NO FREE LUNCH: THE ECONOMIC CONSEQUENCES OF JOB DISMISSAL LAWS

e61 Research Note No. 10

Summary

No free lunch: The economic consequences of job dismissal laws

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The 2009 *Fair Work Act* tightened Australia's unfair dismissal laws. The policy increased the cost of labour adjustment for all firms, but more so for firms with 15 of more employees. We analyse the impact of the policy change by comparing outcomes in firms with just more than 15 employees to outcomes in firms with just less than 15 employees.

We find that tightening job dismissal laws caused a sharp drop in job separations, suggesting that it served its intended purpose of protecting workers against dismissal.

Firms also adjusted to the new laws in other ways:

- In industries where casual work was common, firms temporarily increased their hiring activity, suggesting that they adjusted by hiring more casual workers who were easier to dismiss.
- In other industries, firms adjusted by increasing their use of physical capital, which had become relatively more flexible than labour as a result of the laws.

Because the laws distorted input choices and made it more difficult for firms to adjust their workforce, productivity declined. But the negative effect was short lived in industries where casual work was already common and firms could more easily adjust their workforce.

Overall, workers received a boost to their wages but some were left financially worse off, including incumbents in highly casualised industries.

Our findings are a reminder that firms are sensitive to market regulations and that well-intentioned regulatory changes can carry unintended consequences.

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The *Fair Work Act* tightened Australia's unfair dismissal laws

The introduction of the *Fair Work Act* (Cth) (FW Act) in 2009 marked a "significant re-regulation" of the Australian labour market, according to the OECD.[1] This was headlined by a substantial tightening of unfair dismissal laws (Box 1), which made it harder for firms to fire workers.

Evidence from other countries suggests that tighter unfair dismissal laws lead to fewer job separations.[2] But firms typically also respond by altering their hiring behaviour and production choices, which can hurt productivity (Box 2). For workers, the impact on wages can be nuanced, with both winners and losers emerging.

However, it is unclear how generalisable these lessons are for Australia. Most of the international evidence comes from European countries who lack Australia's unique set of labour market institutions, such as our high level of casual employment.

To fill this gap, we use administrative microdata to study how the tightening of unfair dismissal laws under the FW Act shaped: job separations, new hiring, wages, total factor productivity, physical capital and intermediate input use. To identify the causal effect of the policy change, we use the natural experiment created by differences in dismissal rules for small businesses. These meant that after the policy was introduced, dismissal costs increased more for firms with just more than 15 employees, compared to firms with just less than 15 employees.

Before proceeding, it is important to note that the design of dismissal regulations is subject to a fundamental policy trade-off. Some level of protection is necessary to ensure that firms internalise part of the social cost of dismissals. But by reducing turnover, protections run counter to the policy principle of 'protecting workers, not jobs.' This matters because declining job mobility has contributed to the slowdown in Australian productivity and wage growth over the past 15 years.

Box 1: Institutional background

The FW Act was introduced into the House of Representatives in November 2008 and was given Royal Assent on 7 April 2009 with most provisions taking effect on 1 July 2009.[2] The legislation made several major changes to unfair dismissal laws, including:

1. **A definitional change to unfair dismissal.** Workers could no longer be dismissed for "operational reasons" (e.g., cost cutting) and a new "genuine redundancy" provision was introduced.
2. **Size-based exemptions from unfair dismissal were lowered.** Under the previous Work Choices regime, firms with fewer than 100 employees were exempt from unfair dismissal claims. Under the FW Act, only firms with fewer than 15 employees retained exemptions from claims.
3. **Higher redundancy pay.** Redundancy pay requirements were increased for high-tenure workers, but businesses with fewer than 15 employees remained exempt (Figure A.2).

Box 2: International research

Existing empirical evidence suggests that an increase in dismissal costs could:

- **reduce worker turnover** due to decreased firing *and* hiring[4]
- lead to capital-labour substitution resulting in **capital deepening**[5]
- lower **total factor productivity**[6]
- lead to greater use of **temporary contracts**[7]
- increase **outsourcing**[8]
- ambiguously effect wages with protections potentially **increasing workers' bargaining power**,[9] but firms also **passing on some of the costs to workers**[10]

[1] OECD (2013)
[2] Job separations include all reasons why a worker leaves their job (quit, fired, redundant, contract expired, retired etc.).
[3] See Appendix A for more information about the reforms.
[4] Kugler and Pica (2008)
[5] Cingano et al. (2016)
[6] Autor et al. (2007); Cingano et al. (2016)
[7] Hijzen et al. (2017); Bratti et al. (2021)
[8] Autor (2003)
[9] Ciminelli et al. (2018); Van der Wiel (2010)
[10] Leonardi and Pica (2013)

Unfair dismissal claims spiked, generating a natural experiment

The introduction of the FW Act constituted a material policy change:

1. It resulted in the equal largest tightening of the definition of unfair dismissal on record in the OECD.[11] Australia moved from having some of the least stringent unfair dismissal laws – on par with the United States and Denmark – to more rigid arrangements closer to France, Italy and Spain (Figure 1).
2. Unfair dismissal claims spiked in the years following the policy change (Figure 2). Firm size was disputed in almost 9 per cent of cases, suggesting that the exemptions for firms with fewer than 15 employees were material.[12]

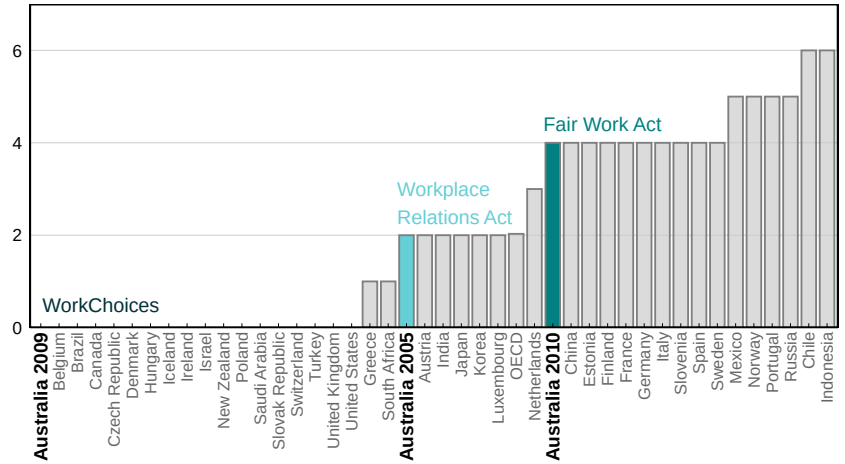
This substantial tightening of dismissal laws, which applied more to firms with more than 15 employees, created a natural experiment. Using a difference-in-differences (DiD) research design, we examine how the tightening of dismissal laws affected job separations and other outcomes of interest, relative to a counterfactual where all firms received the same exemptions afforded to firms with fewer than 15 employees.

Our approach exploits the fact that a firm with 14 employees and a firm with 16 employees are very similar, but the firm with 16 employees was more exposed to the tightening of dismissal laws. Thus, we estimate the effect of tighter dismissal laws by comparing how outcomes in firms with just more than 15 employees (our "treatment" group) and firms with just less than 15 employees (our "control" group) changed over time. We also control for the effect of firm size and age, worker age and gender, industry-year fixed effects (time varying industry (ANZSIC class) level shocks), and firm fixed effects (time invariant firm characteristics).

Our key assumption is that the difference between our treatment and control groups would have remained constant over time,[13] but for the introduction of the FW Act (the "parallel trends" assumption). We assess the validity of this assumption throughout by examining whether the difference between the two groups changed in the years leading up to the FW Act. See Appendix D for a detailed discussion of our approach.

