

Dismissal Costs and Their Impact on Employment: Evidence from Australian Small and Medium Enterprises*

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The influence of labour market regulation on employment is intensely debated across the OECD. In Australia, the focus is currently on the employment impact of recent changes to unfair dismissal provisions. There is surprisingly little research on the magnitude and structure of dismissal costs, and this paper presents new data from a major survey of small- and medium-sized Australian enterprises. Dismissal costs are compared for different types of separations, including redundancy, uncontested fires and complex fires. Using the data and a simple labour demand model, we estimate the direct employment impact of Australia's changes to unfair dismissal protection. The impact is found to be modest.

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I Introduction

The impact of hiring and firing costs on labour markets has been intensely debated across the OECD. In Australia, the focus is currently on the employment impact of recent changes to unfair dismissal provisions as part of the WorkChoices package. The Government has claimed that unfair dismissal provisions are a significant disincentive to firms taking on workers, and that this is especially so for small business. Removing unfair dismissal protection for employees of small and medium businesses is claimed to be the key to reducing unemployment below 5 per cent, and a figure of 77 000 new jobs has been widely quoted as the employment impact of exempting small business from unfair dismissal provisions.

However, in spite of the importance of the issue and intense debate, we have little evidence about dismissal costs. What are the main components of the costs and their relative magnitudes? How do they vary across industries and occupations? Does firm size matter? Finally, what impact do dismissal costs have

on employment, and what is the employment impact of proposed changes to unfair dismissal laws?

There is a large theoretical literature on the impact of costs of retrenchment/redundancy (i.e. dismissals for economic reasons) and less on the impact of costs of firing/dismissal for cause (i.e. disciplinary dismissals).¹ How might dismissal costs affect employment? Consider a profit-maximising firm that uses labour to produce output, which it sells at a price that varies over time depending on market conditions. Assume for simplicity that the wage is fixed and the firm can costlessly hire and fire workers. When economic conditions (and prices) are improving, the value of the output produced by workers rises and the firm hires more workers, and vice versa in economic downturns. If we now introduce separation costs, such as unfair dismissal provisions, the firm will only fire if the gap between the wage and the expected value of the worker's output exceeds the dismissal cost. If price shocks are modelled as transitory, dismissal costs will reduce firing during downturns, but will also reduce hiring during upturns (as firms foresee conditions will not always remain good and they will incur dismissal costs in the future). The net effect on labour demand of higher dismissal costs is ambiguous. Also, these costs may increase labour supply if they make employment more attractive. These theoretical ambiguities have made researchers sceptical about claims of large employment impacts of dismissal costs.

Resolving the employment impact of dismissal costs depends on data on the magnitudes of these costs, which is surprisingly scarce. Empirical investigations of the impact of these costs have sometimes used proxies for these hard-to-measure costs, such as indices constructed from characteristics of dismissal law.² Others have attempted to measure the costs by estimating dynamic labour demand models.³ Only a few studies directly measure dismissal costs.⁴

¹ See, for instance, recent surveys by Hamermesh and Pfann (1996), Bertola (1999), Nickell and Layard (1999) and Addison and Teixeira (2003). Oslington (2002) builds a simple model of the wage and employment impacts.

² For instance, Lazear (1990) used mandatory severance pay for a blue collar with 10 years of service from legal texts. Grubb and Wells (1993) and Botero *et al.* (2004) constructed measures of strictness from legal provisions.

³ For instance, Hamermesh (1989) and Hamermesh (1995) who concentrated on a single firm, and others who have attempted to estimate dynamic labour demand models from macro data.

⁴ For instance, Pfann and Verspagen (1989) who used firms' reported 'total costs of reorganisation'. Abowd and

This paper presents estimates of the costs of dismissal from a large-scale survey of small- and medium-sized Australian enterprises conducted in 2004. We examine three types of fires or dismissals for cause: (i) uncontested dismissals, for which we obtained information on time spent by management on the firing process and other administrative costs; (ii) dismissals settled through conciliation, which involved additional administrative and legal costs and sometimes a settlement payment; and (iii) dismissals that went to arbitration, which involved still further administrative and legal costs, as well as compensation and reinstatement costs if the employer lost the case. We also investigate redundancy costs, which consist of procedural costs and severance pay. A simple labour demand model is calibrated with our data on dismissal costs, along with existing data on job tenure, separation probabilities, and labour demand elasticity. This exercise generates bounds for the employment impact of the direct costs of dismissal as a whole, as well as the recent changes to unfair dismissal laws in Australia.

The next section briefly reviews the institutional context and explains our definitions of different types of separations. Section III describes the survey and sample. Sections IV and V present and discuss our survey estimates of the size and structure of costs of dismissals for cause, and redundancies. Section VI compares our results to the limited international evidence on the costs. Section VII estimates employment impacts and Section VIII concludes.

II Definitions and Background

The Australian Bureau of Statistics (ABS) does not provide standard definitions and terminology for dismissal costs, neither does any other statistical agency. Definitions for this study were established through a pilot survey in Canberra in 2002, trial interviews with businesses in Melbourne, Geelong and Sydney, and focus groups with human resource professionals from the Australian Human Resource Institute (AHRI) and Australian Chamber of Commerce and Industry (ACCI) in 2003.

Kramarz (2003) used outlay data from French wage surveys. Some Australian studies (Button, 1990; Abbott *et al.*, 1998; Harding, 2002) have a quantitative component. Del Boca and Rota (1998) is the study closest to our own. The most important quantitative studies are discussed and compared with our methods later in the paper.

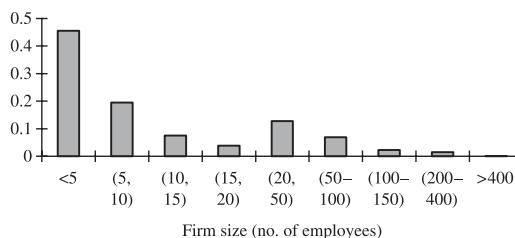
In this study, a redundancy (or equivalently a retrenchment) is an involuntary separation for reasons associated with the general economic environment (e.g. economic downturn, industry decline, business restructuring, and skill obsolescence due to technological change). Dismissals for cause (or fires) are involuntary terminations for reasons specific to the employee (e.g. absenteeism, poor performance, bad behaviour). These types of dismissals are distinguished from other separations such as quits and retirements.

