

***Market Power and Workplace Labour Relations:
Analytical Issues and Empirical Patterns Emerging from Australia's
Experience with Enterprise Bargaining***

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Abstract

This paper examines the distributional consequences of the recent transformation of the industrial relations system in Australia, with a shift from a collective bargaining system with comprehensive involvement of trade unions at both the national and industry levels to a system based on workplace bargaining with no union involvement. The paper presents the results of regression analyses which reveal well-defined differences between agreements involving unions in the bargaining process and the remainder of the population. The paper also outlines a conceptual framework for analyzing non-collective bargaining, focusing on a particular source of power asymmetry - the rather unequal levels of market power available to the employer and the individual worker in the absence of a union.

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Market Power and Workplace Labour Relations: Analytical Issues and Empirical Patterns Emerging from Australia's Experience with Enterprise Bargaining*

"In the long-run the workman may be as necessary to his master as his master is to him; but the necessity is not so immediate." -Adam Smith, **The Wealth of Nations**, Volume 1, p.84.

I. Introduction

This paper examines the distributional consequences of the shift from a collective bargaining system, with comprehensive involvement of trade unions at both the national and industry levels, to a system based on workplace bargaining with no union involvement. The core proposition is that asymmetry of bargaining power between individual employees and their employers is a fundamental feature of the economics of workplace Labour relations. The paper focuses on one particular source of power asymmetry - the rather unequal levels of market power available to the employer and the individual worker in the absence of a union.

Emphasis on the mutual dependence which characterises the employment relationship has, understandably, given rise to the 'mutual gains' literature (e.g. Cohen-Rosenthal & Burton 1987; Kochan & Osterman 1993). But, as Adam Smith observed, although mutual this dependence can be very unequal. Changes in the economic environment and/or the institutional framework governing employment relationships have direct repercussions for the balance of this dependence. Changes which introduce or augment an imbalance in the dependence between employer and

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employee create new distributional opportunities. A desire by the stronger party to capitalise on their new-found bargaining power will undoubtedly encourage them to focus on the potential for new distributional gains, to the point of undermining the scope for efficiency gains which are paramount to mutual gains. For this reason, any analysis of the causes and consequences of 'reform' of the industrial relations and wage bargaining systems must consider not only the scope for mutual gains ('win-win' in

the popular parlance), but also, particularly under some economic and political circumstances, the distributional aspirations of the parties who advocate the institutional reform. The empirical analysis in this paper supports the hypothesis that trade unions play a major role in redressing at least part of the asymmetry of bargaining power between individual employees and their employers.

The argument put forward in this paper is advanced at both the theoretical and empirical levels. The theoretical analysis suggests that there are pure economic, as distinct from institutional, reasons which set the Labour market apart from the economist's description of supply and demand forces in *competitive markets*. In particular, I argue that the economic context of bargaining at the enterprise in general, and individual bargaining in particular, render the economists' model of perfect competition a troublesome rather than expedient abstraction. It is essential to find a frame of analysis which recognises the asymmetry of market power if we are to come to grips with the distributional consequences of individual bargaining between employees and their employers.¹ When we expand the analysis to include the complex web of social and economic factors which motivate job choice, and the dynamics which govern production decisions, task assignments, strategic planning and employee relations, the need for a better analytical understanding of workplace Labour economics becomes all the more urgent.

The empirical analysis in this paper is based on a large data set of nearly 1600 Enterprise Bargaining Agreements in the Australian state of New South Wales. In nearly two thirds of these agreements, a union was involved in the bargaining process, with the remainder representing groups bargaining without the mediation of a trade union. This analysis addresses the following questions: (i) can we find significant support for the proposition that enterprise bargains have allowed workers to make 'gains from trade', as the proponents of reform argue, or have they alternatively surrendered work conditions without receiving offsetting wage increases; (ii) has union involvement had an impact on the outcome of bargaining; (iii) do we observe a fairly uniform pattern across enterprises, or alternatively do we find a bi-modal distribution of enterprises, with a small group producing gains of productive efficiency, and the remainder focused primarily on a redistributive agenda?

¹ Scholars have already noted that distributional aims (of both Labour and management) are an important aspect of a bargaining situation (e.g. Wlaton and McKersie 1991:161-183; and Schelling 1980:21).

II. Background

It is nearly a decade now since Australia embarked on a sweeping reform of the institutional framework governing its Labour market. The main feature of this reform is a shift of focus from a fairly centralised system of pay determination to a radically de centralised one - from a situation where unions had a prominent role in negotiations over pay and primary work conditions, at both the national and the industry levels, to a situation where their involvement is increasingly confined to large enterprises which, for reasons of either economic exigency or managerial philosophy, have chosen to continue their engagement with organised Labour. The poor macroeconomic performance which has beset most Western economies for more than two decades now, and the widely shared political trend towards *deregulation*, have played a significant role in creating the momentum for this reform.

The rhetoric advocating reform, on both the management and Labour side, has emphasised 'efficiency' gains, promising that with the shift to enterprise bargaining these will accrue simultaneously to both employers and employees. Specifically, proponents have argued that bargaining which is confined to the enterprise level is bound to generate a measure of flexibility which will augment both employers' profits and employees' take-home income; that workers will have the chance to restructure their working time and pay packages to their advantage, whilst employers will gain by restructuring work assignments, hours of work and the like. The libertarian proponents of enterprise bargaining have campaigned for individual bargaining, adding to the promise of mutual gains the maxim of the individual's *freedom to contract*.

