DISCUSSION PAPER SERIES

DP13009

GLOBAL MARKET POWER

Jan EECKHOUT Eeckhout and Jan De Loecker

INDUSTRIAL ORGANIZATION and LABOUR ECONOMICS

ISSN 0265-8003

GLOBAL MARKET POWER

Jan EECKHOUT Eeckhout and Jan De Loecker

Discussion Paper DP13009
Published 22 June 2018
Submitted 22 June 2018

Centre for Economic Policy Research
33 Great Sutton Street, London EC1V 0DX, UK
Tel: +44 (0)20 7183 8801
www.cepr.org

GLOBAL MARKET POWER

Abstract

To date, little is known about the evolution of market power for the economies around the world. We extract data from the financial statements of over 70,000 firms in 134 countries, and we analyze and document the evolution of markups over the last four decades. We show that the average global markup has gone up from close to 1.1 in 1980 to around 1.6 in 2016. Markups have risen most in North America and Europe, and least in emerging economies in Latin America and Asia. We discuss the distributional implications of the rise in global market power for the labor share and for the profit share.

JEL Classification: N/A

Keywords: N/A

Jan EECKHOUT Eeckhout - jan.eeckhout@upf.edu
UPF Barcelona and CEPR

Jan De Loecker - jan.deloecker@kuleuven.be
Leuven University and CEPR

Global Market Power*

Jan De Loecker†
KU Leuven
NBER and CEPR

Jan Eeckhout‡
University College London, UPF Barcelona
ICREA and GSE

May 18, 2018

Abstract

To date, little is known about the evolution of market power for the economies around the world. We extract data from the financial statements of over 70,000 firms in 134 countries, and we analyze and document the evolution of markups over the last four decades. We show that the average global markup has gone up from close to 1.1 in 1980 to around 1.6 in 2016. Markups have risen most in North America and Europe, and least in emerging economies in Latin America and Asia. We discuss the distributional implications of the rise in global market power for the labor share and for the profit share.

Keywords: *Markups. Market Power. Global. Labor Share. Profits.*

*Shubhdeep Deb provided invaluable research assistance. De Loecker gratefully acknowledges support from the FWO Odysseus Grant and Eeckhout from the ERC, Advanced grant 339186, and from ECO2015-67655-P.

†jan.deloecker@kuleuven.be.

‡j.eeckhout@ucl.ac.uk.

Competition is essential for a well-functioning economy. In the absence of competitive pressure, firms grab market power which in turn allows them to sell goods at higher prices. Market power naturally leads to redistribution of resources from workers and consumers to the owners of firms: the profit share is higher, while the labor share to workers is lower and the goods are sold at higher prices to consumers. Market power also has welfare effects: due to higher prices, consumption is lower and a suboptimal number of consumers is priced out of the market (Harberger (1954)), and market power stifles innovation and investment (Aghion, Bloom, Blundell, Griffith, and Howitt (2005)).

A precise measure of market power is crucial for numerous policy decisions, from taxation and redistribution to antitrust enforcement. While for antitrust policy, knowledge of market power in a narrowly defined market may be sufficient, redistributive policies require such knowledge for the entire economy. In an integrated and globalized world, we need information on market power for the whole world. Just like climate change, redistributive policies increasingly require a globally coordinated policy response. Here we present measures of market power in the aggregate – for countries, regions and up to the entire world – as well as at the finest granular level – with one measure for each firm.

Despite its central importance in evaluating the health of an economy, little is known about the evolution of market power in virtually all economies, let alone at the global level. The two most commonly used methods to measure market power – 1. the so called demand approach, and 2. direct measures of concentration such as the Herfindahl-Hirschman Index (HHI) – are not conducive to analyzing market power economy wide.

To study market power, we need to estimate markups, the ratio of the price to the marginal cost of production. For the estimation of markups, academic researchers typically rely on the demand method (Bresnahan (1989), Berry, Levinsohn, and Pakes (1995)). This is a well-tested and reliable way to measure markups. However, it requires not only detailed information on transactions (prices and quantities), as well as assumptions on how firms compete and in which market they compete. Due to these demanding data requirements, to date markups have only been obtained for short periods of time and for specific industries for which such detailed information is available, e.g. cars (Berry, Levinsohn, and Pakes (1995)), breakfast cereal (Nevo (2001)), beer (Koujianou Goldberg and Hellerstein (2012)), and a variety of other retail products. Because the required data is not available for all goods and industries, this method cannot be used to obtain estimates economy-wide, let alone to document the evolution over several decades for the global economy.

While policy makers in anti-trust enforcement sometimes use the estimates from the demand approach that academics prefer, they most often calculate measures of concentration, most notably the HHI. For some market structures such as Cournot quantity competition, the HHI is a direct indicator of market power. However, this holds only as long as products are perceived as identical to all consumers. When products are differentiated (for example brands of cars, such as Volkswagen and Land Rover), there is no longer a relation between concentration and market power (see Bresnahan (1989)). In a world with increasingly differentiated products, the HHI is not an adequate measure of market power. In addition, these concentration

measures require precise knowledge of what constitutes a market in terms of the geographical location as well as the product definition. Does Procter & Gamble compete against Unilever in the US market for all personal care products, or do they compete in the market for soap in the Cleveland, OH with the specific products Olay against Dove? Finally, because concentration measures are calculated at the market level, determining the market power of one firm requires data on the universe of all firms in the market. If some firms are missing, the firm's measure of market power is biased. While there is progress in obtaining data on the universe of firms, the definition of a market will always be ambiguous and susceptible to subjective interpretation. More importantly, products are increasingly differentiated, and as a result, concentration ratios as a proxy for market power will always remain contentious.

Instead, we use the cost-based method, originally developed in Hall (1988) for aggregate data and more recently adapted for applications to micro data (De Loecker and Warzynski (2012)), and the calculation of aggregate average markups (De Loecker and Eeckhout (2017)). With this method, we do not need to make any assumptions on the competitive behavior of firms nor do we need to be able to define a market. Because the amount of information required is less stringent, we can extract all necessary information from the financial statements of firms. This allows us to construct a database of markup estimates for a long time series and aggregate them to the entire economy. This database contains estimates of markups for each *individual* firm, one for every year. Based on firm-level markups, we then construct a weighted average markup for the entire global economy, as well as for any country, or region.

