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# An empirical examination of the gender pay gap in New Zealand

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## Abstract

New Zealand has often been described as a leader in the field of gender equality. Yet, while women have achieved substantial gains in a range of outcomes (education and labour force participation for example), the gender pay gap has changed very little. This study uses confidentialised microdata from Statistics New Zealand to examine the gap in a multitude of ways. We begin by applying the traditional Oaxaca decomposition technique, before accounting for selection, distributional differences and matching. We find that the gap is largely unexplained (83 per cent). Importantly, we correct for selection bias for both men and women – which produces counterbalancing effects such that the net result is broadly similar to that prior to the correction. We also employ propensity score matching, as a further check of robustness of results, and find only minor movements in the unexplained gap. Finally, distributional analysis illustrates evidence in favour of the glass-ceiling hypothesis.

**Keywords:** Gender, wage gap, selection, quantile, matching  
JEL classification: J16; J3

## 1. Introduction

New Zealand led the world as the first country where women achieved the right to vote, and there have been substantial gains in recent years for women in a range of outcomes, such as education; labour force participation; and health. However, the gender pay gap has not diminished in the last decade – particularly if we compare the gap between the last time there was substantive analysis in this space for the New Zealand labour market (Dixon, 2003) and the end of the sample timeframe of this study 2015. Over this period of 12 years, the gender pay gap has hovered at the 12 per cent mark. The main aim of this research

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### Disclaimer:

Access to the data used in this study was provided by Statistics New Zealand under conditions designed to give effect to the security and confidentiality provisions of the Statistics Act 1975. The results presented in this study are the work of the authors, not Statistics New Zealand.

is, therefore, to explore whether the factors that contribute/explain the gap have changed over time (given the transformation in other aspects of the labour market by gender), and what proportion of the gap can now be explained by observable information about the individual and their job. While the raw gender pay gap is regularly reported in the mainstream media (based on average or median earnings for males and females), it is meaningless without controlling for differences in characteristics. These include individual, household, occupation, industry and other job characteristics of the person. Of particular note is that there has been no gender pay gap analysis, controlling for relevant observable information post-2003.

This study relies on the use of unit record Income Survey data from Statistics New Zealand to estimate the gender pay gap while controlling for a wide range of observable characteristics. We employ the standard Oaxaca-Blinder decomposition technique which apportions to the gap into two components – explained and unexplained. The explained component reflects differences in the observed characteristics of males and females; while the unexplained reflects differences in returns. The latter is more problematic to interpret as these differences may be due to unobserved variables, discrimination, and/or different preferences for non-wage components by gender.

As the Oaxaca-Blinder approach may suffer from sample selection bias (wages can only be observed for the employed), we also apply the Heckman procedure to correct for this bias. This provides a predicted pay gap under the scenario that both males and females not in the labour force select into the labour market. We, then, switch to the semi-parametric approach of propensity score matching (PSM), which offers an alternative approach to test the reliability of our decomposition results. The PSM approach matches males and females based on their observed characteristics – this includes all personal, educational, household, region, occupation, industry and other job characteristics used in the earlier Oaxaca decompositions. The wages of the matched male observations provide the counterfactual wage for females, based on the returns to the characteristics that males are receiving.

We end our empirical endeavours with an assessment of how the gender pay gap changes across the wage distribution. In particular, we employ quantile regression to investigate how the gender pay gap (along with the proportion that is explained/unexplained) varies across various wage quantiles.

The format for the rest of the paper is as follows: A background on the New Zealand literature in this space is provided in Section two; Data and variable selection is described in Section three; The decomposition analysis, along with results corrected for sample selection bias are shown in Sections four and five; The PSM findings (as a test of robustness of our findings) are illustrated in Section six; while Section seven covers the quantile regressions; and the final section concludes.

## **2. New Zealand literature**

There has been limited empirical work on understanding the gender wage ratio in New Zealand. Kirkwood and Wigbout (1999) made use of the first wave (1997) of the Income Survey (IS) via ‘tree analysis’ and found that about half of the earnings gap between men and women in full time employment could be explained by observed characteristics (such as education, occupation, ethnicity, marital status, etc.). The IS was added in 1997 as an annual supplement to the June quarter of the Household Labour Force Survey (a quarterly survey of around 15,000 households that began in March 1986).

