

Developments in Antitrust Policy Against Labor Market Monopsony

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Economic Brief

March 2024, No. 24-11

Antitrust policies have traditionally focused on merger-induced damages to consumers caused by monopoly. Recently, a literature on *monopsony* has flourished, particularly when applied to labor. As a result, it would be natural to think about the harm to *workers* caused by mergers. In this article, we survey how the literature and empirical evidence on labor market power has evolved and how this has led to proposals of regulatory tools that can be used to analyze merger-induced harm on workers.

The topic of market power got reinvigorated by the influential 2020 study "[The Rise of Market Power and the Macroeconomic Implications](#)," and most of this literature initially focused on *output* markets and *consumers* (instead of *labor* markets and *workers*).¹ However, initial signs of evidence on market power in labor markets (or *labor monopsony*) followed soon.² In this article, we'll examine the literature's evolution as well as its impact on how to analyze merger-induced harm on workers.

Evidence on Labor Market Concentration

The 2020 paper "[Labor Market Concentration](#)" was one of the first studies to point out that labor market concentration in the U.S. economy is high.³ Using traditional concentration indexes (in this case, Herfindahl-Hirschman indexes [HHI] for vacancy postings), it shows that 60 percent of labor markets are highly concentrated.⁴ Importantly, labor markets with high levels of concentration also feature lower wages, which is a finding also present in other datasets for other outcomes.⁵

Policymakers did not ignore these initial findings. In fact, the Federal Trade Commission (FTC) held a hearing in October 2018 to explore the possibilities for agencies and courts to fight labor market monopsony. However, despite the literature's findings on labor market

concentration, it was not clear back then just how rampant labor market concentration was in the U.S. economy.

For one, many labor markets are concentrated, but those that are concentrated also tend to be small. In other words, the average market might be highly concentrated, but the average worker is not situated in a highly concentrated labor market. My 2018 paper "[Concentration in U.S. Local Labor Markets: Evidence From Vacancy and Employment Data](#)" — co-authored with Claudia Macaluso and Brad Hershbein — documents that the average labor market is highly concentrated (HHI of 3864), but this average drastically drops (HHI of 571) when weighted by the size of the market (e.g., posted vacancies/employment). Thus, the average labor market is considered to be unconcentrated when accounting for its size.

Second, negative correlations between levels of concentration and labor market outcomes (say, wages) are extremely hard to interpret as evidence that labor market power causes lower wages. There are numerous issues in terms of interpretation. For example, *what* caused the change in concentration in the first place? There are many explanations besides market power. Furthermore, some economic models even predict a negative relationship between market power and concentration.⁶

The practice of running regressions with market-level concentration as an independent variable is also known as the "structure-conduct-performance" paradigm in the industrial organization literature and had been discredited for decades. A 2019 paper provides detailed arguments on why evidence based on the [readoption of this paradigm should be interpreted with skepticism](#).⁷ As a result, opinions on the importance of labor market power in the U.S. economy were far from settled after the FTC's initial hearings.

Formalizing the Link Between Labor Market Power and Concentration

The shortcomings of empirical studies based on the structure-conduct-performance paradigm led to a new wave of papers seeking to demonstrate the aggregate importance of labor market power. For example, a 2022 paper uses a framework in which [labor market power is rooted in two sources](#).⁸

- Firms have wage-setting power and internalize upward-sloping labor supply curves. (That is, hiring additional workers is associated with raising wages.) Thus, employers make *infra*-marginal decisions for labor.
- Firms compete strategically and internalize the actions of their competitors.

In the paper's framework, employers that command a larger share of the local labor force are also able to exert more market power. Then, a compelling feature of the framework is that it can rationalize a positive relationship between labor market power and concentration in wage payments. In the end, the authors find that the aggregate efficiency

losses from labor market power are large. Relative to an "efficient" world without labor market power, welfare is 7.6 percent lower. Furthermore, output drops by a staggering 20.9 percent.

Another 2022 paper uses a related framework without strategic interaction between firms but draws much sharper conclusions in terms of identification properties.⁹ Its well-identified framework shows comparable welfare effects (5 percent) but much smaller output losses (3 percent).

