Micro Note

MULTI-EMPLOYER BARGAINING AND FIRM HETEROGENEITY: A CASE STUDY

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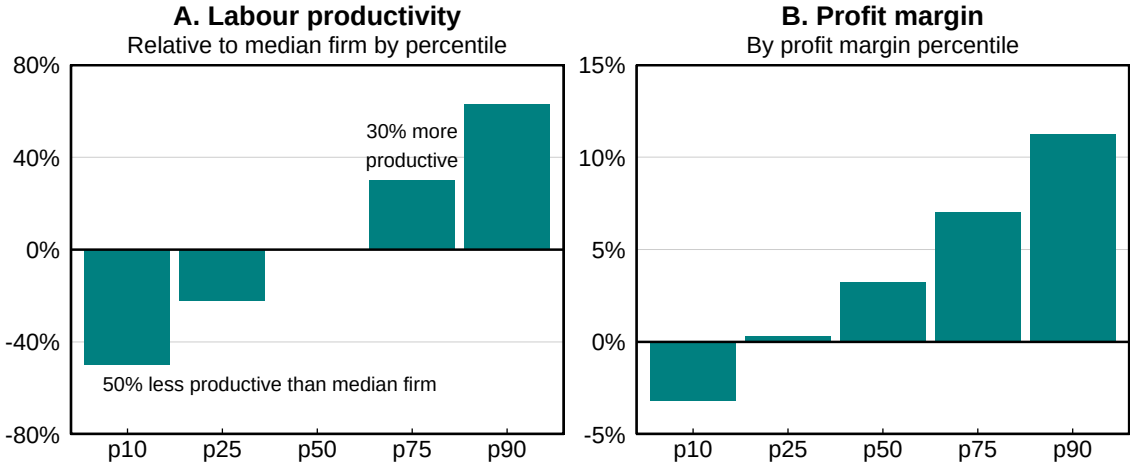
With new multi-employer bargaining laws set to commence in early June, workers will soon have the ability to adopt another "reasonably comparable" firm's enterprise agreement. The widespread heterogeneity in firm performance within industries, however, raises questions about the capacity of lower performing firms to pay higher wages and the potential impact on market competition if they are drawn into the enterprise agreement of a higher performing firm.

To explore this issue, we conduct a case study of firms in the air conditioning manufacturing industry where unions have already begun negotiations with major employers.[1] We focus on firms with at least 20 employees involved in the manufacture of air conditioning systems and related products, such as electric fans and gas heaters, where it is feasible that applicants could claim that workers share a common interest.[2]

A well-established fact in the international productivity literature is that even within very narrowly defined industries, firm performance can vary greatly.[3] The same is true of the domestic appliance manufacturing industries:

1. Highly productive "market leading" firms (the 75th percentile) were 30% more productive than "mid-tier" firms (50th percentile) and 67% more productive than "laggard" firms (25th percentile) (Figure 1A).
2. A cadre of highly profitable firms co-exist with a large number of loss-making firms. The top 10% of firms had profit margins exceeding 12%, while nearly a quarter of firms reported negative profits (Figure 1B).

Figure 1: Firm performance heterogeneity*



* All analysis uses data on firms with 20 or more employees operating in the ANZSIC 4-digit industry classes 2449 and 2452 during the 2018/19 financial year. Labour productivity is defined as log(value add/FTE). Profit margin is defined as (revenue - expenses) / revenue.
Sources: ABS; e61

These (within-industry) productivity and profitability differences partly reflect persistent differences in the use of production technologies. High-performing firms use both more advanced hard technologies, such as IT systems, and better soft technologies, such as management techniques, than low-performing firms. These help them get more out of their workforce, attract more productive workers and pay higher wages.[4]

[1] Hannan (2023); Marin-Guzman (2022)

[2] We restrict our analysis to firms with 20 or more employees as they could be drawn into a single-interest multi-employer agreement without their consent. See Andrews and Buckley (2023) for more information on the reforms. While we focus on companies in the ANZSIC 4-digit classes 2449 and 2452 we also examined firms in the "Air Conditioning and Heating Services" industry, which contains air conditioning installers (see Appendix B).

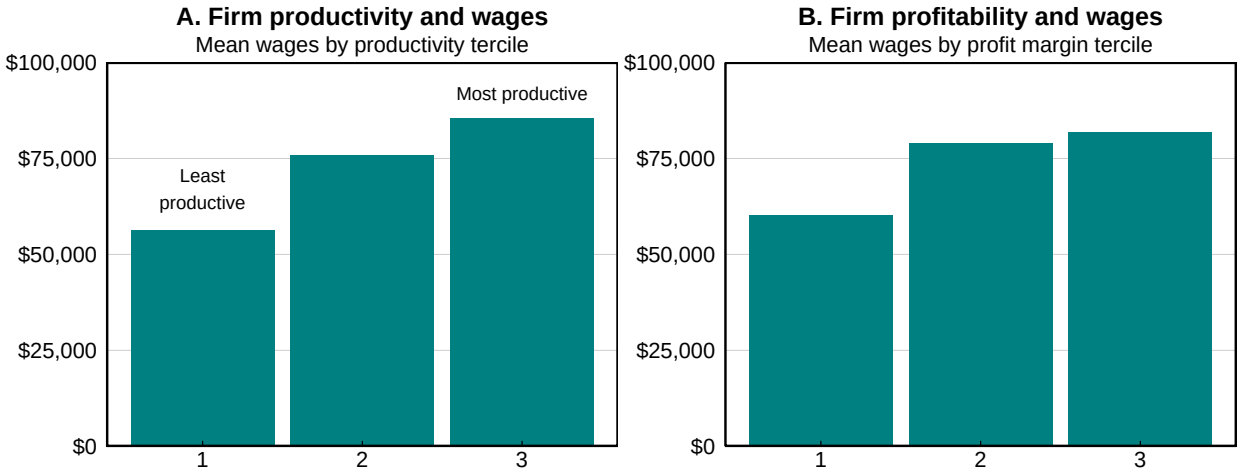
[3] Syverson (2004, 2011); Bartelsman et al. (2013)

[4] Card et al. (2018)

Market leading firms (those in the highest productivity tercile) paid average wages that were 13% higher than mid-tier firms (those in middle productivity tercile) (Figure 2A), while more profitable firms also paid higher wages (Figure 2B).

