The Rise of Market Power

Jan Eeckhout

UPF Barcelona and UCL

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Facts about Market Power

Estimating markups

- Cost based method; publicly traded firms 1955–2016
- From firm's FOC for cost minimization and $\mu = \frac{P}{MC}$:

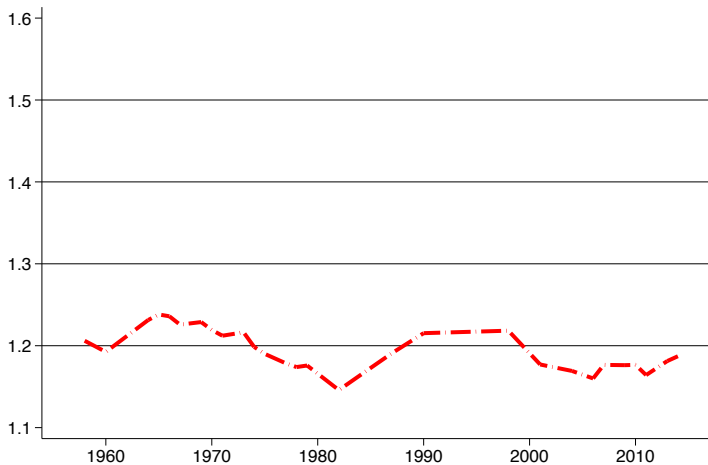$$\mu_{it} = \theta_{it}^V \frac{P_{it} Q_{it}}{P_{it}^V V_{it}} \quad V \in \{Lab, Mat, Elec, ...\}$$

- Individual Markup $\Rightarrow$ distribution of markups
- Average markup, weighted by m_{it} (sales, costs, employment,...):

$$\mu_t = \sum_i m_{it} \mu_{it}$$

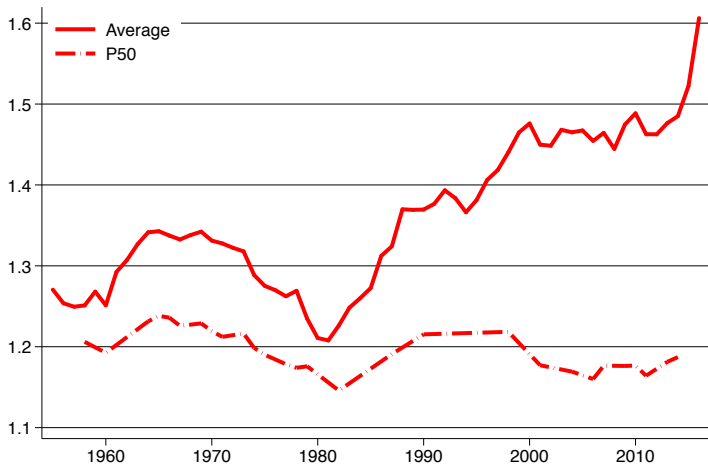- Markup $\neq$ Market Power: with fixed cost calculate profit rate