Although the support for a shift to enterprise bargaining has come from both employers and Labour, the institutional outcomes that each group hopes for are markedly different. The Australian Labor Party government, which presided over the initial stages of this transition, hoped to establish a strong de centralised collective bargaining system with a national 'safety net' for the low-paid and industrially weak members of the workforce. In contrast, the recently elected Liberal/Country Party coalition government has sought to shift the focus to individual, rather than collective, bargaining between workers and their employers. Similarly, the new government has a distinctly different attitude towards the notion of a 'safety net'. While the Australian Labor Party and the Australian Council of Trade Unions (ACTU) wish to retain the power of the Australian Industrial Relations Commission

(AIRC) to set occupation-specific statutory minimum pay levels to shield workers with weak bargaining power², the current government is reluctant to embrace this concept. A fair assessment of the current government's overall policy stance is that it is intent on minimising the role of both the Australian Industrial Relations Commission and the trade unions.

Reforms are usually justified in terms of the gains which, allegedly, will accrue to society at large. In this case the gains from a shift to enterprise bargaining are being described in terms of both overall economic productivity and work satisfaction; what has been emphasised, therefore, is the scope for mutual gains. Yet the true motive for institutional reform is often found either in the distributional aspirations of sections of society, who believe rightly or wrongly that the balance of economic bargaining power has altered in their favour, or in a purely ideological preconception which axiomatically favours specific institutional structures. As mentioned above, this paper puts forward the proposition that ideology and distributional motives have both played a major role in the drive for Labour market reform in Australia. The potential for a positive-sum game cannot be denied.

Australia's workplaces are, in all likelihood, far from realising their full productive capacity. Neither have they exhausted the opportunities for simultaneously enhancing productive efficiency and worker satisfaction. Rather, my concern is that, in most workplaces, the ideological motives and rent-capturing aspirations of those who sense a newly-found bargaining power severely reduce the scope for genuine realisation of the potential for a positive sum game.

The following section presents a brief theoretical support for the proposition that a complete elimination, or even radical curtailment of union involvement in bargaining process promotes significant asymmetry of bargaining power which favours employers. This asymmetry of power has well-defined distributional consequences. It may also have unfavourable efficiency outcomes.

The final section of the paper describes the results of empirical analysis which examines the extent to which the data supports the theoretical argument put forward in the forthcoming section, as against the alternative view that individual bargains are good for both employers and workers.

² The AIRC has recently rejected the ACTU's 'living wage' claim, which sought a wage increase for those workers who had failed to gain increases through enterprise bargaining agreements. The ACTU was attempting to recover the AIRC's historical role (1907-1967) as the setter of a minimum wage for adult members of the workforce.

III. On market power and workplace Labour relations

The quest for reform has also been driven by the desire to make the Labour market more akin to a 'standard' market, and the political support mustered by the proponents of deregulation appears to be sustained by an axiomatic belief that the outcomes of pay determination under **individual** negotiation will replicate the distributive outcomes of the economist's description of supply and demand forces in a perfectly competitive market. Is this expectation well-founded, or is an alternative frame of analysis required, a frame in which asymmetry of power is recognised as a central feature of workplace relations when the involvement of trade unions is virtually eliminated and pay and other conditions are negotiated by direct bilateral bargaining between the individual and her employer?

The wide appeal of the model of the perfectly competitive market among economists (and others) is probably explained by its seductive properties - it describes a 'market' where the terms of exchange are decreed by the *umpire*³ who provides a shield against the hazards present in a *direct* bilateral negotiation between any two individuals when bargaining power, personal ethics, temperament and negotiation skills may vary markedly. It is widely accepted that the economic and social factors that govern the employment relationship do not sit well with the rigorous conditions which define competitive markets. We also know that where the object of exchange has a measure of *idiosyncrasy* or *asset-specificity* (Williamson et al. 1975; North 1990), or where a virtually identical commodity exists but can be accessed only by incurring significant entry or exit costs (both pecuniary and non-pecuniary), prices do not follow the pattern envisaged for competitive markets.⁴ This is particularly so in the case of direct bilateral negotiations between individual workers and their employers. Most workers will tolerate pay levels that are far below their true value to the employer rather than moving to a new job. This is particularly true of workers with household commitments, young children, working spouses, as well as the vast majority of workers in their 40s and above. Asset-specificity is one source of such costs; as Williamson et al. (1975) has shown, it also renders the whole concept of a

³ It is my belief that the conceptual framework (and nomenclature) of the Arrow-Debreu general equilibrium model are essential to a cogent understanding of the economists' model of the perfectly competitive market. The umpire I am referring to here is formally known as the *Walrasian Auctioneer*.

⁴ A formal analytical treatment of the implications of adjustment cost for the behaviour of buyers in general, and sellers (ie workers) in the Labour market in particular, is offered in Gill (1984).

‘market-determined’ wage rather limited in scope as far as enterprise bargaining is concerned, if not outright irrelevant.

The presence of asset-specificity, and mobility costs in general, also has well-defined distributional consequences for a situation where terms of employment are determined in a bilateral bargaining between the individual worker and employer.⁵ Unlike the situation in competitive markets, there is no longer a guarantee that uniform wages will be offered to all workers who have the same value for their employer, even though the employer’s reservation wage may be identical for all. Employees with different mobility costs have different reservation wages, even when the employer’s reservation wage is identical. Therefore, when bargaining individually, a lower wage can be agreed with workers burdened with high mobility costs. Borrowing from the terminology of *chaos theory* (in mathematics), the process of individual enterprise bargaining has the worker’s reservation wage (i.e., minimum supply price) as its *strange attractor*, as the limit towards which the pay outcomes of bilateral determination tend to gravitate. In an analogy to the model of the *first-degree price discriminating monopoly*⁶, the above is best described by the model of the *first-degree price discriminating monopsony*.⁷

Demands for labour market reform that shifts the system from collective to individual bargaining are on a par with the standard form of rent-seeking. Why? Because wages which are above the employee’s reservation level (even when they lie below the employer’s reservation level) yield the workers an ‘economic-rent’.⁸ With a sufficiently large gap between the employer’s and employee’s reservation wages, and sufficiently large asymmetry of bargaining power in favour of the employer, the employer, offering a non-competitive (‘super-normal’) profit level can capture this rent. There is little doubt that a shift from collective to individual bargaining provides the employer with an opportunity to capture this rent. Hence, the proposition that rent-capturing must have played a role in the business community pressure for deregulation of the industrial relation system. A similar proposition is made

⁵ My emphasis on the distributional consequences of mobility costs and the role of collective bargaining in guarding individuals against the hazards of these costs is very close in spirit to Hirschman’s (1970) and Freeman and Medoff’s (1976, 1979) analysis of the *exit/voice* dichotomy.

