# UNIONS AND THE DECENTRALISATION OF COLLECTIVE BARGAINING IN A GLOBALISING WORLD

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**Abstract**

An interesting finding of recent research is that strategic considerations and collective bargaining structures often influence foreign direct investment. In this paper, I argue that the support for the decentralisation of collective bargaining may be an optimal response by unions to the growing global nature of the firms that employ their members. I show that unions prefer a more wage-oriented bargaining posture if their members are faced with a stronger outsourcing threat. The model is able to rationalise the empirically insignificant effects of outsourcing on wages. The findings are also consistent with the growing wage inequality and falling union membership that some countries have experienced since implementing more decentralised forms of wage bargaining.

**Keywords:** Outsourcing, wage bargaining, foreign direct investment.

**JEL codes:** F23, J51, J41.

*" ... the bargaining power of employers has increased vis-à-vis that of employees because employers can increasingly say in a global economy that they will pack their bags and leave."* Bhagwati (1995, p.46).


*" ... large corporations ... can build, expand, or acquire facilities outside the [United States] altogether. In fact, all the strategic innovations devised by multiplant companies for playing off one group of workers against another ... have become standard operating procedure in the global economy."* Bluestone and Harrison (1982, p.170).


## I.      Introduction

The opening quotations are indicative of one aspect of the wide-ranging debate concerning the effects of globalisation on labour markets. They pointedly illustrate a prominent concern and popularly held view regarding the effects of multinational corporations on labour markets.

The widespread fear of jobs being outsourced or firms "delocalising" is often allied to a concern that increasing import penetration, particularly from low-wage countries, has adverse labour market consequences for domestic workers. The debate surrounding the liberalisation of trade and rising wage inequality in advanced economies has highlighted various candidate explanations for the labour market performances. One explanation, specifically related to the themes developed in this paper, is the role played by different types of labour market institutions and the way in which demand shocks translate into very different wage inequality outcomes (e.g., see Blau and Kahn, 1996 and Fortin and Lemieux, 1997). The present paper develops a model that investigates the optimal union response to the "new" global environment. In particular, I examine the effect of the outsourcing of production facilities overseas, or at least the threat by firms to outsource, on domestic wage and employment bargains. It is shown that the global

environment may lead union workers to prefer more decentralised and wage-oriented forms of bargaining.

Lindbeck and Snower (1996) show that in the age of the new global firm, which stresses multi-tasking activities by employees, centralised wage bargaining is inefficient. Efficiency dictates the eventual switch to less-centralised forms of wage bargaining and a greater reliance on individual contracts.[1] Such models help to understand some of the "stylised facts" that are now so ingrained in the conscientiousness of researchers working in the area of globalising labour markets. In particular, movements away from centralised wage bargaining may in large measure explain increase the dispersion of labour market earnings.[2]

Some researchers have explicitly linked increased international competition and trade to explain the move towards more decentralised wage bargaining. For example, Marginson and Sisson (1988) have noted that British multinational corporations are less likely to engage in multi-employer bargaining (see also Katz, 1993 and Ehrenberg, 1994).[3] Katz (1993, p.16) argues that the "... *increasing prevalence of multinational trade and multinational firms may ... help to explain the declines in multi-employer*

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[1] Freeman and Gibbons (1995) provide a model of the breakdown of centralised bargaining, which they apply to the case of Sweden. They attribute the decline in Sweden's peak-level wage bargaining system to wages drift and the increasing need for flexibility.

[2] In a similar vein, some authors have pointed to the growth of profit-sharing plans and contingent-pay schemes as being a potentially significant factor behind the growing wage inequality witnessed in the United States during the 1980's (e.g., Bell and Neumark, 1991). With the increasing prevalence of such pay schemes, volatility in output and income implies greater dispersion in the distribution of earned income. A possible reason for the proliferation of these more flexible forms of employee compensation and the reduced reliance on "pattern bargaining" is globalisation. (See the discussants' comments after the Bell and Neumark, 1991 article.)

[3] Edwards and Podgursky (1986, p.46) argue that "*[u]nions now find themselves negotiating with increasingly centralized corporations at an increasingly decentralized level*".

*bargaining that have occurred in a number of countries.*"[4]  Standing (1997, p.12) argues

that international trends towards increased labour market flexibility and deunionisation

have been propelled by globalisation.  In fact, the "erosion" of labour security has been

"*fuelled by the international division of labour*".