1. HETEROGENEITY
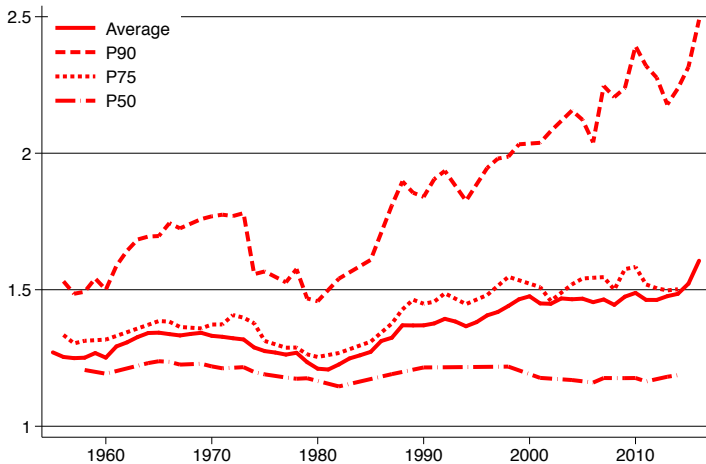
NO CHANGE... IN MEDIAN MARKUP

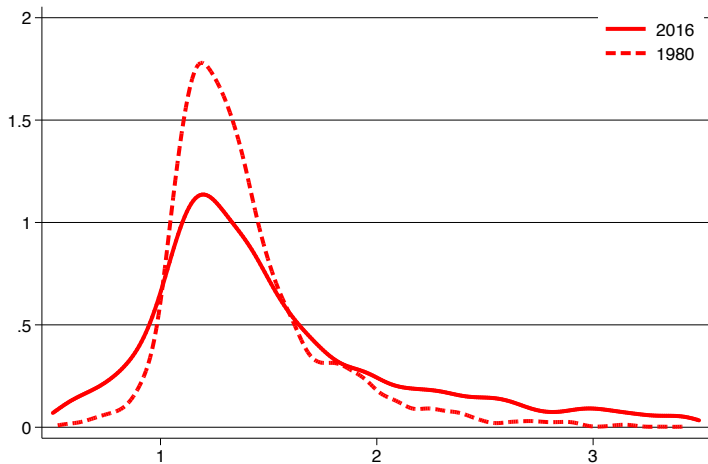# 1. Heterogeneity

Increase in Average Markup since 1980

1. Heterogeneity

All Action in Upper Half Distribution

1. Heterogeneity

Kernel Density 1980, 2016

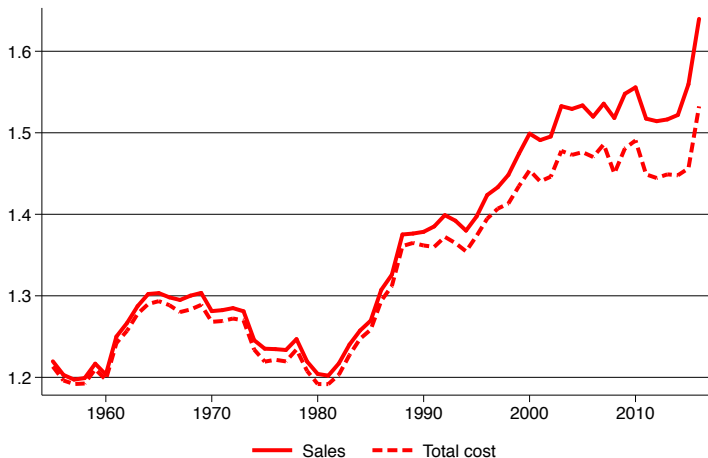1. Heterogeneity: sharp rise for few firms; no rise for most

FACTS

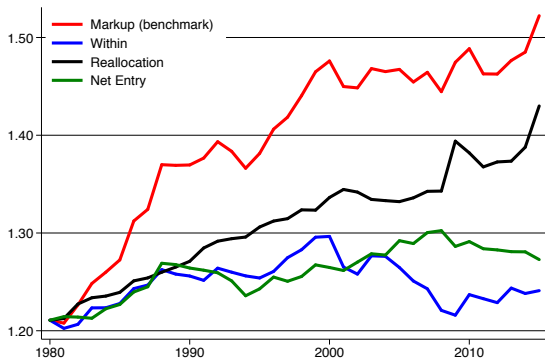1. Heterogeneity: sharp rise for few firms; no rise for most (Carlos Brito)

- See Grassi (2016) and Edmond, Midrigan and Xu (2019)

2. Reallocation

$$\Delta\mu_t = \underbrace{\sum_i m_{i,t-1}\Delta\mu_{it}}_{\Delta \text{ within}} + \underbrace{\sum_i \mu_{i,t-1}\Delta m_{i,t}}_{\Delta \text{ market share}} + \underbrace{\sum_i \Delta\mu_{i,t}\Delta m_{i,t}}_{\Delta \text{ cross-term}}$$

$$+ \underbrace{\sum_{i\in\text{Entry}} \mu_{i,t}m_{i,t} - \sum_{i\in\text{Exit}} \mu_{i,t-1}m_{i,t-1}}_{\text{net entry}}$$

