What determines Paid Parental Leave Provisions in Collective Agreements in New Zealand?

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Abstract: This study investigates the extent to which paid parental leave (PPL) provisions in New Zealand vary as a result of changes in Collective Bargaining Agreements (CEA). In particular, we employ an ordered Logit model to investigate the reasons why standard and additional paid parental leave provisions vary by eligibility (duration of employment), by industry sectors, and by union membership. It is found that additional paid parental leave provisions are more likely to be in agreements where the eligibility to paid parental leave is at 6 months of work. Furthermore, additional PPL provisions are more likely to be in public sector agreements, where the proportions of female union members and delegates are large.

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1. Introduction

The aim of this paper is to clarifying the extent to which paid parental leave (PPL) provisions in New Zealand vary as a result of changes in Collective Bargaining Agreements (CEAs). In particular, we want to investigate the extent to which additional paid parental leave provisions vary with female union membership and delegates.

Statistics are obtained using a dataset, which covers changes in the structure of CEAs since 1999. We distinguish PPL provisions by eligibility (duration of employment), by industry sectors, and by union membership. Variations in PPL provisions (standard and additional) are captured in terms of changes in the proportions of these provisions. We employ an ordered Logit model. Such method is new to the literature. It is a cross-sectional investigation.

This study highlights that the probability of finding additional paid parental leave provisions is high in agreements where the eligibility for it is at 6 months of work. It is significant and increasing in public sector agreements and where the proportions of female union members and delegates are large. The findings presented in this paper are preliminary, and at one point in time. However, the method proposed has wider applications, in particular for comparing and explaining variations in PPL provisions, over time. The contribution lies in the application of a more systematic method for capturing variations in PPL provisions, and the causes for these variations. The method is useful for measuring more accurately the net effects of these variations on the expected PPL outcomes for unions, firms, individuals and societies.

The issues related to paid parental leave provisions have reached contemporary prominence both as a social and an economic issue. The literature on paid parental leave provisions is vast and

studies carried out on this topic vary across countries, industries, sectors (private or public), societies (democratic or not) and over time. The review of the literature reveals that changes in the composition of the labour force are an important factor explaining variations in parental leave provisions. For example, the number of women participating in the labour force has increased since the 1980s. Their social role has changed. They are simultaneously carers, workers and sources of family income (Productivity Commission, 2009), and workplace policies have been adapted to match these evolving workforce requirements.

In addition, since the 1980s, domestic and international markets have become highly competitive. In this environment firms are required to adapt, so that labour market policies have been implemented to underpin a more flexible organisational structure of work (Marin and Verdier, 2008; Guadalupe and Wulf, 2009).

The introduction of paid parental leave provisions is the outcome of a range of factors, from changes in the firms' organisational structure of work, to changes in labour market policies (to render the wage, welfare and tax systems more flexible), which have been accompanied by changes in the country's laws and regulations of work, and by changes in the role of unions in negotiating flexible work arrangements (Rigby and O'Brien-Smith, 2010; Baird and Murray, 2012).

The significance of these factors, for introducing or vary PPL provisions, on the other hand, seems to depend on the perceived benefits of PPL provisions. For example, in countries where there is no parental leave provision, or where the compensation rate is low, the benefits for introducing or vary paid parental leave provisions are perceived to be great. In countries where the compensation rates are high, the benefits are perceived to be low, at the margin (European Parliament Report, 2010).

The literature also shows that the perceived benefits of paid parental leave vary between countries, between regions, between sectors and between firms, either in terms of size (Scicluna, 2010) or by type of production. They differ both in the short and long term. Furthermore, what is also of interest is that the perceived benefits from PPL provisions are difficult to quantify (New Zealand Ministry of Education Report, 2008; European Parliament Report, 2010).

Therefore, understanding the implications for variations in PPL provisions is important for many reasons. In New Zealand standard paid parental leave provisions of 14 weeks are offered in all type of agreements. However, we observe variations in PPL provisions. For example, variations occur by type of eligibility to PPL provisions. There are three types: i) at 6 months of work, ii) at less or iii) more than 6 months of work. We also observe variations by type of additional PPL provisions. For example, there are five types of additional PPL provisions: a lump-sum payment or 'ex-gratia payment', which is offered when parental leave is taken, or when work is recommended; 'top up payments', which are offered at less or more than 14 weeks of paid parental leave; and a 'combination', which offers a 'mix' of PPL additional provisions.

Collective agreements therefore, offer more than two options, both in terms of timing and in terms of amount paid for parental leave. The method proposed in this paper, for capturing variations in PPL provisions in collective agreements, is important to also evaluate the effectiveness of policies that support PPL provisions. The observed variations, for example, also reflect variations from the expected outcomes that unions, firms, individuals and society want or wanted to achieve.

The paper is divided in the following sections: section 2 provides an overview of PPL provisions in New Zealand. Section 3 is the methodology, model and calculation. Section 4 presents the results. A discussion of the results is included. Section 5 is our conclusion.

2. Provision of Paid Parental Leave in New Zealand

In New Zealand statutory entitlements to PPL were first established under the Parental Leave and Employment Protection (Paid Parental Leave) Amendment Act of 2002. The Act amended the statutory right to 12 months of unpaid parental leave, which was established by the Parental Leave and Employment Protection Act in 1987.

