The Decline of Rent Sharing

Brian Bell
King's Business School and Centre for Economic Performance, LSE

Paweł Bukowski
Centre for Economic Performance, LSE

Stephen Machin
Department of Economics and Centre for Economic Performance, LSE

24.06.2020, Compnet & NBS

CENTRE *for* ECONOMIC PERFORMANCE

Recent Trends

Falling labour share, rising income inequality and stagnating real wages have been (re)connected with two labour market trends:

1. The rising powers of firms:
   - Monopsonistic competition
     Manning 2003; 2011; Furman and Krueger 2016, Glover and Short 2018, Benmelech et al. 2019; Azar et al. 2020; Philippon 2020
   - Product market power
     Kalecki 1938; Barkai 2017; Farhi and Gourio 2018; Gutiérrez and Philippon 2019; Eggertsson et al. 2019; Autor et al. 2020; De Loecker et al. 2020
2. The falling power of workers:
   - Declining bargaining power
     Kristal 2010; Elsby et al. 2013; Abdih and Danninger 2017; Stansbury and Summers 2020
   - Erosion of unions
     Rosenfeld 2014; Jaumotte and Osorio 2015; Machin 2016; Farber et al 2018; Bryson 2018; Hirsch and Macpherson 2019

The balance of power between firms and workers is an outcome of the two opposing forces. Knowing the source of changes is important for policy-makers.

Rent Sharing

Rent sharing - a firm-level relationship between wages and a measure of economic rents

- Perfect competition $\rightarrow$ wages given $\rightarrow$ no rent sharing
- What is reflected by a positive rent sharing?
  1. Bargaining power of workers
     Nickel and Wadhwani 1991; Blanchflower et al. 1996; Van Reenen 1997; Garin and Silverio 2018
  2. Monopsonistic labour market
     Manning 2011; Card et al. 2018; Kline et al. 2019; Lamadon et al. 2019
- Rent sharing reflects a situation when one side has more power on the labour market.
- Changes in rent sharing reflect changes in the balance of power between workers and firms.

Rent Sharing

Rent sharing - a firm-level relationship between wages and a measure of economic rents

- Perfect competition $\rightarrow$ wages given $\rightarrow$ no rent sharing
- What is reflected by a positive rent sharing?
  1. Bargaining power of workers
     Nickel and Wadhwani 1991; Blanchflower et al. 1996; Van Reenen 1997; Garin and Silverio 2018
  2. Monopsonistic labour market
     Manning 2011; Card et al. 2018; Kline et al. 2019; Lamadon et al. 2019
- Rent sharing reflects a situation when one side has more power on the labour market.
- Changes in rent sharing reflect changes in the balance of power between workers and firms.
- Research questions:
  - What are trends in rent sharing?
  - What do we learn about changes in the balance of power between workers and firms?

This Paper

- The long-run evolution of rent sharing among UK-domiciled companies.
  - We construct a comprehensive and consistent panel of firms since 1983, spanning the entire economy.
  - Complemented with the analysis of the UK manufacturing firms, and the EU and US industries.
  - In an accompanying work we look at the nature of rent sharing.

Results

- We show evidence for a positive rent sharing (elasticity .012%).
- Decline in rent sharing, the elasticity after 2000 is four-time smaller than before.
- Similar findings for other datasets and countries.
- Bukowski, Machin & Soskice (2020) - the fall in rent sharing reflects a fall in the bargaining power of workers.

Existing Empirical Evidence

- Studies have found RS elasticity within the range of .01-.11%
- The validity of instrumental variables estimates in this literature remains a contentious issue
  - Most studies tend to instrument firm-level rents with industry-level rents or shocks (e.g. Card et al., 2014; Estavao and Tevlin, 2003), but the exclusion restriction is not likely to be satisfied (Manning, 2011)
  - Some studies use patents (Van Reenen, 1996; Kline et al., 2017) or firm-level shocks to exporting companies (Garin and Silverio 2018)
- We use GMM and two-period (and before) lags as instruments (Arellano and Bond, 1991). Also report estimates using a leave-out industry measure.