In this paper, I show that the decentralisation of collective bargaining by unions

would mitigate some of the adverse consequences for workers working for multinationals

or global firms.  In the next section, I explore what it is that we think we know about

multinationals and their labour market effects.  The model is presented in section III.

The results of the model explain the support for decentralised bargaining by unions.  The

last section of the paper contains concluding comments.

## II.    Multinationals and the labour market

Many early studies on wages and multinational corporations found average compensation

per worker tends to be greater in foreign-owned than in domestically-owned

establishments.  In addition, there are wage spillover effects, i.e., the presence of foreign

firms raises average wages at domestic firms (Lipsey, 1994; Aitken *et al.*, 1996).  The

wage differential, however, is strongly associated with firm size.  That is, controlling for

firm size, there is *no* effect of foreign ownership on wages (Lipsey, 1994).

As for industry location, inwards foreign direct investment (FDI) is often

concentrated in high-wage and high skill-intensity industries.  Foreign ownership also

tends to be heavily concentrated in manufacturing (Lipsey, 1994).  An interesting caveat,

is that foreign-owned establishments have generally located in lower-wage U.S. states

(Lipsey, 1994).  This is possibly due to right-to-work laws and the low rates of

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[4] Katz lists Sweden, Australia, the former West Germany, Italy, the United Kingdom, and the
United States as having bargaining structures that have to varying degrees experienced
decentralisation of their collective bargaining structures.  At the beginning of the 1980's,
Sweden and Australia had "extremely centralised" collective bargaining.

unionisation in these states. Wheeler and Mody (1992) present evidence supporting the importance of differential labour costs in multinational locational preferences. More recently, Cooke (1997) has presented extremely interesting evidence on the FDI decisions of U.S. firms. Most pertinent for present purposes are Cooke's findings that FDI is negatively related to the presence of high levels of union penetration, centralised collective bargaining structures and governmental restrictions on layoffs. This seems to give credence to the two observations cited at the beginning of the paper.

One interpretation of the recent evidence is that the "direct" impact of FDI on domestic wage and employment outcomes is marginal. On the other hand, the behaviour of multinational corporations does appear to be affected by the presence of unions, both at home and abroad. However, it is unreasonable to assume that labour market institutions do not evolve in response to the rise of the multinational enterprise. The evolution of different schemes for compensating workers and changes in collective bargaining practices, specifically, the move towards more firm-level bargaining is one reason we should *not* expect to find dramatic negative effects on workers, particularly, for those workers with substantial bargaining power. It is a working assumption of the model developed below, that outsourcing only occurs in the event of a bargaining breakdown. This does not, however, imply that the *threat* of outsourcing has no effects on organised workers.

To illustrate some of the political forces at work and the stance of unions on the decentralisation of wage bargaining, consider the case of Australia. With active support from the Australian Council of Trade Unions (ACTU), the *Industrial Relations Reform Act* of 1993 formalised the process of enterprise bargaining (EB).[5] EB essentially

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[5] The move towards of enterprise bargaining in Australia was actually initiated much earlier than 1993. The national wage case decisions of 1988 and 1989 foreshadowed "award

involves the devolution of negotiation of wages and employment to the level of the

enterprise or workplace. Employees are generally represented by their unions. When

approved by the Industrial Relations Commission, enterprise bargains (EB's) supersede

Federal award provisions. Historically, wages and employment have been negotiated and

administered at the industry-level in Australia. Awards are the principal legal provision

in industrial law in Australia and stipulate work conditions and rates of pay. In the event

that EB's are not negotiated, the Federal award conditions act as the 'safety net'.

Interestingly, EB's cover all workers – both union and non-union.