In 2002 the eligibility for paid parental leave was for those employed for at least 6 months of work, and provided 14 weeks of paid leave. The Amendment also included additional parental leave provisions. For example, a lump-sum payment or 'ex-gratia payment', which is offered when parental leave is taken, or when work is recommenced. 'Top up payments', which are offered at less or more than 14 weeks of paid parental leave, and a 'combination', which offers a 'mix' of PPL additional provisions. The current maximum PPL entitlement for 14 weeks is $475 per week, $65 less per week than the statutory minimum wage for a 40-hour week. It is $150 less per week than the mean (average) lowest adult wage paid under collective agreements.

Collective agreements are one form of employment agreement; the other form is individual agreement. Unionised employees are covered by collective agreements. The duration of these agreements varies between 2 and 5 years, which can be extended (or renewed).

Collective agreements can be negotiated either at the workplace or national level, and may involve one union and one employer, one union and multiple employers, multiple unions and one employer, or multiple unions and multiple employers. Agreements negotiated at the workplace level are sometime called individual agreements. However, these cannot be confused with individual agreements that are negotiated without unions and without provisions, or work entitlements, that are generally included in collective agreements, and above the statutory provisions.

In New Zealand there are about 1,843,700 employees. Just over one-quarter of all employees (or 501,486) belong to a union, and about 65 per cent of them (or 325,964) are union members (Statistics New Zealand, 2013). We utilise this information to apply sampling weights to all our figures. In our sample there 1,436 collective agreements and these cover 253,611 employees. We find that agreements that include eligibility to standard PPL provisions at 6 months of work, dominate agreements that include eligibility at less, or more, than 6 months of work. We also find that additional PPL provisions 'strive' in agreements that include PPL eligibility at 6 months of work.

Tables 3 and 4 show that eligibility at 6 months of work, for standard PPL provisions, dominates in ANZSIC (Australian and New Zealand Standard Industrial Classification) industry sectors, in particular ANSZIC 8 (for example, education and hospital services), and ANZSIC 2 (electricity, gas and water services, for example), followed by 6 and 5 (for example, finance, insurance, professional and technical services, and publishing, transport support services, and telecommunication services, respectively). Agreements with standard PPL provision eligibility at 6 months of work are dominant in single unions and single and/or multiple employers' agreements. Eligibility at 6 months of work is also popular in the public sector.

Table 5 shows that the dominant type of additional PPL provision is the 'combination'. This is followed by 'top-up' payments at more than 14 weeks of paid parental leave, ex-gratia payments, paid when leave is taken and at recommencement, and by 'top-up' payments at less than 14 weeks. Previously, the most common arrangement across all CEAs was the provision for ex-gratia (or lump sum) payments.

Tables 6, 7 and 8, show that the 'combination' is found primarily in the private and core public (or Government) sectors, and in single union and single and multiple employers' agreements. It is found in agreements negotiated at both national and workplace levels, mostly in the north island (as opposed to the south island). The 'combination' dominates in ANZSIC industry sectors 8 and 6 (for example, in education and hospital services; and finance, insurance, professional and technical services, respectively).

The relationship between eligibility to standard PPL provisions and additional PPL provisions is not linear (as also shown in charts 1 and 2). Additional PPL provisions are not equally distributed in agreements which include standard PPL provisions, independently of whether the eligibility for PPL is at 6 months of work or not. We would instead expect a more linear relationship, from the unions' point of view. The statistics may reveal variations in the 'bargaining power' of unions, and in their effectiveness to achieving the desired outcome.

Tables 1 and 4 for example, also show that 76.18 per cent of collective agreements include standard PPL provisions eligibility at 6 months of work; however, only 10 per cent of these agreements include additional provisions, such as the 'combination'. What is of interest, but which cannot be explored further in this paper, is also that 16.85 per cent of collective agreements are silent about paid parental leave eligibility, while 4.22 per cent do not include this information. Further studies are required to investigate these statistics. It may well be that in some industries, eligibility to PPL provisions, as well as additional PPL provisions, are 'traded-off' for alternative work entitlements, over time.

In this study, we propose to consider the impact of union females' members, delegates and officials on eligibility and additional PPL provisions outcomes to explain variations. Tables 10 and 11 (adjusted figures) show that within our sample, there are 171,190 union members, and 61.61 per cent of them are females' members. There are 9,995 delegates and 58.50 per cent of them are females' delegates. There are 259 union officials, and females' officials represent 51.83 per cent of them.

Union members and females delegates in particular, are high in numbers in collective agreements covering the service food, industrial textile and wood workers (ANSZIC 1), workers in the water, electricity, and gas services industries (ANSZIC 2), in the education and hospital services' industries (ANSZIC 8), in the professional managers and finance services industries (ANSZIC 6), and retail services industries (ANSZIC 4). In industry sectors where the proportion of female union members, delegates and/or officials, is large, we would expect a positive relationship with standard and additional PPL provisions, across collective agreements, and where the eligibility to PPL provisions is at 6 months of work (the observed dominant eligibility). We expect to find that the probability of finding additional PPL provisions (such as the 'combination') increases where the proportion of female union members, delegates and/or officials, is large.