⁶ Consult a standard microeconomics textbook for this term (e.g. Pindyck & Rubinfeld 1995: Chapter 12).

⁷ A refreshing comeback of the all but forgotten monopsony model can be found in Card and Krueger (1995:369, 373). Note, however that whereas Card and Krueger retain the assumption of uniform wages, in the present paper there is a crucial departure from this assumption.

by Kuttner (1997) when he critically comments on the proposition (often made by Public Choice Theory) that demands for regulation reflect self-serving rent-seeking motives, rather than serving the interests of the wider community:

In the market model of politics (Public Choice Theory...), regulation invariably makes things worse, because the regulatory arena is politicized. What Public Choice Theory leaves out is that the process of deregulation is every bit as politicized, every bit as laden with self-serving behavior, as the process of regulation. - Kuttner, 1997: 22-23.

Thus far, the discussion has focused on distributive aspects. However, distributive aspirations may also adversely affect any attempts to improve productive efficiency. A number of scholars have argued that overt distributive motives can seriously reduce the scope for efficiency gains, and that strong distributional motives distract management from a focus on astute restructuring of production. In the US, Piore (1995) observes that the strategies of employers tend to fall into two distinct groups: one where the focus is on cost cutting through immediate distributional initiatives, the other where cost cutting is pursued only as the ultimate outcome of a strategy aimed at improving productive efficiency. Where management pursues immediate cost-cutting by reducing wages and undermining the conditions of workers, Piore argues, it enhances the natural suspicion harboured by trade unions and entrenches non co-operative relationships. Symmetrically, where management pursues a long term strategy which aims at making positive efficiency gains which generate income benefits for both sides, it often succeeds in securing co-operative relationships and eliminating any initial suspicions on the part of the trade unions. In Australia, the latter strategy appears to be followed by only a minority of employers (Callus and Short 1995; Charlesworth 1996). Callus (1997) concludes that the reforms which permitted large changes in task assignments and the like have been driven by management seeking to establish its singular right to manage, and that this resulted in a significant increase in decisions made unilaterally by management without any consultation with employees. He also noted that this has occurred even where unions were intimately involved in introducing a higher level of flexibility.

The upshot of the analyses presented above, and the empirical observations cited by scholars, seems to be that flexibility alone cannot fulfil the promise of mutual gains. Effective co-operation requires a more even balance of bargaining power.

⁸ Note that their wage may fail to cover basic needs, yet as soon as their mobility costs rise or

This conclusion underscores observations made by a number of economists regarding the problems which can arise for productive efficiency in a regime of strict individual (strictly non-collective) bargaining. Freeman and Medoff (1979) have exposed this shortcoming when they emphasised that a range of work conditions has the features of *public goods*. (These, standard economic theory proposes, require collective, not individual, bargaining). Williamson (1974) analysis of internal markets implies that unions can serve the cause of efficiency when transaction costs are significant. Finally, Strauss (1995) argues that a ‘...strong union and co-operative relations are not only feasible but are good for companies, the economy, and society’,⁹ continuing to note that ‘unfortunately, we have few examples of union-management co-operation except where the union was already strong.’ (1995: 343). These observations caution us against the economic loss which may be inflicted on us as a society, if the quest for Labour market flexibility is guided by the libertarian zeal for individual contracting and the rigid prescriptions of the economist model of the *spot-auction* markets.

IV. What do enterprise bargains have to offer: the profile emerging from enterprise bargaining agreements to date

Reality has followed fairly swiftly in the heels of the new legislation. The focus of pay determination and the arena of industrial power struggles has indeed shifted away from the central and industry level towards the individual firm, with the number of registered enterprise agreements now covering about 30 per cent of the Australian workforce. These agreements have often altered a wide range of pay, work conditions and other aspects of industrial relations.¹⁰

In the majority of very large enterprises, unions are still actively involved in negotiations. However, in small enterprises, pay levels and basic work conditions tend to be governed either by awards, whose nominal value has remained largely untouched since the late ‘80s, or by newly drawn up contracts with groups of employees not represented by a union. As for the prospects of enterprise agreements replacing awards in small firms, opinions vary between those who believe that here the award system will prevail because the transaction costs involved in reaching enterprise agreements are far too high

jobs are simply not available, they are recipients of appropriable surplus - an ‘economic rent’.

⁹ He also notes that a significant number of academicians share this view.

¹⁰ See the second column of Appendix Table F for the incidence of changes recorded in our data set. For instance, the three first lines of this column shows that allowances were reduced in 14 per cent

for small firms to bear, and those who feel that the new system will continue to spread. In May 1996 year a spokesperson for the association of employers in the metal industry (MTIA) predicted that the majority of his members will remain within the award system. One of the reasons given is that as long as award rates govern the rates of pay of a significant number of jobs in an industry, the awards greatly reduce uncertainty about the prevailing 'market rates' for both unskilled and blue collar trade jobs. However, if future legislation allows a substantial relaxation of the conditions placed on enterprise agreements, and if the power of the Australian Industrial Relations Commission to adjust award rates is significantly reduced either by legislation or by political pressure from the government, the award wage system will be marginalised progressively.

The above picture suggests that the incidence of bargaining at the enterprise level has been significant. The next question is what can we learn from the content of the enterprise agreements to date.

