

Monopoly or Monopsony? Labor Market Effects of Mergers and Acquisitions

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Motivation

Why should we study the effects of mergers and acquisitions on the labor market?

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- Growing (empirical) literature showing link between concentration, wages and employment
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- 3 Relevant for competition authorities (USA, EU, CH)
- 4 Identification strategy for a causal framework

Research Question(s)

What is the effect of mergers and acquisitions on workers in M&A firms in France?

- ① What is the effect on labor market outcomes?
- ② Do M&A firms exploit their market power on the labor market?

→ Is the monopsony power of M&A firms relevant for competition authorities?

Labor Market Effects of M&As

Unclear ex ante...

- ❖ Firms may profit from higher market shares, economies of scale, and higher productivity \Rightarrow sales \uparrow , employment \uparrow , wages \uparrow
e.g. Cortes and Tschopp (2023)
- ❖ “Rent-sharing”-Models: higher productivity and sales \rightarrow larger share for employees \Rightarrow wages \uparrow
z.B. Jarosch et al. (2021), Cho and Krueger (2022), Todd and Heining (2022)
- ❖ Redundant jobs \Rightarrow employment \downarrow
- ❖ GE-effect: Monopoly power on the product market \rightarrow higher prices \rightarrow lower demand \Rightarrow sales \downarrow employment \downarrow
e.g. Deb et al. (2022)
- ❖ Monopsony power on the labor market \rightarrow downward pressure on wages \Rightarrow wages \downarrow , employment \downarrow
e.g. Arnold (2021); Prager and Schmitt (2021); Bassanini et al. (2023)

Data

French administrative datasets containing the near-universe of workers and firms, 2009 - 2020

- ❖ BTS-Postes (job-level employer-employee dataset)
- ❖ FARE (balance sheet data from tax reports)
- ❖ CITRUS (firm restructurings database)

→ All datasets can be linked using the unique firm identifier.

summary stats

figure

Identification Strategy

Event Study

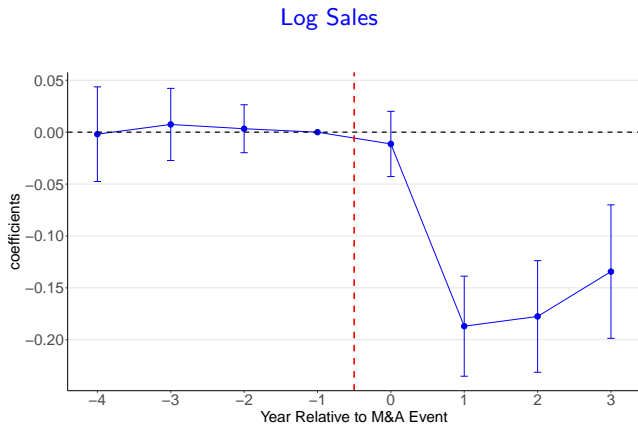
Regression specification from Arnold (2021):

$$Y_{it} = \sum_{\substack{k=-4, \\ k \neq -1}}^3 \beta_k^{MA} \mathbb{1}(t_i = t^* + k) \times MA_{it} + \gamma_i + \delta_t + u_{it} \quad (1)$$

- Y_{it} : firm level outcome (log employment, log wages...)
- β_k^{MA} : coefficient of interest
- MA_{it} : M&A dummy
- $\mathbb{1}(t_i = t^* + k)$: indicates an M&A event k years in the past (or future) relative to the period of the M&A event t^*
- γ_i, δ_t : firm and year FE

→ Estimator from Callaway and Sant'Anna (2021) using not-yet treated as control group