To test for the determinants of standard and additional PPL provisions in collective agreements, in New Zealand, we construct an ordered (limited) dependent variable model (Logit ordered model), where the observed dependent variable denotes outcomes representing ordered or ranked categories of outcome. The next section explains the methodology, the model, and the regressions' specifications, before the results in section 4.

3. Proposed Methodology and Model

In this section we present the methodology, data, model and results of our analysis. Statistics are obtained using a special dataset (CEA Survey, 2012), which covers changes in the structure of collective agreements in New Zealand since 1999. We investigate changes in PPL provisions in 2012, across 1432 agreements. It is a cross-sectional study.

For the purpose of this paper, we construct an ordered (limited) dependent variable model to test for the determinants of paid parental leave (PPL) provisions in New Zealand. Generally, in ordered dependent variable models, the observed dependent variable denotes outcomes representing ordered or ranked categories.

We propose two ranked categories. For example, there are three types of paid parental leave eligibility outcome. Paid parental leave of 14 weeks may be offered at less than 6 months of work, at 6 months of work, or at more than 6 months of work. The statistics show that the dominant outcome, for eligibility to PPL, is at 6 months of work. This is followed by the eligibility at more than 6 months of work, and at less than 6 months of work. In our model, one of the observed dependent variable represents this ordered outcome.

We also observe that there are five types of additional parental leave provisions, and that the dominant type is the 'combination', which offers a 'mix' of all forms of additional provisions. The statistics show that this type is preferred to, for example, the provisions called 'ex-gratia payment' and 'top up payments'. In our model, the second observed dependent variable represents this ordered outcome.

To the author's knowledge the method applied in this investigation is new to the literature. For example Baird and Murray (2012), consider the impact of unions on work-family provisions outcome. They investigate the impact of unions on standard PPL eligibility by focussing on the effectiveness of unions within the legal context, but in the aggregate.

Ray, Gornick and Schmitt (2012) consider how parental leave laws, in term of the support they can give to parents (i.e. by offering job-protected leave and by offering financial support during that leave), vary by country. However, the impact of these laws on unions' role, or vice-versa, is excluded. Rigby O'Brien-Smith (2012), utilise data from interviews with union representatives, to investigate the role of unions (in the retailing and media sectors) in work-life balance issues and intervention strategies; however, they do not investigate marginal changes, or the reasons for these, between sectors.

Gregory and Milner (2009) investigate factors that might encourage or inhibit trade unions from their involvement in work-life balance issues; however, they do not consider paid parental leave provisions in particular. Risse (2006) examines the availability of maternity leave and the impact of maternity leave on fertility outcomes; however, the study excludes the role of trade unions. Therefore, only a very small range of articles is available on the topic of paid parental leave provisions, and even less on the role of unions in implementing this provision.

We propose to investigate the extent to which standard and additional PPL provisions vary across collective agreements, by including female union membership, delegates and officials. The unit of analysis is the number of contracts (i.e. collective agreements) offering PPL provisions (standard and additional), covering members of unions in organisations. As in the binary dependent variable model, we can model the observed responses (or PPL provisions outcome) by considering a 'quality' latent variable y_i^* that depends linearly on the explanatory variables x_i:

$$y_i^* = x_i'\beta + \varepsilon_i \tag{1}$$

where ε_i are independent and identically distributed random variables. The observed y_i is determined from y_i^* using the following standard rule:

$$yi \begin{cases} 0 \ if \ yi* \leqslant \gamma_1 \\ 1 \ if \ \gamma_1 < yi* \leqslant \gamma_2 \\ 2 \ if \ \gamma_2 < yi* \leqslant \gamma_2 \\ \quad ... \\ M \ if \ \gamma_M < yi* \end{cases}$$

For the purpose of this paper, there are two dependent variables (additional paid parental leave provisions, and standard paid parental leave provisions eligibility). These are defined as per the following:

Additional Parental Leave provisions:

$yi = yi^*$ = 0 if the contract does not have additional paid parental leave provisions included
= 0 if the contract has 'silent' additional paid parental leave provisions included
= 1 if the contract has 'exgratia at leave' additional paid parental leave provisions included
= 2 if the contract has 'exgratia at recommencement' additional paid parental leave provisions included
= 3 if the contract has additional paid parental leave provisions included at less than 14 weeks
= 4 if the contract has additional paid parental leave provisions included at more than 14 weeks
= 5 if the contract has a 'combination' of additional paid parental leave provisions included (preferred)   (2)

Eligibility to Standard Paid Parental Leave provisions:

$yi = yi^*$ = 0 if the contract does not have paid parental leave provisions included
= 0 if the contract has 'silent' paid parental leave provisions included
= 1 if the contract has paid parental leave provisions included at more than 6 months
= 2 if the contract has paid parental leave provisions included at less than 6 months
= 3 if the contract has paid parental leave provisions included at 6 months   (3)