Bargaining outcomes and the role of trade unions

As mentioned above, there are two schools of thought about the economic and social consequences of enterprise bargaining. One school promises that the flexibility permitted by enterprise bargaining will not only improve productive efficiency but also grant workers a share in this gain. The second school, in contrast, predicts that the augmented flexibility will undermine the bargaining power of workers in enterprises where unions are either weak or absent, and that this will have adverse distributional consequences for workers. Section III of this paper put forward a theoretical argument which supports the prognosis made by the second school of thought. In this section the empirical evidence is brought to bear on the debate.

If we adopt the first school's prognosis, we might expect that workers who surrender employment conditions would receive higher wages in return. We might, for instance, believe that workers who accept a reduction in overtime and other penalty rates, or the complete elimination of paid public holidays and leave loadings, will increase their chances of receiving a wage increase. The pattern displayed in the data set that I have analysed paints a remarkably different picture! It reveals that

of the enterprises, number of hours increased in 9 per cent, and the span of hours for which standard pay rates apply has been increased in 21 per cent.

workers who made such concessions had a lower, not higher, probability of gaining a wage increase in their Enterprise Bargaining Agreements.

An identical pattern is revealed when we analyse the magnitude of any wage increase. Enterprise Bargaining Agreements that reduced or completely eliminated penalty rates, deleted public holidays and leave loadings were found, on average, to have granted a lower wage increase than Agreements in which a loss of conditions had not occurred.

However, a different pattern emerges when we examine the impact of unions. The data reveal that, when a union is involved in the bargaining process, the pattern just described is reversed - the loss of work conditions increases the probability of gaining a wage increase. Similarly, the magnitude of any wage increase is higher in the agreements which included a loss of conditions, provided a union was involved in the bargaining process.

So, when individual workers have to fend for themselves, or even when they bargain as a group but without the involvement of a union, it is less likely that any loss of conditions will be offset by a wage increase.

This pattern stands out when the data is displayed in a straightforward cross tabulation, as well as when it is subjected to regression analyses (these include *probit*, and *tobit* regressions). The fact that the general pattern of correlation displayed when the data is cross tabulated is also sustained in elaborate regression when we control for a large number of variables (including industry) reinforces the statistical significance of the empirical observations.

The following subsection describes the empirical analysis in some detail.¹¹

Empirical analysis

The data

The sample consists of 1597 Enterprise Bargaining Agreements registered in the state of New South Wales. The content of the agreements has been mapped unto a matrix, with rows representing individual enterprises; ten columns registering key identical features (e.g. industry affiliation, whether a union(s) were involved in the bargaining process), and the remainder recording content of the

¹¹ For a more detailed numerical account see Appendix Tables D and E and F.

agreement regarding pay rates and various aspects of work conditions (e.g. changes in various pay items, hours of work at the standard time pay rate). Except for the magnitude of wage increase, variables have binary values of 0 or 1, indicating the absence (0) and presence (1) and of any particular change in conditions.

Nearly two thirds of the 1597 agreements involved a union in the bargaining process. Nearly one third of the agreements fall within a single industry - education. This raised a concern that this large number of cases originating from a single industry would distort the analysis. However (to our relief), the exclusion of this industry emphasized rather than weakened the patterns evinced by the complete sample.

Quantitative method

Whereas some scholars favour the use of straightforward cross-tabulation of data, others have a strong preference for the use of econometric techniques. Both are employed in this paper.

Cross tabulations offer a useful pictorial summary of the probability with which we can observe a particular clause in a particular sub-set of agreements. When we seek to make propositions about causal links, however, we face the problem that what appears as a 'union effect' may reflect something else. For instance, unions may be more prominent in industries that are better placed to grant pay increases without extracting from their workers the surrender of work conditions.

Regression analysis has an advantage over cross-tabulations (or any binary correlation) in that it can control for a fuller range of clauses which are included in the bargaining agreement, as well as for some of the features of the enterprise, including the specific industry with which it is associated. By including 'industry dummies' in the regression, the analysis goes some way towards controlling for the variation of economic fortunes across the sample of enterprises in our data base.

Our choice fell on the *probit* and *tobit* regressions. Each of these can be described as offering an answer to a specific question.

Probit regression offers an answer to the question 'is the *probability of gaining any wage rise* higher (lower) in enterprises where, for instance, workers have surrendered particular work conditions, or where a union is involved, or in particular industries'. Tobit regression addresses questions relating to the magnitude of the wage increase; namely 'are *wage increases* larger where conditions were

surrendered, unions were involved' and so on. The choice fell on both because it is possible that only the probability of a wage increase bears a systematic statistical relationship with a given set of variables, with the actual magnitude being affected by variables which are not within the data set at hand.

Note that the tobit regression embodies an answer to the probit question, because it implicitly assumes that the same set of variables influences both the probability of obtaining a pay rise and the actual magnitude when a rise occurs. In other words, the model implicitly assumes that a sufficiently strong presence of certain conditions must occur for wages to increase, and that the higher the 'excess' over the critical mass required to cross the threshold from zero to a positive wage increase, the larger the wage increase itself. Of course, such assumptions must be taken with a grain or two of salt, and the regression method should be seen as only a very coarse tool which helps to unravel the contours of a phenomenon, most of which eludes the naked statistical eye.

The picture displayed by cross-tabulations

Pecuniary pay

As Table A below shows, thirty six per cent of all enterprises granted a wage increase without surrender of conditions. In agreements where there was no involvement of unions, this figure falls to 16.6 per cent. In contrast, nearly half of the agreements in which unions were involved (49.1 per cent) gained a wage increase. The pattern is equally pronounced when we look at all forms of pay increase, whether by wage or any other form of pecuniary pay such as specific allowances - nearly two thirds of all agreements granted a pay increase, whereas when unions were involved this figure is nearly three quarters.

Surrendered conditions

These include loss of conditions such as an increase in the number of hours of work paid at normal time (rather than shift) rates and reduction or elimination of penalty rates.¹² In the population as a whole, well over a third of the agreements

¹² For detail see Appendix Table D.

included the surrender of one or more favourable conditions. Where unions were involved, the incidence falls to 14 per cent.