A 2024 study models labor market power through different sources.¹⁰ In its framework, employers can prevent workers from applying to other jobs within their businesses. Consequently, larger employers eliminate a larger fraction of workers' outside options, which means larger employers also have more labor market power.

These studies are not only consistent with many features of the data but also provide a much needed microfoundation on how and why labor market concentration can reflect monopsony.

Our Findings on Labor Market Power in Manufacturing

Our paper corroborates these model-based approaches by finding evidence for substantial levels of labor market power in the U.S. manufacturing sector. Our empirical approach nests "classical" monopsony frameworks with upward-sloping labor supply curves. Importantly, we find that workers' pecuniary compensation is far from the perfectly competitive benchmark.

In a competitive labor market, workers should receive their marginal contributions to their employers' revenues. In other words, under perfect competition, a worker that generates a dollar in her employer's revenues at the margin should be compensated with that dollar. Instead, we find that workers at the average U.S. manufacturing plant only receive 65 cents on the dollar. We also find that labor monopsony is widespread in U.S. manufacturing.

These recent studies demonstrate that labor market power is widespread in the U.S. economy and has large, negative consequences for aggregate outcomes. Thus, regulators such as the FTC should prioritize (labor) monopsony when developing antitrust policies.

Merger Effects on Labor Markets: Empirical Findings

All of the previously mentioned studies found evidence in favor of "size-based" labor market power: Large employers can exert more labor market power. To negate the negative effects of market power, regulators could prevent employers from becoming "too large."

However, when does an employer reach such a size? Even if we could quantify/establish the magnitude of "too large," does that imply we should break up businesses? These are difficult questions with controversial solutions, but we could draw parallels from policies on mergers considered to be less disputed. Two recent empirical studies have clarified our understanding on the effects of mergers on labor market outcomes.

A 2021 working paper analyses the impact of an increase in local labor market concentration induced by mergers and acquisitions (M&A).¹¹ Such changes in concentration are easier to interpret and likely to suffer less from the problems described in the previously cited 2019 paper "Do Increasing Markups Matter?": (Unobservable) factors inducing a typical M&A are plausibly unrelated to local conditions. The effects of merger-induced increases in local labor market concentration are large: Earnings of workers involved with the merging firms decline by 2.1 percent. However, this decrease only occurs when changes in concentration are relatively large. The effects on employment are always large since declines can range from 13 percent to 16.5 percent.

Importantly, most of these effects are also present for mergers between firms that operate in multiple locations. In these cases, M&As are most likely not induced by local economic conditions. This indicates that the merger-induced wage declines are consistent with increased monopsony power.

While this paper finds that merger-induced increases in local concentration can have large, negative effects on wages and employment — implying that antitrust scrutiny is relevant for labor markets — it is unlikely that aggregate trends (such as the falling labor share and stagnant wage growth) can be rationalized by these increases. In fact, local concentration has been trending slightly downward since the 1980s, implying that labor shares and wage growth should have gone up instead.

Another 2021 study focuses on the effects of mergers on labor market outcomes.¹² The authors find that mergers slow down wage growth in the health care industry (i.e., hospitals). However, these effects on wage growth are only present when:

- The increase in merger-induced concentration is large.
- Workers' skills are industry specific.

Importantly, these effects are most likely to be explained by labor market power narratives. When workers' skills are less transferable across industries, their outside options are more limited, raising employers' leverage over them. Furthermore, this study finds that merger-induced wage growth slowdowns are attenuated in labor markets with strong unions.

Proposals for Antitrust Policy in Labor Markets

The evidence so far indicates that labor market power is widespread in the U.S. economy (leading to efficiency losses), and the merger effects on labor market outcomes have been shown to go through market power channels. As a result, recent calls for antitrust policies to look at the labor market implications of mergers are clearly warranted.

However, previous merger guidelines by the FTC and Department of Justice (DOJ) were surprisingly silent on labor market power. Strictly speaking, these guidelines made no distinction between seller (monopoly) and buyer (monopsony) power but also do not mention anything explicit about the possible adverse effects of mergers on labor market outcomes.