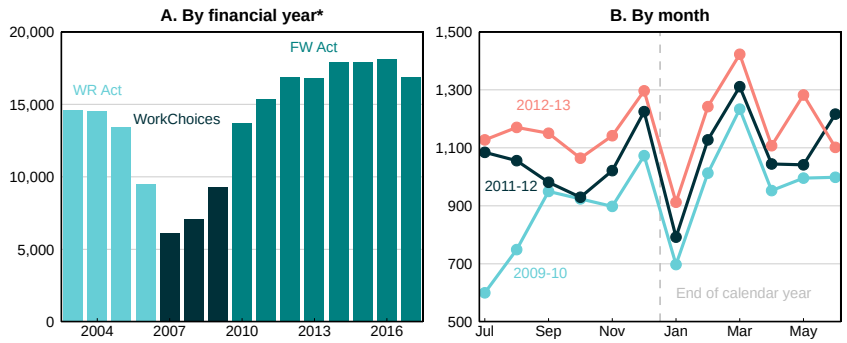
Figure 1: Unfair dismissal law stringency*

Definition of justified or unfair dismissal; 2010 unless otherwise noted



* Data sourced from the OECD Employment Protection Database (Item 5) for 2005, 2009 and 2010. Scores for countries other than Australia reflect 2010 index scores.
Sources: e61; OECD (2021a)

Figure 2: Unfair dismissal claim lodgements



* Financial year totals include all unfair dismissal and general protection claims lodged with both Federal and State Industrial Relations Commissions.
Sources: e61; Fair Work Commission (2023); Freyens and Oslington (2021)

[11] As measured by item 5 of the OECD Employment Protection Database (OECD, 2021).

[12] Fair Work Commission (2013)

[13] Conditional on our control variables.

Job separations fell sharply in firms exposed to tighter dismissal laws

Did the new laws help protect workers from job dismissal?

Figure 3 details how the difference in job separation rates between the treatment and control groups evolved over time, relative to 2008/09 (the last financial year before the reforms). It shows that in the first year that the new laws took effect, the probability of job separation fell sharply for workers in firms with just more than 15 employees, relative to workers in firms with just less than 15 employees.

Leading up to the reforms, the difference between the two groups remained stable overtime (the confidence band in Figure 3B includes zero), supporting our key parallel trends (identifying) assumption. We limit our analysis of parallel trends to the three years before the reform (see Box 3) and our results also survive a battery of robustness tests (see Box 4).

To complement our event-study analysis (Figure 3B), we run a DiD analysis, which compares the average difference in outcomes before and after the reforms. These estimates suggest that workers experienced a 1.2 percentage point drop in the probability they would separate from their job in any given year (Table C.1).[14]

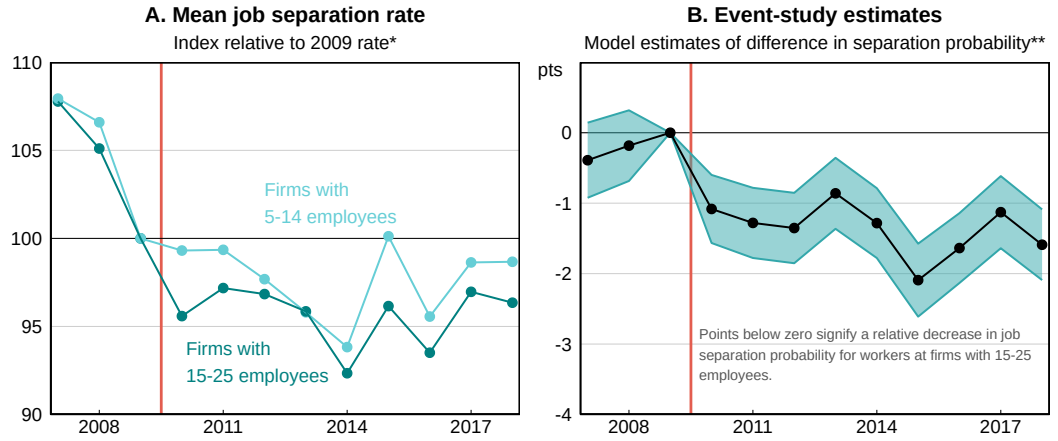
How large was the decline in job separations?

Prior to the FW Act, the annual separation rate of workers in affected firms was approximately 25 per cent (1 in 4 workers left their job each year), which means a 1.2 percentage point drop translates to about a 5 per cent decline in separations.

But not all separations reflect dismissal. Workers may voluntarily leave their jobs to join another firm, retire or take time out of the workforce. We cannot identify why a worker left their job in our tax data,[15] but about 20 per cent of all job separations are "forced" (firing or redundancy) according to HILDA Survey data (Figure C.1). This suggests that the policy may have had a much larger effect on forced separations.[16]

Figure 3: Effect on job separation probability

Workers with at least one year of tenure



* Figure 3.A plots the mean job separation rate of workers with one or more years of tenure at firms with 15-25 employees and 5-14 employees. Values are relative to 2009 means (2009 = 100). The red line highlights the first financial year the FW Act was in effect.
** Figure 3.B plots OLS estimates with 95% confidence intervals (shaded area). Values are multiplied by 100 for readability. Standard errors are corrected for two-way clustering at the firm and worker level. Regressions include industry x year and firm fixed effects as well as a second degree polynomial for firm size interacted with treatment, and controls for firm age, worker age and worker gender.
Sources: ABS; e61

Box 3: Parallel trends and anticipation effects

We focus our analysis of parallel trends on the period after the introduction of Work Choices in March 2006. This avoids conflating the effect of dismissal law changes introduced by Work Choices around the 15-employee threshold (Appendix A), or changes to federal IR coverage (Figure A.1), as pre-trends. For robustness, we also present charts with a longer pre-treatment period in Figure C.2. To the extent that there are pre-trends, they appear to largely coincide with the introduction of Work Choices.

A second potential threat to our identification strategy is that the introduction of the FW Act was likely anticipated by many businesses given the role that IR policy played in the November 2007 federal election. However, the threshold for size-based exemptions was debated and adapted after the Bill was introduced to parliament,[17] and we find no evidence of bunching below the threshold or effects occurring prior to implementation.

[14] In some instances the DiD and event-study results may not match up perfectly due to volatility in the pre- or post-reform period.

[15] PAYG data pre-2010 does not include any information on redudancy pay.

[16] If only one in five job separations is forced, a 1.2 ppt reduction translates to a 24 per cent reduction in forced separations.

[17] Chapman (2009)

Tighter dismissal laws can cause firms to change their behaviour in other ways

The FW Act made it harder for firms to dismiss workers. But did employers change their behaviour in other ways in response to the new laws? What effect did this have on workers and their wages?

Firms can adjust to tighter unfair dismissal laws in a variety of ways (Figure 4). They could respond by reducing hiring, because dismissal costs can act as tax on both firing and hiring. Or they could instead hire more unprotected workers if they provide a good substitute. Firms could also adjust by increasing outsourcing, substituting labour for physical capital, or even by reducing experimentation with new or uncertain technologies.

Such adjustments can entail significant costs. Firms may be forced to expend time and resources altering their operations, and the distortion to production choices may lower productivity.[18]

For workers and their wages, the effect of an increase in dismissal costs is less clear:

1. Theory suggests that a pure transfer from firms to workers, such as an increase in severance pay, will likely be partially offset by lower wages.[19]
2. Protections may increase workers' bargaining power, which could increase the wages of incumbent workers.[20]
3. If firms substitute physical capital for labour, then some high human capital workers may also benefit as physical and human capital tend to be compliments. This is because more skilled workers are generally able to make more productive use of machinery and other physical capital.

Box 4: Robustness tests

We conduct several tests to check the robustness of our results (online Appendix E). One concern is that we may be capturing the impact of the GFC on financially vulnerable smaller firms in a way that is not captured by our main controls. To test this possibility, we add controls for firm gearing ratios and find they have little effect on our results.

Another concern is that some (potentially better performing) firms may choose to remain just below the 15-employee threshold. We test for this by running regressions which drop firms around the threshold (donut hole) and regressions which only use firms who do not cross the threshold in either direction. In both cases, our results are broadly unchanged.

We also run a range of other tests which are typical in the literature, including tests of alternate bandwidths and specifications.

Figure 4: How firms can adjust to an increase in dismissal costs

Reducing hiring activity
Unfair dismissal laws that act as a tax on firing can reduce both hiring and firing of protected workers.[21]

Hiring unprotected workers
When only some workers are protected, firms may adjust to an increase in firing costs by hiring more unprotected workers.[22]

Substituting labour for capital
By raising labour adjustment costs, higher firing costs could distort production choices by inducing capital–labour substitution.[23]

Reducing experimentation
By raising the cost of entrepreneurial failure, tighter job dismissal regulation can reduce the incentive to experiment with uncertain technologies, and thus firm growth.[24]

Outsourcing and offshoring
Firms facing an increase in labour costs may choose to outsource or offshore part of their operations and increase their reliance on intermediate inputs.[25]

[18] Autor et al. (2007); Cingano et al. (2016)
[19] Garibaldi and Violante (2005)
[20] Ciminelli et al. (2018)
[21] Kugler and Pica (2008)
[22] Hijzen et al. (2017); Bratti et al. (2021)
[23] Autor et al. (2007); Cingano et al. (2016)
[24] Garicano, Lelarge and Van Reenen (2016)
[25] Autor (2003)

Hiring activity increased in industries with many casual workers

Did firms change their hiring behaviour?