There is a debate about the merits of EB for unions, in particular. On one hand,

the widespread support for EB by employers was seen to be driven by the increasing

international competition engendered by globalisation and Australia's policy of tariff

reductions (see Gaston, 1998). In addition, the sentiment that EB would eventually

attenuate the influence of unions was also significant. Evidence from New Zealand, for

instance, reveals dramatic declines in union membership since more decentralised

collective bargaining was introduced in that country with the passage of the *Employment*

*Contracts Act* of 1991 (see Whitfield and Ross, 1996, p.193). The idea behind a 'divide

and conquer' strategy entails an undercutting of wages by competing unions in order to

capture market share from one another (recall the Bluestone and Harrison quote; see also

Dowrick, 1993). On the other hand, globalisation of the world economy may actually

enhance the bargaining power of unions. The cost of potential disruptions is greater for

firms with vertically organised production which tilts bargaining power in favour of

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restructuring" at the firm-level and a move towards "managed decentralism" and the eventual
shift to more comprehensive enterprise bargaining (see Katz, 1993). The Industrial Relations
Commission outlined the Enterprise Bargaining Principle in 1991, which promulgated
bargaining at the firm level (or plant level, where appropriate).

unions.  This, however, is likely to be a short-run phenomenon. In the long run, global

firms may re-organise production and delocalise.

While the bargaining power of certain unions may be enhanced, it is difficult to

rationalise the political adoption of EB and the support for more wage-oriented

bargaining by the union movement (represented by the ACTU).  For example, Davis and

Lansbury (1993) note that the position of low-paid workers would be under increasing

threat and how this was at odds with the "traditional" objectives of the union movement.[6]

EB is associated with more wage-oriented bargaining.[7]  In turn, this benefits the

more senior members of stronger unions.  Senior workers face a lower risk of layoff and

prefer that union bargaining power be directed towards increasing their wages.  However,

increasing wage-oriented behaviour by unions may lead to what is sometimes referred to

as 'Cheshire Cat' behaviour (see Burda, 1990), in which the median union member may

support a wage policy that is inimical to the long-run survival of the union.  A related

aspect of more wage-oriented or decentralised bargaining by the stronger unions is that

wage inequality may be exacerbated.[8]  That is, the members of strong unions are able to

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[6] *The Australian* newspaper (June 6, 1998) reported that the membership of some branches of the Australian Workers Union (AWU) were in "freefall", in deep financial crisis and were fighting for their survival.  The AWU is one of Australia's oldest and largest unions.  The percentage of the total workforce that is unionised has been slowly, but steadily, declining in Australia.  In 1986, the figure stood at 45.6 percent; 41.6 percent in 1988; 40.5 percent in 1990; 39.6 percent in 1992; 35.0 percent in 1994; and 33.5 percent in 1996 (source: Trade Union Members, Australia [ABS catalogue no. 6325.0, various issues]).

[7] For example, Calmfors (1993) notes that centralisation of collective bargaining leads to "negative wage externalities" being internalised.  Decentralised bargaining results in less wage restraint by those who have the bargaining power to increase their own wages.  Hawke and Wooden (1998) argue that the uniform wages generated by centralised bargaining in Australia involved rents being transferred from efficient competitive industries to less efficient protected sectors.

[8] Declines in collective bargaining coverage or the retreat from centralised negotiations have produced wider earnings distributions in the United States, United Kingdom, Sweden and Italy. See Freeman (1998) for references.  Countries with more centralised/coordinated systems of bargaining also show some tendency to have lower unemployment and higher employment rates as well (see OECD, 1997).

negotiate higher wages, the members of weak unions and workers in non-unionised sectors of the economy are not. While no claims are made about having identified the most important determinant of increasing wage dispersion, a recent OECD (1997) study notes that countries with higher unionisation and more coordinated bargaining experience less earnings inequality.[9]

The next section examines a rationale for union preference for more decentralised bargaining. In particular, I investigate whether wage-oriented bargaining may be preferable for unions in a more globalised economy.

## III.    Bargaining with an outsourcing threat

Consider an industry in which there are no strategic interactions between firms. A critical assumption is that the industry market structure generates rents that are shared between firms and domestic unions. I focus on the impact of a more globalised economy and the ability of the firm to outsource employment overseas, rather than the impact of globalisation on product market rents.

*Wage and employment bargains*: Attention is focused on a representative firm facing a union. The firm's profits are given by $\pi(w, l; p) = R(l, p) - wl$, where $R(l, p)$ is the revenue function when employment is $l$ and $w$ is the wage. Higher values of $p$ are associated with higher total and marginal revenue, i.e., $R_p > 0$ and $R_{lp} > 0$. Hence, higher $p$ unambiguously indexes good times. Further, we assume $R_l > 0$ and $R_{ll} < 0$.