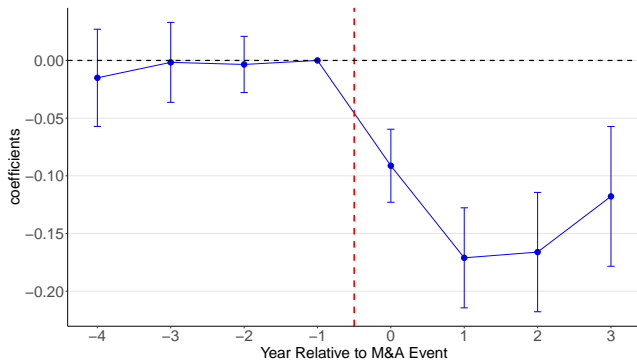
Main Results



→ Lower sales

Main Results

Log FTE Employment



→ Lower employment

Main Results



→ Higher wages only in the year after the M&A event

Potential Mechanisms

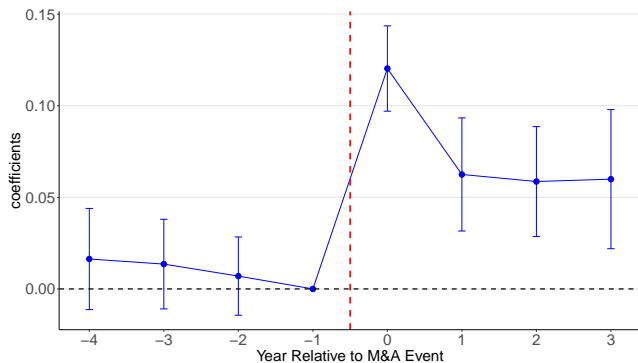
- ❖ Changes in productivity
- ❖ Compositional changes of the workforce
- ❖ Changes in market power

Changes in Productivity

Mechanisms

Changes in Productivity

Log Labor Productivity

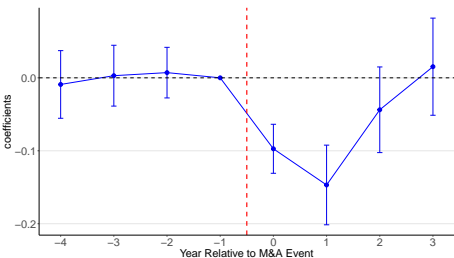


Compositional Changes

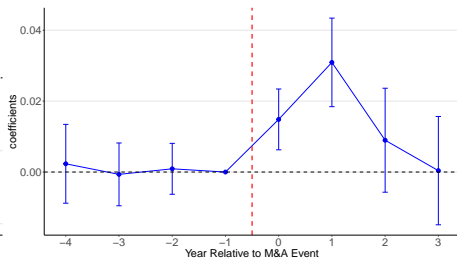
Mechanisms

Compositional Changes

Log Employment (Stayers)



Log Wages (Stayers)



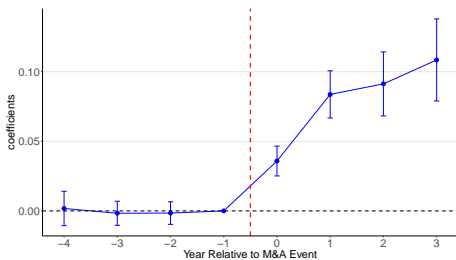
→ Higher wages for those who stay at the M&A firm

hires

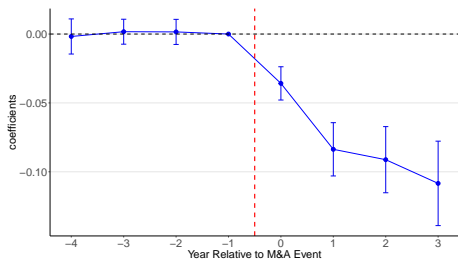
Mechanisms

Compositional Changes

Abstract Share



Non-Abstract Share



→ Increase of the share of workers in **abstract** and relatively **higher-paying** occupations

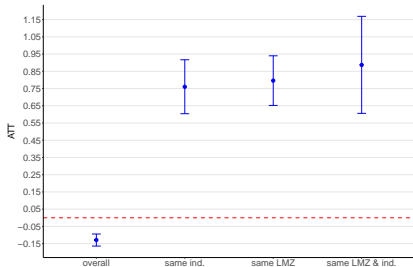
occupations

Changes in Market Power

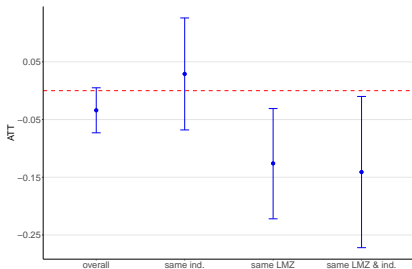
Mechanisms

Changes in (Product) Market Power

Log Sales



Markups (YHM 2022 approach)