Tighter dismissal regulation initially had a small positive effect on the probability of firms making new hires (Figure 5A).[26] But the hiring response faded overtime and varied according to the degree of casualisation within each industry:

1. In industries with the highest proportion of casual workers (the top third by casual employment share), there was a statistically significant increase in hiring activity (Figure 5B; see Table B.2 for a list of industries in each third).
2. In industries with fewer casual workers (the middle and bottom third), the policy change had no statistically significant effect on hiring.

Why would hiring increase in casualised industries?

Economic theory predicts that a tightening of unfair dismissal laws should reduce both the firing *and* hiring of protected workers.[27] This is because an increase in dismissal costs provides an incentive to retain workers whose wage exceeds their productivity during bad times and to not hire workers whose wage lies below their productivity during good times.

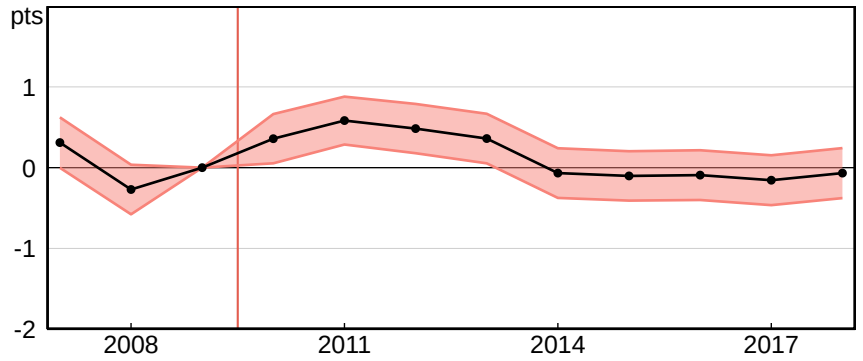
However, when only some workers are protected, an increase in dismissal costs could see firms adjust by hiring more unprotected workers (e.g. temporary or casual staff who accept a job offer with no advance commitment to ongoing work) if they are a good substitute for protected workers.[28]

Thus, firms in already highly casualised industries, such as hospitality and retail, may have responded to the policy change by hiring more casual workers as a flexible alternative to permanent staff. Unfortunately, we cannot test this hypothesis because we cannot identify casual employees in our data.

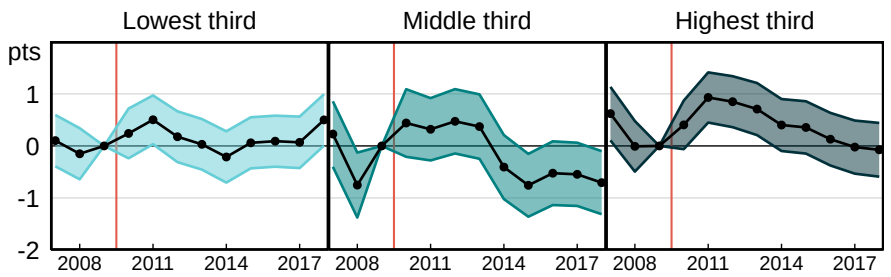
Figure 5: Effect on new hire probability

Model estimates of difference in new hire probability*

A. All industries



B. By share of casual workers in industry



* The figure plots OLS estimates with 95% confidence intervals (shaded area). Values are multiplied by 100 for readability. The red line highlights the first financial year the FW Act was in effect. Standard errors are corrected for two-way clustering at the firm and worker level. Regressions include industry x year and firm fixed effects as well as a second degree polynomial for firm size interacted with treatment, a second degree polynomial for firm age and worker age, and a control for worker gender.
Sources: ABS; e61

[26] The positive and significant effect is only present in our event study analysis. In our main DID results the effect on hiring is insignificant. See Table C.1 and Appendix C for more details.

[27] If the increase in dismissal costs cannot be undone by Coasean Bargaining, then it will act as a tax on both hiring and firing (Cingano et al. 2016).

[28] Hijzen et al. (2017);
Only casual workers who are employed on a regular and systematic basis are protected by unfair dismissal laws under the FW Act.

Tighter dismissal laws distorted firms' production choices

Besides changing their hiring behaviour, firms can adjust to higher dismissal costs by changing their production choices. This could include making greater use of physical capital (e.g. automation) or intermediate inputs (e.g. outsourcing or offshoring), which become relatively more flexible than (non-casualised) labour.

In our DiD analysis, we find that firms just above the 15-employee threshold increased their use of capital by an average of 5.1 per cent and capital to output ratios by 3.3 per cent in the years following the reforms, relative to firms just below the threshold (Table C.1). However, the difference between the two groups continued to grow up until 2016, suggesting that it took several years for firms to adjust their use of capital (Figure 6A).

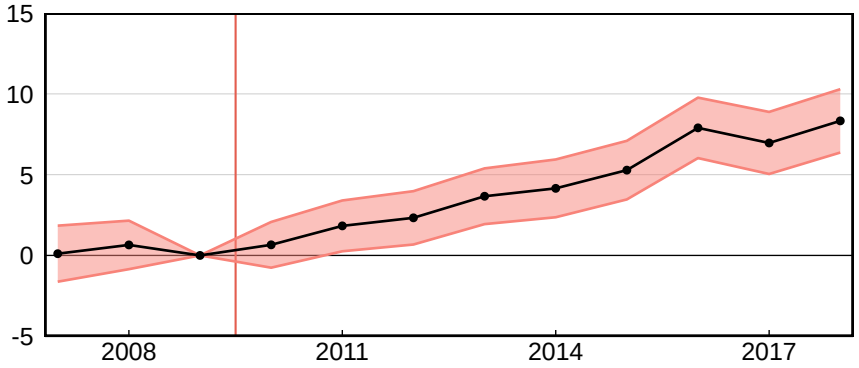
The impact on capital also varied according to the degree of casualisation within each industry. The effect was largest for firms in the least casualised industries, such as manufacturing, where firms had less ability to adjust to the new laws by hiring casual workers. In these industries (the bottom and middle third of pre-reform casual employment), capital and capital to output ratios increased sharply in firms just above the 15-employee threshold compared to firms just below the threshold. The effect was almost twice as large as the effect in the most casualised industries (Figure 6B; Table C.3).

Tighter unfair dismissal laws may also have induced more outsourcing, proxied by intermediate input use. Firms just above the 15-employee threshold increased their use of intermediate inputs by 3.1 per cent and their intermediate input to output ratios by 0.8 per cent, relative to firms just below the threshold (Table C.1).

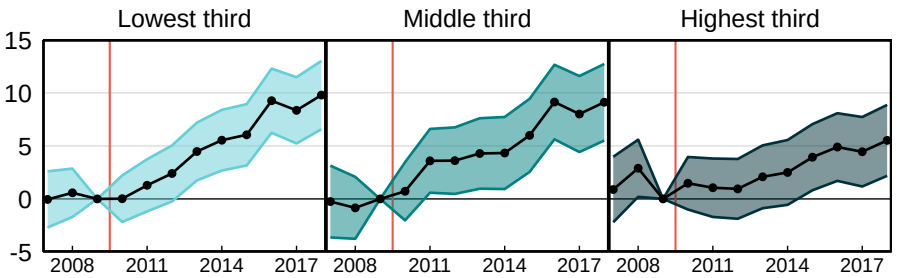
Figure 6: Effect on capital to output ratios

Model estimates of log difference in capital to output ratios*

A. All industries



B. By share of casual workers in industry



* The figure plots OLS estimates with 95% confidence intervals (shaded area). Values are multiplied by 100 for readability. Capital is measured as non-current assets. The red line highlights the first financial year the FW Act was in effect. Standard errors are corrected for two-way clustering at the firm and worker level. Regressions include industry x year and firm fixed effects as well as a second degree polynomial for firm size interacted with treatment, a second degree polynomial for firm age and worker age, and a control for worker gender.
Sources: ABS; e61

Tighter dismissal laws caused total factor productivity to decline

To gauge the productivity impacts, we focus on total factor productivity (TFP), which measures how much output a firm can produce from a given bundle of inputs (labour, physical capital, intermediate inputs). In our DiD analysis, firms just above the 15-employee threshold experienced a 1.2 per cent fall in TFP (compared to firms just below the threshold) due to tighter dismissal laws (Figure 7A; Table C.1).