TABLE A Change of conditions in Enterprise Bargaining Agreements (EBAs)

<i>Change of Conditions</i>	<i>All EBAs (%)</i>	<i>EBA with unions (%)</i>	<i>EBAs with no unions (%)</i>
Pay & surrender of conditions			
Wage increase	36.3	49.1	16.6
Surrender of at least one of the 7* conditions	31.3	13.9	58.2
Surrender with no wage increase	23.3	6.0	50.6
Reduction of allowances	14.0	6.0	26.7
Deletion of Rostered Days Off (RDOs)	8.6	1.4	19.9
Non-pecuniary benefits			
Skill development plans	13.5	15.5	10.2
Training programs	20.7	24.5	16.2
Potential for benefits			
Total Quality Management	6.0	7.9	3.1
Joint Consultative Committees.	16.5	21.4	9.0

• These seven conditions include:

1. Numbers of hours at standard time has been increased;
2. The span of hours for which day time rates apply has been increased;
3. Over-time penalty rates have been reduced;
4. Other penalty rates (e.g. Sunday rates) have been reduced;
5. Other penalty rates have been deleted;
6. Public holiday penalty rates have been deleted;
7. Leave loading (i.e. pay bonus) has been deleted.

An even more telling pattern emerges when we ask whether the loss of conditions was offset by any pay increase. In the population as a whole, workers had to surrender conditions without being compensated by a pay increase in 22 per cent of the agreements. When a union was involved this figure drops to 1.1 per cent.

Skill development, training plans, skill progression

These are initiatives that should enhance both the worker's stock of human capital and the enterprise's productive capacity. To the extent that they ultimately bear fruit for the workers, in the form of either pecuniary rewards or job satisfaction within the firm or enhanced employability outside of the firm, these are most welcome additions to workers' welfare.

Sadly, the incidence of these clauses is still very low (falling far below the rate at which workers surrendered conditions or received pay increases) (see Appendix Table E.). One would like to hope

that it is just matter of time before the few current examples set a pattern for many others. Whether one would be justified in holding such an optimistic prognosis is another matter.

Setting aside for the moment the incidence of these initiatives, it is interesting to note that the probability of having a skill development program, skill progression, 'multiskilling' arrangements or training programs increases with union involvement.

Incidence of Joint Consultative Committees (JCCs), Total Quality Management (TQM), productivity agreement, and job restructuring

Of all the clauses appearing in the 1597 agreements, these initiatives, along with skill development and training programs, would seem to be the most significant as potential contributors to the level of productivity in the enterprise. Yet the incidence of these clauses, as Table A above demonstrates, is still very modest.

Whether it is the introduction of Joint Consultative Committees, systems of Total Quality Management or plain job restructuring, we are more likely to observe such structural reforms where unions are involved in the process of bargaining than in those where unions are absent.

The reasons for this phenomenon may be purely objective, in that the sheer presence of a union provides a readily available institutional apparatus for the implementation of initiatives which depend on the active involvement of the workers. It could also be explained as a reform initiative which happens to have its origins in the union, rather than management, reform agenda. Regardless of the true origins of these structural reforms, the pattern displayed by the present data set tends to dispel, or at least weaken, the proposition that, as a rule, unions are an obstacle to structural change.

As the following section shows, a comparison of the pattern described by the regression analyses with that displayed by the cross tabulations reveals that the regression results tend to reinforce the main features evinced by the cross-tabulations.

Results of the regression analysis

As Appendix Tables E. and F. show, the pair of regressions (probit and tobit) were run five times without including dummy variables for industries (Appendix Table E.), and five times with these dummy variables (Appendix Table F.). The five sets represent five different combinations of variables

(other than industry dummies). The first omits union presence; the second adds a union dummy variable; the third omits the union variable and replaces seven variables, each of which denotes surrender of a specific condition, with a constructed variable that takes the value of 1 when at least one of the seven conditions has been surrendered (AFFL); the fourth adds to the third the union variable; finally, the fifth replaces both the constructed (AFFL) variable and the dummy variable denoting presence (absence) of a union with a constructed variable which takes the value of 1 when the values of both AFFL and the union dummy is 1 (this new variable is AFFUNION). Dummy variables denoting industry affiliation are then added to each of these five sets to produce the results reported in Appendix Table F. A summary of the main pattern displayed by the regression analysis is provided in Table B. below.

As Table B. below shows, generally the surrender of conditions is systematically associated with wage changes. However, the association is negative rather than positive as implied by the view that augmented flexibility in workplace Labour relations will deliver a restructuring with gains for both sides. The negative association is consistent with the proposition that enterprise bargaining undermines the bargaining power of workers in the absence of unions. These results show that both the probability of gaining a wage increase (probit) and the magnitude of any increase (tobit) are lower where conditions have been surrendered. Exceptions are the positive coefficients for *multiskilling* and *increase in the span of hours*.¹³

The regression results shed some light on the bargaining role of Labour unions in a number of aspects.

Firstly, as Table B. below shows, the coefficient of the *union dummy* is positive and significant when the regression controls for the industry affiliation of the enterprise; it is also transformed from negative to positive (compare Appendix Tables E and F). The results of the probit regression can be used to measure the individual contribution of a variable such as union involvement on the probability of attaining a wage increase. The probability is not linear in the magnitude of the independent variables; we therefore can readily estimate this increment only for given values of the independent variables, sample means in this paper. As Table C. below shows, when the magnitude of all the independent variables (other than the union dummy) equals their sample mean, the probability of

¹³ Note that absorption of leave loading does not represent a loss of conditions.

gaining a wage increase rises from 0.48 when the union dummy is 0 (i.e. no union is involved) to 0.71 when the union dummy is 1. As mentioned above, the union dummy is positive and highly significant in both the probit and the tobit regressions when industry dummies are included. These results strongly supports the proposition that union involvement makes an independent positive contribution to both the probability and magnitude of wage increase.