The firm bargains with the union over wage-employment contracts, $(w, l)$. We assume that bargaining over wages and employment is efficient and that the choice from the set of efficient contracts is the one that maximises the symmetric Nash product, i.e.,

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[9] In a consistent fashion, Rowthorn (1992) shows that wage inequality increases as the degree of coordination among national unions fall. Zweimüller and Barth (1994) show those countries

$$S(w,l) = \left[U(w,l;r) - \overline{U}\right]\left[\pi(w,l;p) - \overline{\pi}\right], \tag{1}$$

where $U(.)$ is the union's utility function and $r$ denotes the reservation alternative for workers. Differences in bargaining power are incorporated into the disagreement point, $(\overline{\pi}, \overline{U})$, which is discussed further below.

We assume that the Nash solution lies in the interior of the choice set and that $S$ is strictly concave so that the solution is unique and may be characterised by the following first-order conditions. We suppress arguments where no ambiguity exists and use subscripts to denote partial derivatives.

$$S_w(.) = U_w \Delta^{-1} - \pi_w \Pi^{-1} = 0 \tag{2.1}$$

$$S_l(.) = U_l \Delta^{-1} - \pi_l \Pi^{-1} = 0, \tag{2.2}$$

where $\Pi = \left[\pi(w,l;p) - \overline{\pi}\right]$ and $\Delta = \left[U(w,l;r) - \overline{U}\right]$, the economic rent for firms and employed workers, respectively. Substituting (2.1) into (2.2), gives the equation for the contract curve, which equates the slope of the union's indifference curve and the firm's iso-profit curve,

$$-\frac{U_l}{U_w} = -\frac{\pi_l}{\pi_w}. \tag{3}$$

Further headway is made by investigating the implications of some commonly considered functional forms for union preferences.

*Union preferences*: Consider the popular specification used by McDonald and Solow (1981). Here the union comprises $m$ workers, each endowed with one unit of labour time. Prior to actual wage and employment negotiations, a worker's expected utility is given by

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with more decentralised regimes display greater dispersion in their inter-industry wage structure as well.

$$EU = \frac{l}{m}U(w) + \frac{(m-l)}{m}U(r),\tag{4}$$

where $U(.)$ is increasing and concave, $w$ is the wage rate if employed and the reservation alternative, or benefit when unemployed, is denoted by $r$. Alternatively, ignoring the issue of union membership, the union is assumed to maximise

$$EU(w,l) = lU(w) + (1-l)U(r),\tag{5}$$

where $l$ is normalised to denote the probability of employment.[10] The union's disagreement payoff is $\overline{U} = U(r)$.

Eqn.(3) yields the set of efficient contracts

$$\frac{U(w) - U(r)}{U_w} = w - R_l.\tag{6}$$

With union risk neutrality, $R_l = r$ so that labour is hired until its marginal revenue product equals the reservation wage.

It is straightforward to conduct comparative statics on Eqns. (2.1), and (2.2). For complete transparency, Proposition 1 summarises the results for the risk-neutral union case.[11] The exogenous variables are the reservation wage, the price and the firm's disagreement outcome.

**Proposition 1** (*Risk neutral union*)

a)   $w = w(r, p, \overline{\pi})$: $w_r > 0$; $w_p$ *has indeterminate sign; and* $w_{\overline{\pi}} < 0$;

b)   $l = l(r, p, \overline{\pi})$: $l_r < 0$; $l_p > 0$; *and* $l_{\overline{\pi}} = 0$;

c)   $\pi = \pi(r, p, \overline{\pi})$: $\pi_r < 0$; $\pi_p > 0$; *and* $\pi_{\overline{\pi}} > 0$;

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[10] A union representing workers is assumed to treat its employed and unemployed members equally. Workers are homogeneous and all face the same risk of unemployment, $(1 - l)$.

[11] See Gaston and Trefler (1995) for the risk averse case. Risk aversion, however, is not central for the results that follow.

d) $U = U(r, p, \overline{\pi}) : U_r > 0 ; U_p > 0 ; \textit{and } U_{\overline{\pi}} < 0$.

**Proof:** See Appendix.


There are no real surprises here.  The impact on wages of higher reservation wages shifts the threat point in the union's favour, raising their total welfare.  The impact of higher product prices is to raise employment.  The wage indeterminacy with respect to higher product prices is well known and is explored in detail by Gaston and Trefler (1995).  However, note that higher prices unambiguously benefit both the union and firm.