Data

- Our universe are the largest 300 (by market cap) firms on the London Stock Exchange between **1983-2016**, domiciled and registered in the UK.
  - Except investment, unit and real estate trusts.
  - Except firms, which were in the top 300 for <=2 years.
  - Consider all available years, even when outside the top 300.
- 832 companies, 11478 observations. 95% of the market cap, >7mln employees.
- Data: more
  - Manually collected from annual reports (Mergent Archives, Company House).
  - Worldscope, Compustat, Orbis, Fame, Cambridge DTI, Exstat.
- We capture *global* operation.

The UK-domiciled Companies - Empirical Specification

$$w_{ijt} = \alpha w_{ij-1} + \sum_{l=0}^{L} \beta_l \pi_{ijt-l} + \sum_{l=0}^{L} \gamma_l U_{t-l} + \sum_{l=0}^{L} \delta_l \overline{w}_{jt-l} + \\ + \mu_i + f(time) + \epsilon_{ijt}$$

- w_{ijt} - log of compensation per employee for company i, industry j at time t.
- π_{ijt} - profit before tax per employee.
- U_t - log of nationwide unemployment (ONS).
- $\overline{w}_{jt}$ - log of industry average wages (KLEMS).
- Endogeneity - we take first Δ and use lagged levels as instruments (Arellano-Bond).
- We trim the 1/99th percentiles of profits per employee (Card et al. 2014).

	Dependent Variable: Log w_{ijt}							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Log w_{ijt-1}	0.477***	0.488***	0.43***	-0.177***	0.478***	0.494***	0.445***	-0.187***
	(0.034)	(0.034)	(0.052)	(0.028)	(0.035)	(0.036)	(0.054)	(0.028)
π/n_{ijt}	0.006***	0.008***	0.01***	0.008***	0.006***	0.008***	0.009***	0.008***
	(0.002)	(0.002)	(0.002)	(0.002)	(0.001)	(0.002)	(0.002)	(0.002)
π/n_{ijt-1}	-	-0.002**	-0.003	0	-	-0.002*	-0.003	0.001
		(0.001)	(0.002)	(0.003)		(0.001)	(0.002)	(0.003)
π/n_{ijt-2}	-	-	0.002	0	-	-	0.002	0.001
			(0.002)	(0.001)			(0.002)	(0.001)
π/n_{ijt-3}	-	-	-0.001	-0.002**	-	-	-0.001	-0.002**
			(0.001)	(0.001)			(0.001)	(0.001)
LR Coefficient	**0.011**	**0.010**	**0.013**	**0.006**	**0.011**	**0.011**	**0.013**	**0.007**
	(0.003)	(0.003)	(0.003)	(0.004)	(0.003)	(0.003)	(0.003)	(0.004)
Lester Range	**0.158**	**0.144**	**0.183**	**0.093**	**0.160**	**0.155**	**0.182**	**0.108**
Firm-Years	11478	11380	9751	9751	11478	11380	9751	9751
Firms	832	829	731	731	832	829	731	731
Time	Quad	Quad	Quad	Quad	Year FE	Year FE	Year FE	Year FE
Instruments	Lag(2/.)	Lag(2/.)	Lag(2/.)	No	Lag(2/.)	Lag(2/.)	Lag(2/.)	No

*Standard errors (in parentheses) clustered at firm level. *** p<0.001, ** p<001, * p<0.05*

