

**Discussion of  
“Superstars or Supervillains? Large Firms in  
the South Korean Growth Miracle”**

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## The paper:

- Growth accounting in South Korea (1972-2011).
- Data on largest manufacturing firms (e.g., Samsung).
- Quantitative model with heterogeneous **large** firms.
- Firm-specific wedges.
- **Imperfect competition in goods and labor markets.**

## Main result:

- Differential performance of largest firms due to productivity.
- Increased real GDP and welfare, **with higher concentration.**
- **Superstars!**

## Wedges and frictions

$$\text{Profits: } \pi_{it} = p_{it}^H y_{it}^H + p_{it}^F y_{it}^F - (1 + \tau_{it}^L) w_{it} l_{it} - (1 + \tau_{it}^K) \rho k_{it} - p_t^M m_{it}$$

$$\text{Technology: } y_{it} = a_{it} (l_{it})^{\gamma^L} (k_{it})^{\gamma^K} (m_{it})^{\gamma^M}$$

$$\text{Domestic demand: } y_{it}^H = \frac{1}{F} (p_{it}^H)^{-\sigma} (P_t^H)^{\sigma-\rho} (P_t)^{\rho-1} E$$

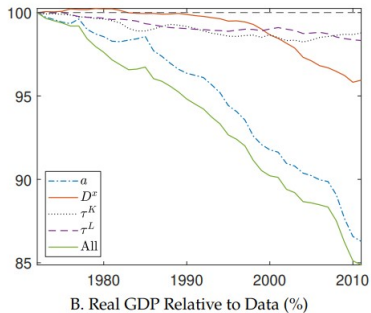
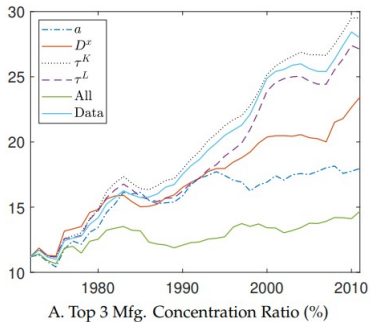
$$\text{Foreign demand: } y_{it}^F = (p_{it}^F)^{-\sigma} D_{it}$$

- Oligopoly in domestic goods markets.
- Oligopsony in labor markets.
- Shocks to import prices and disutility of labor supply.

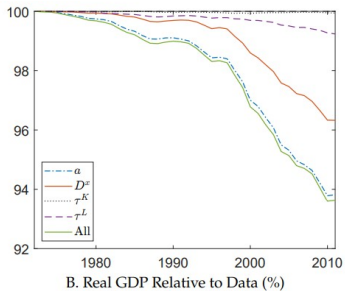
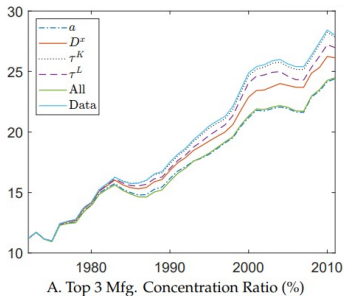
## Wedges and shocks are used to match the following data:

- Firm level:
  - Domestic sales.
  - Exports.
  - Wage bill/employment.
  - Fixed assets.
- More aggregated level (e.g., sector):
  - Domestic sales.
  - Exports.
  - Consumption of intermediate goods.
  - Imports.
  - Labor supply.
- Sequence of static problems.
- Model matches concentration ratios.

## Counterfactuals (“shutting down wedges”)



## Samsung counterfactuals (“shutting down wedges”)



## Equivalence results

- Are the oligopoly and oligopsony assumptions really necessary?
- Markdows and markups did not change much.
- If firms are behaving competitively, is higher productivity needed to offset those frictions?

## Equivalence results

- Simpler model with more wedges?