The most substantial contributor to the New Zealand literature has been Sylvia Dixon. Her earliest work (1996a; 1998) used the Household Economic Survey (HES) to investigate the distribution of earnings in New Zealand. She estimated Ordinary Least Squares (OLS) regressions with log of real hourly earnings as the dependent variable and generally found a significant gender wage differential. For instance, Dixon (1996b) found that, in 1995, the predicted earnings of females was 9.6 per cent lower than males, after controlling for other factors – which included age, age squared, educational characteristics, ethnicity, and part-time status.

In Dixon (2000), more covariates were added to the gender pay gap analysis (such as occupation and industry), analysis was extended to include the 1997 IS (in addition to the 1997 and 1998 HES), and wage regressions were replaced with decomposition frameworks. Such techniques (first developed by Oaxaca (1973) and Blinder (1973)) are now a standard method employed in the pay inequality literature; and apportion the pay gap either into endowments, characteristics, and residuals (a three-fold decomposition) or explained and unexplained (a two-fold approach).

In Dixon (2000), the total log hourly earnings gap equated to 15.3 per cent when using the HES (1997-1998), and 17.1 per cent when using the IS (1997). Initially, it was found that between 30 and 60 per cent of the gender wage differential could be attributed (explained) to differences in education and experience; and after information on occupation and industry was added to the model – the explained component rose to between 40 to 80 per cent. Dixon (2000) expected the pay gap to narrow in future years due to improvements in relative educational attainment of females, as well as the long-run expectation that male and female paid work patterns would gradually become more alike. Indeed, in a follow up paper, Dixon (2003) did find that the total gender pay gap had narrowed to 12.8 per cent. She argued that the decline in the pay gap was primarily driven by increases in the human capital of females (relative to males) and changes in the employment distribution of the two groups.

A final study worth mentioning is that by Alexander, Genç and Jaforullah (2004). They also made use of IS data, from both its inaugural year in 1997 and 2003. They estimated wage regressions via OLS, Heckit and Maximum Likelihood Estimation (MLE) – the latter two taking into account sample selection bias. Dixon (2000) did trial correcting for sample selection bias in her study as well, but found that the selection effect estimates were often insignificant, and very sensitive to the exclusion or inclusion of alternative ‘identifying’ variables. Alexander et al., (2004) found that, regardless of the estimation technique (i.e. whether correcting for selection or not), similar gender wage differentials were found – with approximately a 13 per cent gap in 1997 and 12 per cent gap in 2003.

To sum up the literature on examining the gender pay gap in New Zealand, while there appears to have been a flurry of estimations of the gap when the IS was first introduced in 1997, there has been no substantive analysis of the gender wage differential using data post-2003. We, therefore, provide a much-needed update using the latest available data in 2015.

### 3. Data and descriptives

#### *Data*

This study continues the tradition of using IS data in New Zealand when analysing pay inequality. This data source provides earnings information for a representative sample of approximately 15,000 New Zealand households (corresponding to roughly 30,000 individuals). The survey asks for details on, among other things, the respondent's pay and working hours. Where necessary, responses are imputed from a random donor of similar characteristics, with an 11.1 per cent imputation rate in the 2015 iteration<sup>1</sup>. Information from the accompanying Household Labour Force Survey (HLFS) provides a detailed picture of the labour force in terms of geographic, demographic, occupational, industry, and other job characteristics.

We limit our 2015 sample to the working age population (i.e. those aged 16-64) and drop a small number of wage earners with very low or high values for earnings and/or hours<sup>2</sup> to minimise the potential for measurement error influencing our estimates. We also exclude the self-employed – leaving us with a final sample of 13,737 (6834 males and 6903 females<sup>3</sup>).

#### *Descriptives*

Figures 1 and 2 show kernel density curves for the distribution by gender of log hourly wages and weekly hours worked, respectively. In Figure 1 the curve for the female wage distribution is steeper and higher than that for males, meaning that it is more clustered around the point of maximum density than the male distribution, which is more uniform. This indicates that male wages are more distributed over a range of values, relative to their female counterparts in the workforce. The point of maximum density is also further to the left for the female distribution, relative to the male distribution. This finding is reinforced by the lower value for the median usual hourly wage for women compared to men (\$21 versus \$24.21).