Most importantly, Proposition 1 also states that the domestic union is adversely affected by a higher value of the firm's disagreement outcome.  Mezzetti and Dinopoulos (1991) interpret $\overline{\pi}$ as the value of the option to switch production abroad.  That is, $\overline{\pi}$ varies positively with a credible outsourcing alternative for the firm.[12]  It is credible threat in the case of a multinational enterprise because of the lack of coordination between domestic and foreign unions or workers.  As Caves (1996, p.125) notes, multinational enterprises enjoy bargaining ploys that national firms do not possess.

The ability to outsource shifts the domestic collective bargaining outcome in favour of the firm.  That is, when it bargains with a domestic union, the firm can threaten to close the domestic plant and switch production to the foreign country.  During any dispute, the domestic firm supplies the market from abroad.  The threat point of the firm is therefore its reservation profit when its production facilities are moved offshore.[13]

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[12] It is helpful to think of $\overline{\pi}$ as being inversely related to barriers or restrictions to FDI.  FDI liberalisation is therefore associated with a higher $\overline{\pi}$.  As in Mezzetti and Dinopoulos (1991), I focus on the case in which the firm produces in the home country in equilibrium, despite its option to shift production abroad.  The analysis is easily extended to the case in which the firm produces both at home and overseas.

[13] Presumably, if foreign and domestic workers are equally productive and the foreign wage is less than the domestic wage, there are some additional fixed costs of moving overseas or taxes on overseas production, otherwise production would never occur at home.

A pertinent issue is how unions might respond to the possibility of outsourcing production and employment by firms. If foreign direct investment and outsourcing production facilities overseas by firms are features of the new global environment, then it is simply unrealistic to assume that unions and workers sit idly by. Unions adapt to the new global environment or risk extinction. Labour market institutions evolve.

*Choosing the stance of bargaining*: For transparency, the risk-neutrality assumption is maintained, i.e., the union's underlying preferences are given by $U(w,l) = (w - r)l$. However, we now suppose that the union leadership is free to choose the weight, $\lambda$, in the symmetric Nash product

$$S(w,l) = \left[ (w - r)^\lambda l^{1-\lambda} \right] \left[ \pi(w,l;p) - \overline{\pi} \right], \tag{1$'$}$$

where $\lambda \in [0,1]$ is the intra-union bargaining weight when the median union's membership is secure. Pemberton (1988) interprets low values of $\lambda$ as reflecting a relatively greater weight being placed on the desire for high membership on the part of union leadership vis-à-vis the desire for high wages on the part of the median union member. In the following, we treat $\lambda$ as a variable that can be strategically chosen by the union.[14] Note that neither $\overline{U}$ nor $\overline{\pi}$ are treated as strategic variables.

Once again, Eqn.(3) yields an expression for the contract curve

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[14] Drawing on the literature on strategic delegation (e.g., Vickers, 1985; Sklivas, 1987), Jones (1989) investigated the desirability of entrenching a union leadership that was sufficiently bloody-minded to pursue a more 'wage-oriented' strategy. However, firms also have a similar incentive to be bloody-minded in pursuing low wage-high employment outcomes. Consequently, an increase in industrial disputes may result. Political support for the institutionalisation of decentralised bargaining (as in the case of Australia, for instance) may therefore be a less costly way for unions to credibly commit to a more wage-oriented bargaining posture. Political economy models that endogenise labour market institutions seem to be more readily embraced by economists these days. Wright (1986) uses a dynamic voting model to show how workers with heterogeneous employment opportunities help to entrench a public unemployment insurance system that may prescribe sub-optimal levels of benefits. Saint-Paul (1996) and Fredriksson and Gaston (1999) use political economy models to show that incumbent workers or "insiders" may "vote" for labour market policies that exclude "outsiders".

$$\frac{(1-\lambda)}{\lambda}(w-r) = w - R_l. \tag{7}$$

As $\lambda \to 0$, $w \to r$ and employment is maximised, i.e., the union is completely employment-oriented. As $\lambda \to 1$, $w \to R_l$ and worker's receive the entire marginal revenue product. With complete wage-oriented bargaining, employment and wage outcomes occur along the demand for labour schedule. The symmetric case considered in the previous section is represented by $\lambda = \frac{1}{2}$ (so that $R_l = r$).