Dismissals for cause are considered fair if for unsatisfactory performance, absenteeism or serious misconduct. Redundancies are in principle considered fair dismissal. Proper process must also be followed for dismissal to be considered fair. For other cases the law distinguishes between unlawful dismissal, which refers to situations where employees are dismissed without required notice provisions, warnings or explanation or for discriminatory reasons, and unfair dismissals, which are lawful terminations deemed 'harsh, unjust or unreasonable'. Employees who consider themselves unfairly dismissed can lodge a claim with the Australian Industrial Relations Commission (AIRC), or corresponding State bodies.⁵ At the Federal level the relevant legislation is subsection 170 CE of the *Workplace Relations Act 1996*, which was recently amended by the *Workplace Relations Amendment Bill (Fair Dismissal) 2004* that exempts businesses with fewer than 100 employees from these laws.

Unfair dismissal claims brought in 2003 to the courts numbered 15 523 comprising 6954 Federal and 8299 State (Senate Committee, Hansard, 14 June 2005). These claims may be resolved through conciliation, which happens in about three quarters of cases, or go to arbitration. Although the number of Federal unfair dismissal claims has steadied at around 7000 in recent years, fewer and fewer unfair dismissal claims are being arbitrated by the AIRC each year (552 cases in 2001–2002, 482 in 2002–2003, 429 in 2003–2004). As reported in AIRC (2005), employees win on average about half of the AIRC arbitrated cases.

⁵ There are some differences, for instance, although the Commonwealth and most States put a salary cap (ranging between \$A75 000 and \$A90 000) on the capacity to lodge an unfair dismissal claim; Tasmania does not. Western Australia and Tasmania also allow casual workers to lodge unfair dismissal claims. Overall though, the differences are not large, Victoria and the two territories follow the same laws as the Commonwealth. All States cap the damage award to 6 months.

FIGURE 1
Sample Distribution by Firm Size



III Survey Characteristics

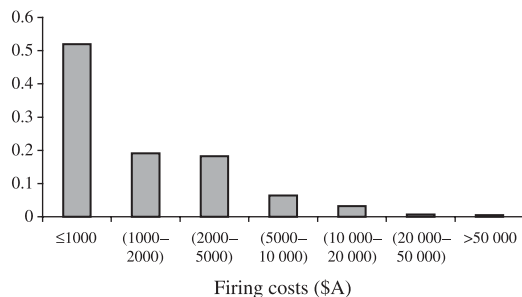
The survey consisted of telephone interviews conducted by Sensis in 2004 over an initial sample of 12 279 small and medium enterprises.⁶ Removing non-eligible responses and using the nomenclature for computer-assisted telephone survey reporting established by Bates and Dixon (2003), the response rates were 20.8 per cent (RR2), 22 per cent (RR4) and 24.2 per cent (RR6).

We obtained 1438 responses for general questions. Of these responses, 208 firms had retrenched workers over the last five years and 597 respondents had experienced fires: 439 of which were not disputed, 121 of which were resolved through conciliation, and 38 of which went to arbitration by courts. Voluntary separations such as quits and retirements were not surveyed. We considered both full-time and part-time permanent employees, but not casual employees and contractors. The size distribution of firms in the sample, shown in Figure 1, is strongly skewed towards small enterprises, and corresponds almost exactly to the sizes of firms affected by the proposed changes to unfair dismissal laws.

Our sample includes 11 Australian and New Zealand Standard Industrial Classification (ANZSIC) sectors of activity (manufacturing and most services, but not agriculture), including the nine major occupational groups of the second edition of the Australian Standard Classification of Occupations (ASCO), and all Australian States.

⁶ For details on the Sensis Business Index, the reader is referred to the longer working paper version of this article available at http://www.unsw.adfa.edu.au/sbus/pdfs/Dismissal_Costs.pdf.

FIGURE 2
Distribution of Firing Costs: Uncontested Dismissal



IV The Costs of Dismissal for Cause

(i) Uncontested Dismissals

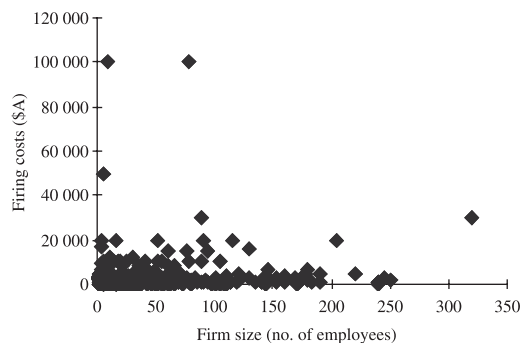
We find that the average cost of an uncontested dismissal is \$A3044, which represents 10.3 per cent of annual wage cost.⁷ Costs are presented relative to the annual wage cost rather than as an absolute dollar cost as many costs components are actually expressed in terms of wages, and it is convenient for comparisons, including comparisons across industries and skill groups with different wage levels, and across countries.

Uncontested dismissal costs comprise time spent writing warnings, obtaining managerial and legal advice, gathering evidence, documenting the dismissal decision, meeting with the employee to guarantee her right to respond to the charges, and meeting with union delegates. It also includes the time needed to take a decision with respect to poor performance or misbehaviour. Time spent is valued at management's hourly wage. We specifically exclude any costs associated with hiring a replacement worker.

Figure 2 presents a histogram of the cost of uncontested dismissal. The distribution is strongly

⁷ The average wage differs for each type of dismissal cost (\$A29 553 for uncontested dismissals, \$A46 104 for settlements, \$A41 190 for arbitration cost). This is because proportions of different occupations and industries differ between dismissal types. Wage data were obtained from ABS (2002a) and ABS (2001b) and comprise base pay, payment by measured result and overtime pay for full-time and part-time employees. The wage data for each dismissal type were weighted by the share of each job occupation and industry adjusted for firm size using wages by employer size from ABS (2002a). Patterns by industry and occupation are given in the longer working paper version.

FIGURE 3
Firing Costs by Firm Size: Uncontested Dismissal



skewed to the left and a majority of firms incur administrative and time dismissal costs below \$A1000. Figure 3 shows the relationship between the costs and firm size.

