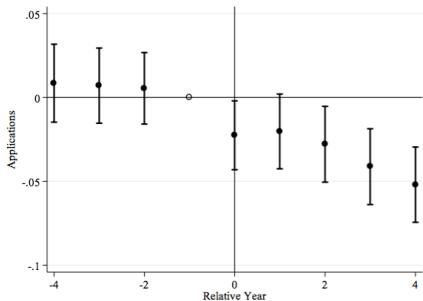


B) Share of Inventors Employed in Young Firms

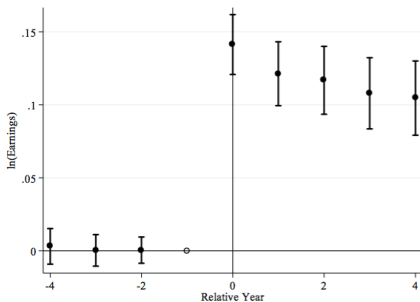
**FIGURE:** Patents and Inventors

# Empirical Evidence on Knowledge Diffusion

*Inventors' productivity declines but earnings rise when employed by mature firms.*



A) Patenting by Switching Inventors



B) Earnings of Switching Inventors

**FIGURE:** Inventors' Patent Production and Earnings after Switching to Mature Firms

Notes: Akcigit and Goldschlag (2020)

# Summary of Empirical Findings

## Patents

1. Higher share of patents *produced* by the top 1 percent of firms.
2. Higher share of patents *reassigned* to the top 1 percent of firms.
3. Patent concentration and share of litigated patents are positively associated with market concentration, profits, and markups.

## Inventors

4. Lower share of inventors in young start-ups
5. A decline in patents produced and citations received by inventors after starting a job in a mature firm (relative to those that start in a young start-up)
6. A rise in earnings of inventors after starting a job in a mature firm
7. Start-ups founded by inventors have higher employment growth (relative to start-ups founded by non-inventors)
8. Lower entrepreneurship by inventors since 2000

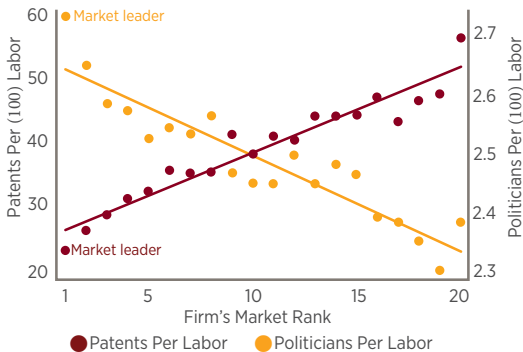
## M&As and Lobbying

9. Higher M&A activity negatively associated with business dynamism at the sector level
10. Lobbying expenditure, most spent by old and large firms, increased during the 2000s

# Country Experiences - ITALY

Factors constraining business dynamism elsewhere:

- ▶ Higher political connection and lower innovation intensity among leaders



**FIGURE:** Political Connections and Innovation Intensity, Italian Firms

Source: Akcigit et al. (2018)



## Country Experiences - TURKEY

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Developing economies suffer from other problems, such as credit availability.

Factors constraining business dynamism in Turkey after 2013:

- ▶ Decline in relative credit availability for laggard firms (Akcigit et al., 2020).

# Conclusion

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- ▶ We tease out mechanisms that drive declining U.S. business dynamism.
- ▶ We show that distortions to *knowledge diffusion / implementation* are the potential culprits.
- ▶ Data show concentration of ideas and inventors in mature firms.

## *Policy implications*

- ▶ Slower business dynamism and higher markups constrain the effectiveness of monetary policy.
- ▶ Policies to prop up competition between incumbents and productivity growth.
  - ▶ Reconsideration of policies that favor market leaders.
  - ▶ Enforcement of anti-trust policies.
  - ▶ Secondary market for diffusion of technologies.
  - ▶ Foreign competition to boost business dynamism.

- Akcigit, Ufuk and Nathan Goldschlag**, "Measuring the Employment Dynamics of U.S. Inventors," 2020. mimeo.
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