We estimate markups using data on individual firms' financial statements. Because financial accounting practices around the world are very diverse, we need to rely on uniform definitions and standardized statements. Ideally, we require a large enough sample of firms with information on a long time series in order to document the evolution of markups over the last decades, while covering a broad geographical coverage.

Each firms' financial statements includes the Income Statement, the Balance Sheet, and the Cash Flow. This allows us to extract a measure of variable costs (cost of goods sold), a measure of the overhead cost (selling, general and administrative costs), of capital expenditure, as well as the firm's sales. We also obtain information on some of the firms' wage bill as well as the dividends and the stock market valuation. We extract the data from the Worldscope dataset[1] which contains standardized financial statements for over 70,000 companies worldwide. Data coverage starts in 1980 and spans 134 countries. The individual companies tend to be large and consist mainly of publicly traded, though there are also privately held firms. While there is a genuine concern about the representativeness of the sample, in De Loecker and Eeckhout (2017) we have found for the United States that the rise in market power occurs in all sectors. Moreover, there we find similar results when using Census weights based on the entire universe of companies, and not just the publicly listed firms. In the Appendix, we report a robustness exercise where we weigh the firms' markups by their country's or continent's share of GDP rather than the firm's sales share and find that the pattern of markups is similar.

[1]This is a dataset commercially provided by Thomson Reuters. We obtained institutional access via Wharton Research Data Services while at Princeton.

To implement the cost based method, we start from a conventional production technology for a firm i at time t, denoted by $Q_{it} = \Omega_{it} V_{it}^{\alpha_{it}} K_{it}^{\beta_{it}}$. The technology represents the units output produced Q_{it}, where V_{it} is the variable input (labor, intermediate inputs, electricity,...), K_{it} is capital, Ω_{it} is Total Factor Productivity. While overhead costs affect profits, they are assumed not to be a factor of production (for the estimation of production technologies with overhead costs as a factor of production, see De Loecker and Eeckhout (2017)). Then the Lagrangian of the firm's profit maximization problem is written as $P_{it}^V V_{it} + P_{it}^K K_{it} - \lambda_{it}(\Omega_{it} V_{it}^{\alpha_{it}} K_{it}^{\beta_{it}} - \overline{Q}_{it})$, where P_{it} is the output price, P_{it}^V, P_{it}^K are the input prices, λ_{it} is the Lagrangian multiplier, and $\overline{Q}_{it}$ is a constant. Under the assumption that variable factors of production can be adjusted without frictions, the firms optimally adjusts the variable input immediately. We can then derive the markup from the firm's static optimization problem. The first order condition of this profit maximization problem is $P_{it}^V - \lambda_{it}\alpha_{it}\Omega_{it} V_{it}^{\alpha_{it}-1} K_{it}^{\beta_{it}} = 0$. We define the firm's markup μ_{it} as $\frac{P_{it}}{\lambda_{it}}$, the ratio of the output price to the marginal cost. The marginal cost is measured by the shadow value λ_{it} of the Lagrangian. Then after multiplying by $P_{it}V_{it}$, rearranging, and substituting for Q_{it}, the markup can be written as:

$$\mu_{it} = \alpha_{it} \frac{P_{it} Q_{it}}{P_{it}^V V_{it}}. \tag{1}$$

The implementation of this approach has two steps. First, we estimate the output elasticity α_{st} for each sector and year (a sector s is defined by a two digit NAICS code). We thus assign to all firms i in a sector s in a year t a common elasticity. The interpretation is that firms in the same sector have access to the same technology, yet they differ in TFP (Ω_{it}) and of course the optimally chosen input. In what follows we use the elasticity estimates from De Loecker and Eeckhout (2017) for the United States.[2] Second, we use the information on Sales ($P_{it}Q_{it}$) and expenditure on variable inputs (Cost of Goods Sold $P_{it}^V V_{it}$), to derive a firm's markup.

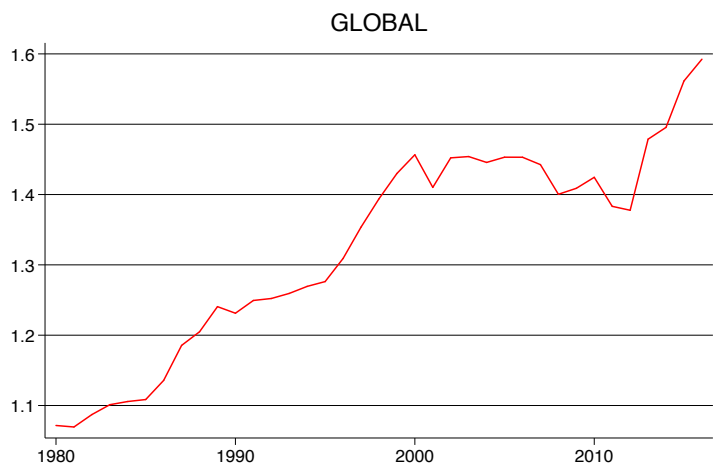
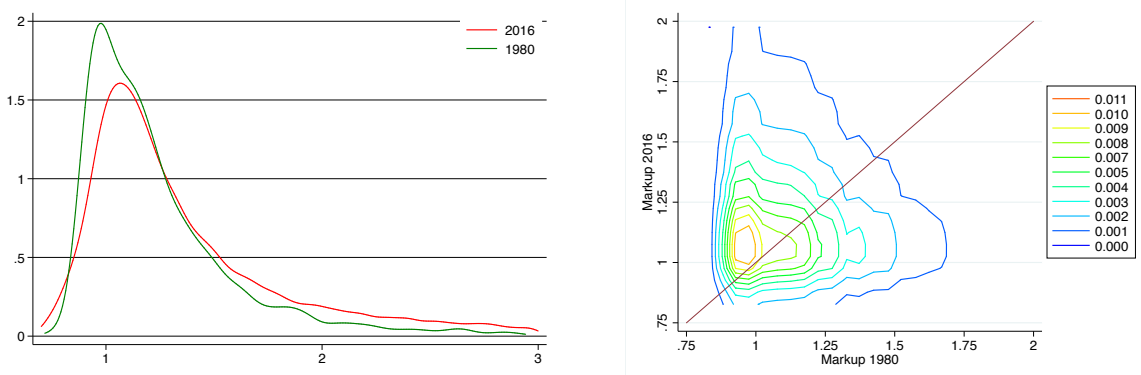


Figure 1: Global Market Power

[2]Those elasticities are sector-specific and time-varying. The underlying assumption in our approach is that firms and therefore countries vary in their TFP and the chosen inputs, but not in the technology Q.