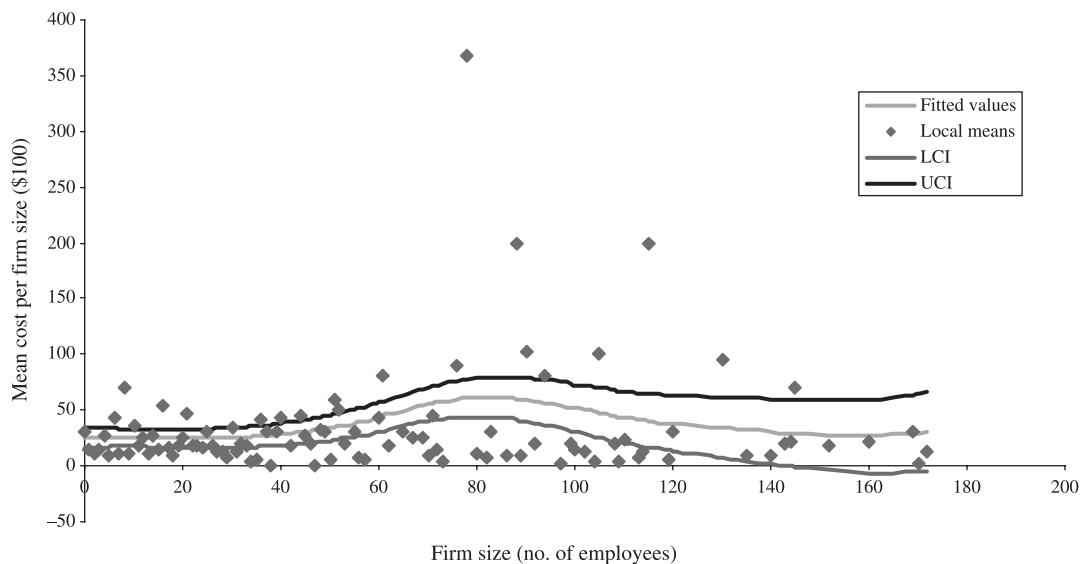
Inspection of Figure 3 suggests costs are insensitive to firm size; the correlation coefficient is low (0.1) and standard ordinary least-squares (OLS) regression yields a significant but mild positive relationship (P -values indicated in brackets, significance level 5 per cent):

$$\text{Cost} = 2341(0.00) + 17.8(0.02)\text{Size}$$

A referee was concerned the relationship may be non-linear. A robust test for non-linearities in the relationship is the local linear non-parametric method presented in Fan and Gijbels (1994) and Pagan and Ullah (1999), which is illustrated in Figure 4, in which data points are local means, not single observations as in Figure 3. The use of local means improves the visibility of the scatter plot and helps reduce the influence of outliers. Lower and upper confidence intervals (LCI and UCI) are shown. There is mild non-linearity; a slight hump for firms employing between 70 and 110 employees. Non-parametric estimation does not suggest any strong relationship between uncontested dismissal costs and firm size.

We have reservations on three outliers apparent in Figure 3. Costs of approximately \$A100 000 appear high, but each is for managers/professionals. They could be errors. On the other hand, firing highly skilled employees may involve considerable time valued by high senior executive wages. Reclassifying these from uncontested to conciliated or arbitrated dismissals in the analysis would considerably reduce time and administrative costs

FIGURE 4
Non-Parametric Regression of Uncontested Dismissal Costs on Firm Size



from 10.4 to 6.5 per cent of wage cost. In the absence of any other information the data was kept.

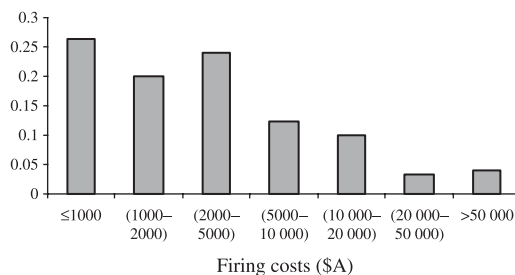
(ii) *Conciliated and Settled Dismissals*

If a dismissal for cause is contested as being unfair, the dispute may be resolved before court arbitration. Conciliation and settlement costs average \$A9780, which is 17.1 per cent of annual wage costs. These costs include the time cost of the conciliation process, the cost of obtaining legal advice, and any settlement payment to the dismissed employee. Adding this to the time and administrative cost (assumed the same as for an uncontested dismissal) gives an average total cost of a dismissal challenged by the employee but settled before court arbitration of \$A12 818, which is 27.7 per cent of the annual wage cost.⁸

Figure 5 presents the distribution of costs of conciliation and settlement (net of administration costs). Most cases are settled through conciliation

⁸ Again, because wages are specific to the skill/industry/firm size, the costs presented as proportions of annual wage cost are not additive. This is the reason for the discrepancy between absolute and proportional values when time and administrative costs are added to conciliation costs. The same holds for the data presented in the next sections.

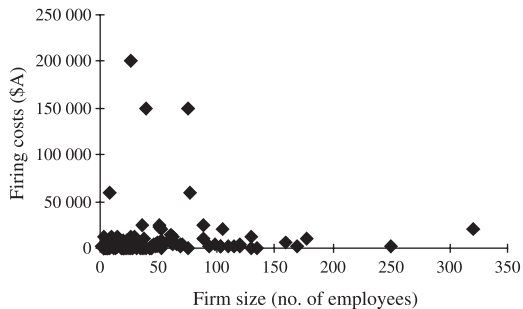
FIGURE 5
Distribution of Firing Costs: Conciliation Costs



and often end with no payment or only a small payment. We have no reason to believe that respondents excluded so-called 'piss-off money'. Figure 6 indicates that relatively small firms paid the highest settlement payments, but OLS regressions suggest no statistically significant relationship between payments and firm size (size coefficient 30, $P = 0.54$).

Local-linear non-parametric estimation, presented in Figure 7, displays mild non-linearities similar to those revealed in the previous subsection. There is again a hump-shaped relationship

FIGURE 6
Firing Costs by Firm Size: Conciliated Dismissals



between firm size and the costs of conciliated dismissals: the apex of the hump being located on firms employing between 70 and 90 employees and incurring an average cost of \$A20 000. The line estimator does not support the claim that costs are higher for small firms. Note that our survey asks specifically about time spent on dismissals as well as outlay costs, and costed time is included.

