

# Global Declining Competition

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Brief summary of main findings by:

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# Background and main question(s)

- Main question(s):

To what extent has corporate market power increased around the world? What are the *proximate* drivers of the increase?

- Background:

Major rise in market power document among public firms (US: De Loecker and Eeckhout, 2017; World: Diez et al., 2018) and De Loecker and Eeckhout, 2018)

➔ How large is the macro-relevant rise in market power across the broader economy? (private and public firms)

➔ Use BvD's Orbis, cleaned following approach of Kalemli-Ozcan et al. (2015, 2017): 20 to 28 countries, 2000-2015, 5 million observations

# Approach

- Follow approach of De Loecker and Warszynski (2012) based on firm's cost-minimization problem, which in turn builds partly on Hall (1986, 1988):

$$\mu_{it} \equiv \frac{P_{it}}{MC_{it}} = \underbrace{\frac{\partial \mathcal{F}_{it}(\cdot)}{\partial \mathcal{V}_{it}} \frac{\mathcal{V}_{it}}{\mathcal{F}_{it}(\cdot)}}_{\text{Output Elasticity}} / \underbrace{\frac{P_{it}^{\mathcal{V}_{it}} \mathcal{V}_{it}}{P_{it} Q_{it}}}_{\text{Expenditure Share}} = \frac{\beta_{it}^{\mathcal{V}}}{\alpha_{it}^{\mathcal{V}}},$$

- Issues (see paper):
  - Underlying production function estimation approach
  - Variable input choice (COGS, materials)
  - Fixed (overhead) costs
  - Weighting scheme to aggregate markups (sales, VA, wage bill, COGS)

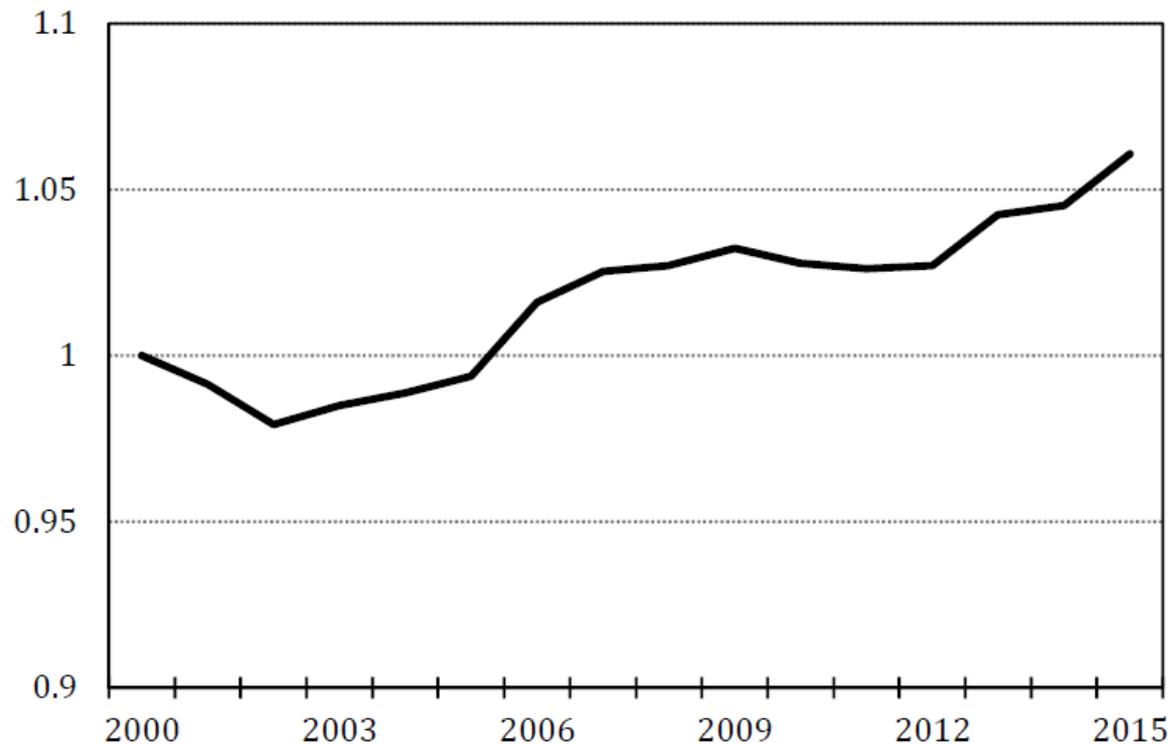
➔ All results are qualitatively—and for most part quantitatively—robust to these

# 5 findings

1. Moderate global increase in markups:  $\sim 6\%$  overall since 2000
2. Concentrated in advanced economies, where markup increase  $\sim 8\%$
3. Mostly explained by behavior of high-markup firms (top decile), whose markup increase  $\sim 40\%$
4. Mostly explained by within-firm increase among incumbents, and to lesser extent by market share reallocation toward high-markup entrants; United States seems different (larger between component)
5. U-shaped relationship between size and markups in each (4-digit) industry