This generates a database with 745,958 firm-year markup observations, for 67,491 distinct firms in 134 countries, over the period 1980-2016.[3] With those individual markups, we calculate the average annual markup of any geographical area denoted by $\mathcal{G}$, such as a country, a region or continent, or the entire world. The average markup is the sales-weighted average of all firms' individual markup in the geographical area $\mathcal{G}$ in a given year.[4]

In Figure 1 we report the evolution of markups for the world as a whole. Globally, since 1980 there has been a steady rise from a markup of around 1.1 to a markup of 1.6 in 2016. Observe the steady rise in the first two decades (1980s and 1990s), and the virtually flat evolution in 2000s. In the last few years, there has again been a sharp increase.



(a) Distribution of Markups: 1980, 2016

(b) Contour Plot of Markups: 1980, 2016.

Figure 2: The Change of the Global Distribution of Markups

Because we have the markup for each of the firms, we can investigate the change in the distribution. From Figure 2a, it is evident that the the increase in the average markup is due to an increase in both the variance as well as the mode of the distribution. Most importantly, we observe the fattening of the upper tail. And while the values of the higher percentiles have increased substantially, there is little change at or below the median. Even in 2016, most firms have markups that are relatively low. But in contrast, substantially more firms now have relatively high markups.[5] Figure 2b shows yet another way to analyze this distributional shift, with the contour plot for all firms in 1980 and in 2016. The mass of the distribution is disproportionately above the forty-five degree line which confirms that on average, firms have higher markups in 2016. Moreover, below the diagonal the density is steep (the contour lines are close together), and more spread out above the diagonal. This shows that the distribution of markups now has a fatter tail. Consider a firm with a markup of 1 in 1980 for example by drawing a vertical line through 1. By 2016, the distribution of markups is on average above the forty-five degree line, and the upper tail is less steep.

[3]We drop observations with missing data, and adjust for measurement error (2 % winsorization).

[4]Formally, the average markup is $\overline{\mu}_{\mathcal{G}t} = \sum_{i \in \mathcal{G}} \frac{S_{it}}{\overline{S}_{\mathcal{G}t}} \mu_{it}$, where $\overline{S}_{\mathcal{G}t} = \sum_{i \in \mathcal{G}} S_{it}$.

[5]To the extent that markups are related to firm size, this fattening of the tail has important implications for aggregate uncertainty. See Gabaix (2011).

The breakdown of the evolution of markups in different regions of the world is documented in Figure 3. The evolution of markups is comparable in Europe, North America, Asia and Oceania, with an increase from around 1 – 1.2 to 1.5 – 1.7, or an increase of about 0.4 – 0.6. With some minor variation, these four regions are in line with the evolution of global markups. Instead, in the emerging economies of South America the average markup is flat or even decreasing, though it has been high from the start of the data availability. In Africa, the markup increases sharply around 2000 and then drops, but is otherwise fairly flat.

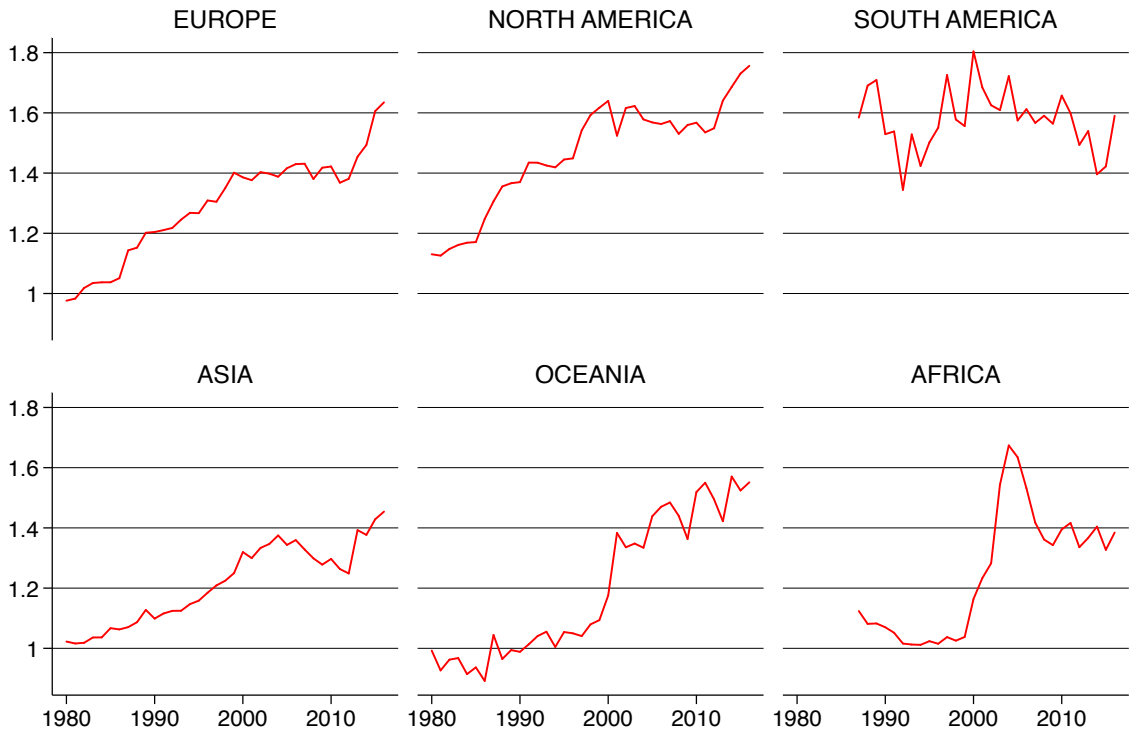


Figure 3: GLOBAL REGIONS

One interesting artifact of the global average markup and the four regions that have a similar pattern is the fact that markups are flat in the decade starting in 2000. Until well after the great recession, there is virtually no change in the average markup. In Europe and North America, there is then a sharp increase again in the second decade of the millennium.[6]