Thus, tighter unfair dismissal laws had a sizeable negative effect on the productivity of firms around the 15-employee threshold. But it is plausible that similar effects may apply to firms with up to 100 employees – who were also exposed to tighter dismissal costs – leading to a large decline in market sector productivity.[29]

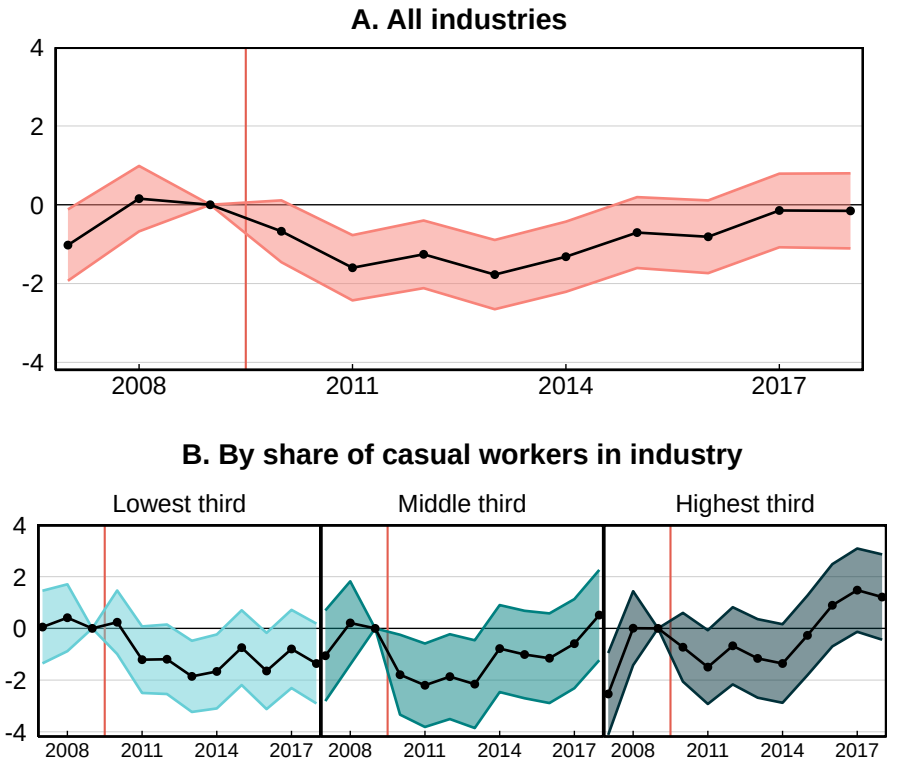
Once again, our results vary according to the degree of casualisation within each industry. In the most casualised industries, where firms could more easily adjust by hiring casual workers, the negative effect on TFP was short lived and statistically insignificant (Figure 7B). But in the least casualised industries, the reforms had a statistically significant and long-lasting negative effect on TFP, consistent with a sharper rise in labour adjustment costs.

Overall, our results are consistent with international evidence which shows that by raising labour adjustment costs, tighter dismissal laws can reduce productivity by distorting capital–labour production choices. Dismissal protections can also reduce workers' effort and slow innovation.[30]

Of course, stricter dismissal laws could raise productivity by promoting workers' willingness to engage in training activities due to better job security or better hiring decisions, because firms face greater costs if they hire a bad candidate.[31] While we find some evidence that worker quality improved (see next section), the overall negative impact on TFP suggests that these effects are muted.

Figure 7: Effect on total factor productivity

Model estimates of log difference in TFP*



* The figure plots OLS estimates with 95% confidence intervals (shaded area). Values are multiplied by 100 for readability. The red line highlights the first financial year the FW Act was in effect. Standard errors are corrected for two-way clustering at the firm and worker level. Regressions include industry x year and firm fixed effects as well as a second degree polynomial for firm size interacted with treatment, a second degree polynomial for firm age and worker age, and a control for worker gender.
Sources: ABS; e61

[29] Firms with between 15-100 employees were responsible for 16 per cent of market sector value add in 2008/09, suggesting that a 1.2 per cent decline in their productivity could reduce market sector output by ~0.2 per cent.

[30] Lagos (2006); Belot et al. (2007)

[31] Ichino and Riphahn (2005); Wasmer (2006)

Some workers received a boost to their wages, but not all benefited

Following the tightening of dismissal laws, we find that workers in firms just above the 15-employee threshold experienced a 0.9 per cent increase in wages compared to workers in firms just below the threshold (Table C.1).

At first glance, this suggests that the policy change raised workers' bargaining power. But our results vary according to each industry's pre-reform share of casual employment, and whether a worker was a new hire or an incumbent:

1. In the most casualised industries (the top third), the policy change led to a 1.5 per cent increase in wages for new hires, but a 1.5 per cent decrease in wages for incumbents in firms with 15 or more employees compared to new hires and incumbents in firms with fewer than 15-employees (Figure 8B; Figure C.4; Tables C.4 and C.5). This is consistent with firms responding by hiring more casuals, who earn a 20-25 per cent wage premium under most awards,[32] and (less flexible) incumbents losing bargaining power as the share of casuals increased.

2. In the least casualised industries (the bottom third), the policy change increased wages for both new entrants and incumbents (Figure 8B; Figure C.4). However, when we control for time invariant worker characteristics the wage benefits for new hires disappear (Table C.4), suggesting that firms may have simply been hiring better quality workers.[33]

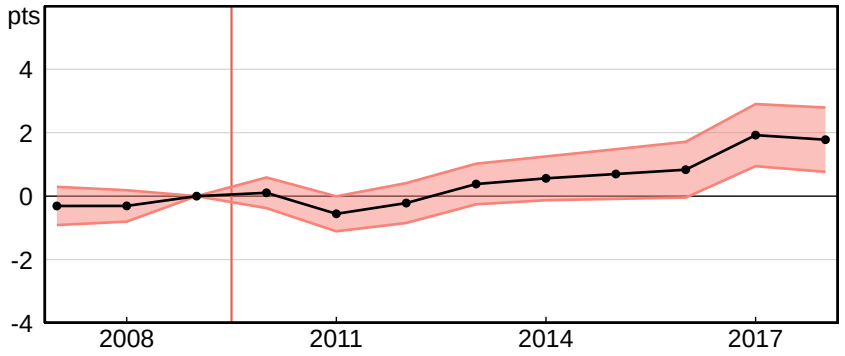
Why would firms hire better workers?

One explanation is that human capital and physical capital are complements, and firms increased their use of capital following the policy change (Figure 6). Consistent with this explanation, we find that the wage benefits for incumbent workers in these industries mostly accrued to high income and older workers who likely also had higher human capital (Table C.6).

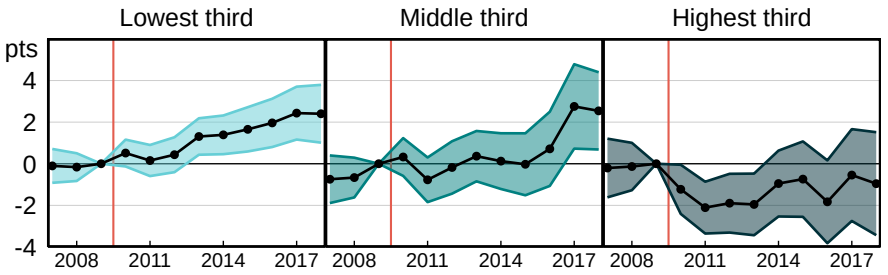
Figure 8: Effect on the wages of incumbent workers

Model estimates of log difference in incumbent worker wages*

A. All industries



B. By share of casual workers in industry



* The figure plots OLS estimates with 95% confidence intervals (shaded area). Values are multiplied by 100 for readability. Incumbent workers are workers who stayed employed at their firm over the reform period, from 2007 to 2014. The red line highlights the first financial year the FW Act was in effect. Standard errors are corrected for two-way clustering at the firm and worker level. Regressions include industry x year and firm fixed effects as well as a second degree polynomial for firm size interacted with treatment, a second degree polynomial for firm age and worker age, and a control for worker gender.
Sources: ABS; e61

[32] Under most awards and agreements, casual employees are paid a casual loading (a higher pay rate), or a specific higher pay rate for being a casual employee (Fair Work Ombudsman, 2023).

[33] Worker fixed effects control for time invariant worker characteristics (e.g. talent), but reduce the sample to workers who started at least two jobs during the period, which may bias our results.