(iii) Dismissals that Go to Arbitration

The average cost associated with a dismissal challenged by the employee and arbitrated is

\$A11 661 and represents 25.3 per cent of annual wage cost. Adding time and administrative cost of dismissing the employee gives \$A14 705, which is 35.7 per cent of annual wage cost. Figure 8 presents the histogram for the costs of an arbitrated dismissal (net of administration costs).

Again, we have reservations on two outliers of \$A150 000 for managers and professionals in manufacturing and finance. Compensation being capped to 6 months, it would take considerable legal and time costs to reach such figures. For similar reasons to previous sections, outliers have been kept. Figure 9 reports the costs by size of the establishment: as for previous costs, arbitration costs are not systematically related to firm size (OLS size coefficient 20, $P = 0.8$, whereas non-parametric estimation for local means, shown in Figure 10, also suggests little relationship between the two variables⁹).

Of the 597 dismissals for cause, reported by firms surveyed only 38 (or 6 per cent) ended up in courts. Plaintiff success or failure was not

⁹ Figure 10 is provided by specific request of a referee. The number of observations in Figure 10 is very low and the local linear estimator yields unbounded confidence intervals bandwidth. We therefore use and report the results of LOWESS line estimation. The figure does not appear to offer much information on the relationship. We urge particular caution in any use made of its contents.

FIGURE 7
Non-Parametric Regression of Conciliation Costs on Firm Size

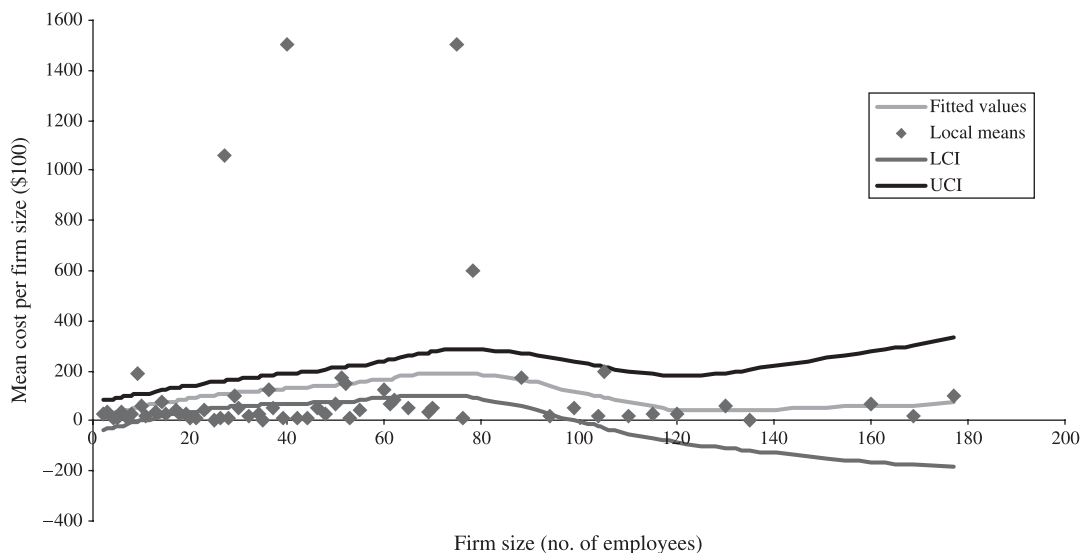


FIGURE 8
Distribution of Firing Costs: Arbitration Costs

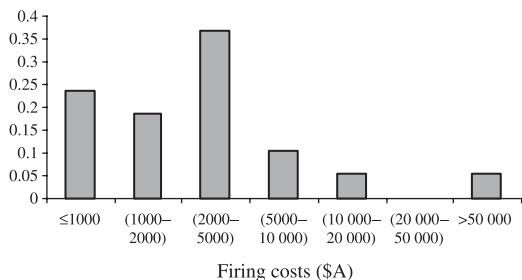
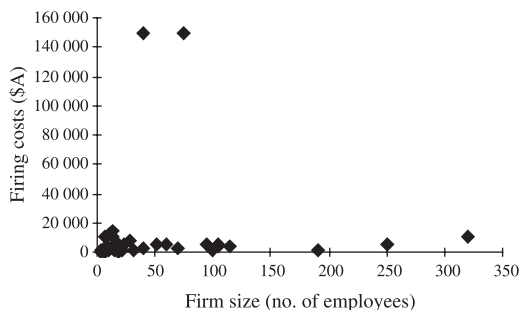


FIGURE 9
Firing Costs by Firm Size: Arbitration by Courts



reported in the survey, but costs give some indication of success rates. On the assumption that a payment greater than \$A3000 is a success, the plaintiff success rate is about 50 per cent, which is in line with AIRC statistics for 1999–2004.

What are the types of workers that predominantly go to court? Of the court cases present in our sample, clerks lodged a third; labourers, machine operators and drivers another third; and tradesman and managers and professionals a sixth. The small number for professional may indicate that the stigma cost of an unfair dismissal case is

more of a deterrent for them. Higher claim rates for other occupations may be related to higher unionisation rates, if unions are pushing workers to claim, and to go to court. It is interesting that professionals obtained the largest payouts in our sample, even as a proportion of wages, suggesting that they are better at picking cases they are likely to win, and getting this outcome. Further work is required on the characteristics of workers who win unfair dismissal claims to make judgements about the income distribution implications of changes to unfair dismissal regulations.