Table 1 shows the evolution of markups for a selection of individual countries (the Figures in the Appendix show the pattern graphically for each country). The first column reports the value of the average markup in 2016, and the second column reports the change between 1980 and 2016. Within each geographical region, we rank countries by the change in markup. While

[6]This is consistent with some recent studies (Weche and Wambach (2018) and Calligaris, Criscuolo, and Marcolin (2017)) that find little change in average markups for the beginning of the millennium. They use a alternative data sources that cover that period only.

the pattern that emerges in the aggregate, both globally and for the regions, is the amalgamation of each of the constituent countries, there is considerable variation across countries. Most European economies have seen steep increases, particularly Denmark, Switzerland and Italy. Except for Portugal, which had a modest decline in markups, the other European countries all show an increase in markups that is in line with the overall trend.

		Markup	
		2016	change*
Global Average		**1.59**	**+0.52**
Europe		**1.64**	**+0.66**
1	Denmark	2.84	+1.95
2	Switzerland	2.72	+1.63
3	Italy	2.46	+1.46
4	Belgium	2.06	+1.03
5	Greece	1.80	+0.85
6	United Kingdom	1.68	+0.74
7	Norway	1.60	+0.74
8	Ireland	1.82	+0.66
9	France	1.50	+0.53
10	Sweden	1.31	+0.50
11	Netherlands	1.52	+0.47
12	Finland	1.36	+0.44
13	Austria	1.33	+0.41
14	Spain	1.34	+0.33
17	Germany	1.35	+0.29
16	Portugal	1.19	–0.06
North America		**1.76**	**+0.63**
1	United States	1.78	+0.63
2	Canada	1.53	+0.61
3	Mexico	1.55	+0.17
Africa		**1.38**	**+0.32**
1	South Africa	1.34	+0.07

		Markup	
		2016	change*
Asia		**1.45**	**+0.43**
1	South Korea	1.48	+0.72
2	Hong Kong	1.65	+0.41
3	India	1.32	+0.34
4	Japan	1.33	+0.30
5	Indonesia	1.50	+0.22
6	Thailand	1.44	+0.21
7	Malaysia	1.33	+0.03
8	Pakistan	1.17	–0.01
9	Taiwan	1.24	–0.15
10	Turkey	1.16	–0.32
11	China	1.41	–0.45
12	Philippines	1.50	–0.77
Oceania		**1.55**	**+0.56**
1	Australia	1.57	+0.57
2	New Zealand	1.35	+0.37
South America		**1.59**	**+0.01**
1	Argentina	1.45	+0.64
2	Colombia	1.56	+0.41
3	Brazil	1.61	–0.01
4	Peru	1.64	–0.04
5	Venezuela	1.47	–0.46
6	Chile	1.37	–2.25

Table 1: Sample of Individual Countries (40 countries out of 134). Countries in each region are ranked by their change in markup. The Region and Global averages are for all countries in that geographical area, not just those reported in the table.
*Difference between markup in 2016 and 1980. If the first observation (1980) is missing, we extrapolate linearly.

The pattern of the NAFTA countries Canada and United States, is very much aligned, though the US started 20 points above Canada. Instead, Mexico has experienced a much more modest increase, though it has had a high markup from the start.

The evolution of the emerging economies of South America is more mixed. The average for the region is flat, while Argentina and Colombia see an increase similar to the global average. Instead, Venezuela and especially Chile see a substantial decrease. The economies of Peru and

Brazil are invariant.

On average, Asia experiences a more modest increase than the global average, and it exhibits some diversity within the region. South Korea has the biggest increase. The emerging economies of Taiwan, Turkey, China and the Philippines experience a decrease in their average markups. The decrease in markups in China is consistent with recent evidence by Brandt, Van Biesebroeck, Wang, and Zhang (2017) on the effect of trade liberalization on markups. They find that China's entry in the WTO in 2001 and the resulting lowering of tariffs has lead to a decline in markups.

Finally, the economies in Oceania experience an increase in line with the global average, exemplified by Australia. New Zealand sees less of an increase. In Africa, the overall increase is more moderate, and its largest economy, South Africa, has a modest change.