*Table B. The Probit and Tobit Regression Results
Showing Sign of Significant Coefficients **

<i>Variable</i>	<i>Significant¹ in probit & tobit</i>	<i>Significant only when no industry dummies are included; in probit & tobit</i>	<i>Industry dummies render significant in probit & tobit</i>	<i>AFFUNIO N + Industry dummies render significant in probit & tobit.</i>
Overtime penalty reduced	< 0			
Other penalties reduced	< 0			
AFFL ²	< 0			
Multiskilling	> 0			
Leave loading absorbed	> 0			
AFFUNION ³	> 0			
Pub. holiday penalty deleted		< 0		
Leave loading deleted		< 0		
Union was involved			> 0	
Span of hours increased			> 0	
Productivity agreements				> 0
Rosterred days off (RDOs.) deleted				< 0
Performance based pay				< 0

* See Appendix Tables 2 and 3 for full detail.

¹ Significant in at least 80 per cent of the probit and the tobit regressions.

² A constructed dummy variable which takes the value of 1 when at least one of conditions have been surrendered.

³ A constructed dummy variable which takes the value of 1 when at least one of seven pay or work conditions have been surrendered in an enterprise in which a union was involved in the bargaining process.

*TABLE C. THE IMPACT OF UNION INVOLVEMENT ON THE CHANCE OF
GAINING ANY WAGE INCREASE*

<i>When</i>	<i>Estimated Probability of Gaining Any Wage increase</i>
no union is involved in the bargaining process	0.48
a union is involved	0.71
no conditions are surrendered & a union is not involved	0.54
at least one condition is surrendered	0.50
a union is involved and at least one condition is surrendered	0.99

Secondly, the coefficient for the AFFUNION variables is always positive and significant, regardless of whether the regression controls for industry. This suggests that when conditions are surrendered, the involvement of a union in the bargaining process systematically increases the chance of obtaining a wage increase, as well as enhancing its magnitude. Furthermore, note that the results reported in Appendix Table D. show that, whereas the coefficient for AFFL (at least one of seven conditions has been surrendered) is negative (and highly significant) and the coefficient for the union variable is insignificant, their interaction effect is positive and highly significant. As for the probability of receiving any wage increase, Table C. above shows that the estimated probability of receiving any wage increase when no conditions are surrendered is 0.54. This declines to 0.50 when conditions are surrendered. In contrast, when a union is involved the probability of receiving wage offset for the surrender of conditions is virtually 1.0.

Thirdly, the failure of the union variable to either prove significant or have a positive sign when we do not control for industry affiliation, coupled with the fact that its coefficient becomes positive and highly significant when industry dummies are included, suggests that both the involvement of unions and the economic circumstances have a significant and independent bearing on bargaining outcomes. This pattern of change also shows that the contribution of union involvement varies strongly with the fortunes of the industry, and only when the regression controls for the variation in economic circumstances between industries has the variation in bargaining structure between enterprises come to the fore.

These observations suggest several conclusions: (a) unions do have an independent positive impact on the probability and magnitude of wage increases in our sample; (b) this contribution is highly conditional on the fortunes of the industry; and (c) unions have secured wage offsets for surrender of conditions.

V. Conclusion

The impetus for institutional reform of Australia's Labour market came from the economic cataclysms which have beset most Western economies since the early '70s. The interest in enterprise bargaining has also been encouraged by the prevailing hope, in Australia as in many other countries, that salvation will come from a diminution of regulation both in general and particularly in the Labour

market. Thus, Australia's move towards enterprise bargaining can be seen as a local variant of a much broader global trend. Notwithstanding this global trend, the institutional reforms we are facing raise a number of fundamental questions about the true causes of the ascent of laissez-faire: have public institutions outlived their usefulness, or have they merely fallen prey to the vagaries of fashion and an amnesia regarding the reasons which led to their establishment in the first place; have these public institutions been outright perpetrators of the decline in our economic well being, or are they merely being used as a scapegoat; or is, perhaps, the rising tide of laissez-faire primarily a political reflection of the change in the balance of bargaining power in favour of employers which characterises troubled economies?

It is clear that structural changes are needed from time to time. However, the outcome is substantially influenced by the motives of those who capture the reform agenda. These motives may be parochial to the point where they undermine rather than enhance the welfare of the larger community. Even where they have a large measure of commonality with the needs of the broader community, the reform process may be incapable of achieving the original aims. If management is locked in tunnel vision, unions are averse to change and the scars of history have entrenched distrust and hostility between unions and management, or where the skills to manage change are simply lacking, organisations will lack the capacity to implement the appropriate change. In this case, society may be better served by maintaining the *status quo*. The paper cites scholars who report strong presence of distributional motives and which tend to undermine genuine pursuit of maximal efficiency (Piore 1995; Charlsworth 1996; Callus and Short 1994; and Callus 1997). Similarly, a reluctance on the part of management to cede any managerial prerogatives and opposition to collective bargaining per se, as well as deep seated harboured suspicion on the part of labour, have also been cited in the literature as factors which forestall the type of labour management co-operation which is essential to the realisation of the full potential of productive efficiency.

This paper has emphasised the need for a conceptual framework which allows us to understand the distributional outcomes of a wage fixing system which relies significantly on individual, rather than collective, bargaining between workers and their employers. In particular, it emphasises that the economist's description of the perfectly competitive market does not describe the distributional outcomes of a system based on individual bargaining at the enterprise level. This model offers a

distorted picture of both the process and the outcomes of enterprise bargaining, not only because it overlooks institutional, social and psychological aspects of the employment relationship but also because it offers a very poor account of the economic aspects of the employment relationship. In particular, a major flaw is that this model entirely overlooks the fundamental asymmetry of bargaining power between individual workers and their employers. As for collective bargaining, the available economic models have allowed some insights into the issues contested between unions and management, but they remain problematic. In particular, they overlook many of the factors which drive union activity, workers' support for the trade union movements and the complex set of factors which determine the dynamics of the bargaining process and its ultimate outcome.