This recently changed in the 2023 Merger Guidelines, in which buyer market power is explicitly mentioned. Guideline 11 mentions "when a merger involves competing buyers, the agencies examine whether it may substantially lessen competition for workers or other sellers." An issue is that regulators lack tools to evaluate the adverse effects of mergers for workers.

To address these issues, several papers have proposed how existing regulatory tools/analyses can be modified for labor markets. The authors of a 2019 paper on anticompetitive mergers wrote, "Mergers affecting the labor market require some rethinking of merger policy, although not any altering of its fundamentals."¹³ Previously existing merger guidelines for sellers have relied heavily on sales concentration (that is, HHI for revenues) to determine whether a merger should be blocked or not. In fact, this is codified in Guideline 1 of the 2023 Merger Guidelines, which states: "Mergers should not significantly increase concentration in highly concentrated markets."

Recent aforementioned contributions have shown how labor market analogues for concentration indexes as proper reflections of labor market power can be constructed. The paper "Labor Market Power" shows that wage bill concentration is the appropriate measure, whereas vacancy concentration is the relevant statistic in the setup of the paper "Granular Search, Market Structure and Wages."

However, concentration indexes are constructed for a *given* definition of the labor market. How should they be defined? Informally, a labor market comprises jobs between which workers can easily switch within a certain geographical area. To help determine the boundaries of an output market, the DOJ introduced the "small but significant and non-transitory increase in price" (SSNIP) test for sellers. This involves investigating the narrowest market in which a hypothetical monopolist or cartel could profitably increase its prices by 5 percent for one year. A relevant product market is then a group of substitutable products or services that can be profitably monopolized.

A pair of papers propose an analogue test for labor markets.¹⁴ Under the "small and significant but non-transitory decrease/reduction in wages" (SSNDW/SSNRW) test for employers, one could ask what is the smallest labor market in which a hypothetical

monopsonist can profit by reducing wages for a certain period of time. A 2019 paper argues that labor markets should be defined at the six-digit SOC-commuting zone-quarter level.¹⁵ A 2020 paper shows that an overwhelming fraction of the variation in wages can be explained by job titles, but the authors argue that merger policy requires prudence and that conservative six-digit level occupations are more appropriate.¹⁶

By construction, commuting zones are geographic areas capturing a local economy's commuting patterns. Using data from the employment board CareerBuilder.com, a 2018 paper documents that "more than 80 percent of job applications occur where the job applicant and prospective employer are within the same commuting zone."¹⁷ Last, wage reductions under the SSNDW/SSNRW test should last a quarter since the typical unemployed job seeker gets hired or drops out of the labor force within about a quarter.

Therefore, researchers have provided some justifications on *how* labor market concentration indexes should be constructed. The remaining issue is then to determine what are "critical" levels and changes in labor market concentration that could justify a merger to be blocked. A 2023 working paper explores a natural benchmark: What are the implications for workers if we apply current critical levels of concentration for output markets to labor markets?¹⁸ A merger can harm workers since it can lower wages through monopsony forces. On the other hand, a merger can also create synergies allowing the merged entity to produce with higher efficiency. These productivity gains can then be passed on to workers.

This paper then quantifies a framework and uses the concept of the "required efficiency gain" (REG), which is the required productivity gain to prevent worker harm.¹⁹ A merger does not harm workers (or is worker-surplus neutral) whenever the market-level wage index in which the merger takes place does not change. The authors find that adhering to the looser merger guidelines from 2010 would induce a REG of 5.68 percent.²⁰ Given the standard (but ad hoc) assumption of 5 percent efficiency gains, this implies that mergers make workers worse off on average. The updated guidelines from 2023 put more scrutiny on mergers and revert to the critical concentration levels of 1982.²¹ In this case, the REG is 4.68 percent. Therefore, under efficiency gains of 5 percent, the average permitted merger does not harm workers.