FIGURE 10
Non-Parametric Regression of Arbitration Costs on Firm Size

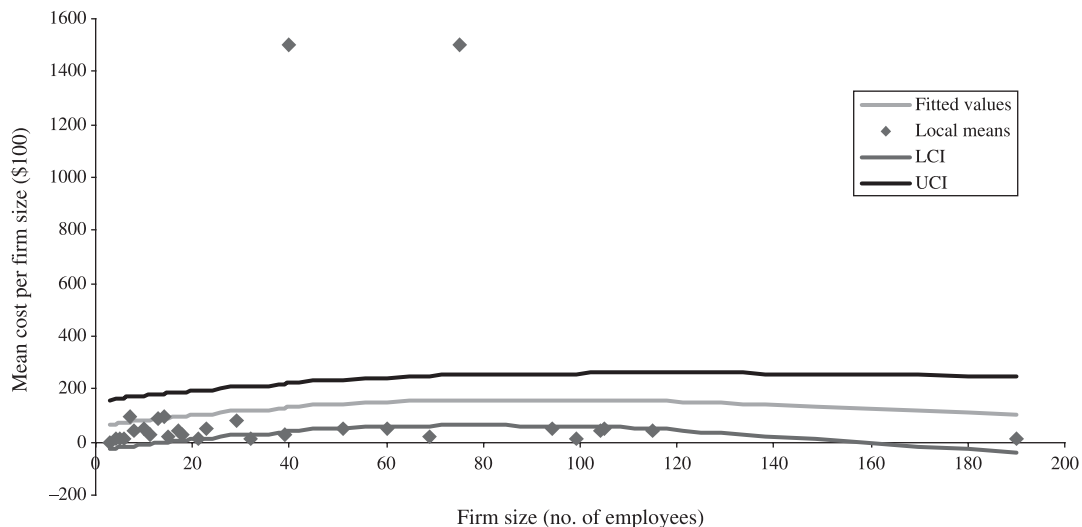
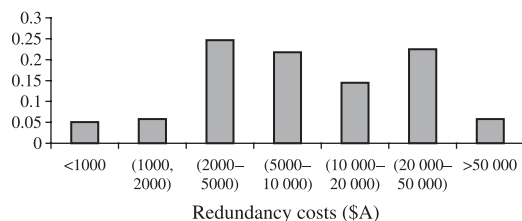


FIGURE 11
Distribution of Redundancy Costs



V Redundancy Costs

Average redundancy cost in the sample is \$A18 900, which is 35.8 per cent of annual wage cost. Redundancy cost has two components. First, procedural cost, which consists of the time spent by management selecting which workers to retrench, outplacement costs, and the clerical work in notifying selected employees and working out separation packages. It also includes costs such as the time spent consulting with all the parties involved (unions, workers, government agencies, etc.) and the cost of separation-related industrial disputes (such as a strike), which can be considerable when negotiations fail. On average, this procedural cost component is \$A4005 or 10.1 per cent of annual wage cost. The second component of redundancy cost is severance pay, payments in lieu of notice, and any extra payment made to arrange a swift and trouble-free separation. This component averages \$A17 530 or 25.3 per cent of annual wage cost. In the survey severance costs were carefully defined to exclude annual leave, long-service leave, sick leave entitlements and accrued bonuses.

Figure 11 presents the histogram of redundancy costs in the sample of firms surveyed, which is much more centrally distributed than dismissal costs. As for firing costs, white-collar workers (with equivalent tenure) are more costly to retrench than other types of workers, but otherwise severance payments do not increase in the skill level.

In our sample, we repeatedly observed severance payments above the minimum required (based on minimum standards recently set by the AIRC¹⁰). This may be due to employer generosity, a concern for fairness, maintaining reputation, agreements above the minimum or the so-called 'piss off money' referred to in parliamentary

¹⁰ As stated, for example, in AIRC (2004).

debates (e.g. Hansard, House of Representative, 21 February 2002). Large redundancy payments may also be fires renegotiated as redundancies. Renegotiation can be in the interest of both parties to avoid payments to third parties such as lawyers, the stigma for workers of being fired that hurts future job prospects, reputational losses for companies, etc.

VI International Comparisons

Comparisons of costs with other countries are difficult because dismissal regulations and other features of labour markets vary greatly between countries. The presumption in the USA is firing for 'good cause, bad cause or no cause at all', although some US states have introduced mild regulation (Autor *et al.*, 2004). At the other end of the scale some European countries have extremely onerous notice, approval, reinstatement and payout provisions as described in Buechtemann (1993), Grubb and Wells (1993) and OECD (1999).

Aside from these variations, international comparisons are hampered by a dearth of studies. The only other study similar to ours is Del Boca and Rota (1998), who analysed hiring and firing costs in 61 northern Italian manufacturing firms.¹¹ They reported that average firing costs (without reinstatement) for a representative firm employing 50 as ranging from less than half to over 20 months of labour costs, which expressed in units comparable to our Australian survey, is between zero and approximately 14 months' wage. An average unfair dismissal case lost by the employer with court order to pay compensation and reinstatement costs between 5 and 12 months' wage (i.e. between 42 and 100 per cent of the wage cost, plus legal dispute costs). This is much higher than the average Australian values found in our survey, although expected because of Italy's more stringent regulations.

VII Employment Impacts

As discussed in the introduction, the Australian Government has introduced legislation to exempt small businesses employing fewer than 100 employees from unfair dismissal laws.

¹¹ Despite different rankings in international comparisons of the strictness of employment protection between Italy and Australia, Bertola *et al.* (2000) found little difference between the two countries in terms of number of unfair dismissal cases brought to court, ratio of cases won by dismissed employees, definition of unfair dismissal and extent of reinstatement.

One figure quoted by the Government (when the threshold was 20 employees) as the employment impact of this change was 53 000 jobs. This figure arose from responses to an opinion survey, the CPA (2002) Small Business Survey, in which 5 per cent of business respondents recognised unfair dismissal laws as an impediment to hiring new staff. Assuming that each respondent would hire one extra worker if the laws were relaxed and weighing up to the population yielded an estimate of 52 575 new jobs.