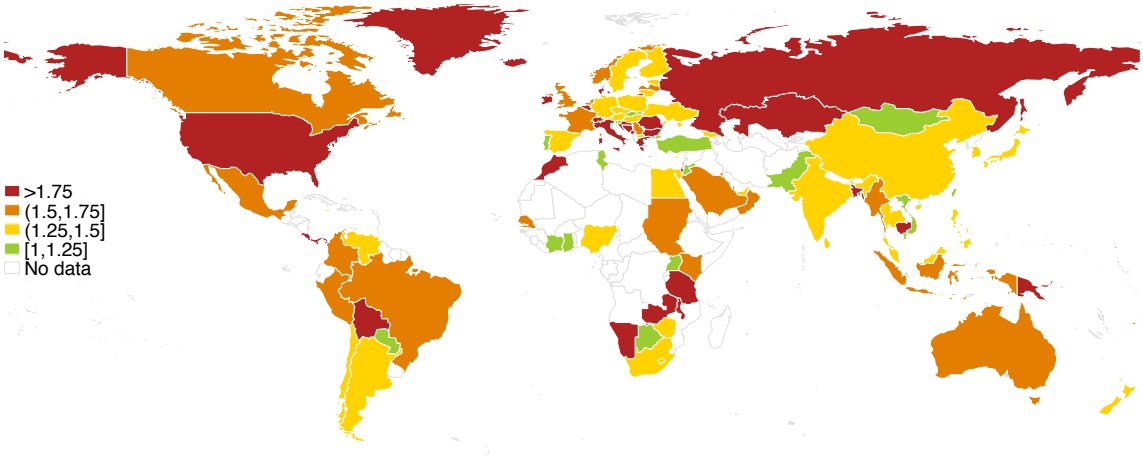
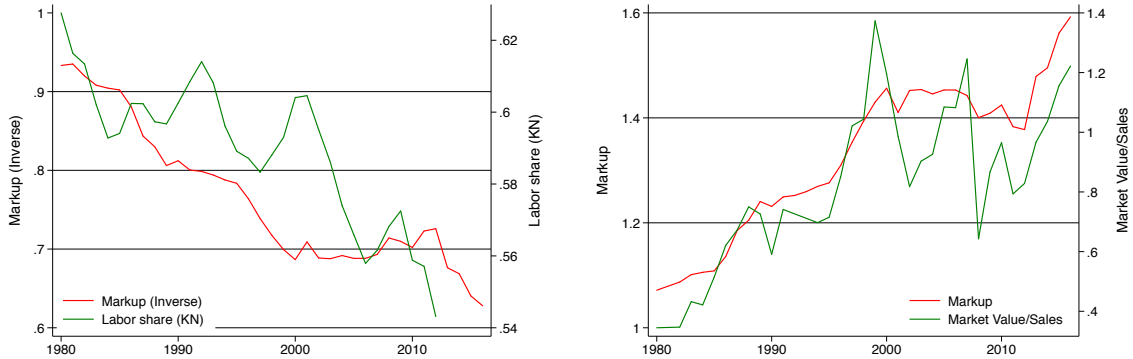


Figure 4: Markup by Country in 2016

In broad lines, markups are increasing across the board, in all continents. It appears that the more developed economies tend to have bigger increases in markups whereas some of the emerging market economies see a decline. The world map in Figure 4 summarizes the geographic dimension of the markup in 2016. Most developed economies have moderately high markups, with some high levels in Europe for Denmark, Belgium and Italy for example. Those in emerging economies in Asia, Africa and Latin America are more mixed, with both the highest levels (such as Russia, Bolivia and several African countries), as well as the lowest levels (such as India and several African countries). In Figure B.1 in the Appendix we report the change in the markup. We see there that the developed economies have experienced an increase, while the experience of the emerging economies with already high levels of markup was more mixed.

High markups have efficiency implications, quantified in the deadweight loss (Harberger (1954)). Because of high prices, marginal consumers choose not to buy. In addition, high markups have distributional implications. Firms with high markups demand fewer variable inputs. Due to higher prices, demand for the output falls, and as a result, the quantity produced



(a) Labor Share

(b) Market Value/Sales

Figure 5: The Evolution of Labor Share and Market Value/Sales with Global Markups. Labor share data, for the corporate sector, from Karabarbounis and Neiman (2014).

declines. As a result, the demand for inputs such as labor decreases. This follows immediately from inspection of our expression for the markup in equation (1), which we can rewrite as $\frac{P_{it}^V V_{it}}{P_{it}Q_{it}} = \frac{\alpha_{it}}{\mu_{it}}$. The expenditure share on variable inputs on the left-hand side is inversely related to the markup. One such a variable input is Labor, $V_{it} = L_{it}$ with wage $w_{it} = P_{it}^V$, and as a result, the labor share $\frac{w_{it}L_{it}}{P_{it}Q_{it}}$ – the ratio of the expenditure on labor over sales – is decreasing as markups increase.

Unfortunately, the information on the labor share in our data is not available for all firms to draw conclusions. Because in many countries it is not mandatory to report the total wage bill, we have that information for few firm-year pairs only. Moreover, the set of firms for which the data is available is highly selective[7] and therefore we cannot use the available data to analyze the relation between markups and the labor share.

We can however confirm the negative relation using aggregate data collected by Karabarbounis and Neiman (2014) on the labor share in 59 countries. In Figure 5b we plot their measure of the global labor share together with the inverse of our measure the global markup. These two series co-move, as predicted by the inverse relation between the labor share and the markup.

A second distributional implication of high markups is the effect on profits. In our setup and assuming the variable input is labor $V = L$, profits Π are given by $\Pi_{it} = P_{it}Q_{it} - w_{it}L_{it} - P_{it}^K K_{it} - F_{it}$. Then, after dividing by sales $P_{it}Q_{it}$, we obtain that the profits share $\pi_{it} = \frac{\Pi_{it}}{P_{it}Q_{it}}$ is given by

$$\pi_{it} = 1 - \frac{w_{it}L_{it}}{P_{it}Q_{it}} - \frac{P_{it}^K K_{it}}{P_{it}Q_{it}} - \frac{F_{it}}{P_{it}Q_{it}}. \tag{2}$$

With market power, the labor share declines, and in the long run so does the capital share. As a result, either the profit share increases or the share of fixed costs $\frac{F_{it}}{P_{it}Q_{it}}$ increases. We do not have reliable measures for the cost of capital that are comparable across the 134 economies.

[7] Until 2002, few firms report the wage bill and after 2002, the data remains a highly unbalanced panel.

However, our data has detailed information on the market value of the firms. Because the market valuation of a firm is the discounted sum of all future profits (or dividends), we can use the market valuation relative to sales as a measure of the stock of profits. In Figure 5b, we report the evolution of the global average of the market valuation as a share of sales, which tracks that of the global markup. In the period when markups rise in the 1980s and 1990s, we see a similar trend in this measure of firm profitability. From the 2000s, the average market value share of sales is noisy but with no particular trend. In current decade starting in 2010, markups rise again as does the average market value as a share of sales.