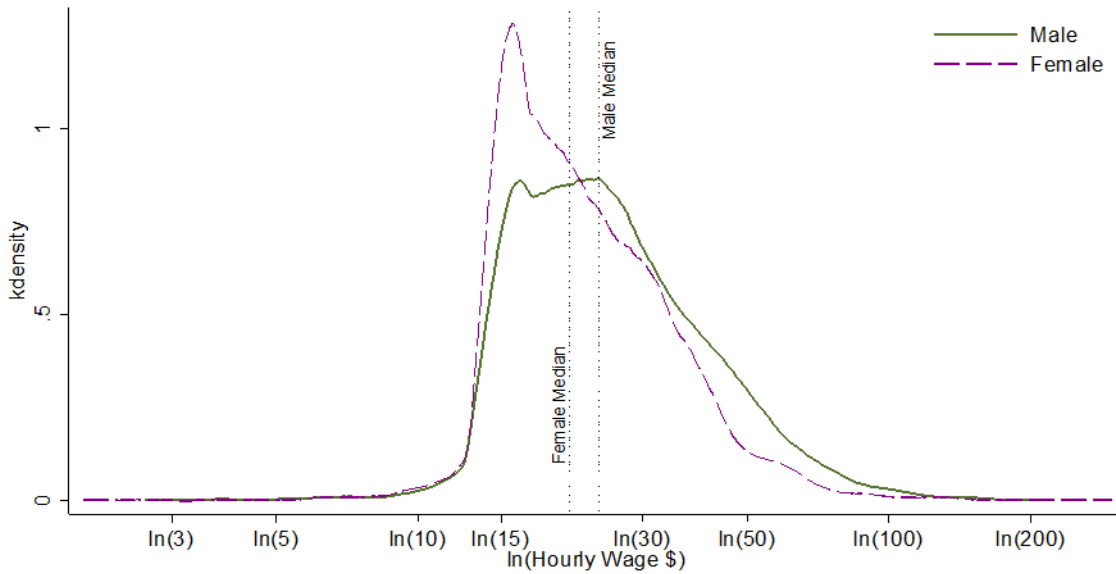
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<sup>1</sup> See [http://archive.stats.govt.nz/browse\\_for\\_stats/income-and-work/Income/NZIncomeSurvey\\_HOTPJun15qtr/%20Data%20Quality.aspx](http://archive.stats.govt.nz/browse_for_stats/income-and-work/Income/NZIncomeSurvey_HOTPJun15qtr/%20Data%20Quality.aspx)

<sup>2</sup> Specifically, we follow Dixon's (2003) thresholds of excluding hourly wage <\$1 and >\$500, and inflate these figures to 2015\$. This mostly removes employed individuals who report zero wages, which may indicate a misclassification of their employment status. We also drop individuals reporting weekly hours in excess of 100.

<sup>3</sup> All sample sizes are random rounded to base three, due to Statistics New Zealand requirements regarding confidentiality assurance. Also, included in our sample are all imputed records.

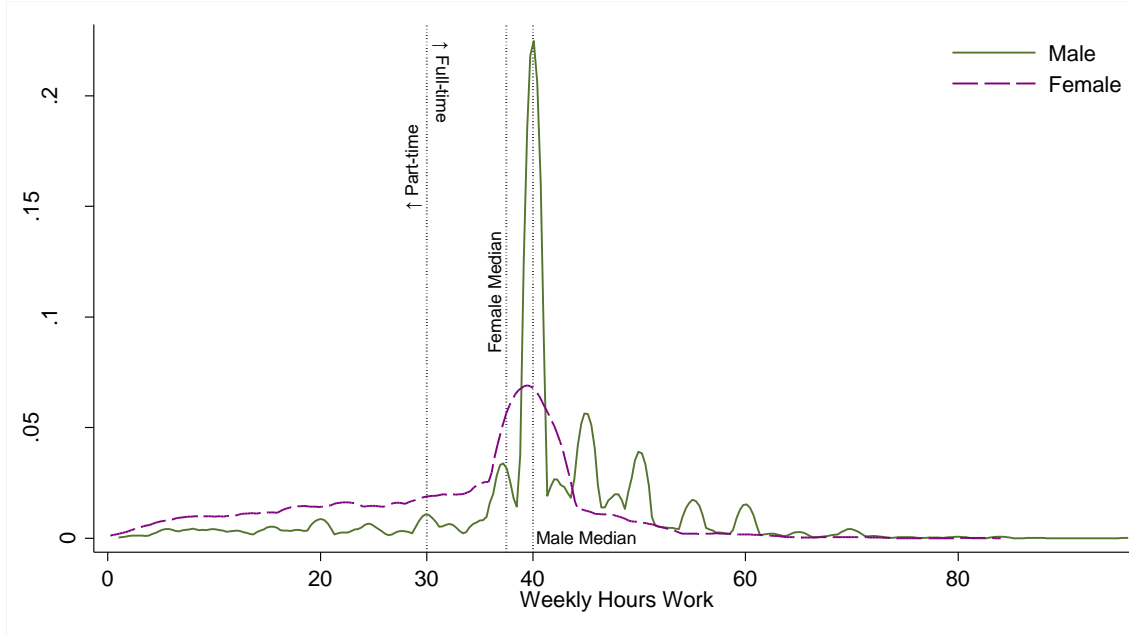
**Figure 1: Usual hourly wage distribution, by gender (2015)**



