WHAT HAPPENED TO BUSINESS DYNAMISM?

Session 3: One-country Evidence

Ufuk Akcigit
University of Chicago

March 19, 2019 - European Investment Bank
Gradzewiczy and Mućk (2018)

Interesting finding: Markups declined in Poland. Due to globalization (?)
10 Empirical Trends

(Mostly based on the US data)
Fact 1: Market concentration has risen.

Source: Autor, Dorn, Katz, Patterson, and Van Reenen (2017).
Fact 2: Average markups have increased.

Figure: AVERAGE MARKUP OVER TIME

Source: De Loecker and Eeckhout (2017).
Fact 3: Profit share of GDP has increased.

Figure: PROFITS AS A FRACTION OF GDP OVER TIME

Source: Akcigit and Ates (2019), BEA NIPA Table 1.15.
Fact 4: The labor share of output has gone down.

Figure: LABOR SHARE

Source: Karabarbounis and Neiman (2013).
Fact 5: Negative link b/w concentration and labor share

Figure: Sector-level changes in concentration and labor share

Source: Autor, Dorn, Katz, Patterson, and Van Reenen (2017).
Fact 6: Larger gap btw. frontier and laggards.

Figure: LABOR PRODUCTIVITY OF FRONTIER AND LAGGARD FIRMS

Fact 7: Firm entry rate has declined.

Figure: Firm and establishment entry rates in the United States

Source: Decker, Haltiwanger, Jarmin, and Miranda (2016a)
Fact 8: Employment share of young firms has fallen.

Figure: EMPLOYMENT SHARE OF < 5-YEAR OLD FIRMS

Source: Decker, Haltiwanger, Jarmin, and Miranda (2016a).
Fact 9: Job reallocation has slowed down.

Figure: GROSS JOB REALLOCATION

Source: Decker, Haltiwanger, Jarmin, and Miranda (2016a).
Fact 10: Dispersion of firm growth has decreased.

Source: Decker, Haltiwanger, Jarmin, and Miranda (2016a).
Ten Facts about the U.S. Economy

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 labor share are negatively associated.
6. Labor productivity gap between "the best" and "the rest" has widened.
7. Firm entry rate has declined.
8. The share of young firms in economic activity has declined.
9. Job reallocation has slowed down.
10. The dispersion of firm growth has decreased.
What Has Changed?
Effective Corporate Tax Rate

Worker/Union Power

R&D Subsidy

Interest Rate

Many Things... Some Examples:

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- Endogenous mark-ups and endogenous market structure.
- Dynamic macro-growth model with strategic interaction.
- Explicit focus on transitional dynamics.

**Explicit competition margin:**

\[ \Rightarrow \text{incumbents innovate to increase their markups.} \]
\[ \Rightarrow \text{followers innovate to catch-up and leapfrog the leader if they have “hope”.} \]

- Similarly, entrants enter if and only if they have the hope of taking down the incumbents.
  - Entrants are “forward looking”.
Horse Race Among Alternative Fundamentals:

1. Lower Effective Corporate Tax Rate.
2. Higher R&D Subsidies.
3. Higher Entry Costs.
4. Lower Knowledge Diffusion.
5. Declining Interest Rate.
6. Ideas Getting Harder.
7. Lower Worker Power.
Data vs Model Predictions

**Experiment:** Shock BGP through one channel at a time

**Table:** Qualitative experiment results

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What about Welfare?
What Do These Trends Mean for Policy?

Knowledge Diffusion and Welfare

Source: Akcigit and Ates (2019)
Empirical Trends on IP and Innovation
Empirical Fact (1)

→ Patenting by new entrants has declined.
Empirical Fact (1)

→ Patenting by new entrants has declined.

**PATENTING SHARE BY NEW ENTRANTS**

![Graph showing the decline in patenting share by new entrants over time.](chart)

*Source: Akcigit and Ates (2019)*
Empirical Fact (2)

→ Patenting concentration has increased.

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<th>Year</th>
<th>Share of Top-1% Innovating Firms</th>
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<tr>
<td>1980</td>
<td>.35</td>
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<td>1990</td>
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<td>2000</td>
<td>.45</td>
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Source: Akcigit and Ates (2019)
Empirical Fact (2)

→ Patenting concentration has increased.

**TOP-1% PATENTING SHARE**

Source: Akcigit and Ates (2019)
Empirical Fact (3)

$\rightarrow$ Patents are bought by the largest firms.

Share of Top-1% Buyers Over Time

Source: Akcigit and Ates (2019)
Empirical Fact (3)

→ *Patents are bought by the largest firms.*

**Share of Top-1% Buyers over Time**

*Source: Akcigit and Ates (2019)*
90-10 Growth Rate Difference by Sector

Source: Decker, Haltiwanger, Jarmin, and Miranda (2016b)
Empirical Fact (4)

→ Patents have become less exploratory.
Empirical Fact (4)

→ Patents have become less exploratory.

Fraction of Self Citations

![Graph showing the fraction of self-citations from 1980 to 2010]

Source: Akcigit and Ates (2019)
Empirical Fact (5)

→ *Patents have become less exploratory.*
Empirical Fact (5)

→ Patents have become less exploratory.

**Average Claim Length over Time**

![Graph showing the average claim length over time from 1980 to 2010](image)

*Source: Akcigit and Ates (2019)***
Figure 1: Buyer Power Across Sectors

Morlacco (2018)

Interesting finding: Substantial buyer power in France. It correlates with the size and productivity of the firm.
Thank You...

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uakcigit@uchicago.edu
Innovation Types

quality, $q$

product line, $j$

Leader

Follower

Neck&neck

Figure: Evolution of product lines
Leader Innovation

Figure: Evolution of product lines
Follower Innovation: Slow Catch-up

Quality, q

(1 - \(\phi\)) x_{-i}
Knowledge Diffusion
### Evaluation of Each Shock

\[
\text{contribution}_i = \frac{X^4_{2010} - X^4_{2010 \backslash i}}{X^4_{2010} - X^4_{1980}}.
\]

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### Evaluation of Each Shock

Contribution of each shock is given by the following formula:

\[ \text{contribution}_i = \frac{X_{2010}^4 - X_{2010}^4}{X_{2010}^4 - X_{1980}^4}. \]

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