To note that the values chosen to represent the categories in y are arbitrary. All the ordered specification requires for the ordering to be preserved so that $y_i^* < y_j^*$ which implies that $y_i < y_j$. It follows that the probabilities of observing each value of *y* are given by:

$$\Pr(y_i = 0 \mid x_i, \beta, \gamma) = F(\gamma_1 - x_i'\beta) \tag{4}$$

$$\Pr(y_i = 1 \mid x_i, \beta, \gamma) = F(\gamma_2 - x_i'\beta) - F(\gamma_1 - x_i'\beta) \tag{5}$$

$$\Pr(y_i = 2 \mid x_i, \beta, \gamma) = F(\gamma_3 - x_i'\beta) - F(\gamma_2 - x_i'\beta) \tag{6}$$

$$\Pr(y_i = M \mid x_i, \beta, \gamma) = 1 - F(\gamma_M - x_i'\beta) \tag{7}$$

where *F* is the cumulative distribution function of *ε*. The threshold values γ are estimated along with β coefficients by maximising the log likelihood function:

$$l(\beta, \gamma) = \sum_{i=1}^{N} \sum_{j=1}^{M} \log(\Pr(y_i = j \mid x_i, \beta, \gamma)) \, 1(y_i = j) \tag{8}$$

where 1(.) is an indicator function which takes the value of 1 if the argument is true, and 0 if the argument is false. The functions defined above can only be applied to agreements (and provisions) for which data are observed.

All collective agreements are known to include the standard 14 weeks of paid parental leave provision. However, it is not known in advance the type of eligibility to PPL provisions (i.e. at less than 6 months of work, at 6 months or at more than 6 months of work). Moreover, it is known that agreements include one or more of additional parental leave provisions. However, it is not known in advance which type of those additional provisions is included. Therefore, because all the agreements are known to include paid parental leave provisions and some form of additional paid parental leave provisions, the potential problem of sample selectivity bias (Greene, 2003) is not there.

In sum, we expect that standard paid parental leave provisions are included in collective agreements, but that these provisions differ by eligibility (duration of work). We also expect that one or more additional parental leave provision is included in collective agreements, but that these provisions vary by type.

3.1 The Regressions' specification

As mentioned, we construct an ordered (limited) dependent variable model (the ordered Logit model) to test for the determinants of standard and additional paid parental leave provisions in collective agreements, in New Zealand. We expect that the observed dependent variables denote outcomes representing ordered or ranked categories.

The ordering is correlated (positively or negatively) to the following explanatory variables. There are nine (9) explanatory variables for the dependent variable 'additional parental leave provisions' (PPOPSTAR), and eight (8) for the dependent variable 'eligibility to paid parental leave provisions' (PESTAR). Dummy variables are utilised to differentiate explanatory variables by level of negotiation, such as workplace agreements (i.e. CITY), by market type (public and private), by type of bargaining (for example, single union and single or multiple employer, and multiple unions and single or multiple employers), and by ANZSIC industry sectors.

In regression 1, the dependent variable ' (PPOPSTAR in regression 1) can be 'ordered' or classified according to the 'best', or 'most preferred', additional PPL provision outcome. There are five types of additional parental leave provisions. The provision called 'combination' is 'preferred' and also 'observed to be preferred' to an 'ex-gratia payment' provision, which is given when parental leave is taken, or when work is recommenced. The 'combination' is also observed to be preferred to 'top up payments', which are given at less or more than 14 weeks of paid parental leave.

The explanatory variables determining 'additional parental leave provisions' (PPOPSTAR) are the following: difference between the log of the minimum adult wage rate in agreement and the

log of the Government minimum adult wage rate (LDGMAR), which is a monetary continuous variable. The number of union members (SOC2), the proportion of female union members (FUMP), proportion of females' union officials (FUOP), and proportion of females' union delegates (FUDP), are continuous variables. We also include the number of agreements in public and private sectors (SECTOR 1, 2 and 3 respectively), the agreements negotiated, for example, between single union and single or multiple employers, and multiple unions and single or multiple employers (SINGLEMULTI 1, 2), agreements by industry sectors (ANSZIC), and by level of negotiations (CITY, as the workplace level).

In regression 2, the dependent variable 'eligibility to standard paid parental leave provisions' (PESTAR), can also be 'ordered' according to the 'observed preferred' outcome. There are three types of eligibility options. Standard paid parental leave provisions of 14 weeks are offered at less than 6 months of work, at 6 months of work, or at more than 6 months of work. While it could be argued that the first outcome is preferred to all the others, this is not what we observe. We classify 'standard paid parental leave provision eligibility' (PESTAR) according to the 'observed' outcome. In regression 2, we utilise the same explanatory variables as in regression 1, but we do not include agreements negotiated at the workplace level (i.e. CITY), as the variable does not seem to be significant. The next section presents the results.

4. Results and Interpretation

In this section we present the two regressions' results. In regression 1 for the dependent variable 'additional paid parental leave provision' (PPOPSTAR), the Pseudo R-square of the standard Logit model is 0.6125, which does not seem to be very large. However, the LR test statistics for significance of the explanatory variables (only the β parameters) on the 'order' is 745.221, which is large. It seems that these explanatory variables contribute substantially to the fit. They explain the expected order of additional parental leave provisions in collective agreements.

The probability of finding a 'combination' of additional parental leave provisions is greater than the probability of finding other types of additional provisions. In particular, the variables LDGMAR and FUMP (the difference between the log of the minimum adult wage rate in agreement and the log of the Government minimum adult wage rate, and the proportion of female union members) are both significant and positive, indicating that it is more likely to find a 'combination' of additional provisions, and the expected order of additional provisions, if there is a difference in wage rates (for adults), and with female union membership.