	Mkt Value/Sales (log)	
	(1)	(2)
Markup (log)	0.83	0.30
	(0.02)	(0.01)
Year F.E.	X	X
Industry F. E.	X	
Firm F.E.		X
R^2	0.16	0.88
N	652,321	652,322

Table 2: Regressions: log (Market Value/Sales) on log(Markup). F.E. = Fixed Effects; 4-digit Industries; Standard Errors (in parentheses) clustered at the firm level.

The positive relation at the aggregate level depicted in Figure 5b originates in the tight relationship at the firm level between the share of market value and the markup. In Table 2 (columns (1) and (2)) we report the strong positive relation between the market value share and markups. This establishes that higher markups lead to higher profits, and that they are not driven by higher overhead costs. This further confirms the fact that the increase in markups brings about a distributional change with more of the surplus going to the owners of the firms and less to the workers.

Appendix A Country Specific Average Markups

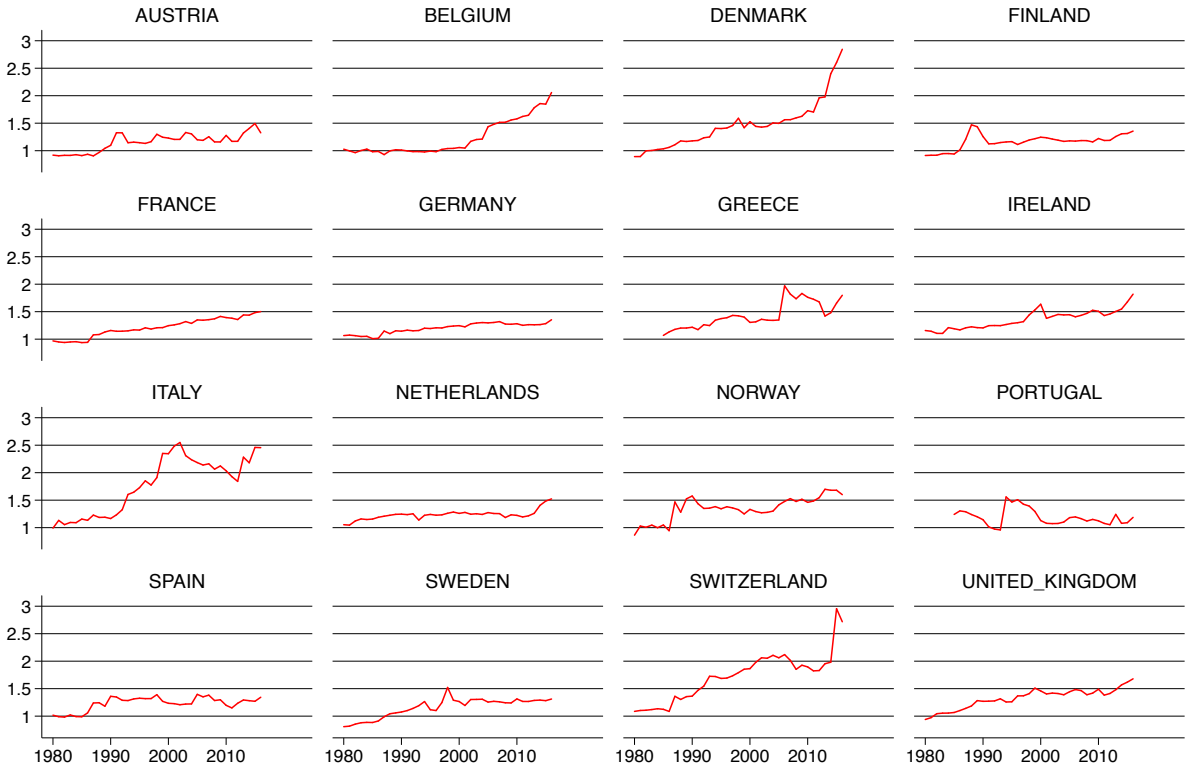


Figure A.1: Europe

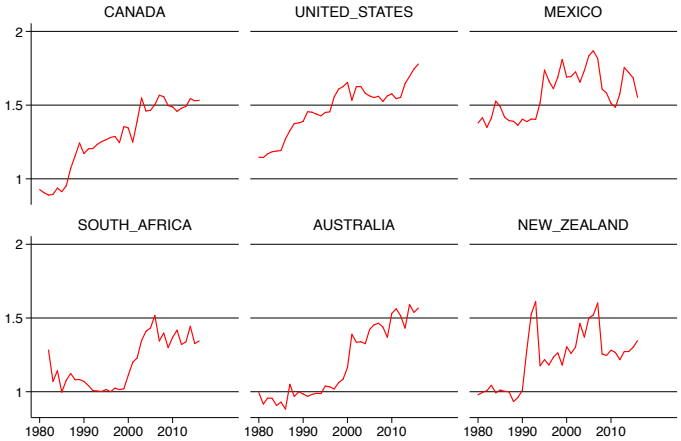


Figure A.2: North America, Africa, Oceania

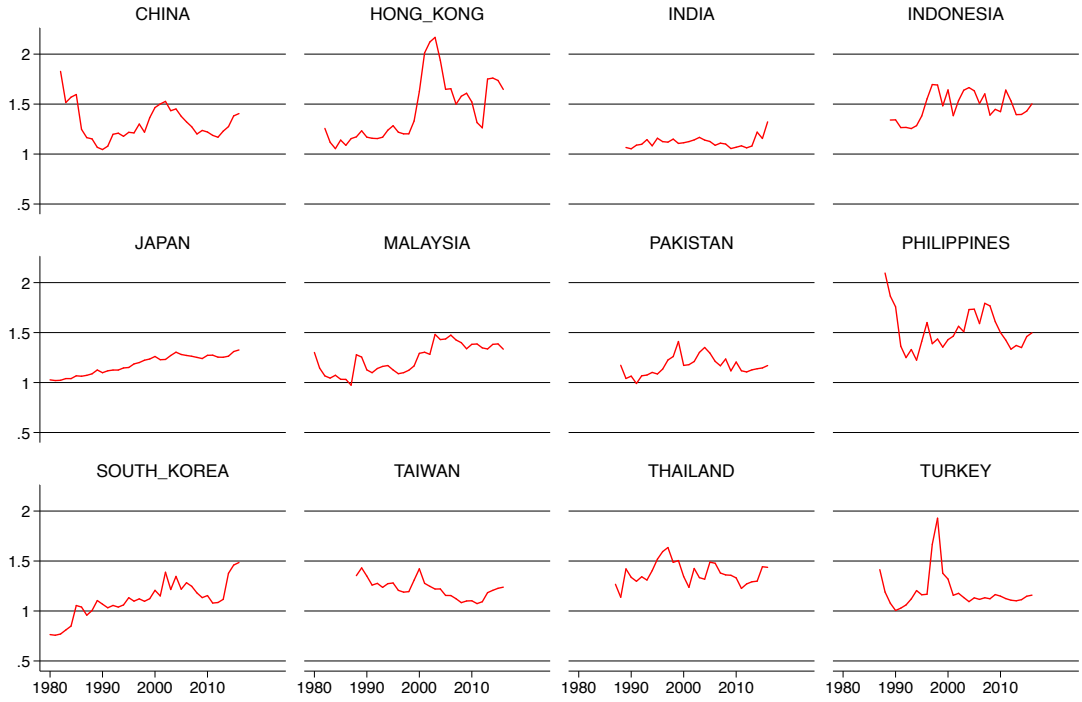


Figure A.3: Asia

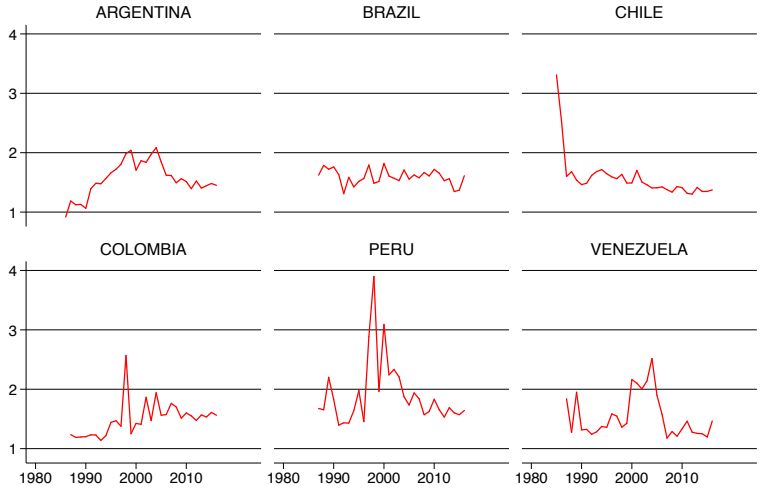


Figure A.4: South America

,

Appendix B World Map: Changes in Markups

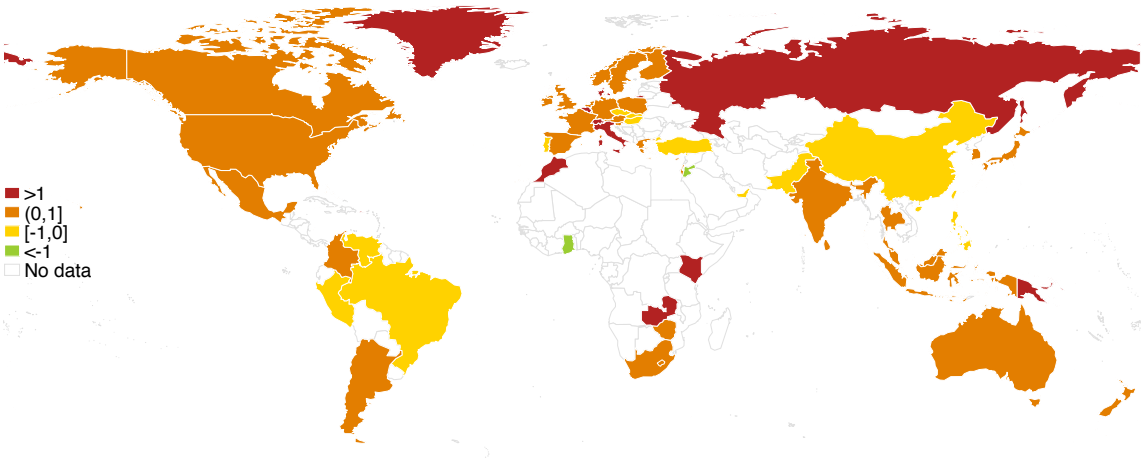
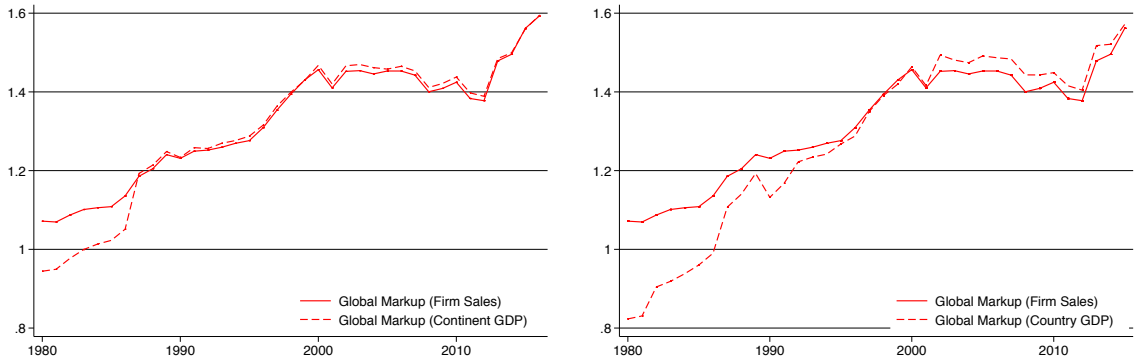


Figure B.1: Change in Markup 1980-2016.