Policy should support labour market dynamism and worker mobility

In some respects, the FW Act was a success: by tightening job dismissal laws, it reduced job separations and improved the wages of some workers. But there was no free lunch. Firm productivity declined. Casualisation may have also increased as firms exposed to the new laws altered their hiring behaviour, reducing the wages of incumbent workers in casualised industries.

While capital intensity rose in firms just above the 15-employee threshold, this did not necessarily raise aggregate output. Tighter dismissal laws may have simply crowded out investment elsewhere in the firm size distribution, which is plausible given the decline in capital reallocation to productive firms.[34]

Given our focus on job dismissal laws, we do not capture the full costs and benefits of the FW Act. By entitling the parents of young children to request a (reasonable) change in work arrangements, the FW Act benefited working mothers by reducing the child penalty in hours worked.[35] The FW Act may also reflect the public's revealed preference for greater job security, given the key role of industrial relations in the 2007 election.

While these potential benefits of the FW Act may be important, they should also be assessed against the subsequent macroeconomic deterioration. The 2010s was the weakest decade for productivity and wage growth in the past 60 years and was underpinned by a significant decline in job reallocation.[36] This raises questions about the unintended consequences of tighter unfair dismissal laws, and any societal preference for greater stability that may imply.

What do our results imply for policy?

First, firms are sensitive to changes in market regulations and can adjust in ways that carry unintended consequences. This is an important reminder at a time when Australia is debating significant changes to its industrial relations regime.

Second, any policy discussion about easing dismissal regulations should be viewed in the context of the broader social safety net. The United States is well known for having lax unfair dismissal laws and doing little to support displaced workers. Even from a purely economic efficiency standpoint, this lack of social protection is counterproductive if it undermines political support for flexible labour markets.

But other countries have struck a different balance. Denmark's "flexicurity" model pairs US levels of dismissal protection with a generous income safety net and spending on active labour market policies, and high collective bargaining coverage (84 per cent) and union density (66 per cent).[37] This allows Denmark to maintain a dynamic labour market, while minimising the costs of job dismissal.[38] The costs to finance these programs are also not concentrated on a single margin (as is the case with dismissal laws), but spread through the economy via higher taxation.

The Danish case suggests that stringent job dismissal regulations may not be the best way to protect workers against labour market risk. It also raises questions about the adequacy of JobSeeker and whether Australia has adequate retraining policies to manage the costs of creative destruction. Unfortunately, policy debates over the social safety net and labour market regulations tend to be conducted in isolation, ignoring the potential for policy complementarities.

Finally, policy makers should do more to target market frictions – such as non-compete clauses and occupational licensing – that hamper both firm productivity and workers' bargaining power. At least one in five Australian workers are subject to mobility sapping non-compete clauses, including many low-wage workers who lack bargaining power.[39] Reforms on this front would not entail an equity-growth trade-off: they would support worker transitions to higher paying jobs and productivity growth via firm entry, innovation and reallocation.

[34] Hambur and Andrews (2023)
[35] Ciasullo and Uccioli (2023)
[36] Productivity Commission (2021)
[37] Kreiner and Svarer (2022)
[38] Aghion et al. (2021).
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Appendix A: Institutional background

This section provides additional details on the changes made to unfair dismissal laws under i) the *Fair Work Act 2009* (Cth) (FW Act) ii) the Work Choices reforms to the *Workplace Relations Act 1996* (Cth) (WR Act) in late 2005 and iii) the WR Act. A more detailed summary of the legislative changes is provided by Chapman (2009), which our summary draws from heavily.

The FW Act made changes to four key aspects of dismissal regulations:

1) Exclusions from unfair dismissal

Table A.1 outlines exclusions from unfair dismissal laws under the WR Act, the amendments made by Work Choices to the WR Act, and under the FW Act. Under Work Choices, exclusions were updated to include dismissals for "genuine operational reasons." Operational reasons included reasons of an "economic, technological, structural or similar nature relating to the employer's undertaking, establishment, service or business" (e.g. cost cutting).

Work Choices also introduced an exemption for businesses with one hundred employees or fewer. This meant that a termination was not covered by unfair dismissal law where the employer employed 100 or fewer employees at the date of termination. This was the most significant of the new exemptions and it was estimated that it removed unfair dismissal protection from approximately 4.6 million (56%) employees in Australia.

Exclusions from unfair dismissal were wound back under the FW Act. The "genuine operational reasons" clause and 100-employee exemption were both removed. A new genuine redundancy provision was added along with an exclusion for non-award high income earners (defined using a threshold set by the Fair Work Commission).

The 100-employee exemption was replaced by an exemption for small businesses complying with a new Small Business Fair Dismissal Code (See Box A.1). A small business employer was defined as an employer with "fewer than 15 employees" at the time of dismissal. The 15-employee threshold was based on the number of employees in the common law sense, including the applicant and other employees being dismissed at that time, and casuals employed on a regular and systematic basis. Employees of associated entities were also included. Up to 1 January 2011, this count was based on a full-time equivalent basis, and afterwards on a head count basis.

Table A.1: Exclusions from unfair dismissal laws

Under the WR Act	Changes made by Work Choices	Changes made by the FW Act
• employees on fixed term contracts • employees serving a period of probation • short term casuals • some trainees • some employees in building, maritime and meat industries • non-award high income earners.	New exclusions added: • the termination was for genuine operational reasons • employer employed 100 employees or fewer • employee was serving the six months qualifying period • seasonal employees.	Exclusions updated to: • compliance by a small business employer with the Small Business Fair Dismissal Code • genuine redundancy • minimum employment period • non-award high income earners.

Box A.1: The Small Business Unfair Dismissal Code

The Code states that:

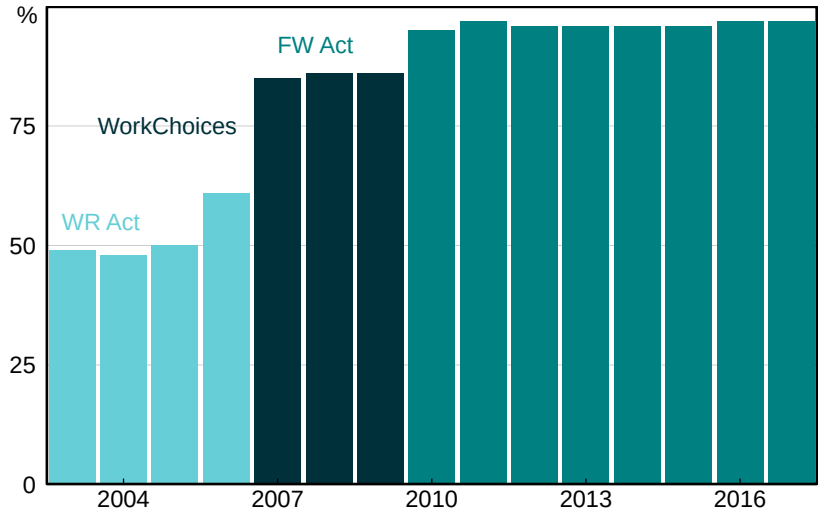
- It is fair to dismiss an employee without notice or warning when the employer believes on reasonable grounds that the employee's conduct is sufficiently serious to justify immediate dismissal.
- The Code defines serious misconduct as including 'theft, fraud, violence and serious breaches of occupational health and safety procedures' [and sexual harassment].
- The Commission does not have to make a finding, on the evidence, whether the conduct occurred.
- The Commission needs to find whether the employer had a reasonable belief that the conduct of the employee was serious enough to warrant immediate dismissal. It is not necessary for the Commission to determine whether the employer was correct in the belief that it held.
- For an employer to believe on reasonable grounds that the conduct of the employee was serious enough to justify immediate dismissal, the employer must establish that they did in fact hold the belief that the conduct: was by the employee; was serious and justified immediate dismissal.
- The employer must establish that they had reasonable grounds to hold the belief, which could be established by providing evidence of inquiries or investigations the employer undertook to establish their belief.

2) Expansion of federal coverage

Under the WR Act, coverage of unfair dismissal claims was shared evenly between federal and state industrial relations commissions (Figure A.1). Federal coverage increased under Work Choices as the legislation utilised the corporations' power of the constitution to cover claims extending beyond employees covered by federal awards and agreements. This effectively saw the removal of various state specific IR laws, including any protections for small businesses from unfair dismissal. Federal coverage increased further under the FW Act with the near-full transfer of state powers (excepting those over the state public service and agencies) to the Federal Government by all states except Western Australia.