Rearranging Eqn.(2.2) and suppressing arguments, yields the Nash bargaining condition or "equity locus"

$$w = \theta\left(\frac{R}{l} - \frac{\bar{\pi}}{l}\right) + (1-\theta)R_l. \tag{8}$$

where $\theta = \left(\frac{1-\lambda}{2-\lambda}\right)$. Thus, the negotiated wage is simply the weighted mean of the marginal and the (net) average revenue products of labour. It is also apparent from Eqn.(8) that, for a given level of employment, the threat to move production overseas $(\bar{\pi} > 0)$, results in a lower negotiated wage.

The ability to credibly choose the wage-orientation or bargaining posture has a number of obvious advantages for the union, but the one I focus on below is the union's response to the firm's threat to outsource. Specifically, the union's optimal choice of $\lambda$ increases in $\bar{\pi}$. We prove this in two steps. First, Proposition 2 states that the union chooses a *more* wage-oriented posture if it has the option to do so. Second, Corollary 1 states that the union chooses a more wage-oriented posture in bargaining in order to maximise the welfare of its members, when the firm's outsourcing threat is greater.

**Proposition 2**

*Suppose that wages and employment are chosen to maximise the symmetric Nash product $\left[(w-r)^\lambda l^{1-\lambda}\right]\left[\pi(w,l)-\overline{\pi}\right]$, $\lambda \in [0,1]$. Suppose also that a risk-neutral union can choose the degree of wage-orientation when it bargains with the domestic firm. That is, it can choose $\lambda^*$ in its bargaining objective $U(w,l;\lambda) = (w-r)^\lambda l^{1-\lambda}$, $\lambda \in [0,1]$. Then the union will optimally choose a more wage-oriented bargaining posture, i.e., $\lambda^* > 0.5$.*

**Proof:** See Appendix.

**Corollary 1**

*The union chooses a more wage-oriented bargaining posture the greater is the firm's threat to outsource employment and production, i.e., $\dfrac{d\lambda*}{d\bar{\pi}} > 0$.*

**Proof:**  See Appendix.

The finding in Proposition 2 is intimately related to the literature on strategic delegation. For example, Jones (1989) noted that a preferred outcome for the union could be achieved if a credible institutional mechanism existed that increased wages, even though its members were exposed to a greater risk of unemployment. Consequently, a preferred contract for the union would involve higher wages with greater employment risk.[15] On the other hand, the firm would prefer that contracts stipulate low wages and high employment. The real issue, of course, is how either the firm or union can credibly commit to adopt bargaining postures different from that implied by their "true" underlying preferences.

It is the argument of this paper that the union support for firm-level bargaining achieves exactly this outcome. In fact, the developments that have institutionalised more decentralised forms of wage bargaining can be rationalised as a political economic equilibrium. The possibility that firms bargaining with unions may actually outsource to mitigate the power of unions is partially countered by institutional changes in the way in which unions bargain. In addition, the changes represent an optimal response to the globalised world economy and the increasing threat of capital flight. This is the case for members of strong unions, at least.

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[15] The same conclusion pertains for efficient bargains constrained to lie on the labour demand curve (i.e., a 'right-to-manage' model). See Jones (1989).

Corollary 1 states that by setting a higher $\lambda^*$ the union can ameliorate the effect of a growing $\bar{\pi}$ on worker welfare. That is, the union can offset the firm's increased ability to be able to locate overseas. A growing threat to locate production overseas, or a *higher* $\bar{\pi}$, results in a *larger* $\lambda^*$ or even greater wage-oriented bargaining posture on the part of the union.[16] The higher value of $\lambda$ means that the interests of the median union worker are pursued more aggressively by the union leadership. Consequently, unions become more aggressive in wage bargaining with firms that threaten to outsource employment overseas in the event of a bargaining breakdown. Such a change in strategic behaviour is optimal from the viewpoint of the union's membership. Doing so, however, may jeopardise the union's marginal workers. When demand fails to grow it may thus imply falling levels of union membership. In addition, this implies that wage and employment bargains are struck "closer" to the demand for labour curve. Some recent and consistent evidence for this is presented by Haskel *et al.* (1997) who show that increasing labour market flexibility in the United Kingdom has resulted in labour input being more closely aligned to the business cycle.