The 77 000 figure frequently quoted by the government comes from Harding (2002), a study commissioned by the Department of Employment and Workplace Relations, in which 1802 employers were surveyed through the Yellow Pages Business Index (a precursor to the Sensis® Business Index). Harding notes that a small proportion of employers nominate unfair dismissal provisions as an impediment to employing staff and, rightly in our view, argues that this does not give much useful information about their impact. To estimate the employment effect of the provisions, Harding instead considers respondents with no employees who previously had employees, and seeks the reasons for the change. Adding up the previous employees of respondents who nominated unfair dismissal provisions as playing a major role in the change, and factoring up to the population yields an estimated employment loss of 34 812. Adding and factoring up for those who nominated unfair dismissal provisions as playing a medium to weak role yields 77 482. These figures are not nearly as prominent in Harding's report (which concentrates on human resource policies and effects on equity) as government's promotion might suggest, nor are Harding's caveats much discussed. Harding's survey also included a question about the quantitative impact of unfair dismissal laws on business costs per year (this is Q18), which follows a series of questions (Q12–Q17, see Harding, 2002, for details) about components of costs. Applying a labour demand elasticity of 0.7 to reported impact on business costs suggests a negative impact on employment of 0.46 per cent. If total employment is about 9 million, this translates to 41 400 jobs. Harding discusses some caveats to this 0.46 per cent estimate, but additionally we consider that the generality of the cost question makes it difficult to know what costs exactly firms are reporting. The business cost question does not ask specifically about costs of dismissal. It is not clear whether it captures opportunity costs such productivity losses from retaining unproductive workers.

Although a valuable study, it was not designed to address and does not resolve the issue of the employment impact of unfair dismissal provisions.

Another survey that considers employment impacts is Robbins and Voll (2004), who interviewed 594 small business representatives in the Albury/Wodonga area, asking a number of questions about their perceptions of unfair dismissal laws. When asked for the main factor in decisions about employing staff 5.5 per cent of respondents nominated unfair dismissal laws. They also asked for information about costs, but did not obtain useable responses. Their very different interpretation of seemingly similar respondent opinions to previous surveys illustrates one of the problems of opinion surveys. Another is the limited reliability of qualitative information when respondents have an economic interest in the issue on which they are expressing an opinion (Boulier and Goldfarb, 1998). Qualitative employer opinion surveys are not a suitable instrument for assessing levels and employment impacts of dismissal costs.

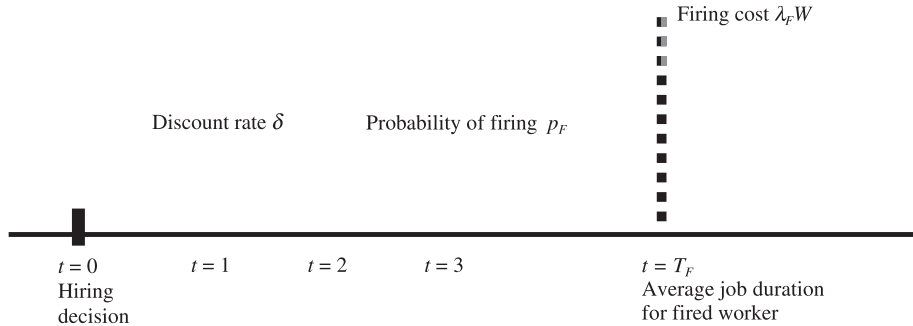
Our study uses quantitative information about dismissal costs from our survey in conjunction with other publicly available information to derive employment impacts to calibrate a labour demand model. We believe that this yields more reliable estimates than other methods of the direct impact of exempting small businesses from current Australian unfair dismissal laws. Our calibration utilises a simple model, which incorporates important elements of the more complex Bentolila and Bertola (1990) and Bertola (1990) models sketched in the Introduction.

We focus on the employment impact of the additional labour costs that flow from unfair dismissal provisions, and do not consider the indirect impacts such as productivity losses from retaining workers who may have been otherwise fired, or reductions in worker effort flowing from dismissal costs. In our simplified model, profit-maximising firms set employment to equate the marginal product of labour with the sum of the wage and the expected present value of dismissal costs. Firing costs are not incurred with certainty, and their expected present value depends on the probability that a worker will be fired, the expected duration of employment before firing, and the discount rate. Wages are taken as given by the firm. This is represented in Figure 12.

The expression for the expected present value of firing costs is:

$$EPV[F] = \frac{p_F \cdot \lambda_F}{(1 + \delta)^{T_F}} \bar{W} \quad (1)$$

FIGURE 12
Discounting Uncertain Future Firing Costs



Retrenchment is analogous:

$$EPV[R] = \frac{p_R \cdot \lambda_R \bar{W}}{(1 + \delta)^{T_R}} \quad (2)$$

where p_F and p_R are the probabilities, λ_F and λ_R denote firing and retrenchment costs relative to wages, \bar{W} is the average wage, δ is the discount rate and T_F and T_R indicate average job duration at time of dismissal.

Using expected present value of firing costs in expression 1 as ΔW in the standard formula for the wage elasticity of labour demand (η) yields:

$$\Delta L^D = \frac{\eta \bar{L} \cdot \left(\frac{p_F \cdot \lambda_F}{(1 + \delta)^{T_F}} \right)}{1 + \frac{p_F \cdot \lambda_F}{(1 + \delta)^{T_F}} + \frac{p_R \cdot \lambda_R}{(1 + \delta)^{T_R}}} \quad (3)$$

And using expression 2 for the expected present value of retrenchment costs yields:

$$\Delta L^D = \frac{\eta \bar{L} \cdot \left(\frac{p_R \cdot \lambda_R}{(1 + \delta)^{T_R}} \right)}{1 + \frac{p_F \cdot \lambda_F}{(1 + \delta)^{T_F}} + \frac{p_R \cdot \lambda_R}{(1 + \delta)^{T_R}}} \quad (4)$$

The employment impact of repealing employment protection laws thus emerges as a function of a few parameters for which estimates are available from our survey, AIRC and State courts reports, ABS data, and labour demand studies in the literature. We posit plausible values for the only unknown parameter, the discount rate. Parameters values used to calibrate the model are presented in Table 1.

Some of the parameters come directly from the source, while others have been constructed from the data in the source as follows:

Retrenchment and fire probabilities: the starting point for computing the probability that a hired worker will be retrenched or fired in the future is the yearly incidence of separations reported by the AIRC and State courts (contested dismissals) and by the ABS Retrenchment and Redundancy Survey¹² (uncontested dismissals). If the annual probability of retrenchment is ap_R , firing ap_F , quit ap_Q and retirement ap_M , then the probability that a job spell will end in retrenchment is the geometric progression:

$$P_R = \sum_{t=1}^{\infty} ap_R (1 - ap_F - ap_R - ap_Q - ap_M)^{t-1} \\ = \frac{ap_R}{ap_F + ap_R + ap_Q + ap_M} \quad (5)$$

¹² Another source of probabilities is the Labour Force Mobility Survey (LMS) (ABS, 2002b). Compared to the Retrenchment and Redundancy Survey (ABS, 2001a) it provides less detail on separations, especially reasons for separations. The LMS asks about retrenchment indirectly and discussions with ABS staff lead us to believe the LMS data on retrenchment is less appropriate than the Retrenchment and Redundancy data.