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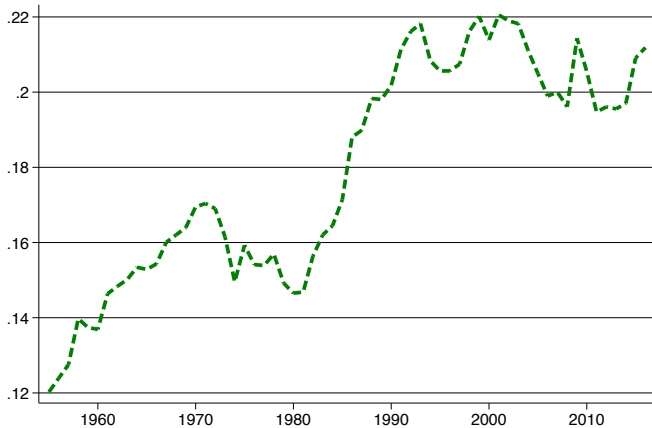

See also Superstar Firms (Autor, Dorn, Katz, Patterson, Van Reenen (2018))

1. Heterogeneity: sharp rise for few firms; no rise for most
2. Reallocation of sales from low to high markup firms (2/3)

3. Technology Matters
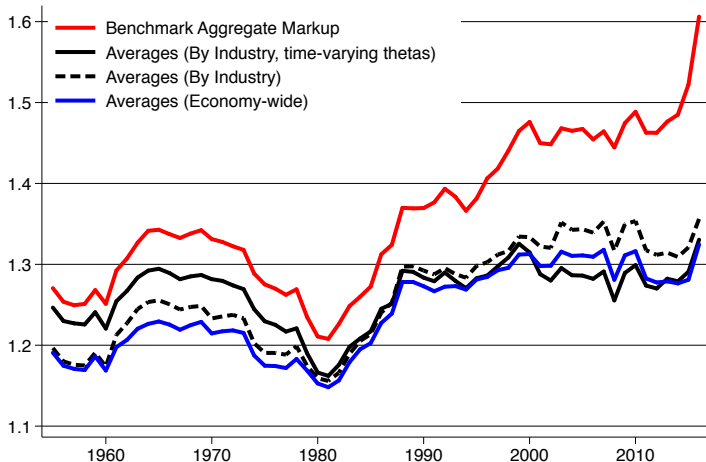## Rise in Overhead (SG&A)

FACTS

1. Heterogeneity: sharp rise for few firms; no rise for most
2. Reallocation of sales from low to high markup firms (2/3)
3. Technology Matters: Overhead cost (SG&A) ↑

4. MAGNITUDE OF INCREASE

A. AGGREGATION: INDUSTRY AVERAGES: +20 POINTS

Legend:
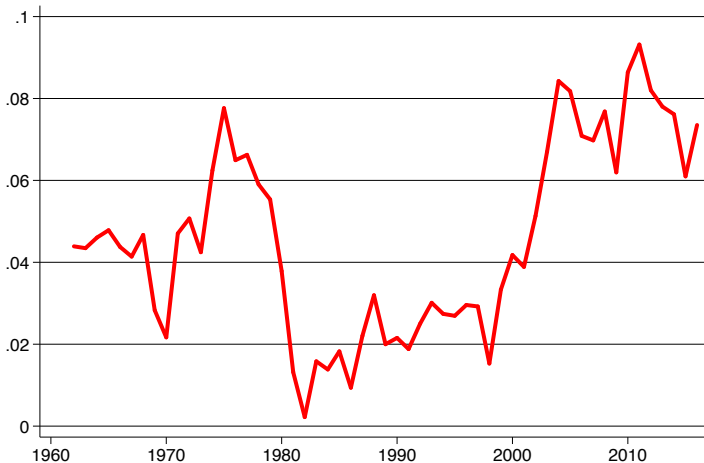- Benchmark Aggregate Markup
- Averages (By Industry, time-varying thetas)
- Averages (By Industry)
- Averages (Economy-wide)

- See also Hall (1988 and 2018)

4. MAGNITUDE OF INCREASE

B. PROFIT RATE: +7-8 PPT

- Profits/Value Added: +15%

- The profit rate:

$$\pi_i = \frac{P_i Q_i - C(Q_i)}{P_i Q_i} = 1 - \frac{1}{\mu_i} \frac{AC_i}{MC_i}$$