# Finding 1: Global increase in market power

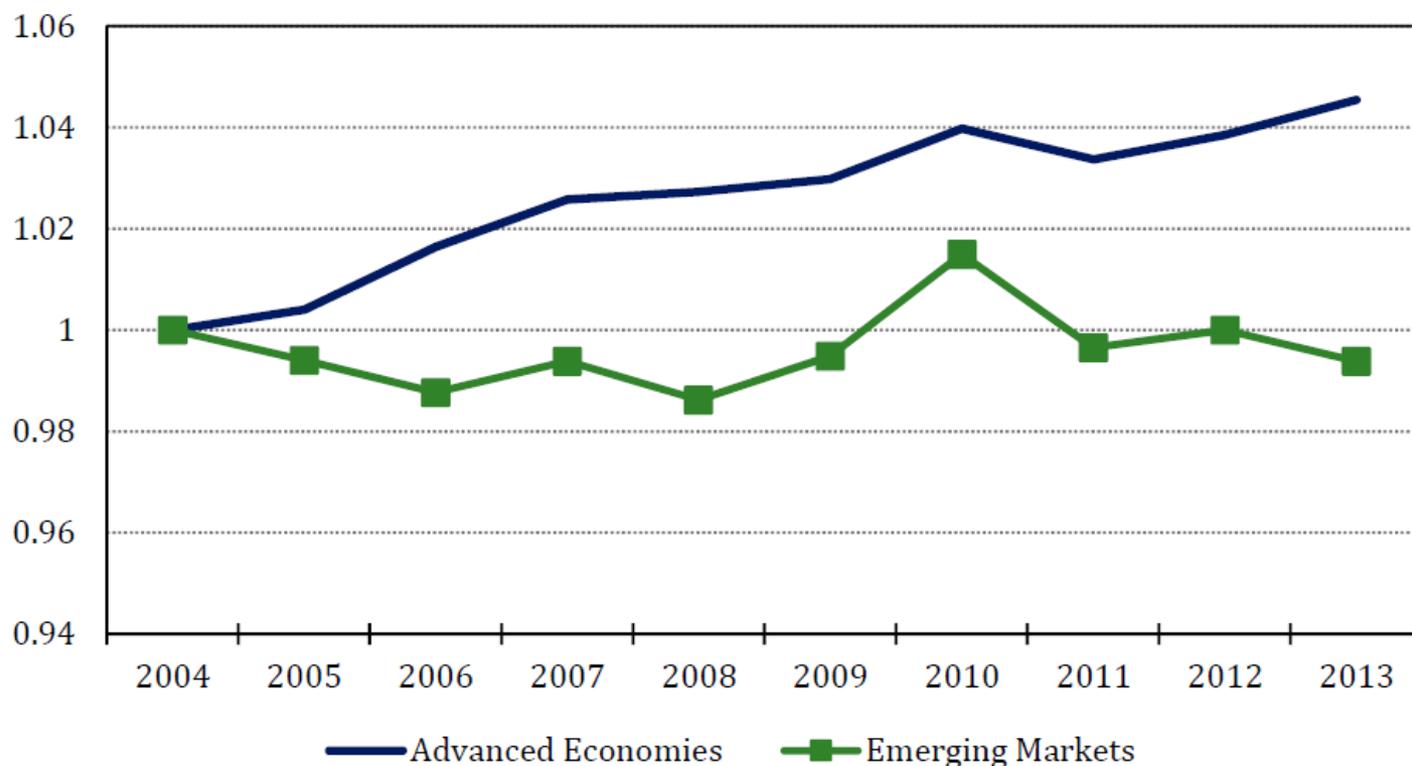
Figure 1: Average Global Markup



*Notes:* Authors' calculations based on data from Orbis. The sample includes all countries in the Baseline Sample of Table 1. Firm-level markups are estimated according to equation (6) where  $\beta_s^v$  is estimated separately for each country-2-digit sector. Markups weighted by firm's revenue.