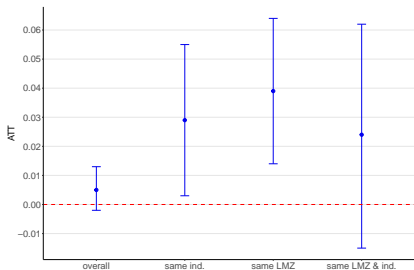
→ No increase in monopoly power

profitmargins

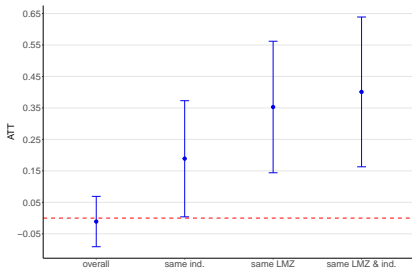
Mechanisms

Changes in (Labor) Market Power

Log Wages



Markdowns (YHM 2022 approach)



→ But **increase in monopsony power** if buyer and target are within the same labor market zone

formula

employment

Conclusion

Labor market effects of mergers and acquisitions in France:

- ❖ Lower sales and employment after an M&A event
- ❖ Almost no significant effect on wages
- ❖ Compositional changes play a major role → strong increase of workers in abstract occupations
- ❖ Some evidence for higher monopsony power if the buyer and target firms are within the same labor market zone
- ❖ Next steps:
 - Understand what drives the increase in wage markdowns
 - Understand if competition authorities need to take this into account

Thank you!

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Characteristics of M&A Events in France

	%
<hr/> <i>Panel A - Top 5 industries</i>	
Wholesale trade (46)	12.60
Financial service activities (64)	8.59
Retail sale (47)	7.22
Activities of head offices; management consultancy (70)	6.14
Specialized construction activities (43)	5.19
<hr/> <i>Panel B - Share of horizontal mergers</i>	
Same 1-digit industry	67.43
Same 2-digit industry	59.98
Same 3-digit industry	53.74
Same 4-digit industry	49.06
<hr/> <i>Panel C - Change in Product Market Power</i>	
Δ in market share after M&A	0.50
Δ in market share after M&A (weighted)	0.39
Δ in market share after M&A (horizontal mergers)	1.41
Δ in market share after M&A (weighted, horizontal mergers)	2.13
<hr/> <i>Panel D - Change in Labor Market Power</i>	
Share of M&A within same LMZ	35.26
Share of M&A within same LMZ and 2-digit industry	21.06

Summary Statistics

Characteristics of M&A Firms

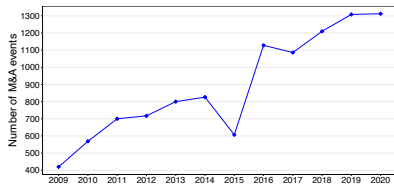
	M&A firm (combined)				buyer in $t - 1$			target in $t - 1$		
	N	Mean	SD	Median	Mean	SD	Median	Mean	SD	Median
Sales	101,345	97,595.56	807,529.57	7,752.24	58,703.44	578,089.81	3,632.15	19,984.41	172,349.36	1,679.56
FTE employment	101,345	286.77	2,249.67	36.13	167.54	1,367.66	17.73	76.46	1,052.15	8.61
FTE employment (stayers)	95,391	861.26	10,398.51	36.78	414.54	4,778.19	16.50	60.24	719.20	6.79
FTE employment (new hires)	87,060	209.87	4,333.31	6.84	82.83	1,050.69	2.62	16.22	395.30	0.88
FTE employment (abstract occ.)	84,103	316.15	3,826.85	10.63	130.08	2,191.45	3.62	22.19	419.86	1.07
FTE employment (non-abstract occ.)	101,345	730.47	10,566.72	28.43	367.30	4,606.00	14.30	54.27	844.49	5.89
Hourly wages	101,345	21.22	11.78	18.33	22.26	14.41	18.40	21.10	12.47	17.80
Hourly wages (stayers)	95,391	21.68	12.42	18.63	22.56	14.68	18.69	21.48	12.88	18.06
Hourly wages (new hires)	87,060	18.20	9.74	15.73	18.64	10.97	15.62	17.65	9.75	14.92
Abstract wages	84,103	33.41	14.07	31.41	34.07	16.19	31.19	32.61	15.65	29.76
Non-abstract wages	92,309	17.07	5.73	16.34	17.25	7.02	16.28	17.01	6.77	16.06
Abstract share	101,345	0.42	0.87	0.20	0.29	0.31	0.17	0.28	0.32	0.15
Labor productivity	101,345	132.24	14,585.82	65.00	106.28	1,158.49	64.50	97.61	586.54	58.77
Profit margin	101,029	0.26	139.79	0.02	1.00	80.62	0.02	-4.77	213.58	0.02
Firm age	101,345	23.94	18.36	20.00	22.85	19.37	18.00	19.58	16.68	16.00
Share GE	-	-	-	-	0.16	-	-	0.10	-	-
Share ETI	-	-	-	-	0.36	-	-	0.17	-	-
Share PME	-	-	-	-	0.35	-	-	0.44	-	-
Share MICRO	-	-	-	-	0.12	-	-	0.30	-	-
Number of unique firms	10,683	-	-	-	-	-	-	-	-	-