Profits:

$$\pi_{it} = (1 + \tau_{it}^S) p_{it}^H y_{it}^H + p_{it}^F y_{it}^F - (1 + \tau_{it}^L) w_{it} l_{it} - (1 + \tau_{it}^K) \rho k_{it} - p_t^M m_{it}$$

Technology:  $y_{it} = a_{it} (l_{it})^{\gamma^L} (k_{it})^{\gamma^K} (m_{it})^{\gamma^M}$

Domestic demand:  $y_{it}^H = \frac{1}{F} (p_{it}^H)^{-\sigma} (P_t^H)^{\sigma-\rho} (P_t)^{\rho-1} E$

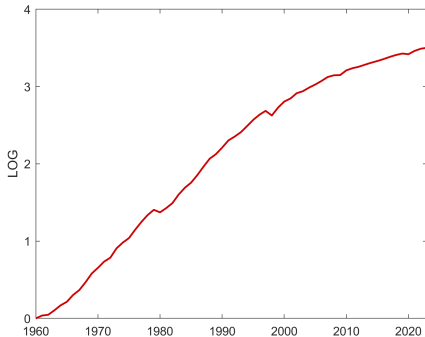
Foreign demand:  $y_{it}^F = (p_{it}^F)^{-\sigma} D_{it}$

- Competitive domestic goods markets.
- Competitive labor markets.
- Shocks to import prices and disutility of labor supply.
- How would  $(1 + \tau_{it}^S)$  and  $a_{it}$  interact?



## Can superstars become supervillains?

- Dynamic component: first superstars and then supervillains?
- What if we repeated the exercise starting in a later period?



- Growth of Korea's real GDP per capita slowed down recently.

## Can superstars become supervillains?

- Some measures of business dynamism slowed down as well.

	Real GDP per working-age person annual growth (%)	Agg. manufacturing productivity annual growth (%)	Contribution of net entry (%)
1992–1997	6.1	3.6	48.0
2001–2006	4.3	3.3	37.3
2009–2014	3.0	1.5	25.1

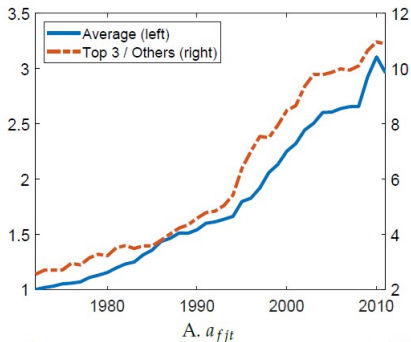
Source: Asturias, Hur, Kehoe and Ruhl (2023).

## Korean superstars and U.S. supervillains?

- De Loecker, Eeckhout and Mongey (2022):
  - Welfare losses from increasing market power.
  - Different quantitative model.
  - Endogenous entry and exit.
  - Explore measures of business dynamism.
- Question: is the difference due to the model or due to some feature of the data in the U.S. relative to Korea?
  - Faster productivity growth in Korea.
  - Higher increase in markups in the US.
  - Faster decline in business dynamism in the US (?).

## Were superstars lucky?

- Is the productivity process exogenous to the concentration ratio?
- Persistent difference in shocks.
- Lower incentive for other firms to enter, innovate and grow?
- Other firms could have performed better without the top 3.

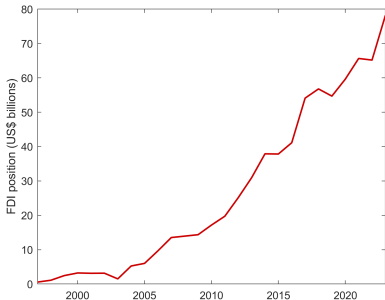


## **Superstars to some and supervillains to others?**

- Lower share of employment in superstar firms in recent years.
- Likely with higher wages (Song et al., 2019).
- Implications for inequality.
- What if the bottom performed worse because of the superstars?

## Measurement

- How do wedges show up in the accounts?
  - For example, does compensation of employees include the wedges?
- Is fixed asset a good proxy for capital?
  - What about intangible assets?
- Increased FDI from Korea to the U.S. in the 2000s:



## Conclusion

- Great paper!
- Rich data + quantitative analysis.
- Important insights on a timely issue.