Figure A.1: Federal coverage of unfair dismissal claims

Share of lodgements made to federal bodies



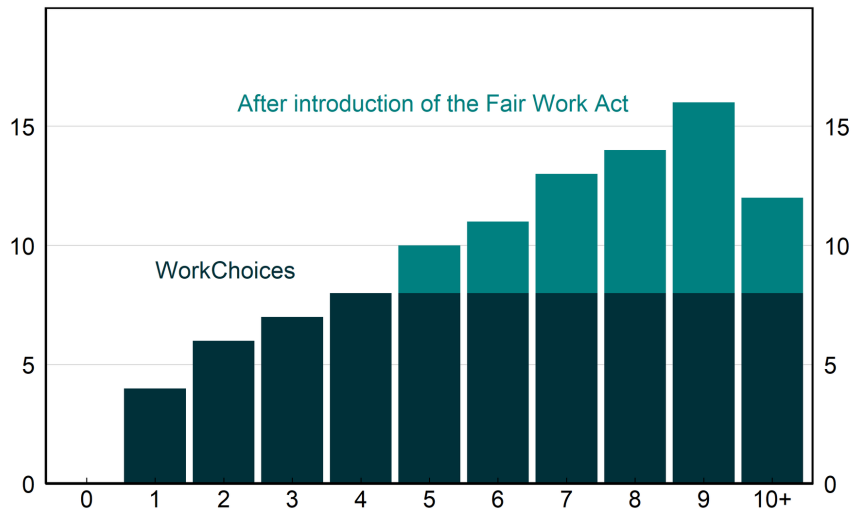
Sources: e61; Freyens and Oslington (2021)

3) Increase in severance pay entitlements

Under the WR Act, redundancy pay was a matter for the award system. Work Choices introduced important changes which allowed existing award provisions to continue, but largely limited them to employers with 15 or more employees. The FW Act updated this system as part of the new National Employment Standards and altered the redundancy pay totals employees were entitled to. These started at four weeks' pay for at least one year but less than two years' service, and rose to a maximum of 16 weeks pay for between nine and ten years' service. These were the same amounts as formulated in a 2004 AIRC test case on award provisions.

Figure A.2: Weeks of severance pay

Mandated minimum by worker tenure



Sources: e61; Fair Work Commission

4) Introduction of general protection provisions

The FW Act provided an additional avenue of action against employers who dismissed workers after a complaint or an attempt to exercise a (broadly defined) workplace right. These claims had uncapped compensation and placed the onus on the employer to show that the dismissal was not in response to a complaint.

Appendix B: Data

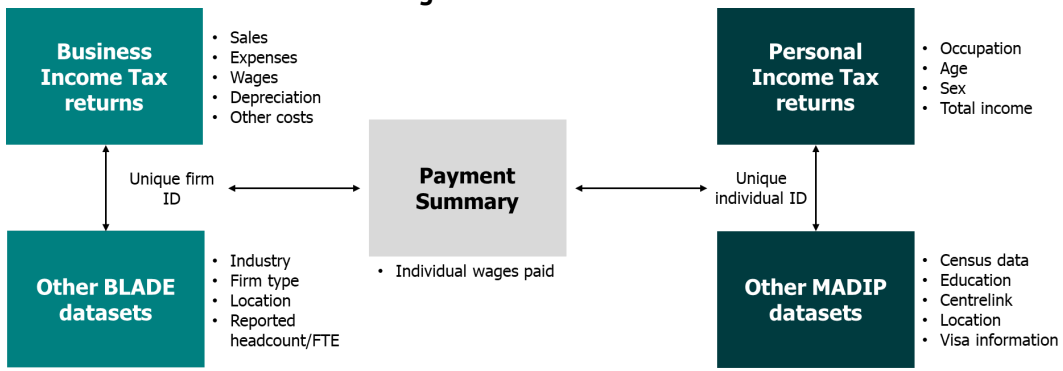
We construct a Longitudinal Linked Employee-Employer Dataset (L-LEED) of all jobholders using administrative data from BLADE (firm side) and MADIP (individual side) (Figure B.1).

For firms we draw information on sales and expenses from the Business Income Tax files, reported employment from Pay As You Go summaries and firmographics from business register information. For individuals we construct a spine based off Personal Income Tax data. We then merge in other information on workers from the MADIP demographic files.

We link workers to firms using firm-worker links provided by payment summary data, constructing a yearly panel dataset. This L-LEED covers the (financial year) period from 2002–03 to 2019–20.

To ensure comparability of nominal variables over time, we apply industry-level price deflators. We also undertake standard administrative data cleaning procedures, including winsorizing extreme values (the top and bottom 1 per cent) and dropping firms who report implausible values (e.g. negative cost of goods sold).

Figure B.1



We confine our analysis to the market sector excluding the utilities, education, public administration and safety, arts and recreation, and health industries. We also exclude the finance and insurance industries – where productivity is notoriously hard to measure – and the highly volatile commodities sectors such as agriculture and mining.

Finally, we generate new variables for our analysis. These are described in Table B.1.

Table B.1: Variable construction

Variable	Definition
Headcount	Firm headcount at the beginning of each financial year estimated using payment summary data on the total number of employees in the last financial year and the number of these employees who did not continue into the new financial year.
TFP	We estimate TFP using the approach suggested by Ackerberg, Caves and Frazer (2015) using Stata's *prodest* package.
Capital	Capital is measured as non-current assets.
Separations	A binary variable that takes the value 1 if a worker was employed by a firm this year, but is not employed by the firm next year.
New hires (accessions)	A binary variable that takes the value 1 if a worker was not employed by a firm last year, but is employed this year.
Wages	Wages are estimated as using PAYG data and are converted to annualised wages using employment start and end dates. Some values with implausible start and end dates are dropped.
Intermediate inputs	Intermediate inputs are measured as total expenses minus depreciation, interest, wages and other non-sales expenses.

Throughout our analysis we display results for different industry groups based on the share of their employees who are casual workers. We divide industries (ANZSIC Divisions) into three employment weighted terciles (thirds) based on the share of their employees who were employed on a casual basis in 2009 (the last year before the reforms). We estimate these casual shares using data from the HILDA Survey. Table B.2 outlines the ANZSIC Divisions which belong to each group. Note, as these are employment weighted terciles the number of industries in each group is not equal.

Table B.2: Industries by pre-reform share of casual workers

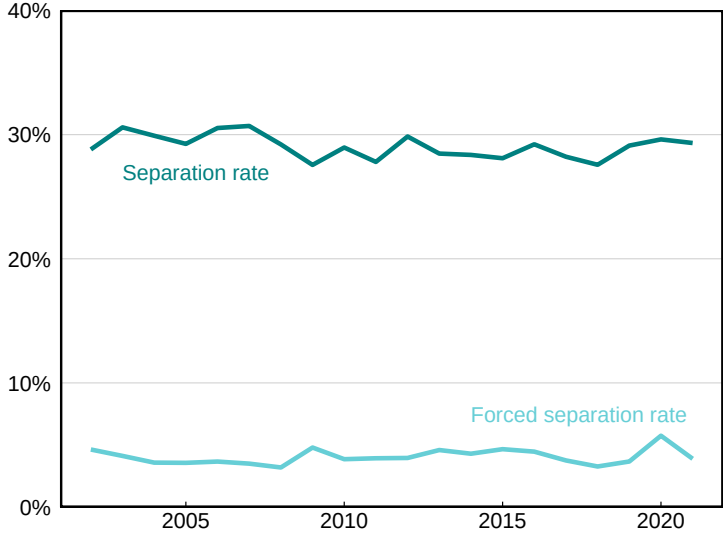
Tercile	ANZSIC Divisions
Lowest casual worker share	• Manufacturing • Professional Services • Wholesale Trade • Information, Media and Telecommunications
Middle	• Administrative and Support Services • Transport, Postal and Warehousing • Construction • Rental, Hiring and Real Estate Services
Highest	• Retail Trade • Accommodation and Food Services

Appendix C: Results and additional charts

This section provides a summary of our main DiD results (Tables C.1 to C.5) and additional charts to support our analysis. Of particular interest is Figure C.2, which plots our main results with a longer pre-treatment period. In this longer pre-treatment period there are some statistically significant differences between our treatment and control groups. However, many of these differences appear to coincide with the introduction of Work Choices in March 2006 (blue line), which reduced dismissal costs for firms with fewer than 15 employees relative to firms with 15 or more employees.