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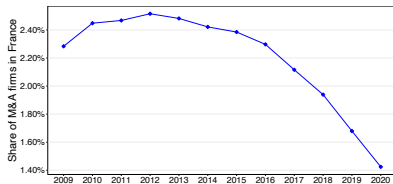
Descriptives

M&A Firms in France

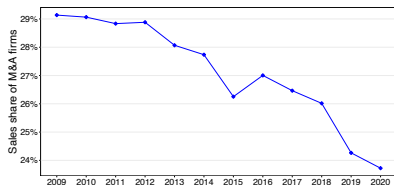
(a) Number of M&A Events



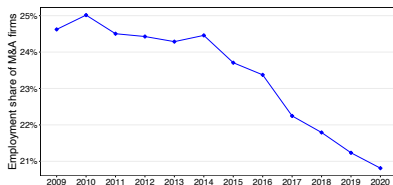
(b) Share of M&A Firms



(c) Sales Share of M&A Firms



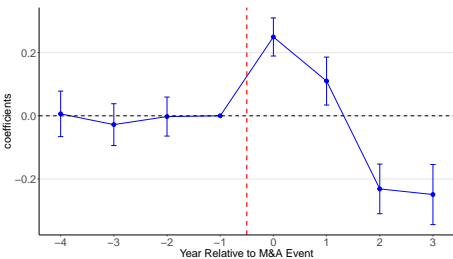
(d) Employment Share of M&A Firms



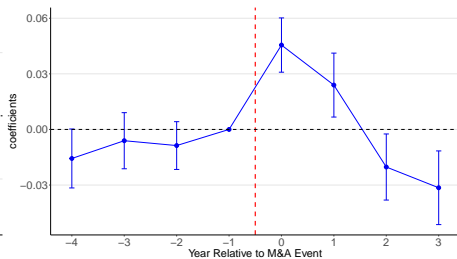
Mechanisms

Compositional Changes

Log Employment (New Hires)



Log Wages (New Hires)



→ New hires reflect changing labor demand of the M&A firm

← return

French occupation classification (PCS)

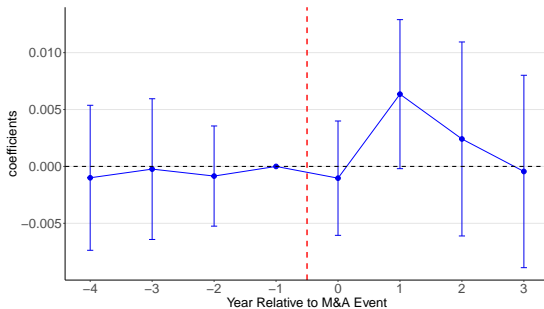
2-digit code	Occupation Title	Type	Average Wage (log)	Employment Share (%)
56	Consumer service occupations	manual	2.49	5.73
68	Unskilled craft workers	manual	2.50	4.02
55	Retail occupations	routine	2.53	8.79
53	Police, military and security workers	manual	2.57	1.24
52	Civil servants and public service agents	manual	2.57	1.82
67	Unqualified industrial workers	manual	2.60	5.96
64	Drivers	manual	2.62	4.96
63	Skilled craft workers	manual	2.65	8.74
65	Skilled storage and transportation workers	manual	2.69	2.98
44	Clergy, religious occupations	abstract	2.69	0.00
54	Administrative occupations	routine	2.72	10.22
42	Teachers and related professions	abstract	2.75	0.46
62	Skilled industrial workers	routine	2.77	9.17
43	Intermediate occupations in health and social work	abstract	2.83	1.72
47	Technicians	routine	2.94	5.94
46	Intermediate administrative and commercial professions	routine	2.95	6.90
45	Intermediate administrative civil service professions	routine	2.96	0.11
21	Craft workers (business heads)	abstract	2.96	0.12
22	Merchants (business heads)	abstract	3.01	0.31
48	Supervisors	routine	3.01	2.58
31	Self-employed professionals (with employment status)	abstract	3.26	0.10
33	Civil service executives	abstract	3.31	0.12
35	Information, arts and entertainment professions	abstract	3.34	0.48
34	Professors, scientific professions	abstract	3.39	0.43
38	Engineering and technical managers	abstract	3.40	8.19
37	Administrative and commercial executive positions	abstract	3.46	8.15
23	Top managers with 10 or more employees	abstract	3.69	0.77