The paper presents the results of an empirical analysis of a data set containing information on the content of 1597 enterprise bargaining agreements in the Australian state of New South Wales.

Specifically, it addresses three principal questions: (i) can we find significant support for the proposition that enterprise bargains have allowed workers to make 'gains from trade', or have they alternatively surrendered work conditions without receiving offsetting wage increases; (ii) has union involvement had an impact on the outcomes of bargaining; (iii) do we observe a fairly uniform pattern across enterprises, or alternatively do we find a bi-modal distribution, with a small group of enterprises achieving gains of productive efficiency while the remainder focus primarily on a redistributive agenda?

As for the first two questions, the pattern displayed by the data tends to reject the proposition that overall, workers who surrendered conditions received an offsetting wage increase, although when unions were involved in bargains where workers surrendered conditions they did tend to receive offsetting wage increases. These patterns are sustained even when the (regression) analysis controls for the industry with which the agreements are affiliated.

As for the third question, the data displays a limited incidence of strategies focused on long-term efficiency gains. Training initiatives, joint consultative committees and initiation of total quality management are mentioned explicitly in relatively few agreements. However, this may reflect deficiencies of the data base rather than an absence of such strategies. As for the impact of unions on such strategies, the incidence of the three initiatives mentioned above tends to be higher where unions

are involved in the bargaining process; as in the case of wage offsets for the loss of conditions, this pattern is sustained when the statistical analysis controls for affiliation with a specific industry. Anecdotal evidence suggests that the process of implementing change which genuinely transforms the workplace into a co-operative environment where jobs are enriched, allowing workers more autonomy, initiative and scope for learning, demands some delicate balances. Their managerial colleagues at best give 'progressive' innovative managers tentative support, while many workers, including union officials, may well find it equally threatening to part with the old and familiar. However, more extensive conceptual and empirical work is needed before any definite conclusions can be safely put forward.

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Appendix

Table D. List of variables employed in the regression analysis

- | | |
|----|----------------------------------------------------------------------------------------------------------------------|
| 1) | The dependent variable in the |
| | • probit regression is a wage increase dummy with binary values of '0' and '1' indicating absent and present; |
| | • tobit regression the dependent variable is continuous, indicating the percentage increase in the wage rate. |

- 2) The **independent variables**, all of which have binary values of '0' or '1' are:
- Hours of work at normal time rates were increased
 - The span of hours (for which non-shift rates apply) was increased
 - Overtime penalty rates were reduced
 - Leave loading was deleted
 - Public holiday penalties were deleted
 - Penalty rates were deleted
 - Penalty rates were reduced
 - Allowances were reduced
 - Leave-loading was absorbed in the standard pay rate
 - Over-award pay was rescinded
 - Rosterred days off (RDOs) were deleted
 - Manning levels were reduced
 - Productivity agreement included
 - Performances contracts included
 - Multiskilling arrangements introduced
 - Involvement of a union in the bargaining process (UNION)
 - Either
 - a constructed variable (AFFL) denoting that at least one of the first 7 variables (1 - 7) appears in the contract,
 - a constructed interaction variable (AFFUNION); $AFFUNION = AFFL * UNION$, thus $AFFUNION = 1$ denotes simultaneous presence of both $AFFL = 1$ and $UNION = 1$, (when either AFFL or AFFUNION appeared in the regression, variables 1 to 7 were omitted).
 - Nine industry dummies (one of which is omitted as the reference group).

Table E. Results of Probit and Tobit regressions; Excluding Industry Dummies (Z-statistics are below the coefficients)*

Independent variables		Probit	Tobit	Probit	Tobit	Probit	Tobit	Probit	Tobit	Probit	Tobit
Name	Mean values			Inc u	Inc u	Inc AFFL	Inc AFFL	Inc AFFL; u	Inc AFFL; u	Inc AFFU NION	Inc AFFU NION
Allowances - reduced	0.1396	0.03 0.3	0.77 1.1	0.05 0.3	0.80 1.1	-0.11 1.0	-0.27 -0.4	-0.11 -1.0	-0.27 -0.4	-0.45 -4.2	22.13 -3.2
Number of standard hours - increased	0.0870	-0.34 -2.1	-1.46 -1.5	-0.34 -2.1	-1.47 -1.5						
Span of hours - increased	0.2091	-0.04 -0.5	-0.27 -0.5	-0.03 -0.3	-0.20 -0.3						
Over time penalty - reduced	0.1515	-0.67 -4.5	-4.46 -4.8	-0.69 -4.6	-4.59 -4.9						
Public holidays penalty - deleted	0.0789	-0.60 -2.7	-3.80 -2.8	-0.61 -2.7	-3.90 -2.8						
Other penalty rates - reduced	0.0452	-0.67 -1.9	-0.79 -0.6	-0.41 -2.0	-0.86 -0.7						
Other penalty rates - deleted	0.1008	-0.52 -2.8	-2.95 -2.6	-0.52 -2.8	-3.02 -2.6						
Leave loading - deleted	0.0996	-0.35 -2.0	-2.45 -2.3	-0.35 -2.0	-2.45 -2.2						
Over-awards - rescinded	0.0050	0.69 1.4	1.63 0.6	0.70 1.4	1.66 0.6	1.05 2.2	4.46 1.7	1.04 2.2	4.46 1.7	0.91 1.9	2.90 1.1
RDOs - deleted	0.0858	-0.06 -0.4	-0.01 0.0	-0.06 -0.4	-0.03 0.0	-0.40 -2.7	-2.30 -2.5	-0.40 -2.7	-2.30 -2.5	-0.71 -5.1	-3.99 -4.6
Manning levels - reduced	0.0138	-0.09 -0.3	1.08 0.7	-0.06 -0.2	1.24 0.7	0.02 0.1	1.75 1.0	0.02 0.1	1.74 1.0	-0.24 -0.9	-0.20 -0.1
Leave loading - absorbed	0.0996	0.32 2.1	1.90 2.2	0.33 2.2	1.97 2.6	0.34 2.4	2.13 2.5	0.34 2.4	2.13 2.5	0.16 1.2	1.17 1.4
Productivity agreements made	0.0658	-0.10 1.3	0.80 1.0	0.21 1.5	0.95 1.1	0.20 1.4	0.84 1.0	0.19 1.4	0.83 1.0	0.15 1.1	0.67 0.9
Performance-based pay Introduced	0.0113	-0.10 -0.3	-0.24 -0.1	-0.09 -0.3	-0.23 -0.1	-0.16 -0.5	-0.74 -0.4	-0.16 -0.5	-0.74 -0.3	-0.41 -1.3	-2.13 -1.1
Multiskilling - introduced	0.1540	0.25 2.6	1.62 3.0	0.03 2.8	1.76 3.1	0.30 3.3	1.20 3.6	0.30 3.2	1.95 3.5	0.07 0.8	0.69 1.3
AFFL	0.3131					-0.68 -8.8	-3.94 -7.6	-0.68 -8.8	-3.94 -7.6		
UNION	0.6124			-0.58 -1.3	-0.32 -1.1			0.01 0.1	0.00 0.0		
AFFUNION	0.0852									0.27 2.4	2.20 3.3
Prediction		0.671		0.673		0.673		0.621		0.802	
Log likelihood			- 2535. 8		- 2535. 2		- 2577. 6		- 2577. 6		- 2605.5
No. of observations	1597	1597	1597	1597	1597	1597	1597	1597	1597	1597	1597