At the 2005 Australian Labour Market Workshop, it was suggested that the Australian Workplace Industrial Relations Survey (AWIRS, see Morehead *et al.*, 1997) could be another source of probabilities. However, the AWIRS data are missing small workplaces affected by the proposed changes, and reported separations always include casuals, and so is unsuitable for our purposes. Note that our survey could not be used to derive dismissal probabilities because we only asked whether the firm fired, not the number of fires.

TABLE 1
Parameter Values

Parameter	Value	Year	Source
Retrenchment probability (P_R)	0.137	1998–2001	ABS (2001a)
Probability of dismissal for cause (P_F)	0.0323	1998–2001	ABS (2001a) and courts
Probability of uncontested dismissal (P_{FU})	0.01893	1998–2001	ABS (2001a)
Probability of contested dismissal (P_{FCA})	0.0133	2003	AIRC and State courts
Probability of conciliated dismissal (P_{FC})	0.01292	2003	AIRC and State courts
Probability of arbitrated dismissal (P_{FA})	0.00042	2003	AIRC and State courts
Annual probability of retrenchment (ap_R)	0.0175	1998–2001	ABS (2001a)
Annual probability of fire (ap_F)	0.004	1998–2001	ABS (2001a)
Annual probability of quits (ap_Q)	0.046	2001	ABS (2002b)
Annual probability of retirement (ap_M)	0.06	2001	ABS (2002b)
Average tenure at time of retrenchment (T_R)	5.8	1998–2001	ABS (2001a)
Average tenure at time of firing (T_F)	3.6	1998–2001	ABS (2001a)
Average total redundancy cost (λ_R)	0.353	1999–2004	Our survey
Average procedural redundancy cost (λ_{RP})	0.101	1999–2004	Our survey
Average redundancy pay (λ_{RS})	0.253	1999–2004	Our survey
Average cost of uncontested fire (λ_{FU})	0.103	1999–2004	Our survey
Average gross cost of conciliated fire (λ_{FUC})	0.277	1999–2004	Our survey
Average gross cost of arbitrated fire (λ_{FUA})	0.357	1999–2004	Our survey
Average net cost of conciliation (λ_{FC})	0.171	1999–2004	Our survey
Average net cost of arbitration (λ_{FA})	0.253	1999–2004	Our survey
Average annual wages (W)	32 698	2001	ABS (2002a)
Discount Rate (δ)	0.05	:	:
Wage elasticity (η)	0.7	Long-run	Lewis and MacDonald (2002)
Aggregate employment ($\bar{L}_{1999-2000}$)	8 913 950	1999–2000	ABS (2001b)

The same process can be used to derive the probability that a job spell will end in uncontested dismissal or conciliated or arbitrated dismissal. For instance, the probability that a spell will end in a contested fire starts from the annual number of unfair dismissals claims lodged with the AIRC and State courts (15 253 cases in 2003), which divided by aggregate employment yields $ap_F = 0.00154$ to which we apply Equation 5 to derive $p_{FCA} = 0.0133$.

Average tenure at time of separation: average job duration is taken from the ABS Retrenchment and Redundancy Survey 2001, excluding durations of separations for ill health and injury and all types of dismissals for cause. As in Wooden (1998), we set the average of the 20+ job duration class at 25.

Average dismissal costs are the costs reported in Sections 2 and 3 of our survey.

Aggregate employment covers the years 1999–2000 to be consistent with the sources used for firing and retrenchment probabilities.

Average annual wages are weighted to reflect the relative importance of industries, job occupations and firm size in the survey. Note that the

average wage is used to compute expressions 1 and 2, but cancels out of the employment impact expressions 3 and 4.

Discount rate: $\delta = 0.05$ is our posited required return on firm's investments. We experiment with other values such as $\delta = 0.03$ and $\delta = 0.07$, which are standard albeit relatively conservative values.

Wage elasticity: $\eta = 0.7$ is taken from Lewis and MacDonald (2002), who provide a study of long-run labour demand elasticity with respect to real wages in Australia. We also experimented with the two bounds of the elasticity range: $\eta = 0.8$ and $\eta = 0.6$.

There is an issue with applying a standard wage elasticity to dismissal costs, as a wage increase changes costs to the firm for many years into the future while dismissal cost is a single payment. If the wage increase due to the threat of future firing costs is a perpetuity, then it could be argued that an elasticity of η/δ rather than η should be applied to the expected present value of dismissal cost. Using an adjusted elasticity would reduce the estimated impacts of dismissal costs on employment substantially below those we report.

TABLE 2
Employment Effect of Conciliation and Arbitration Costs of Dismissal for Cause

	$\eta = 0.8$	$\eta = 0.7$	$\eta = 0.6$
$\delta = 0.03$	14 220	12 443	10 665
$\delta = 0.05$	13 316	11 652	9 987
$\delta = 0.07$	12 483	10 922	9 362

Our estimate of the direct effect of the proposed Australian policy changes if applied to all firms assumes that time and administration costs remain, so that exempting firms from unfair dismissal legislation eliminates only conciliation and arbitration costs. This estimate is given in Table 2, which evaluates expression 3 where:

$$\lambda_F = \left[\frac{P_{FC}}{P_{FCA}} \lambda_{FC} + \frac{P_{FA}}{P_{FCA}} \lambda_{FA} \right] \quad (6)$$

We estimate that repealing Federal and State unfair dismissal laws for all Australian firms, regardless of size, would create 11 652 jobs. This is about 0.1 per cent of total employment in Australia. As indicated in Table 2 our estimate is not greatly affected by plausible changes of the discount rate and labour demand elasticity. Also, our estimates should be seen as upper bounds of the direct employment impact because we have excluded zero cost responses to the survey (including them would reduce the average cost estimates), high cost outliers were kept, and we used an unadjusted wage elasticity.