# Finding 2: Advanced economies vs. emerging markets

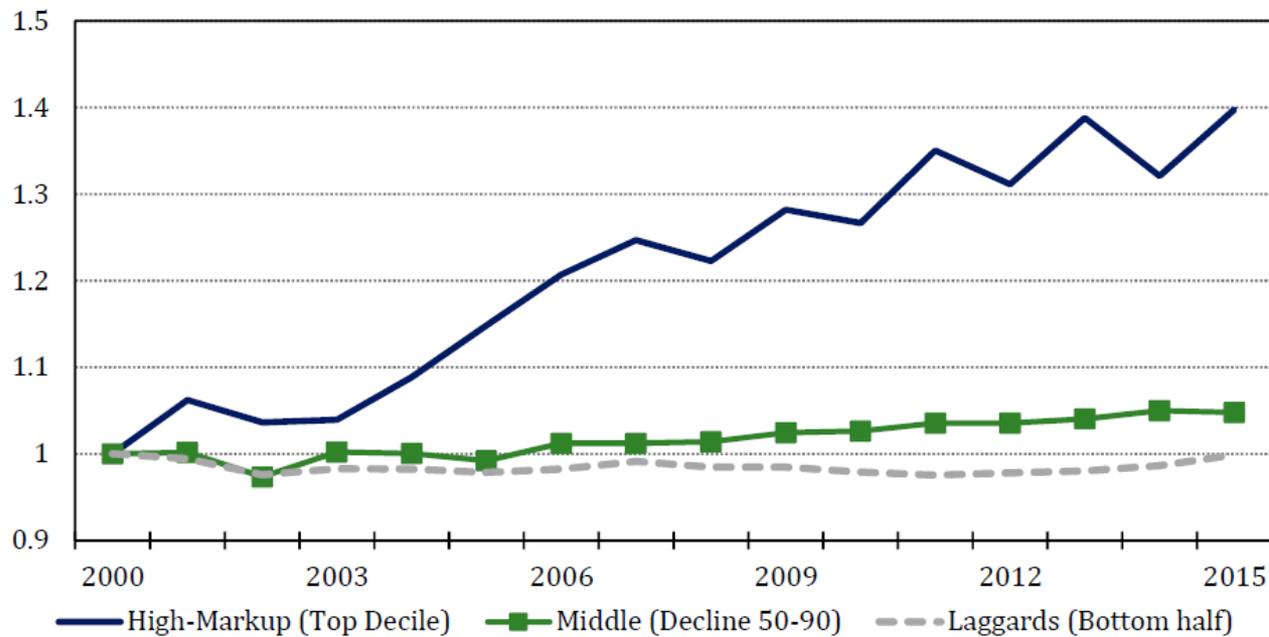
Figure 4: Advanced Economies vs Emerging Markets



*Notes:* Authors' calculations based on data from Orbis. Firm markups are estimated according to equation (6) where  $\beta_s^v$  is estimated separately for each country-2-digit sector. Markups weighted by firm revenue. See Table 1 for the list of countries.

# Finding 3: High-markup firms vs. the rest

Figure 2: High-markup, Middle, and Laggard Firms



*Notes:* Authors' calculations based on data from Orbis. The sample includes all countries in the Baseline Sample of table 1. Firm markups are estimated according to equation (6) where  $\beta_s^v$  is estimated separately for each sector. Markups weighted by firms' revenue. High-markup firms are defined as those firms in the upper decile of the markup distribution; middle firms as those between the median and the 90th percentile; laggard firms are defined as those in the bottom decile of the distribution.

# Finding 4:

## Within-incumbent growth vs other components

- Melitz-Polanec (2015) decomposition of aggregate rise in markups over 2000-2015 into incumbent, entry and exit components—each further decomposed into within and between components:

Table 5: Dynamic Firm Markup Decomposition 2000-2015

PANEL A: BASELINE SAMPLE					
	$\Delta\mu$	Incumbent Firms	Entering Firms	Exiting Firms	TOTAL
Within Firm Growth	0.064	0.045	0.027	-0.008	0.045
Market Share Reallocation		0.064	-0.009	-0.009	0.019
		-0.019	0.036	0.002	0.019

*Notes:* The table reports the change in markup between 2000 and 2015 and the corresponding decomposition. Incumbent firms are those that were present in 2000 and in 2015. Entering firms are those that were not in the sample in 2000 and by 2015 report at most 15 years of age. Exiting firms are those that were present in 2000 but did not report any financial information between 2001 and 2015. For incumbent firms, within firm growth is the difference in the average markup of incumbent firms between 2000 and 2015.

# Finding 5:

## U-shaped relation between size and markups

Table 4: Markups and Firm Size: Conditional Correlation

DEPENDENT VARIABLE: log FIRM MARKUP

	(1)	(2)	(3)	(4)	(5)	(6)
	CROSS-SECTION			WITHIN FIRM		
<i>MS</i>	-0.396*** (0.005)	-1.277*** (0.011)	-1.476*** (0.019)	-0.472*** (0.006)	-1.443*** (0.015)	-1.267*** (0.022)
<i>MS</i> <sup>2</sup>		1.346*** (0.015)	1.534*** (0.024)		1.295*** (0.016)	1.135*** (0.022)
log <i>TFP</i>			0.744*** (0.006)			0.957*** (0.006)
log <i>Overhead</i>			-0.029*** (0.000)			-0.030*** (0.000)
Observations	5,303,984	5,303,984	2,394,304	5,201,324	5,201,324	2,296,207
Firm FE	no	no	no	yes	yes	yes
Country-Ind-Year FE	yes	yes	yes	yes	yes	yes
Cluster	id	id	id	id	id	id

*Notes:* The dependent variable is the log of firm markup recovered for the estimation of a Cobb-Douglas production function and using the cost of goods sold as the flexible input. *MS* refers to the market share measured as the share of firm sales in total country-sector-4-digit-year sales.

Thank you!

(on behalf of Federico)