The new multi-employer bargaining laws could allow workers from lower-productivity, lower-paying firms to access the same wages and working conditions as workers at higher-productivity, higher-paying firms. But if market leaders pay higher wages because they employ more productive technologies, or more talented workers, then the capacity of other firms to pay higher wages comes into question.

Figure 2: Wage heterogeneity and firm performance*



* All analysis uses data on firms with 20 or more employees operating in the ANZSIC 4-digit industry classes 2449 and 2452 during the 2018/19 financial year. Labour productivity is defined as log(value add/FTE). Profit margin is defined as (revenue - expenses) / revenue.
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This has potentially significant implications for industry dynamics. Initially, market leading firms may negotiate a multi-employer agreement. If unions were then to draw in mid-tier firms, the competitive threat that such firms pose to market leaders may fall:

1. If mid-tier firms (the 40-60th percentile of the average wage distribution) were to raise their wages to the level of the firm at the 80th percentile, they would see their profit margins fall from an average of 2.8% to -2.1%.[5]
2. In response, mid-tier firms may adjust their operations, potentially by using more capital inputs or outsourcing.

If laggard firms were drawn into the multi-employer agreement, higher wage costs could force less productive firms to exit, increasing aggregate productivity. This stronger market selection could lift employment standards if firms using unqualified or poorly trained workers are forced to exit. But firm exits could also reduce competition and entail job displacement costs.[6]

How these effects play out will depend upon a range of factors. To be sure, the threat of a multi-employer bargaining could incentivise firms to enter into new single-enterprise agreements, which could boost wages. But the widespread heterogeneity in firm performance complicates the Fair Work Commission (FWC) application of the common-interest test. The new laws suggest that the FWC should consider the geographical location, regulatory regime, and the nature of the enterprises to which the agreement will relate, as well as the terms and conditions of employment in those enterprises.

Going forward, the e61 Institute will harness timely microdata sources to evaluate how multi-employer bargaining shapes firm dynamics and wages in relevant industries to inform the Statutory Review due within two years.

[5] This estimate is obtained by examining the effect that increasing each firm's average wage costs would have on their profit margins holding all else equal. It does not take into account that entering into a multi-employer agreement may lead to other changes in costs, such as a reduction in costs associated with negotiating a single-enterprise agreement.

[6] For more information on the costs of job loss see Michielsen and Buckley (2023).

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Appendix A

Dataset

Our analysis is based on firm-level data from the Australian Bureau of Statistics' (ABS) Business Longitudinal Analysis Data Environment (BLADE). We apply a set of filters to obtain the final dataset used in our analysis:

1. We restrict our analysis to firms operating in the 2018/19 financial year to ensure our work is as current as possible while avoiding the effects of the COVID-19 pandemic. For our measures of firm productivity and profitability, we also use data from the two previous financial years to minimise the effect of annual fluctuations in firm profits and value add.
2. We focus our analysis on firms with at least 20-employees (as measured by PAYG records) operating in the "Fixed Space Heating, Cooling and Ventilation Equipment Manufacturing" (ANZSIC 2452) and "Other Domestic Appliance Manufacturing" (ANZSIC 2449) industries.
3. For the productivity analysis, we drop all firms where labour productivity cannot be measured accurately, which includes firms with negative value add, firms with less than 3 FTE, and firms with missing data on value add and employees.

After applying these filters, we are left with a final sample which includes 39 firms with 20-49 employees (1,121 total workers) and 39 firms with 50+ employees (8,047 total workers).

Variable construction

Productivity

Firm productivity is measured as log labour productivity (value add / labour input), where:

- Labour input is measured as the number of full-time-equivalent (FTE) workers. FTE values for each firm are derived by the ABS from PAYG statement data using the methodology laid out in Hansell et al. (2015).
- Value add is measured as revenue minus the cost of goods sold.

Profit margin

Firm profit margins are calculated as (revenue - expenses) / revenue.

Wages

Worker wages are measured using PAYG data collected by the Australian Taxation Office and compiled by the ABS.

Appendix B

We also examined firms in the "Air Conditioning and Heating Services" (ANZSIC 3233) industry. This includes firms involved in air conditioning installation, which have been discussed in the media as potentially being party to the same multi-employer agreement as firms in the air conditioning manufacturing industry.

Examining the heterogeneity of firm performance, we find results which are very similar to our main analysis:

- Highly productive "market leading" firms (the 75th percentile) were 33% more productive than "mid-tier" firms (50th percentile) and 72% more productive than "laggard" firms (25th percentile).
- A small number of highly profitable firms co-exist with a large number of loss-making firms. The top 10% of firms had profit margins exceeding 12%, while nearly a quarter of firms reported negative profits.

In keeping with our main analysis, we find that market leading firms (those in the highest productivity tercile) paid average wages that were 15% higher than mid-tier firms (those in middle productivity tercile) and that more profitable firms also pay higher wages, although the difference is smaller than in our main analysis.