The variables ANZSIC industry sectors 2 (electricity, gas, water services, manufacturing), 8 (education, hospital and other health care services), and FUDP (proportion of female union delegates) are significant and negative. This indicates that it is less likely to find a 'combination' of additional provisions in these ANZSIC industry sectors' agreements (and the expected order), and with female union delegates.

The variable SECTOR 1 (Government core sector) is also significant and negative, indicating that it is less likely to find a 'combination' of additional provisions (and the expected order), in this sector. However, the variable SECTOR 2 (Government non-core sector) is weakly positive, indicating that the probability of finding a 'combination' of additional provisions (and the expected order) in this sector is weakly increasing.

In regression 2, for the dependent variable 'eligibility to paid parental leave provisions' (PESTAR), the Pseudo R-square of the standard Logit model is 0.64405. However, the LR test statistics for the significance of the explanatory variables (only the β parameters) on the order is

1087.435. This is large. Hence, it seems that the explanatory variables contribute substantially to the fit and to explaining of the order of the eligibility. In particular, the variables LDGMAR (difference between the log of the minimum adult wage rate in agreement and the log of the Government minimum adult wage rate), FUMP (proportion of female union members), SECTOR 1 and SECTOR 2 (Government core and non-core sectors) are all significant and positive.

The probability of finding eligibility to standard PPL provisions at 6 months of work is significant and increases if there is a difference between the log of the minimum adult wage rate in agreement and the log of the Government minimum adult wage rate; with female union membership; and in public sector agreements.

The variables FUDP (proportion of female union delegates), ANZSIC industry sectors 2 (manufacturing, gas water and electricity services), 3 (construction, wholesale trade) and 4 (fuel, accommodation retail services, road and airspace transport services), are significant and negative. It seems that it is less likely to find eligibility at 6 months of work (and the expected order), in ANZSIC industry sectors 2, 3 and 4, and with female union delegates. These results could be explained by the fact that in these industries individual contracts (instead of collective agreements) and casual jobs are common; and hence, unions are likely to have lower impact on the expected outcome.

When all the agreements are considered, the probability of finding eligibility to standard PPL provisions of 14 weeks at 6 months of work is greater than the probability of finding eligibility at less or more than 6 months of work. The coefficients included in the limit points are significant in both regressions. The Wald tests reveal that, as a group, all the variables are important in both regressions. This means that each explanatory variable contributes significantly to the probability of finding eligibility to standard parental leave provisions at 6 months of work, and of finding additional PPL provisions in the expected order.

5. Conclusion

This study investigates the extent to which Paid Parental Leave (PPL) provisions in collective agreements (CEAs) in New Zealand vary as a result of changes in CEAs. We employed an ordered Logit model to investigate how standard and additional paid parental leave provisions vary by eligibility (duration of employment), by industry sectors, by union membership, delegates and officials. It is found that the probability of finding additional paid parental leave provisions, such as the 'combination', is greater than the probability of finding other types of additional provisions, in agreements where the eligibility to the standard PPL of 14 weeks is at 6 months of work. In particular it is more likely to find it in public sector agreements.

The probability of finding a 'combination' of additional PPL provisions at 6 months of work increases where the difference between the log of the minimum adult wage rate in agreement and the log of the Government minimum adult wage rate is large, and where the proportion of female union members is large.

We find that unions, in terms of more females' workers in the proportion of its members, have an important role to play in determining eligibility to standard PPL provisions at 6 months of work, and in including additional PPL provisions in collective agreements. However, this is not so, when more female unions' delegates are included in the bargaining process.

There are limitations to this analysis. It is a cross-sectional analysis. It does however propose an alternative approach for capturing variations in PPL provisions, and to explore in details the

marginal effects of these changes, which could be compared over time, for example, in future studies. It also offers the opportunity to better measure the net effects of these variations on the outcomes that are expected by unions, over time.

Endnote

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Acknowledgements

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Table 1: Proportions of agreements with PPL eligibility, by type of eligibility

PPL Eligibility	Proportion
PPL at > 6 months	0.91%
PPL at < 6 months	0.70%
PPL Silent	16.85%
PPL = 6 months	76.18%
No PPL Eligibility	4.22%

Source: table constructed by the author. Data obtained from Collective Employment Agreement Survey (2012)

Table 2: Additional PPL provisions by type of PPL eligibility

	PPL at < 6	PPL at > 6	PPL Silent	PPL = 6
Ex-gratia @Recomenc	0.0150%	0.0195%	0.3638%	1.6446%
Top-up at < 14 weeks	0.0034%	0.0044%	0.0821%	0.3714%
Top-up at > 14 weeks	0.0179%	0.0233%	0.4342%	1.9630%
Silent	0.0131%	0.0170%	0.3169%	1.4324%
Combination	0.0737%	0.0958%	1.7838%	8.0640%
Ex-gratia @leave	0.0165%	0.0214%	0.3990%	1.8038%

Source: table constructed by the author. Data obtained from Collective Employment Agreement Survey (2012)