Table from Cortes et al. (2023)

Mechanisms

Compositional Changes

Residual Wages



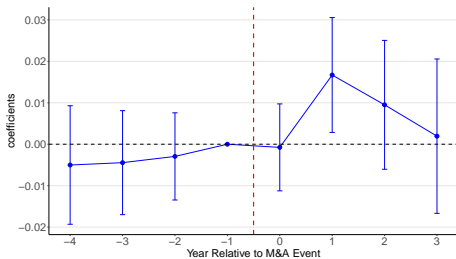
→ But **no significant effect** of M&A on **wages** when controlling for occupational composition

← return

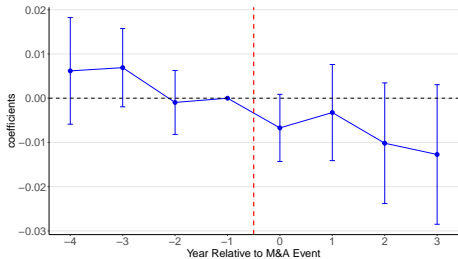
Mechanisms

Compositional Changes

Abstract Log Wages



Non-Abstract Log Wages

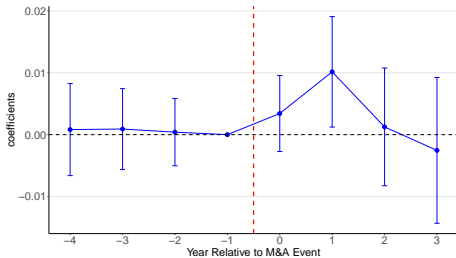


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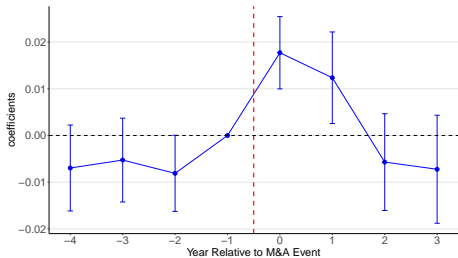
Mechanisms

Compositional Changes

Residual wages (stayers)



Residual wages (new hires)

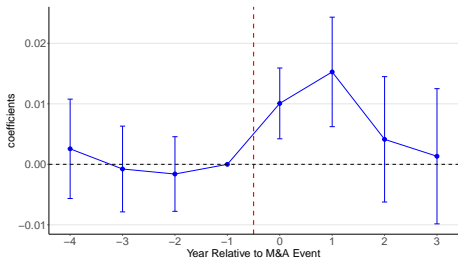


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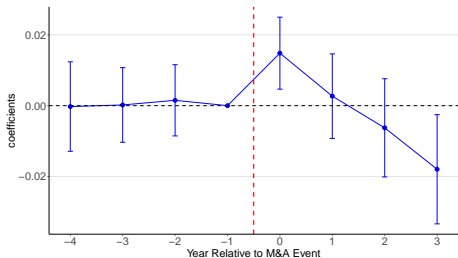
Mechanisms