Steps Forward

Antitrust enforcement in labor markets is still in its infancy, and there is still a lot of progress to be made, including researching other related questions. Given that labor market concentration is typically higher than sales concentration, what are appropriate critical levels of labor market concentration? How should regulators think about other harmful practices, such as non-compete agreements, collusive behavior among employers (including non-poaching agreements) and predatory hiring practices? While definite solutions are not available to this date, academics can dig into plenty of interesting questions which can hopefully be answered soon.

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¹ This paper was written by Jan De Loecker, Jan Eeckhout and Gabriel Unger.

² The theory on "monopsony" was developed by Joan Robinson in her 1933 paper "The Economics of Imperfect Competition" and refers to buyer market power: a scenario in which there is only one or few dominant buyers of inputs. When applied to labor, monopsony occurs when only one employer exists in a labor market.

³ This paper was written by Jose Azar, Ioana Marinescu and Marshall Steinbaum.

⁴ The Herfindahl-Hirschman Index (HHI) is a statistic calculated through firm-level market shares. It is bounded between $10,000/N$ and 10,000, reflecting the cases of an equal market distribution across N firms and a market dominated by a single firm, respectively. Following FTC guidelines for concentration in output markets, a market is considered "highly concentrated" when its HHI is above 2,500.

⁵ For example, using administrative data from the Census Bureau, the 2022 paper "Labor Market Concentration, Earnings and Inequality" by Kevin Rinz found that labor markets with high levels of employment concentration are associated with lower individual-level earnings.

⁶ See, for example, the 2019 paper "Macroeconomics and Market Power: Context, Implications and Open Questions" by Chad Syverson.

⁷ See the 2019 paper "Do Increasing Markups Matter? Lessons From Empirical Industrial Organization" by Steven Berry, Martin Gaynor and Fiona Scott Morton.

⁸ See the 2022 paper "Labor Market Power" by David Berger, Kyle Herkenhoff and Simon Mongey.

⁹ See the 2022 paper "Imperfect Competition, Compensating Differentials and Rent Sharing in the U.S. Labor Market" by Thibaut Lamadon, Magne Mogstad and Bradley Setzler.

¹⁰ See the 2024 paper "Granular Search, Market Structure and Wages" by Gregor Jarosch, Jan Sebastian Nimczik and Isaac Sorkin.

¹¹ See the 2021 working paper "Mergers and Acquisitions, Local Labor Market Concentration and Worker Outcomes" by David Arnold.

¹² See the 2021 paper "Employer Consolidation and Wages: Evidence From Hospitals" by Elena Prager and Matt Schmitt.

¹³ See the 2019 paper "Anticompetitive Mergers in Labor Markets" by Ioana Marinescu and Herbert Hovenkamp.

¹⁴ See the 2018 article "Antitrust Remedies for Labor Market Power" by Eric Posner, Suresh Naidu and Glen Weyl and the 2019 paper "Anticompetitive Mergers in Labor Markets" by Ioana Marinescu and Herbert Hovenkamp.

¹⁵ See the previously cited 2019 paper "Anticompetitive Mergers in Labor Markets."

¹⁶ See the 2020 paper "Opening the Black Box of the Matching Function: The Power of Words" by Ioana Marinescu and Ronald Wolkhoff.

¹⁷ See the 2018 paper "Mismatch Unemployment and the Geography of Job Search" by Ioana Marinescu and Roland Rathelot.

¹⁸ See the 2023 working paper "Merger Guidelines for the Labor Market" by David Berger, Thomas Hasenzagl, Kyle Herkenhoff, Simon Mongey and Eric Posner.

¹⁹ The framework is quantified in the spirit of the 2022 paper "Labor Market Power" and disciplined by the facts in the 2021 working paper "Mergers and Acquisitions, Local Labor Market Concentration and Worker Outcomes."

²⁰ Under the 2010 Merger Guidelines, a merger is blocked whenever the post-merger HHI exceeds 2500 and the change in HHI is greater than 100.

²¹ More precisely, a merger is blocked whenever the post-merger HHI exceeds 1800 and the change in HHI is greater than 200.

To cite this Economic Brief, please use the following format: Yeh, Chen. (March 2024) "Developments on Antitrust Policy Against Labor Market Monopsony." *Federal Reserve Bank of Richmond Economic Brief*, No. 24-11.

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