Figure C.1: Job separation rate, HILDA

Estimates from HILDA*

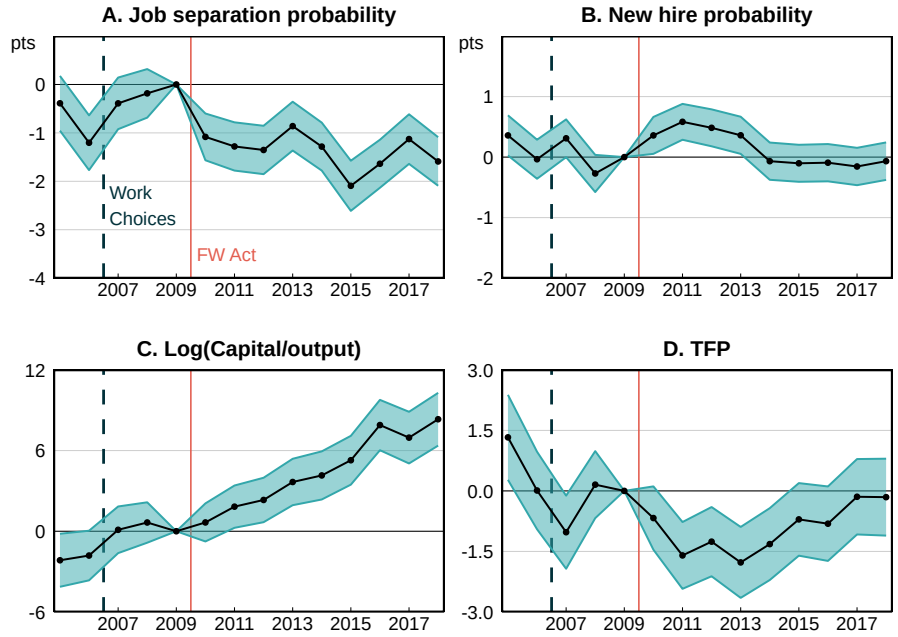


* Separations include all individuals who satisfy one of the following criteria: 1) Were fired or made redundant, 2) Changed jobs, 3) Retired from workforce, 4) Was employed last year and are now no longer employed, 5) Had two or more jobs last year, and now only has one, 6) Had no job at the time of the survey this year or last year, but earnt wage income during the year.
Sources: e61; HILDA Survey 21.0

For instance, the slight increase in capital to output ratios, new hire probability and the fall in TFP from 2006/07 to 2007/08 aligns with the introduction of Work Choices and the corresponding reduction in dismissal costs for small firms relative to large firms.

Figure C.2: Main results, longer time series

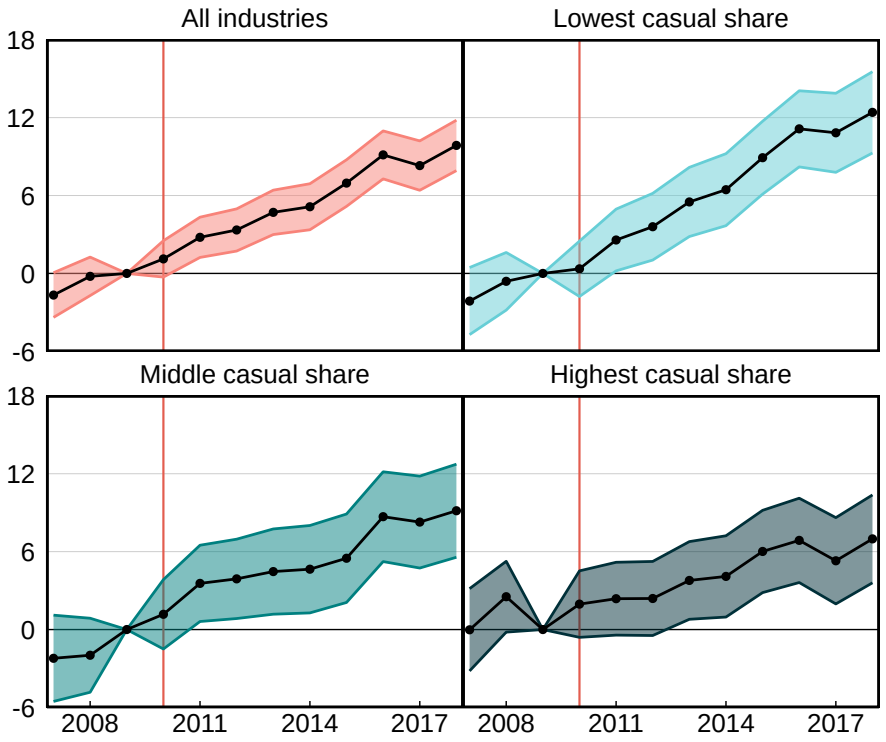
Model estimates of differences*



* The figure plots OLS estimates with 95% confidence intervals (shaded area). Values are multiplied by 100 for readability. The red line highlights the first financial year the FW Act was in effect. The blue line highlights the first full financial year the Work Choices amendments to the WR Act were in effect. All specifications include controls for a second order polynomial of firm size interacted with treatment (Firm size). Demographic controls include a second order polynomial of firm age for the firm level analysis as well as controls for worker age and gender for the worker level analysis. Standard errors are adjusted for clustering at the firm level (firm-level analysis) and two-way clustering at the firm and individual level (worker-level analysis).
Sources: ABS; e61

Figure C.3: Effect on capital (noncurrent assets)

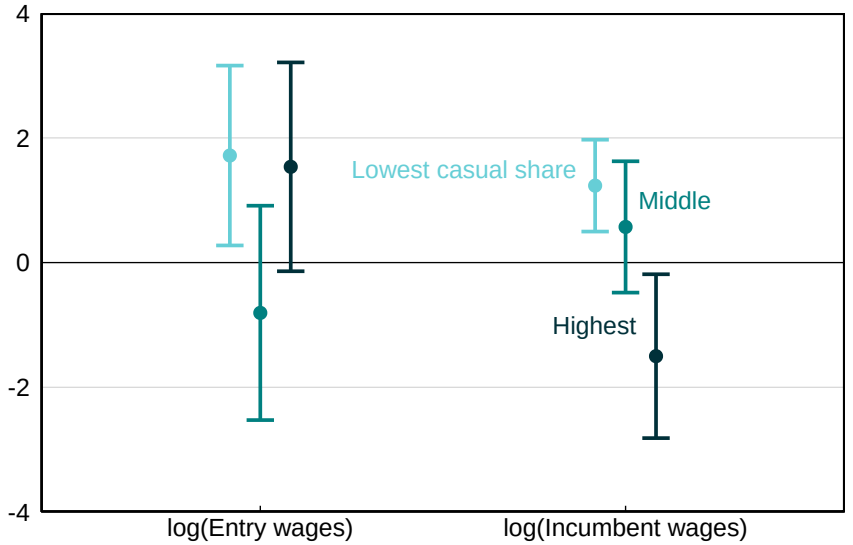
Model estimates of log difference*



* The figure plots OLS estimates with 95% confidence intervals (shaded area). Values are multiplied by 100 for readability. The red line highlights the first financial year the FW Act was in effect. Standard errors are corrected for clustering at the firm level. Regressions include industry x year and firm fixed effects as well as a second degree polynomial for firm size interacted with treatment and a second degree polynomial for firm age.
Sources: ABS; e61

Figure C.4: Effect on worker wages

Model estimates*



* The figure plots OLS estimates with 95% confidence intervals (shaded area). Values are multiplied by 100 for readability. The red line highlights the first financial year the FW Act was in effect. Standard errors are corrected for two-way clustering at the firm and worker level. Regressions include industry x year and firm fixed effects as well as a second degree polynomial for firm size interacted with treatment, a second degree polynomial for firm age and worker age, and a control for worker gender.
Sources: ABS; e61

Table C.1: Main regression results

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Separations	New jobs	log(Wages)	TFP	log(Capital)	log(Capital/Output)	log(COGS)	log(COGS/Output)
POST FW Act	-0.012***	0.001	0.009***	-0.012***	0.051***	0.033***	0.032***	0.008***
	(0.002)	(0.001)	(0.003)	(0.003)	(0.007)	(0.007)	(0.003)	(0.003)
Firm size	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry-year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Demographic controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R2	0.02	0.047	0.111	0.222	0.029	0.002	0.108	0.001
Within-R2	0.204	0.182	0.46	0.979	0.858	0.837	0.923	0.781
N	15,306,799	24,385,123	17,327,972	1,328,948	1,496,384	1,479,755	1,713,645	1,691,873

Notes: This table shows the OLS estimation of Equations 1 and 3. Intermediate inputs/Cost of goods sold (COGS) is defined as total expenses – (depreciation + interest + wages + other non-sales related expenses). All specifications include controls for a second order polynomial of firm size interacted with treatment (Firm size). Demographic controls include a second order polynomial of firm age for the firm level analysis as well as controls for worker age and gender for the worker level analysis. Standard errors are adjusted for clustering at the firm level (firm-level analysis) and two-way clustering at the firm and individual level (worker-level analysis). $*$ $p < 0.10$, $**$ $p < 0.05$, $***$ $p < 0.01$.