$\Rightarrow$ With $\mu = 1.6$ in 2016, implied profit rate is $\pi = 1 - \frac{1}{1.61} = 0.38$!!
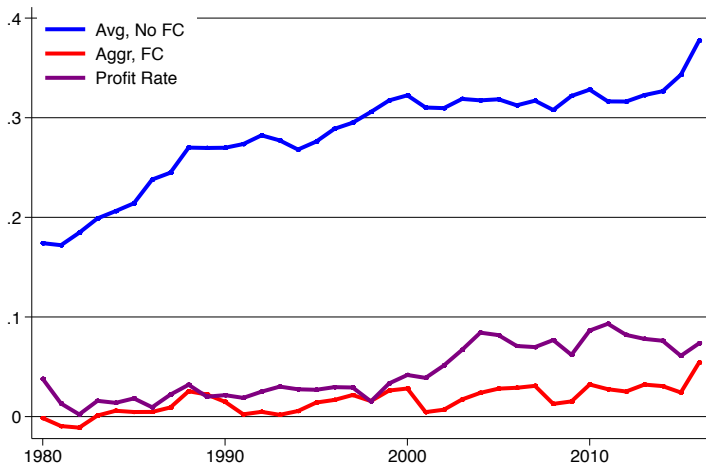
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- This logic uses:
    1. Representative Firm Economy: but Aggregation (Jensen's Inequality)
    2. Unchanged economies of scale ($AC = MC$): but $\frac{AC}{MC} \uparrow$ (Overhead $\uparrow$)

4. MAGNITUDE OF INCREASE
PROFIT RATE VS MARKUP

FACTS

1. Heterogeneity: sharp rise for few firms; no rise for most
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3. Technology Matters: Overhead cost (SG&A) ↑
4. Magnitude of the Increase?
   - A Weighting and Aggregation is crucial
   - B Profit rate (+7-8 ppts) ≠ Markup (+30-40 points)

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∴ Only publicly traded firms (40% of GDP)

