Labor market concentration and collective wage bargaining

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Abstract

This paper investigates the effect of employers concentration in the labour market on firms' average compensation and compliance with minimum wage set in collective agreements. We measure the extent of firm's monopsony power computing concentration (i.e. Herfindal index) in terms of employment share in the local labour market (LLM) and in the industry the firm is operating. Using CERVED data on balance sheets of Italian incorporated firms, merged with INPS data on the population of their employees, we specify and estimate the wage effects of employers' concentration. Our empirical strategy exploits plausibly exogenous variation in employers' concentration in a given LLM driven by nation-wide shocks to firms' value added and industry specialization in the LLM. We find that employers' concentration has sizeable depressing effect on firms' average wages, and increases the probability that a firm signs a collective agreement with non-representative social partners.

JEL classification: J52, J32, K31
Keywords: Employer concentration; Collective agreements; Firms' compensation.

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1 Statistical annex

Table 1 Sample descriptive statistics

Variables	***Mean***	***SD***
Avg. wage	21671.715	(20685.985)
Share of NRLA	0.142	(0.349)
PCA	0.003	(0.051)
MCA	0.139	(0.346)
Firm age	10.528	(10.909)
Firm size	15.444	(157.928)
Value added per worker	77.422	(8984.719)
HHI_sjt	0.136	(0.19)
N. firms	1,003,109	
N. observations	5,880,406	

Figure 1 Employer concentration over time

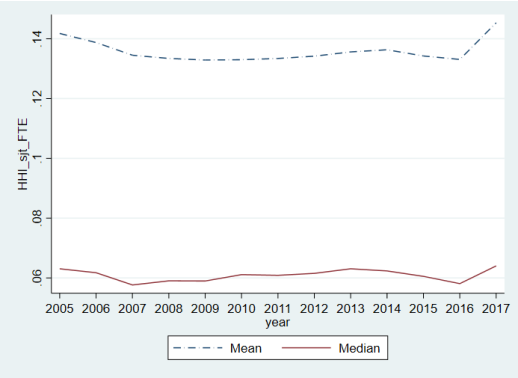

Figure 2 Employer concentration and diffusion of non-representative agreements across LLM

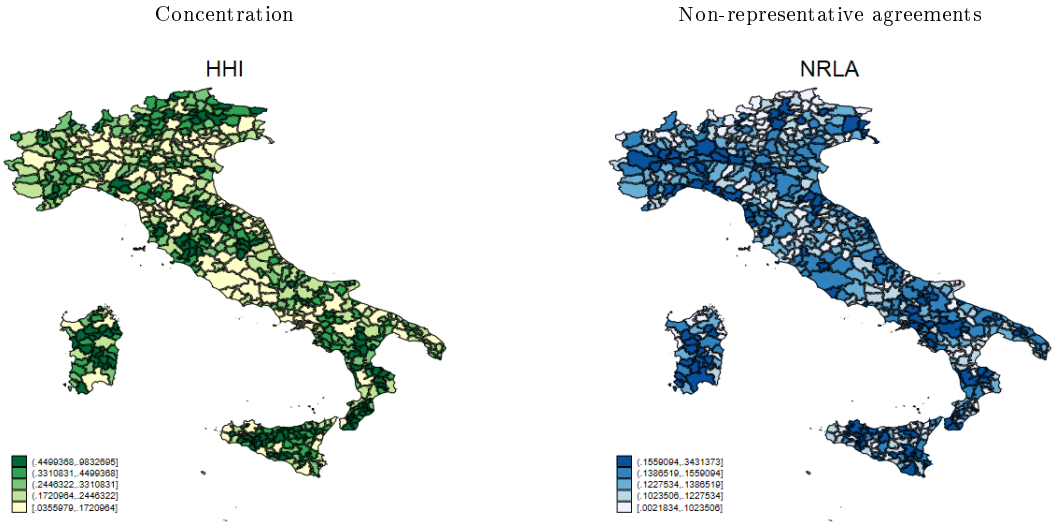

Table 2 Employer concentration and wages

	log(wage)				
	(1)	**(2)**	**(3)**	**(4)**	**(5)**
HHI_{sjt}	-0.123***	-0.144***	-0.0950***	-0.0972***	-0.0120***
	(0.0447)	(0.0331)	(0.0330)	(0.0331)	(0.00228)
log(VA_{pw})	0.178***	0.191***	0.158***	0.158***	0.0492***
	(0.00458)	(0.00322)	(0.00341)	(0.00342)	(0.000778)
log(firm age)		0.0453***	0.0396***	0.0389***	0.0144***
		(0.00233)	(0.00172)	(0.00173)	(0.00175)
log(firm size)		0.0764***	0.0764***	0.0769***	0.00422***
		(0.00154)	(0.00142)	(0.00144)	(0.000724)
Year FE	✓	✓	✓		✓
Industry FE			✓		
Industry*year FE				✓	
Firm FE					✓
R^2	0.171	0.303	0.385	0.388	0.855
N	5,497,094	5,497,042	5,497,042	5,497,042	5,497,042

Robust standard errors in parentheses, clustered at the LLM level. Significance: * p<.1, ** p<.05, *** p<.01.
HHI_{sjt} measures employer concentration at the LLM-industry-year level; log(VA_{pw}) is the log of value added per worker; log(firm age) is the log of firm age (in years); log(firm size) is the log of firm size measured in full-time equivalent number of workers.