Appendix C Markup weighted by GDP



(a) Weight = GDP by continent **(b)** Weight = GDP by country

Figure C.1: Global Markup: Weighted by GDP and by Firm Sales (Benchmark)

One of the concerns about our data is that firms in some countries and continents are disproportionally represented compared to actual economic activity as measured by GDP. If firms from Europe and North America are overrepresented and firms in Africa are underrepresented, then the global markup estimate will disproportionately reflect the markup of Europe and North America. In order to adjust for the possible bias of a non-representative sample of firms, we weigh the markup of each geographical region (a continent or a country) by their share in global GDP,[8] instead of by the firms' sales share in the total sales of all firms in the world. In

[8] We use GDP data from the IMF.

Figure C.1 we plot the average global markup obtained weighted with the continents' GDP (C.1a) and the countries' (C.1b) weights together with the average markup obtained with the sales weights from the firms in our sample, as in Figure 1. The pattern of the GDP weighted markups in both figures is remarkably close to the benchmark, except in the early 1980s. This indicates that, except in the early years, there is no systematic bias in the markup measures.

To get a better understanding, in Figure C.2 we plot the GDP shares over time for every continent together with the sales shares of the firms in the continent. Both track each other closely in all 6 regions, except for the early 1980s when North America is overrepresented, and Europe.

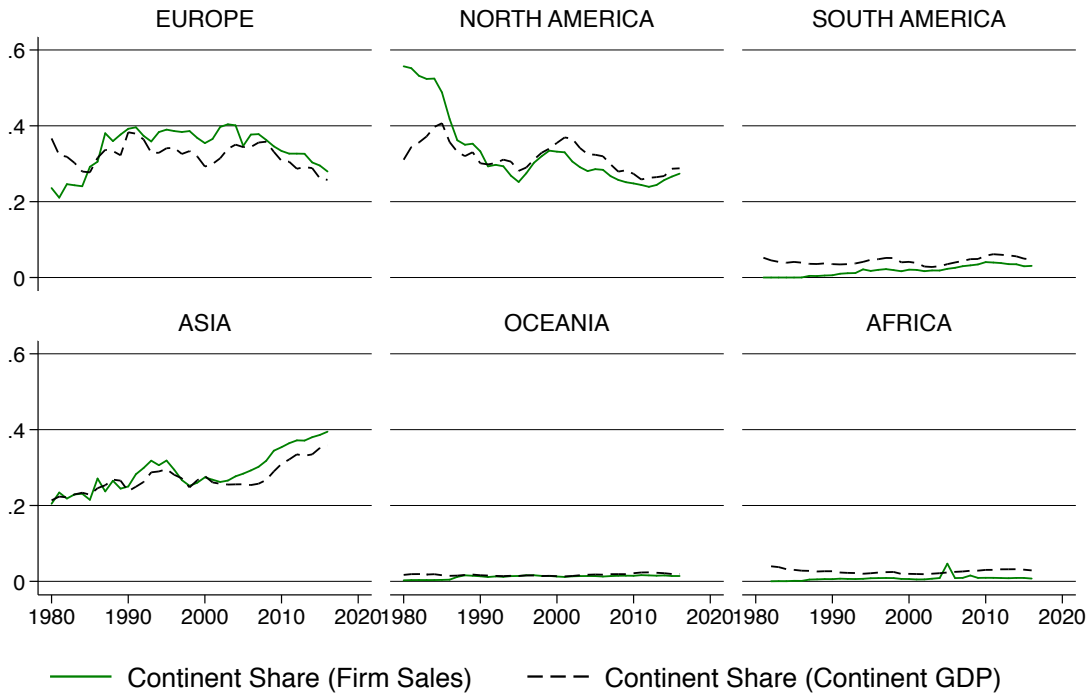


Figure C.2: Share of each continent: firm sales (baseline) and GDP.

We perform the same robustness using countries as the unit of observation for which we use GDP weights, and we plot the country-weighted global markup alongside the unweighted in Figure C.1b.

References

AGHION, P., N. BLOOM, R. BLUNDELL, R. GRIFFITH, AND P. HOWITT (2005): "Competition and innovation: An inverted-U relationship," *The Quarterly Journal of Economics*, 120(2), 701–728.

BERRY, S., J. LEVINSOHN, AND A. PAKES (1995): "Automobile prices in market equilibrium," *Econometrica: Journal of the Econometric Society*, pp. 841–890.

BRANDT, L., J. VAN BIESEBROECK, L. WANG, AND Y. ZHANG (2017): "WTO accession and performance of Chinese manufacturing firms," *American Economic Review*, 107(9), 2784–2820.

BRESNAHAN, T. F. (1989): "Empirical studies of industries with market power," *Handbook of industrial organization*, 2, 1011–1057.

CALLIGARIS, S., C. CRISCUOLO, AND L. MARCOLIN (2017): "Digital and market transformations," Discussion paper, OECD Report.

DE LOECKER, J., AND J. EECKHOUT (2017): "The Rise of Market Power and the Macroeconomic Implications," NBER working paper.

DE LOECKER, J., AND F. M. P. WARZYNSKI (2012): "Markups and Firm-level Export Status," *American Economic Review*, 102(6), 2437–2471.

GABAIX, X. (2011): "The granular origins of aggregate fluctuations," *Econometrica*, 79(3), 733–772.

HALL, R. (1988): "The Relation between Price and Marginal Cost in U.S. Industry," *Journal of Political Economy*, 96(5), 921–947.

HARBERGER, A. C. (1954): "Monopoly and Resource Allocation," *The American Economic Review*, 44(2), 77–87.

KARABARBOUNIS, L., AND B. NEIMAN (2014): "The Global Decline of the Labor Share*.," *Quarterly Journal of Economics*, 129(1).

KOUJIANOU GOLDBERG, P., AND R. HELLERSTEIN (2012): "A structural approach to identifying the sources of local currency price stability," *Review of Economic Studies*, 80(1), 175–210.

NEVO, A. (2001): "Measuring market power in the ready-to-eat cereal industry," *Econometrica*, 69(2), 307–342.

WECHE, J. P., AND A. WAMBACH (2018): "The fall and rise of market power in Europe," ZEW mimeo.