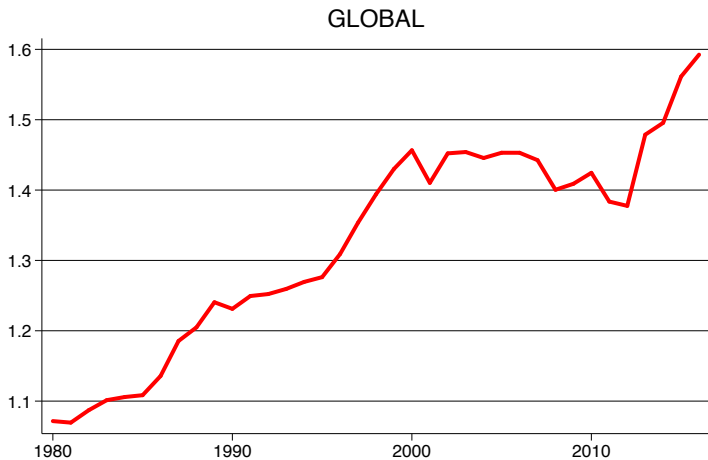# Robustness: US Censuses

Manufacturing
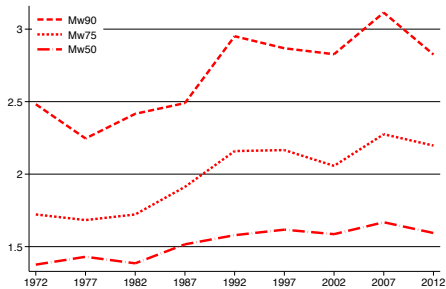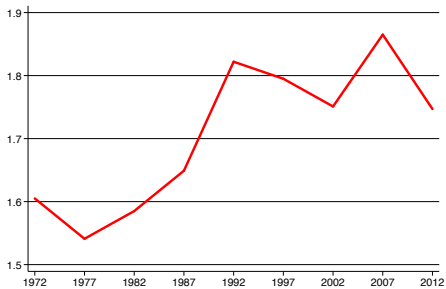
GLOBAL MARKUP
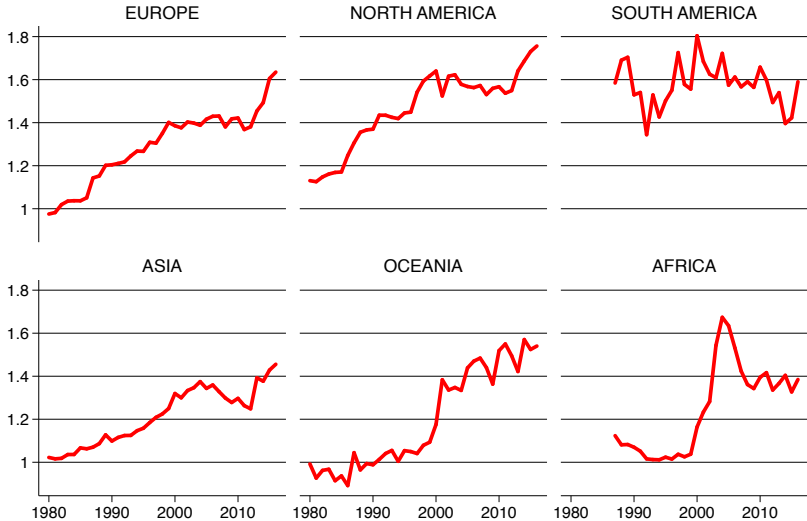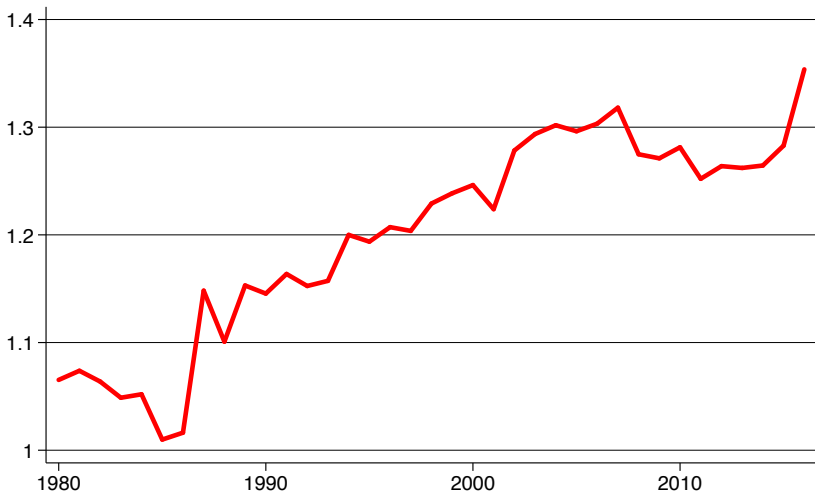
134 COUNTRIES; 70,000 FIRMS; 1980-2016

GLOBAL

Markup Continents

EUROPE

NORTH AMERICA

SOUTH AMERICA

ASIA

OCEANIA

AFRICA

GERMANY

Quantifying Market Power:

Causes and Consequences

Market Power in General Equilibrium
- Causes: need both
    1. Market Structure: ABInBev
        $\rightarrow$ labor reallocation down
    2. Technology: Amazon Paradox
        $\rightarrow$ fixed cost and productivity dispersion $\Rightarrow$ markup dispersion
    $\Rightarrow$ Net effect: Welfare loss

Quantifying Market Power

Market Power in General Equilibrium
- Causes: need both
    1. Market Structure: ABInBev
        $\rightarrow$ labor reallocation down
    2. Technology: Amazon Paradox
        $\rightarrow$ fixed cost and productivity dispersion $\Rightarrow$ markup dispersion
    $\Rightarrow$ Net effect: Welfare loss
- Consequences: Secular Trends in Macro
    1. Wage Stagnation: equilibrium effect (not monopsony)
    2. Labor Share decline: at firm level
    3. Decline in Business Dynamism: incomplete passthrough
    4. Reallocation of sales towards high markup, large superstar firms

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