

Labor Market Power, Product Market Power and the Wage Structure

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A burgeoning literature in labor economics is focused on modelling employer labor market power, generally finding nontrivial estimates of monopsony power. A smaller literature also simultaneously incorporates product market power. Deb et al. (2023) is an example of applying an oligopoly-oligopsony model to the US labor market, arguing for important effects on wage levels and inequality from rising market power. I agree that combining IO and labor is a fruitful way of studying wages and business dynamism but argue for looking more broadly at (i) *differential* degrees of employer power in labor and product markets; (ii) investigating the dynamic sources of markups (e.g. through innovation) and (iii) considering wage bargaining models, not just wage posting models, which have some starkly different implications for wage setting.

JEL Classifications: C6, D3, D4, L1.

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The interaction between product market power and labor market power has received too little attention in modern economics. The work of Deb et al (2023) is a good example of how this is changing. Now, richer models of market imperfections are being used to analyze major changes in modern economies since the early 1980s, such as the increase in wage inequality between individuals and increasing differences between firms (Autor et al., 2020, Van Reenen, 2018; de Loecker et al, 2023).

Although labor markets imperfections have long been a staple of labor economics, the focus has more been on institutional causes such as regulations (minimum wages, unions, etc.) and information frictions (e.g., search and matching). In recent years, however, there has been a resurgence of interest in monopsony, with many papers adducing evidence that firms perceive an upward sloping labor supply curve and take this into account when posting their wages (e.g., Lamadon et al., 2022; Manning, 2011). The implication of this is that firms will generally set wages below marginal products, a “mark down”.

Interestingly, the most common rationale of monopsony follows the Industrial Organization (IO) framework of Berry et al. (1994) that assumes job amenities have different valuations by heterogeneous workers (Card et al, 2018). Hence, inframarginal workers who place high value on the attributes of the job they are in, are unlikely to quit even when there is a wage cut below the prevailing market wage. It is analogous to product markets when consumers will often stick to their favorite product in the face of a significant increase in its price. Of course, there are other monopsony models such as the classic “company town” or limited worker information on wage offers (see Burdett and Mortensen, 1998 on the theory and Jaeger et al., 2023, for recent evidence).

Despite the substantial number of papers finding some evidence for monopsony, the vast majority of such studies ignore or abstract away from product market power. Deb et al. (2023) make an important contribution of considering a GE model where firms are both oligopolists and oligopsonists, i.e. they have both product and labor market power. They apply their model to the US economy between 1977 and 2016 and argue that market power is responsible for a 11% fall for skilled workers’ wages and 12% for unskilled wages as well as accounting for over half of the increase in the wage variance between establishments.

The intuition for why market power harms wages is straightforward. Market frictions will cause an inefficient loss of aggregate output per worker, and this lower productivity will feed through to

lower real wages. Deb et al. (2023) find a sharp increase in the markup from 1.7 to 2.2 (which drives their results) with a slight increase in the markdown.

Although it is an important attempt to have labor and product market power together there are several areas where the literature could advance beyond Deb et al. (2023). First, there are asymmetries between labor and product markets. For tractability, the authors estimate the degree of market power as a “numbers equivalent” – the number of effective competitors along a coarse grid (a value of 1 for monopoly, 2 for duopoly, 4, 8, 16 or 32). But more importantly, the number of effective rivals is assumed to be identical in the product market to those in the labor market. This seems unlikely. Firms will often have quite different influences in the labor markets and product markets they operate in. For example, a car manufacturer in a rural area may have much labor market power as it is one of the only employers but faces a national or international product market. Similarly, a hospital may be the only one realistically on offer in a local area and so has much product market power, but to hire a top CEO it must compete in a much larger labor market.

A second issue is the need for a more careful examination of *where* power comes from. The new models tend to be static and usually take job amenities and product characteristics as given (e.g., by earlier investments). This is fine as a modelling device, but over time such attributes are endogenous. Consider product market power. It is often assumed that more product market has negative welfare effects, which is reasonable if monopoly arises from lobbying to allow dominant firms to create unnecessary barriers to entry through red tape or allowing anti-competitive mergers or cartels. But if market power arises from innovation due to earlier investments in R&D (see Akcigit and Van Reenen, 2023), higher markups are the rewards for creative destruction. Assessing welfare becomes more complex in such a world of dynamic growth.

A third issue relates to the history of models trying to integrate labor with IO. The recent embrace of imperfect competition by labor economists has focused on wage posting models where the wage is set by a firm facing an upward sloping labor supply curve. This means employment is set below the competitive level to drive down the wage and increase profits. When we incorporate product market power, a monopolist will restrict output to drive up price. This will generate an even lower employment level as fewer inputs are needed and further reduce the wage below the monopsony level. Hence, product market power reduces wages even further, aggravating the wage losses from market power.

In contrast, an older tradition in labor economics focuses more on bargaining models. Here, workers individually or collectively bargain over the surplus. For example, in the spirit of Kalecki (1938, 1954), workers may collectively bargain with oligopolistic employers. Here, when firms achieve more product market power there are higher profits and therefore more of a potential surplus to be split between employers and employees. Workers (at least those who keep their jobs), may welcome greater monopoly power as they are able to extract higher wage rents, which would not be the case for a firm earning thin or no margins in an extremely competitive product market. Consequently, this generates the opposite implication at the firm level - more product market power generates higher, not lower, wages.

Is the world closer to wage posting or wage bargaining? Unions are much less powerful than they were 40 years ago, but there is still much evidence of bargaining, especially outside the US. Hence, bargaining may be a better approximation than posting in many environments. Naturally, different markets will be characterized by different models, and it may be that labor moves closer to IO in focusing on specific occupational and/or geographic markets. But even at the macro level, it is unclear to me that wage posting is a better approximation than bargaining in many countries.

I have always found the class of models that incorporate both innovation dynamics and wage bargaining attractive. A fundamental feature of market economies is that innovation generates (temporary) monopoly rents as Schumpeter argued, but the distribution of those rents is a struggle between different actors, in particular workers and businesses. Van Reenen (1996) documented a substantial creation of rents through technological innovation, but also significant sharing in these innovative rents to employees at these firms. This was for British manufacturing firms in the 1970s and 1980s, but Kline et al (2019) used much richer employer-employee matched data from the US in recent decades and found wage effects of a similar magnitude. The rhythm of capitalism swings between these twin dynamics of the creation and capture of rents.

If such innovative rent sharing is important, it has implications for the rate and direction of technological change. The rate of innovation might be slowed because firms will invest less in R&D since profits from successful technologies get “held up” by workers. On the other hand, there may be offsetting effects if workers and firms strike longer term bargains as may be the case in Japan, for example (see Menezes-Filho et al, 1998).

Acemoglu and Johnson (2023) focus on how bargaining affects not just the pace, but also the *direction* of technological change. For example, firms may introduce technologies to reduce the ability of workers to capture rents. Richard Arkwright's spinning machine patented in 1769, replaced skilled workers with mega-factories system using unskilled workers, automating away much the ability of striking artisans.

In conclusion, Deb et al (2023) have advanced the literature in a by integrating imperfect competition in labor and product markets. I forecast there will be many more attempts in the coming years.

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