Source: 2015 IS. Author's compilation.

For usual weekly hours worked (Figure 2), the male curve is considerably steeper and higher than the female curve, suggesting more clustering in our male series. The density for females is flatter relative to that for males, indicating that weekly hours worked by females are more distributed in comparison to the clustering of male hours around the 40-hour mark. The female distribution also lies to the left of the distribution for males; median weekly hours worked are 37.5 for females and 40 for males.

**Figure 2: Usual weekly hours distribution, by gender (2015)**



Source: 2015 IS. Author's compilation.

A comprehensive descriptive portrait of the individuals in our sample is provided in Table 1. The 13,737 sample is fairly evenly split between the genders and the means and standard deviations for all variables used in the forthcoming analysis are provided for both the full sample, as well as separately for males and females. The final column in the table reflects whether the differences in characteristics between the gender sub-groups are statistically significant.

As Table 1 indicates, female employees, on average, receive a lower wage than their male counterparts – \$25 per hour compared to \$29 per hour. In terms of personal characteristics, females in our sample are marginally older, and there are minor differences in the ethnic makeup across the genders (with a little more Māori females than males; and a little less Asian females than males in the workforce). There are more marked differences across the genders with respect to household characteristics – with females close to three times as likely to be a sole parent and twice as likely to be widowed or separated/divorced, relative to males. It also appears that males in 2015 were more likely to be living in a household with children under the age of 6 (26.1 per cent of males compared to 18.1 per cent of females).

In previous studies, differences in educational attainment between males and females have often been found to be a contributing factor in explaining pay gaps – past evidence has usually found higher levels of educational attainment for males. However, based on Table 1, and as Dixon (2000) predicted, the educational divide in New Zealand has narrowed considerably – with females overtaking males in all qualification levels (barring post-school – which encompasses many vocational certificates and diplomas). Males are more likely to have no qualifications (16.3 per cent versus 14.2 per cent), and less likely to have a Bachelor's and postgraduate qualification. We can compare the figures in Table 1 to those reported by Dixon (2000) which used the 1997 wave of the IS. This comparison shows that in the 1997 sample, 14.3 per cent of males held a Bachelor's or postgraduate degree as their highest level of educational attainment (and 12.4 per cent of females); while in the 2015 sample, the comparable proportions were 22.5 per cent and 30.5 per cent, respectively.

In terms of occupational structure, males are more likely to be managers, trades workers, machinery operators or labourers; and women are more likely to be professionals, community and personal service workers, or in administration roles. There are also significant differences in gender distribution for the majority of the industry categories. Manufacturing and Construction, for example, appear to be male dominated; while Retail Trade and Education and Training appear to be female dominated sectors. Besides occupation and industry, one other job related characteristic provided in Table 1 is a dummy variable for working part-time. Females appear to be more than three times more likely to work part-time compared to males, 30.4 per cent versus 8.8 per cent.