## IV.     Discussion

Much of the "new" trade literature is devoted to understanding the growth and formation of multinationals. They address the ownership, location and internalisation motives for FDI. For example, why ownership and control is important; why and where multinationals locate abroad; and why activities need to take place within the boundaries of the firm (particularly, when sub-contracting or licensing are obvious alternatives). In his survey of multinationals and trade, Markusen (1995) points out that the internalisation motive is the most abstract and difficult to rationalise. The bargaining

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[16] This result holds as long as $R_l$ is not "too" convex. See proof of Corollary 1. Mezzetti and Dinopoulos (1991) have a similar restriction in their strategic trade model.

models may provide some insight into why firms often choose FDI over licensing activities or "arm's length" contracting – investing overseas, which may entail substantial investment in plant and equipment, provides a credible threat to outsource employment; licensing in all likelihood will not.[17] In addition, strategic considerations involving unions in developed countries are consistent with two-way FDI within the same industry – which is a prominent feature of modern FDI (Ethier, 1994).

From an industrial relations perspective, a basic issue is whether unions can potentially "hold-up" a vertically integrated firm or whether workers will be pressured to reduce wages by dint of the increased competition from workers at foreign affiliates and outsourcing threats. In the latter case, it may seem obvious that unions can be played off against one another, but it depends crucially on whether the workers in separate unions (or "bargaining units") are complements or substitutes for one another (Horn and Wolinsky, 1988; Dowrick, 1993). If the two groups of workers are complements (substitutes) in production, then both groups can do better by bargaining separately (jointly).

The benefits of "going global" for firms are particularly obvious when they integrate horizontally rather than vertically (see Mezzetti and Dinopoulos, 1991; Zhao, 1995, 1998). This is the case that is modelled in the present paper. As for unions, while it may be beneficial for separate unions to band together to push up the wage bargain (see Davidson, 1988; Dowrick, 1989, 1993), it is not always possible for unions to credibly

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[17] The issues are far from clear-cut, however. While multinational firms may find it beneficial to make capital investments in production facilities overseas to tilt the bargaining outcome in their favour, Grout (1984) showed that firms may *under*-invest in capital in order to avoid expropriation by strong unions. More recently, Ulph (1989) has shown that unions may be better off by weakening their bargaining position, so that firms increase their investment whereby, although getting a smaller slice, the larger pie more than compensates. However, Ulph shows that firms may *over*-invest in capital in order to make credible a threat to use other workers.

increase their threat payoff.  Alternatively, unions adopting a more wage-oriented

bargaining posture may achieve the same objectives.  They can institutionalise this

through their political support for more decentralised wage bargaining.  This avenue may

be particularly attractive, when it is difficult for unions to integrate across national

boundaries (see Caves, 1996).

This paper sought to increase our understanding of one dimension of the

relationship between multinational corporations and labour markets.  In particular, we

investigated the evolution of less centralised wage bargaining in an era characterised by a

growing number of global firms.  In some countries (Australia, for example), enterprise

bargaining has introduced radical changes to the way in which wages are determined.  It

was argued that the changes in the manner in which bargaining are conducted may best

be viewed as a political economic response by unions to the growing internationalisation

of the firms they bargain with.

The increased importance of multinational firms and the greater exposure to

international competition has brought with it many changes.  One such change is the

gradual diminution of centralised wage bargaining.  The model presented in this paper

shows that unions prefer a greater degree of wage-orientation in their bargaining posture

when dealing with firms that threaten to outsource their jobs. The relevance of the model

for recent labour market developments is that the model's findings help to explain the

increased dispersion of labour market earnings.  Less directly, another feature of the

model is that outsourcing to foreign countries should not have as large a negative impact,

as is sometimes feared, on actual labour markets.  Overall, it should not be terribly

surprising that changes in labour market institutions have accompanied the growing

internationalisation of labour markets.