* Coefficients which are significant at the 5% level are bold faced.

Table F. Results of Probit and Tobit regressions; With Industry Dummies* (Z-statistics are below the coefficients)

Independent variable		Probit	Tobit	Probit	Tobit	Probit	Tobit	Probit	Tobit	Probit	Tobit
Name	mean value			Inc u	Inc u	Inc AFFL	Inc AFFL	Inc AFFL ; u	Inc AFFL ; u	Inc. AFF- UNION	Inc. AFF- UNION
Allowances - reduced	0.1446	0.18 1.3	1.16 1.4	0.20 1.4	1.35 1.7	0.02 0.1	0.18 0.2	0.07 0.6	0.64 0.8	-0.11 -0.8	-0.54 -0.7
Number of standard hours - increased	0.0829	-0.31 -1.6	-2.03 -1.61	-0.16 -0.8	-1.00 -0.8						
Span of hours - increased	0.2035	0.30 2.4	1.74 2.4	0.29 2.3	1.60 2.2						
Over time penalty - reduced	0.1555	-0.68 -3.9	-4.37 -4.0	-0.50 -2.7	-2.96 -2.7						
Public holidays penalty - deleted	0.0792	-0.44 -1.7	-2.66 -1.7	-0.37 -1.5	-2.15 -1.4						
Other penalty rates - reduced reduced	0.0400	-0.33 -1.4	-0.63 -0.4	-0.22 -0.9	0.18 0.1						
Other penalty rates - deleted	0.1017	-0.60 -2.7	-3.72 -2.7	-0.46 -2.0	-2.71 -2.0						
Leave loading - deleted	0.1047	-0.14 -0.7	-1.41 -1.12	-0.06 -0.3	-0.99 -0.8						
Over-awards - rescinded	0.0051	0.44 0.7	-0.81 -0.3	0.36 0.6	-1.34 0.5	0.90 1.6	2.81 1.0	0.66 1.1	0.75 0.3	0.62 1.0	-0.15 0.0
RDOs - deleted	0.0879	-0.08 -0.4	-0.14 -0.12	0.47 0.3	0.70 0.6	-0.42 -2.5	-2.44 -2.2	-0.20 -1.1	-0.78 -0.7	-0.45 -2.7	-2.61 -2.4
Manning levels - reduced	0.0124	-0.13 -0.4	0.89 0.5	-0.44 -1.4	-0.94 -0.5	-0.07 -0.2	1.10 0.5	-0.47 -1.4	-1.24 -0.7	-0.35 -1.1	-0.97 -0.5
Leave loading - absorbed	0.0509	0.55 2.7	2.12 1.8	0.62 3.1	2.49 2.2	0.45 2.4	1.93 1.7	0.56 2.9	2.45 2.2	0.44 2.3	1.8 1.6
Productivity agreements made	0.0676	0.44 -1.8	2.26 2.4	0.31 1.9	1.35 1.5	0.44 2.7	2.30 2.4	0.30 1.8	1.27 1.4	0.49 3.1	2.72 2.9
Performance-based pay Introduced	0.0094	-1.16 -1.8	-7.5 -1.8	-1.29 -1.8	-8.28 -1.9	-0.99 -1.8	-6.87 -1.9	-1.18 -1.9	-7.73 -2.0	-1.30 -2.2	-8.64 -2.3
Multiskilling - introduced	0.1504	0.45 3.9	2.47 3.6	0.42 3.6	2.15 3.3	0.42 3.8	2.51 3.7	0.38 3.4	2.10 3.2	0.37 3.3	2.13 3.2
AFFL	0.3023					-0.25 -2.4	-1.67 -2.6	-0.01 -0.1	-0.17 -0.3		
UNION	0.6010			0.86 7.7	5.4 8.2			1.04 9.6	6.58 9.9		
AFFUNION	0.0661									0.83 5.5	4.85 5.6
Prediction		0.688		0.704		0.673		0.689		0.690	
Log likelihood					- 2048. 0		-2119.7		- 2066. 3		- 2107.4
No. of observations	1378	1376		1376	1376	1376	1376	1376	1376	1376	1376

* Coefficients which are significant at the 5% level are bold faced. The coefficients of the industry dummies are not included; they can be obtained from the author on request.