Table C.2: Results by industry casual tercile, worker outcomes

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Separations			New jobs			log(Wages)		
	Lowest	Middle	Highest	Lowest	Middle	Highest	Lowest	Middle	Highest
POST FW Act	-0.009***	-0.016***	-0.012***	-0.001	0.002	0.003	0.007*	0.019***	0.002
	(0.003)	(0.003)	(0.003)	(0.002)	(0.002)	(0.002)	(0.004)	(0.006)	(0.005)
Firm size	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry-year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Demographic controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Within-R2	0.019	0.017	0.023	0.052	0.039	0.050	0.129	0.086	0.120
R2	0.189	0.203	0.204	0.180	0.195	0.164	0.432	0.420	0.388
N	5,815,830	4,605,201	4,885,768	8,627,072	7,505,493	8,252,558	6,205,005	5,391,379	5,731,588

Notes: This table shows the OLS estimation of Equations 3. All specifications include controls for a second order polynomial of firm size interacted with treatment (Firm size). Demographic controls include a second order polynomial of firm age for the firm level analysis as well as controls for worker age and gender. Standard errors are adjusted for two-way clustering at the firm and individual level (worker-level analysis). * p < 0.10, ** p < 0.05, *** p < 0.01.

Table C.3: Results by industry casual tercile, firm outcomes

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	TFP			log(Capital)			log(Capital/Output)		
	Lowest	Middle	Highest	Lowest	Middle	Highest	Lowest	Middle	Highest
POST FW Act	-0.017***	-0.013**	-0.002	0.062***	0.056***	0.028**	0.041***	0.045***	0.009
	(0.005)	(0.006)	(0.006)	(0.011)	(0.012)	(0.012)	(0.011)	(0.012)	(0.012)
Firm size	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry-year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Demographic controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Within-R2	0.209	0.245	0.215	0.038	0.033	0.016	0.001	0.004	0.003
R2	0.983	0.958	0.942	0.851	0.872	0.859	0.823	0.845	0.849
N	513,264	419,560	396,124	577,566	474,821	443,997	569,741	468,735	441,279

Notes: This table shows the OLS estimation of Equations 1 and 3. All specifications include controls for a second order polynomial of firm size interacted with treatment (Firm size). Demographic controls include a second order polynomial of firm age for the firm level analysis. Standard errors are adjusted for clustering at the firm level. * p < 0.10, ** p < 0.05, *** p < 0.01.

Table C.4: Wage results by industry casual tercile, new entrants

	(1)	(2)	(3)	(4)	(5)	(6)
	Lowest tercile		Middle tercile		Highest tercile	
	Firm FE	Individual FE	Firm FE	Individual FE	Firm FE	Individual FE
POST FW Act	0.017**	-0.013	-0.008	-0.002	0.015*	0.013
	(0.007)	(0.017)	(0.009)	(0.019)	(0.009)	(0.02)
Firm size	Yes	Yes	Yes	Yes	Yes	Yes
Industry-year FE	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes		Yes		Yes	
Individual FE		Yes		Yes		Yes
Demographic controls	Yes	Yes	Yes	Yes	Yes	Yes
Within-R2	0.137	0.039	0.090	0.023	0.121	0.024
R2	0.517	0.973	0.491	0.964	0.462	0.951
N	653,981	653,981	585,076	585,076	638,675	638,675

Notes: This table shows the OLS estimation of Equations 3. New entrants are defined as workers who joined their firm in the previous financial year. All specifications include controls for a second order polynomial of firm size interacted with treatment (Firm size). Demographic controls include a second order polynomial of firm age for the firm level analysis as well as controls for worker age and gender. Standard errors are adjusted for two-way clustering at the firm and individual level (worker-level analysis). $*$ p < 0.10, $**$ p < 0.05, $***$ p < 0.01.

Table C.5: Wage results by industry casual tercile, incumbents

	(1)	(2)	(3)	(4)	(5)	(6)
	Lowest tercile		Middle tercile		Highest tercile	
	Firm FE	Individual FE	Firm FE	Individual FE	Firm FE	Individual FE
POST FW Act	0.017**	-0.013	-0.008	-0.002	0.015*	0.013
	(0.007)	(0.017)	(0.009)	(0.019)	(0.009)	(0.02)
Firm size	Yes	Yes	Yes	Yes	Yes	Yes
Industry-year FE	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes		Yes		Yes	
Individual FE		Yes		Yes		Yes
Demographic controls	Yes	Yes	Yes	Yes	Yes	Yes
Within-R2	0.137	0.039	0.090	0.023	0.121	0.024
R2	0.517	0.973	0.491	0.964	0.462	0.951
N	653,981	653,981	585,076	585,076	638,675	638,675

Notes: This table shows the OLS estimation of Equations 3. New entrants are defined as workers who joined their firm in the previous financial year. All specifications include controls for a second order polynomial of firm size interacted with treatment (Firm size). Demographic controls include a second order polynomial of firm age for the firm level analysis as well as controls for worker age and gender. Standard errors are adjusted for two-way clustering at the firm and individual level (worker-level analysis). $*$ p < 0.10, $**$ p < 0.05, $***$ p < 0.01.

Table C.6: Incumbent workers in the lowest casual tercile wage results, by age group and income tercile

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	By age group					By pre-reform income tercile		
	15 - 24	25 - 34	35 - 44	45 - 54	55+	Lowest income	Middle	Highest
POST FW Act	0.010	-0.004	0.009	0.018**	0.010	0.013	0.020***	0.024***
	(0.053)	(0.011)	(0.008)	(0.007)	(0.009)	(0.008)	(0.007)	(0.007)
Firm size	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry-year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Demographic controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Within-R2	0.155	0.077	0.134	0.106	0.099	0.094	0.125	0.11
R2	0.798	0.688	0.684	0.654	0.645	0.622	0.524	0.609
N	18,100	94,043	179,233	233,109	212,136	175,234	276,900	203,733

Notes: This table shows the OLS estimation of Equations 3 with separate regressions run for each group. Workers are assigned to income terciles based on their total income level in 2006 and their ranking within their age group. All specifications include controls for a second order polynomial of firm size interacted with treatment (Firm size). Demographic controls include a second order polynomial of firm age for the firm level analysis as well as controls for worker age and gender. Standard errors are adjusted for two-way clustering at the firm and individual level (worker-level analysis). * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Disclaimers

Business Longitudinal Analysis Data Environment (BLADE)

This paper uses unit record data held in the BLADE data environment which is hosted by the Australian Bureau of Statistics. The results are based, in part, on Australian Business Register (ABR) data supplied by the Registrar to the Australian Bureau of Statistics (ABS) under A New Tax System (Australian Business Number) Act 1999 and tax data supplied by the Australian Taxation Office (ATO) to the ABS under the Taxation Administration Act 1953. These require that such data are only used for the purpose of carrying out functions of the ABS. No individual information collected under the Census and Statistics Act 1905 is provided back to the Registrar or ATO for administrative or regulatory purposes. Any discussion of data limitations or weaknesses is in the context of using the data for statistical purposes, and is not related to the ability of the data to support the ABR or ATO's core operational requirements. Legislative requirements to ensure privacy and secrecy of this data have been followed. Only people authorised under the Australian Bureau of Statistics Act 1975 have been allowed to view data about any particular firm in conducting these analyses. In accordance with the Census and Statistics Act 1905, results have been confidentialised to ensure that they are not likely to enable identification of a particular person or organisation.

HILDA Survey Disclaimer

This paper uses unit record data from Household, Income and Labour Dynamics in Australia Survey [HILDA] conducted by the Australian Government Department of Social Services (DSS). The findings and views reported in this paper, however, are those of the authors and should not be attributed to the Australian Government, DSS, or any of DSS' contractors or partners. DOI:10.26193/24EJST