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## Appendix

**Proof of Proposition 1:** Totally differentiate Eqns. (2.1) and (6), using Eqn. (2.2) to simplify, to obtain

$$\begin{bmatrix} 2l & 2(w-r) \\ 0 & R_{ll} \end{bmatrix} \begin{bmatrix} dw \\ dl \end{bmatrix} = \begin{bmatrix} R_p & l & -1 \\ -R_{lp} & 1 & 0 \end{bmatrix} \begin{bmatrix} dp \\ dr \\ d\bar{\pi} \end{bmatrix}. \tag{A.1}$$

The determinant is $2lR_{ll} < 0$, by concavity. Using Cramer's Rule the results follow. $\blacksquare$

**Proof of Proposition 2:** Totally differentiate the first-order conditions, using Eqn. (7) to simplify, to obtain

$$\begin{bmatrix} (\lambda+1)l & (2-\lambda)(w-r) \\ (\lambda-2)l & \dfrac{(\lambda-2)(1-\lambda)(w-r)}{\lambda} + lR_{ll} \end{bmatrix} \begin{bmatrix} dw \\ dl \end{bmatrix} = \begin{bmatrix} -\lambda & (\pi-\bar{\pi}) \\ (1-\lambda) & (\pi-\bar{\pi}) \end{bmatrix} \begin{bmatrix} d\bar{\pi} \\ d\lambda \end{bmatrix}. \tag{A.2}$$

The determinant is $D = (\lambda-2)(w-r)\left(\dfrac{1-2\lambda}{\lambda}\right)l + (\lambda+1)l^2 R_{ll}$. $D < 0$ as long as

$$\frac{(\lambda-2)(1-2\lambda)}{\lambda(\lambda+1)} < \frac{-lR_{ll}}{(w-r)}.$$

The union chooses $\lambda$ to maximise $U(w,l;\lambda) = \big(w(\lambda)-r\big)l(\lambda)$. It therefore solves

$U_\lambda = (w-r)l_\lambda + lw_\lambda = 0$. Using Cramer's Rule on Eqn.(A.2), we have

$$l_\lambda = \frac{3l(\pi-\bar{\pi})}{D} < 0 \text{ and } w_\lambda = \frac{(\pi-\bar{\pi})}{D}\left(\frac{(\lambda-2)(w-r)}{\lambda} + lR_{ll}\right) > 0. \text{ Substitution into } U_\lambda$$

yields

$$\frac{2(2\lambda-1)}{\lambda} = -\frac{lR_{ll}}{(w-r)} > 0. \tag{A.3}$$

Clearly, $\lambda^* > \frac{1}{2}$. When evaluated at the $\lambda^*$ defined by Eqn.(A.3), also note that

$D = \frac{3}{2}\lambda l^2 R_{ll} < 0$. $\blacksquare$

**Proof of Corollary 1:** First, we note that for the $\lambda^*$ defined by Eqn.(A.3) to maximise

$U(\lambda)$, we require that the second order condition, $U_{\lambda\lambda} = \dfrac{(\pi - \overline{\pi})U}{D}\left[\dfrac{2}{\lambda^2} + \dfrac{(2R_{ll} + lR_{lll})l_\lambda}{(w - r)}\right]$

is negative. Sufficient is $2R_{ll} + lR_{lll} < 0$, which is satisfied as long as $R_{lll}$ is not "too"

positive.

The effect on union welfare of higher $\overline{\pi}$ is $U_{\overline{\pi}} = (w - r)l_{\overline{\pi}} + lw_{\overline{\pi}}$. From Eqn.(A.2),

we have $l_{\overline{\pi}} = \dfrac{(1 - 2\lambda)l}{D} > 0$ (since $\lambda^* > \frac{1}{2}$) and $w_{\overline{\pi}} = \dfrac{-\lambda l R_{ll}}{D} < 0$. By substitution,

$$U_{\overline{\pi}} = \frac{(w - r)(1 - 2\lambda)l - \lambda l^2 R_{ll}}{D}. \tag{A.4}$$

Evaluated at the optimal $\lambda^*$ we have $U_{\overline{\pi}} = -\frac{1}{3}$.

Note that $\lambda^* = \dfrac{2U}{4U + l^2 R_{ll}}$. Differentiating with respect to $\overline{\pi}$ gives:

$$\frac{d\lambda^*}{d\overline{\pi}} = \frac{2\lambda(1 - 2\lambda)U_{\overline{\pi}} - \lambda^2(2lR_{ll} + l^2 R_{lll})l_{\overline{\pi}}}{2U} > 0. \tag{A.5}$$

Eqn.(A.5) is positive since $U_{\overline{\pi}} < 0$, $l_{\overline{\pi}} > 0$ and $2R_{ll} + lR_{lll} < 0$. ∎