The changes proposed to Australian unfair dismissal laws, however, only apply to a proportion of Australian firms. Only firms with fewer than 100 employees seem likely to be affected, and it is unclear whether those currently under State jurisdiction will be affected. Table 3 adjusts employment impact estimates for proportions of employment affected by various possible changes to unfair dismissal laws. Employment shares of 36 per cent for firms employing fewer than 20 workers and 51 per cent for firms employing fewer than 100 workers are calculated from the ABS Small Business in Australia Survey, ABS (2001c), with total employment from ABS (2001b). Barrett (2003) quotes a government estimate that 34 per cent of workers were covered by Federal legislation in 2001. Table 3 gives our adjusted estimates of the employment impact of various possible changes to unfair dismissal provisions.

TABLE 3
Employment Impact of Exempting Different Segments of the Labour Force from Unfair Dismissal Legislation

Exempt firms < 20		Exempt firms < 100		Exempt all firms	
%	Impact	%	Impact	%	Impact
12	1398	17	1981	34	3 962
36	4199	51	5973	100	11 652

TABLE 4
Employment Effect of Removing All Costs of Dismissal for Cause

	$\eta = 0.8$	$\eta = 0.7$	$\eta = 0.6$
$\delta = 0.03$	34 735	30 393	26 051
$\delta = 0.05$	32 533	28 466	24 400
$\delta = 0.07$	30 502	26 689	22 876

The employment gains from removing the direct costs generated by unfair dismissal protection are likely to be small: around 6000 jobs if we assume all firms with fewer than 100 employees will be affected.

Another exercise, not directly related to the current policy controversy, is to estimate the employment impact of all direct costs of dismissal for cause for all Australian firms, including the time and administrative costs of uncontested and contested dismissals. Our estimates are given in Table 4, which evaluates expression 3 with:

$$\lambda_F = \left[\frac{P_{FU}}{P_F} \lambda_{FU} + \frac{P_{FC}}{P_F} \lambda_{FUC} + \frac{P_{FA}}{P_F} \lambda_{FUA} \right] \quad (7)$$

Besides dismissal for cause which is the focus of our paper, the survey collected data on redundancies, allowing us to estimate the direct employment impact of these costs. The impact of removing severance and notice payment components of redundancy costs (leaving administration costs) is given in Table 5, which evaluates expression 4 where:

$$\lambda_R = \lambda_{RS} \quad (8)$$

Redundancy regulations would seem to have a far larger impact on employment than unfair dismissal regulations. However, it would be irresponsible to quote the Table 5 estimates as

TABLE 5
Employment Effect of Removing Severance Pay and Notice Requirements

	$\eta = 0.8$	$\eta = 0.7$	$\eta = 0.6$
$\delta = 0.03$	200 692	175 605	150 519
$\delta = 0.05$	180 047	157 541	135 035
$\delta = 0.07$	161 801	141 576	121 351

likely impact of redundancy policy changes for the following reasons:

- 1 Redundancy payments would be likely to continue, even if no longer mandatory. Such payments existed before legislation. We found evidence in the survey of substantial payments above required amounts, to maintain fairness and firms' reputations. This argument has less force for unfair dismissal, as firms are less likely to make additional voluntary payments to workers dismissed for shirking or misbehaviour.
- 2 Abolishing severance pay and notice requirements would decrease the discounted value of expected wages and one would expect workers to individually or collectively bargain higher wages to compensate for this shortfall. This argument would not apply to the removal of unfair dismissal legislation as workers trying to negotiate higher wages on the basis of expected dismissal for poor performance would send an unhelpful signal to an employer assessing their uncertain productivity.
- 3 The interaction between redundancy provisions and bankruptcy law matters a great deal for small business, and needs to be modelled.
- 4 We have ignored the business cycle in estimating the impact of unfair dismissal provisions (which are in principle unrelated to economic indicators), but this matters a great deal for retrenchments, and needs to be explicitly modelled.

For these reasons, we believe that Table 5 greatly overstates the possible employment gains from moving to 'retrenchment at will' policies. However, retrenchment is not the main focus of this paper and investigation is left to future research.

VIII Conclusions

Our study provides estimates of the costs of dismissal for cause between 1 and 4 months' wage cost and of redundancy costs around 4 to

5 months' wage cost. There is substantial variation between industries and occupations, with costs increasing in a patchy way with skill levels. We do not find much evidence of variation by firm size, suggesting that unfair dismissal provisions do not impose a higher burden on small business.

Calibrating a labour demand model with our estimates of the direct costs of firing suggests that the employment impact of the proposed changes is likely to be modest. Redundancy costs seem a bigger issue, but more complex modelling is needed to capture the full effect of their removal. Our estimates of the likely employment impact of firing costs are significantly below the most commonly quoted figures in the current Australian debate, including those quoted by the Government. We believe that these widely quoted figures overstate the scope for unfair dismissal policy changes to improve employment outcomes for Australians.

There are limitations to our study. Harding (2002) emphasises the importance of including indirect effects of firing costs, such as productivity losses from retaining workers who would otherwise have been fired. It is also possible that employers systematically misperceive the expected costs. Another possibility is that while costs are the same for small and large businesses, the inability to spread risk of a costly dismissal magnifies the impact for small business. Unfortunately, such effects are extremely difficult to measure. Plausible estimates of these additional effects would contribute further to our understanding of the impact of unfair dismissal provisions.

The most pressing need is for better data on dismissal costs, preferably collected by official statistical agencies like the ABS. Apart from the absence of any dismissal cost data we were surprised how limited the data on numbers and types of separation actually is. A redesign and re-run of the Australian retrenchment and redundancy survey would be helpful given the policy importance of the issues. The ABS has the opportunity here to take the lead among international statistical agencies.

Impacts of dismissal costs on employment are currently a politically sensitive issue in Australia, and are associated with a number of other controversial changes to labour market regulations. It is important in our view to evaluate the proposed unfair dismissal provisions separately from the other proposed changes – it is perfectly possible that one change may not be supported by the evidence while others have a substantial effect on employment outcomes.

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