Table 3: Eligibility to Paid Parental Leave by ANZSIC industry sector agreements

ANZSIC Industry	PPL at > 6	PPL at < 6	PPL Silent	PPL = 6	No PPL Elig
ANSZIC 1	0.0221%	0.0170%	0.4107%	1.8568%	0.1290%
ANSZIC 2	0.2906%	0.2236%	5.4101%	24.4573%	1.6990%
ANSZIC 3	0.0309%	0.0238%	0.5750%	2.5996%	0.1806%
ANSZIC 4	0.0454%	0.0349%	0.8450%	3.8198%	0.2654%
ANSZIC 5	0.0523%	0.0403%	0.9741%	4.4034%	0.3059%
ANSZIC 6	0.1040%	0.0800%	1.9364%	8.7537%	0.6081%
ANSZIC 7	0.0454%	0.0349%	0.8450%	3.8198%	0.2654%
ANSZIC 8	0.2660%	0.2046%	4.9524%	22.3883%	1.5553%
ANSZIC 9	0.0485%	0.0373%	0.9036%	4.0851%	0.2838%

Source: table constructed by the author. Data obtained from Collective Employment Agreement Survey (2012)

Table 4: Proportions of Additional PPL provisions, in agreements

PPL additional provisions	Proportion
Ex-gratia @Recommenc.	2.16%
Top-up @ < 14 weeks	0.49%
Top-up @ > 14 weeks	2.58%
Silent	1.88%
Combination	10.58%
Ex-gratia @leave	2.37%
No additional provisions	56.69%

Source: table constructed by the author. Data obtained from Collective Employment Agreement Survey (2012)

Table 5: Composition of union agreements and their proportion by PPL eligibility

Agreements	PPL at > 6	PPL at < 6	PPL Silent	PPL = 6	No PPL Elig
Single Union	0.7225%	0.5557%	13.4490%	60.7985%	4.2237%
Multiple Union	0.1828%	0.1406%	3.4033%	15.3853%	1.0688%

Source: table constructed by the author. Data obtained from Collective Employment Agreement Survey (2012)

Table 6: Additional PPL Provisions by Public and Private sectors agreements

Market Sectors	Exgratia @Rec	Top-up at < 14	Top-up at > 14	Silent	Combination	Ex-gratia @leave	No add provision
Gov Core	0.2420%	0.0547%	0.2889%	0.2108%	1.1868%	0.2655%	6.3554%
Gov Non-Core	0.2075%	0.0468%	0.2476%	0.1807%	1.0172%	0.2275%	5.4475%
Private	1.7093%	0.3860%	2.0401%	1.4887%	8.3810%	1.8747%	44.8824%

Source: table constructed by the author. Data obtained from Collective Employment Agreement Survey (2012)

Table 7: Additional PPL Provisions by Union/employer agreements

Unions and Employers	Ex-gratia @Rec	Top-up at < 14	Top-up at > 14	Silent	Combination	Ex-gratia @leave	No add provision
Single	1.7228%	0.3890%	2.0563%	1.5005%	8.4473%	1.8895%	45.2377%
Multiple	0.4360%	0.0984%	0.5203%	0.3797%	2.1376%	0.4782%	11.4476%

Source: table constructed by the author. Data obtained from Collective Employment Agreement Survey (2012)

Table 8: Eligibility to PPL by Workplace and National agreements

Other Agreements	PPL at > 6	PPL at < 6	PPL Silent	PPL = 6	No PPL Elig
Workplace North Island	0.1715%	0.1319%	3.1921%	14.4304%	1.0025%
Workplace South Island	0.1116%	0.0858%	2.0772%	9.3903%	0.6523%
National level agreements	0.1563%	0.1203%	2.9104%	13.1571%	0.9140%

Source: table constructed by the author. Data obtained from Collective Employment Agreement Survey (2012)

Table 9: Additional PPL provisions by ANZSIC industry sector agreements

ANZSIC Agreements	Ex-gratia @Rec	Top-up at < 14	Top-up at > 14	Silent	Combination	Ex-gratia @leave	No add provision
ANSZIC 1	0.0526%	0.0119%	0.0628%	0.0458%	0.2580%	0.0577%	1.3816%
ANSZIC 2	0.6930%	0.1565%	0.8272%	0.6036%	3.3981%	0.7601%	18.1977%
ANSZIC 3	0.0737%	0.0166%	0.0879%	0.0642%	0.3612%	0.0808%	1.9342%
ANSZIC 4	0.1082%	0.0244%	0.1292%	0.0943%	0.5307%	0.1187%	2.8422%
ANSZIC 5	0.1248%	0.0282%	0.1489%	0.1087%	0.6118%	0.1369%	3.2764%
ANSZIC 6	0.2480%	0.0560%	0.2961%	0.2160%	1.2162%	0.2721%	6.5133%
ANSZIC 7	0.1082%	0.0244%	0.1292%	0.0943%	0.5307%	0.1187%	2.8422%
ANSZIC 8	0.6344%	0.1433%	0.7572%	0.5525%	3.1106%	0.6958%	16.6582%
ANSZIC 9	0.1158%	0.0261%	0.1382%	0.1008%	0.5676%	0.1270%	3.0395%

Source: table constructed by the author. Data obtained from Collective Employment Agreement Survey (2012)

Table 10: Proportion of Females Union Delegates

Unions	Membership (T)	Membership (F)	Delegates (T)	Delegates (F)
Total	171,190	103,755	9,995	5.847
Percentage		60.61%		58.50%

Source: table constructed by the author. Data obtained from Collective Employment Agreement Survey (2012)

Table 11: Proportion of Females Union Officials

Unions	Executives (T)*	Females
Total	259	99
Percentage		38.34%

Source: table constructed by the author.