Table 3 Employer concentration and adoption of non-representative labor agreements (LPM)

	Pr(NRLA=1)				
	(1)	**(2)**	**(3)**	**(4)**	**(5)**
HHI_{sjt}	0.234***	0.234***	0.0279***	0.0275***	0.0314***
	(0.0113)	(0.0116)	(0.00686)	(0.00676)	(0.00298)
$\log(VA_{pw})$	-0.00424***	-0.00321**	-0.00404***	-0.00400***	-0.000698***
	(0.00122)	(0.00158)	(0.000546)	(0.000555)	(0.000179)
log(firm age)		-0.00466***	-0.00688***	-0.00695***	-0.00300***
		(0.000894)	(0.000533)	(0.000533)	(0.000452)
log(firm size)		0.00202	-0.000452	-0.000436	-0.00209***
		(0.00151)	(0.000995)	(0.000988)	(0.000283)
Year FE	✓	✓	✓		✓
Industry FE			✓		
Industry*year FE				✓	
Firm FE					✓
R^2	0.0162	0.0164	0.233	0.233	0.906
N	5,497,094	5,497,042	5,497,042	5,497,042	5,497,042

Robust standard errors in parentheses, clustered at the LLM level. Significance: * p<.1, ** p<.05, *** p<.01.

Table 4 Employer concentration and wages - heterogeneity

	log(wage)				
	Females	**Males**	**Blue collars**	**LS White collars**	**HS White collars**
HHI_{sjt}	-0.111***	-0.0897***	-0.0242	-0.116***	-0.0779***
	(0.0358)	(0.0329)	(0.0187)	(0.0348)	(0.0175)
$\log(VA_{pw})$	0.159***	0.164***	0.137***	0.165***	0.0941***
	(0.00351)	(0.00439)	(0.00171)	(0.00133)	(0.00212)
log(firm age)	0.0406***	0.0399***	0.0282***	0.0389***	-0.00564***
	(0.00199)	(0.00158)	(0.00137)	(0.00148)	(0.0010)
log(firm size)	0.0765***	0.0736***	0.0605***	0.0982***	0.0446***
	(0.00115)	(0.00169)	(0.00212)	(0.00251)	(0.00535)
Industry*year FE	✓	✓	✓	✓	✓
R^2	0.298	0.357	0.386	0.282	0.198
N	4,213,873	4,657,703	4,003,695	3,980,530	327,519
		Open-ended	**Fixed-term**	**Part-time**	**Full-time**
HHI_{sjt}		-0.0975***	-0.0474***	-0.0848***	-0.0984***
		(0.0334)	(0.0154)	(0.0280)	(0.0258)
$\log(VA_{pw})$		0.165***	0.137***	0.112***	0.111***
		(0.00340)	(0.00191)	(0.00448)	(0.00468)
log(firm age)		0.0388***	0.00193	0.0337***	0.0311***
		(0.00158)	(0.00118)	(0.00228)	(0.00131)
log(firm size)		0.0781***	0.0605***	0.0555***	0.0426***
		(0.00150)	(0.00117)	(0.00119)	(0.000930)
Industry*year FE	✓	✓	✓	✓	✓
R^2		0.381	0.277	0.193	0.335
N		5,306,723	2,373,528	3,344,970	4,856,665
			Up to 34	**35-54**	**55 plus**
HHI_{sjt}			-0.0665**	-0.101***	-0.112***
			(0.0260)	(0.0334)	(0.0262)
$\log(VA_{pw})$			0.142***	0.179***	0.204***
			(0.00247)	(0.00416)	(0.00456)
log(firm age)			0.0233***	0.0329***	0.0364***
			(0.00103)	(0.00155)	(0.00206)
log(firm size)			0.0663***	0.0802***	0.0704***
			(0.00103)	(0.00164)	(0.00118)
Industry*year FE	✓	✓	✓	✓	✓
R^2			0.330	0.361	0.304
N			4,396,057	4,787,068	2,215,397

Robust standard errors in parentheses, clustered at the LLM level. Significance: * p<.1, ** p<.05, *** p<.01.