Compositional Changes

Share Abstract Stayers



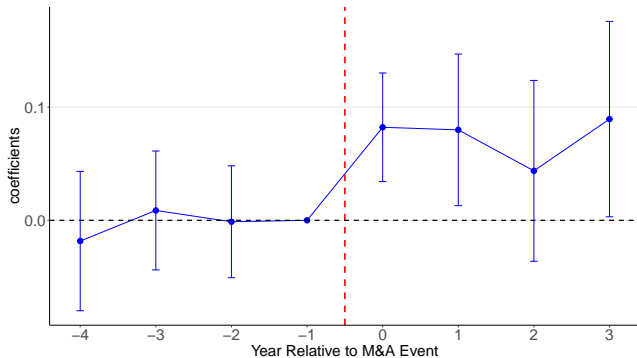
Share Abstract Hires



[return](#)

Compositional Changes

Number of jobs with temporary contracts

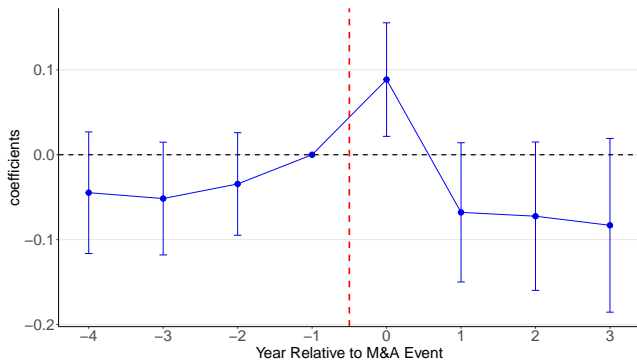


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Mechanisms

Changes in (product) market power

Log Profit Margin

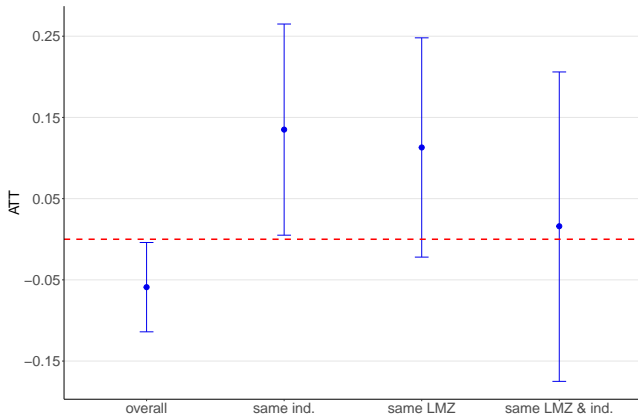


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Mechanisms

Changes in (product) market power

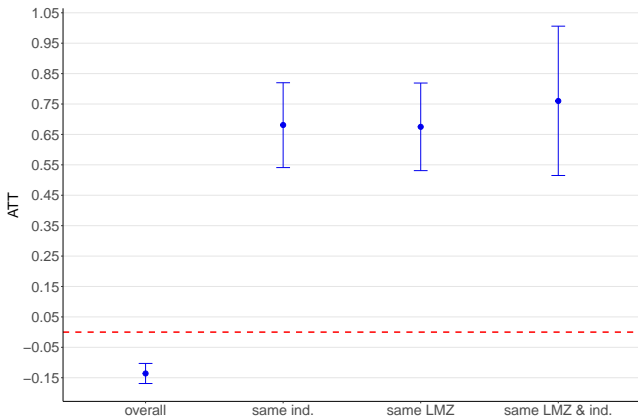
Log Profit Margin



Mechanisms

Changes in (labor) market power

Log FTE Employment



Markups & Markdowns

Yeh et al. (2022) approach

- ❖ Yeh et al. (2022) derive markups and markdowns from the firm cost minimization problem
- ❖ Estimation is based on the Loecker and Warzynski (2012) approach
- ❖ Wedges between output elasticities and revenue shares reflect market power both in input and output markets
- ❖ Firm-level markdowns ν_{it} are defined as follows:

$$\nu_{it} = \frac{\theta_{it}^{\ell}}{\alpha_{it}^{\ell}} \cdot \mu_{it}^{-1} = \frac{\theta_{it}^{\ell}}{\alpha_{it}^{\ell}} \cdot \left(\frac{\theta_{it}^{k'}}{\alpha_{it}^{k'}} \right)^{-1},$$

where θ_{it}^{ℓ} is a firm's output elasticity of labor, α_{it}^{ℓ} is the labor share of revenue and μ_{it} are markups

◀ return