*This number includes: National Executive, President, Vice president/s, National Secretary, Assistant National Secretary

Chart 1: Distribution of eligibility to PPL by type of additional PPL provisions

Distribution of eligibility to PPL by type of additional PPL provisions

0.0					
0.0					
0.0					
0.0				PPL = 6	
0.0				PPL > 6	
0.0				PPL < 6	
0.0				Mean	
0.0					
0.0					
	Exgratia @Rec	Top-up < 14	Top-up > 14	Combination	Exgratia @leave

Source: Chart constructed by the author. Data obtained from Collective Employment Agreement Survey (2012)

Chart 2: Distribution of additional PPL provisions by type of PPL eligibility
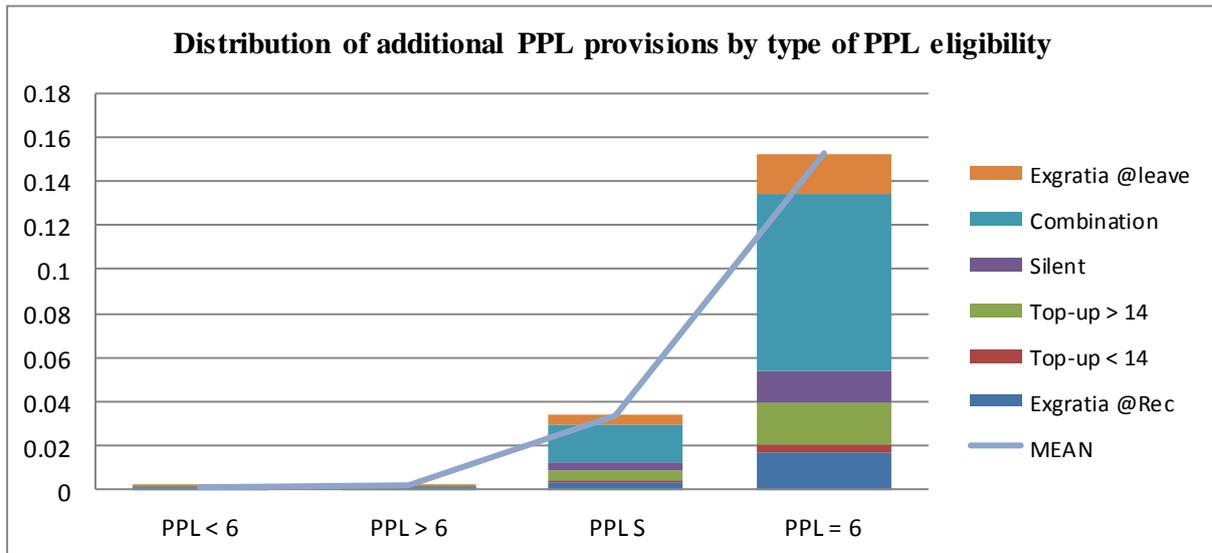
Distribution of additional PPL provisions by type of PPL eligibility

Source: Chart constructed by the author. Data obtained from Collective Employment Agreement Survey (2012)

Legend

Dependent Variables

PPOPSTAR =   Paid Parental leave additional provisions ordered according to their dominance in collective agreements

PESTAR =   eligibility to paid parental leave provisions ordered according to its dominance in collective agreements

Independent Variables

LDGMAR =   Difference between the log of minimum adult wage rate in agreement and the log of Government minimum adult wage rate (data obtained from New Zealand Department of Labour, 2012)

FUMP =   Proportion of females union members

FUDP =   Proportion of females union delegates

FUOP =   Proportion of female union officials

SOC2 =   Union members covered by the agreement = SOC + (SOC*SOC)

ANZSIC =   Australian and New Zealand Standard Industrial Classification, industry code, two digits (2006)

CITY =   Agreements negotiated at the workplace level (Auckland 1, Christchurch 2, Dundee 3, Hamilton 4, Palmerston North 5, Wellington 6), as opposed to national level agreements

SINGLEMULTI =   Agreements negotiated between single union – single and multiple employer 1, multiple union – single and multiple employer 2

SECTOR =   Government core (or central) sector 1, Government non-core sector 2 (or Local Authority and Government Trading), private sector 3

Regressions

Regression 1:
Dependent Variable: PPOPSTAR
Method: ML - Ordered Logit (Quadratic hill climbing)
Sample (adjusted): 1 1314
Included observations: 1302 after adjustments
Number of ordered indicator values: 5
Convergence achieved after 397 iterations
Covariance matrix computed using second derivatives