The UK-domiciled Companies, Sub-Periods

	Dependent Variable: Log w_{ijt}									
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	1983-2000	2001-2016	1983-1991	1991-2000	2000-2009	2009-2016	1983-1991	1991-2000	2000-2009	2009-2016
Log w_{ijt-1}	0.376***	0.428***	0.620***	0.438***	0.512***	0.253***	0.351*	0.359***	0.597***	0.265***
	(0.086)	(0.062)	(0.161)	(0.077)	(0.057)	(0.083)	(0.183)	(0.129)	(0.085)	(0.098)
π/n_{ijt}	0.017***	0.01***	0.002	0.017***	0.010***	0.004	0.013	0.033***	0.008*	0.005
	(0.004)	(0.003)	(0.006)	(0.003)	(0.003)	(0.003)	(0.021)	(0.009)	(0.005)	(0.006)
π/n_{ijt-1}	0	-0.003	0.014	-0.003	-0.005	0.002	0.014	0.006	-0.006	0.007**
	(0.004)	(0.003)	(0.010)	(0.003)	(0.004)	(0.002)	(0.025)	(0.011)	(0.008)	(0.003)
π/n_{ijt-2}	0.004	0.002	0.003	0.006*	0.002	-0.001	0.014	-0.001	-0.003	-0.008*
	(0.003)	(0.002)	(0.008)	(0.003)	(0.002)	(0.001)	(0.025)	(0.009)	(0.005)	(0.005)
π/n_{ijt-3}	0.006*	-0.002*	-	-	-	-	-	-	-	-
	(0.003)	(0.001)								
LR Coefficient	**0.043**	**0.012**	**0.050**	**0.035**	**0.016**	**0.007**	**0.065**	**0.060**	**-0.003**	**0.006**
	(0.013)	(0.004)	(0.042)	(0.009)	(0.007)	(0.004)	(0.053)	(0.021)	(0.028)	(0.012)
Lester Range	**0.445**	**0.200**	**0.486**	**0.373**	**0.277**	**0.104**	**0.627**	**0.642**	**-0.056**	**0.095**
Firm-Years	4719	5032	1,901	3,748	3,437	2,474	1,897	3,748	3,437	2,474
Firms	547	503	404	539	494	379	404	539	494	379
Time	Year FE	Year FE	Year FE	Year FE	Year FE	Year FE	Year FE	Year FE	Year FE	Year FE
Instruments	Lag(2/.)	Lag(2/.)	Lag(2/.)	Lag(2/.)	Lag(2/.)	Lag(2/.)	Ind. Profits	Ind. Profits	Ind. Profits	Ind. Profits

*Standard errors (in parentheses) clustered at firm level. *** p<0.001, ** p<001, * p<0.05*

Interim Conclusions

- Positive rent sharing, elasticity .012.
- Strong decline since 1980s (.04) until today (.01).
- Robust to the exclusion of small companies, and oil and financial sectors.
- Results not affected by the use of industry-level instruments. more
- Similar results for the UK Manufacturing companies with domestic operation (ARD/ABS). more
- Similar results for the US Manufacturing industries and the European broad sectors (EU-KLEMS).
- The fall driven by companies with higher product market power.

- Manufacturing firm-level data from nine European countries since 2000 (BvD's Historical Orbis)
- Rent sharing estimated using System GMM (Blundell and Bond 1998)
- We control for contemporary employment in order to switch off the monopsonistic channel
- Relate rent sharing with unionization, employment protection, bargaining regimes, firm size, level of wages, market share

Rent Sharing in Europe: Bukowski, Machin, Soskice

	Dependent variable: wages			
	Worker + Firm Power		Worker Power	
	2000-2008	2009-2016	2000-2008	2009-2016
Profits, LR elasticity	.0891 (.0271)***	.0426 (.0129)***	.057 (.0173)***	.0347 (.0106)***
Firms	102524		102524	
Observations	808944		808944	
Country X Time	Yes		Yes	

Source: Historical Orbis; *Notes*: Robust and clustered standard errors are reported in the parentheses. *** denotes significance at the 0,1% level, ** at the 1% level, * at the 5% and + at the 10%.

- 1% rise of profits per worker $\rightarrow$ .05% rise of average wage
- Significant fall of rent sharing since 2000.
- Less than 1/3 of the elasticity reflects the market power of firms
- The decline of rent sharing seems to be connected with the decline of bargaining power (Stansbury and Summers 2020)

Conclusions

- Profound change in the balance of power between firms and workers.
- It is driven by the decline of workers' bargaining power.
- Potential implications:
  - Fall of labour share.
  - Less inclusive growth.
  - Weaker position of workers.
  - More competitive labour market.