Variable	Coefficient	Std. Error	z-Statistic	Prob.
LDGMAR	51.149400	7.008399	7.298301	0.000000
FUMP	7.404838	2.652022	2.792148	0.005200
FUOP	-0.795606	2.076722	-0.383106	0.701600
FUDP	-5.510677	2.713132	-2.031113	0.042200
SOC2	0.000000	0.000000	-0.266331	0.790000
ANZSIC=1	-0.815519	0.960958	-0.848652	0.396100
ANZSIC=2	-1.499149	0.727096	-2.061830	0.039200
ANZSIC=3	-0.832385	0.899765	-0.925113	0.354900
ANZSIC=4	0.200171	0.877492	0.228117	0.819600
ANZSIC=5	-1.073290	0.995922	-1.077685	0.281200
ANZSIC=6	0.209990	0.828509	0.253455	0.799900
ANZSIC=7	0.080186	0.855267	0.093755	0.925300
ANZSIC=8	-3.069875	0.828128	-3.707003	0.000200
CITY=1	37.449590	44268.58	0.000846	0.999300
CITY=2	39.938920	44268.58	0.000902	0.999300
CITY=3	3.766446	2430772.00	0.000002	1.000000
CITY=4	2.119211	2525479.00	0.000001	1.000000
CITY=5	1.418447	473143.20	0.000003	1.000000
CITY=6	-10.107490	76321.87	-0.000132	0.999900
SINGLEMULTI=1	-2.134135	44268.58	-0.000048	1.000000
SECTOR=1	-3.339279	1.075168	-3.105821	0.001900
SECTOR=2	0.998766	0.515540	1.937319	0.052700
	Limit Points			
LIMIT_1:C(23)	39.139470	5.711423	6.852841	0.000000
LIMIT_2:C(24)	39.293620	5.713680	6.877113	0.000000
LIMIT_4:C(25)	40.087540	5.723191	7.004403	0.000000
LIMIT_5:C(26)	42.420800	5.808670	7.303014	0.000000
Pseudo R-squared	0.612531	Akaike info criterion		0.402002
Schwarz criterion	0.505276	Log likelihood		-235.70300
Hannan-Quinn criter.	0.440747	Restr. log likelihood		-608.31400
LR statistic	745.221900	Avg. log likelihood		-0.181032
Prob(LR statistic)	0.000000			

Regression 2:
Dependent Variable: PESTAR

Method: ML - Ordered Logit (Quadratic hill climbing)

Sample (adjusted): 1 1314

Included observations: 1302 after adjustments

Number of ordered indicator values: 4

Convergence achieved after 22 iterations

Covariance matrix computed using second derivatives

Variable	Coefficient	Std. Error	z-Statistic	Prob.
LDGMAR	46.921350	3.299675	14.219990	0.000000
FUMP	4.897891	2.586519	1.893623	0.058300
FUOP	0.632892	1.569054	0.403359	0.686700
FUDP	-4.359119	2.479767	-1.757875	0.078800
SOC2	0.000001	0.000001	0.722133	0.470200
SECTOR=1	1.490617	0.429608	3.469713	0.000500
SECTOR=2	0.088853	0.515415	0.172392	0.863100
ANZSIC=1	-1.381068	0.919590	-1.501830	0.133100
ANZSIC=2	-1.391112	0.702293	-1.980814	0.047600
ANZSIC=3	-3.039585	0.913089	-3.328903	0.000900
ANZSIC=4	-1.693359	0.859164	-1.970937	0.048700
ANZSIC=5	-0.902370	0.957127	-0.942791	0.345800
ANZSIC=6	-1.095197	0.768841	-1.424477	0.154300
ANZSIC=7	-0.376549	0.869310	-0.433158	0.664900
ANZSIC=8	0.557888	0.742216	0.751652	0.452300
SINGLEMULTI=2	7.109732	115496.80	0.000062	1.000000
	Limit Points			
LIMIT_1:C(17)	2.794363	0.969075	2.883538	0.003900
LIMIT_2:C(18)	2.970177	0.972841	3.053096	0.002300
LIMIT_3:C(19)	3.242952	0.981372	3.304509	0.001000
Pseudo R-squared	0.644052	Akaike info criterion		0.490778
Schwarz criterion	0.566248	Log likelihood		-300.50
Hannan-Quinn criter.	0.519092	Restr. log likelihood		-844.21
LR statistic	1087.44	Avg. log likelihood		-0.230796
Prob(LR statistic)	0.000000			

Wald Tests

PPOPSTAR

Test Statistic	Value	df	Probability
F-statistic	27.65684	(4, 1276)	0.00000
Chi-square	110.6274	4	0.00000

Null Hypothesis: C(23)=C(24)=C(25)=C(26)=0

Null Hypothesis Summary:

Normalized Restriction (= 0)	Value	Std. Err.
C(23)	39.13947	5.71142
C(24)	39.29362	5.7137
C(25)	40.08754	5.72319
C(26)	42.4208	5.8087

Restrictions are linear in coefficients.

PESTAR

Test Statistic	Value	df	Probability
F-statistic	9.956934	(3, 1283)	0.00000
Chi-square	29.8708	3	0.00000

Null Hypothesis: C(17)=C(18)=C(19)=0

Null Hypothesis Summary:

Normalized Restriction (= 0)	Value	Std. Err.
C(17)	2.794363	0.96907
C(18)	2.970177	0.97284
C(19)	3.242952	0.98137

Restrictions are linear in coefficients.