**Table 1: Variable definitions and descriptive statistics**

Variable	Definition	Mean (Standard Deviation)			Significant difference
		Full Sample	Male	Female	
Hourly wage	Usual hourly total earnings (\$)	27.0 (15.7)	29.0 (16.8)	25.0 (14.1)	***
Ln hourly wage	Natural logarithm of hourly usual total earnings	3.18 (0.45)	3.25 (0.47)	3.12 (0.42)	***
Weekly hours	Weekly usual total hours work	36.7 (12.5)	40.9 (11.1)	32.5 (12.5)	***
<b>Personal characteristics</b>					
Age	Age in years	41.2 (13.0)	40.7 (13.0)	41.7 (12.9)	***
Pakeha	Dummy variable: 1 = Pakeha; 0 otherwise	0.743 (0.437)	0.739 (0.439)	0.746 (0.436)	
Māori	Dummy variable: 1 = Māori; 0 otherwise	0.117 (0.321)	0.111 (0.314)	0.123 (0.328)	**
Pacific	Dummy variable: 1 = Pacific; 0 otherwise	0.067 (0.251)	0.069 (0.254)	0.065 (0.247)	
Asian	Dummy variable: 1 = Asian; 0 otherwise	0.115 (0.319)	0.120 (0.326)	0.109 (0.312)	**
MELAA	Dummy variable: 1 = MELAA; 0 otherwise	0.009 (0.092)	0.008 (0.092)	0.009 (0.093)	
Other ethnicity	Dummy variable: 1 = Other ethnicity; 0 otherwise	0.020 (0.141)	0.018 (0.135)	0.022 (0.147)	
Non-immigrant	Dummy variable: 1 = Born in NZ; 0 otherwise	0.726 (0.446)	0.719 (0.449)	0.732 (0.443)	*
Immigrant - Pasifika	Dummy variable: 1 = Born in Pacific Island countries; 0 otherwise	0.055 (0.227)	0.057 (0.231)	0.052 (0.223)	
Immigrant – Asia, Middle East, Africa	Dummy variable: 1 = Born in Asian, Middle East or African countries; 0 otherwise	0.098 (0.298)	0.104 (0.306)	0.092 (0.290)	**
Immigrant - Other	Dummy variable: 1 = Born in other countries (not listed above); 0 otherwise	0.121 (0.326)	0.120 (0.324)	0.123 (0.328)	
<b>Household characteristics</b>					
Joint parent	Dummy variable: 1 = Couple with one or more dependent children; 0 otherwise	0.345 (0.475)	0.382 (0.486)	0.307 (0.461)	***
Sole parent	Dummy variable: 1 = One parent with one or more dependent children; 0 otherwise	0.059 (0.236)	0.030 (0.172)	0.087 (0.283)	***
Children under 6	Number of children aged under 6 in the family	0.221 (0.549)	0.261 (0.600)	0.181 (0.491)	***
Children 6 - 14	Number of children aged 6-14 in the family	0.364 (0.744)	0.362 (0.749)	0.365 (0.738)	
Children 15 - 18	Number of children aged 15-18 (and not in full-time employment) in the family	0.102 (0.342)	0.092 (0.328)	0.111 (0.355)	***
Married/partnered	Dummy variable: 1 = Married/living as married; 0 otherwise	0.649 (0.477)	0.675 (0.468)	0.624 (0.484)	***
Widowed/separated/Divorced	Dummy variable: 1 = Widowed/separated/divorced; 0 otherwise	0.069 (0.254)	0.043 (0.203)	0.095 (0.294)	***
Never married	Dummy variable: 1 = Never married; 0 otherwise	0.281 (0.449)	0.282 (0.450)	0.280 (0.449)	
<b>Educational attainment (highest qualification)</b>					
No qualification	Dummy variable: 1 = No qualification; 0 otherwise	0.152 (0.359)	0.163 (0.369)	0.142 (0.349)	***
School	Dummy variable: 1 = Lower/upper secondary school qualification; 0 otherwise	0.243 (0.429)	0.230 (0.421)	0.255 (0.436)	***
Post school	Dummy variable: 1 = Post school qualification (level 1-7 certificate or diploma); 0 otherwise	0.339 (0.474)	0.381 (0.486)	0.298 (0.457)	***
Bachelor's	Dummy variable: 1 = Bachelor's degree (including Honours); 0 otherwise	0.180 (0.385)	0.153 (0.360)	0.207 (0.405)	***
Postgraduate	Dummy variable: 1 = Postgraduate qualification; 0 otherwise	0.085 (0.279)	0.072 (0.259)	0.098 (0.298)	***
<b>Occupational Characteristics (ANZSCO Level 1)</b>					
Dummy variables (8)	1 = Manager; 0 otherwise	0.130 (0.336)	0.170 (0.376)	0.090 (0.285)	***
	1 = Professional; 0 otherwise	0.238 (0.426)	0.195 (0.396)	0.280 (0.449)	***
	1 = Technician and Trades Worker; 0 otherwise	0.124 (0.329)	0.199 (0.400)	0.049 (0.215)	***
	1 = Community and Personal Service Worker; 0 otherwise	0.098 (0.297)	0.054 (0.225)	0.141 (0.348)	***



	1 = Clerical and Administrative Worker; 0 otherwise	0.132 (0.339)	0.063 (0.243)	0.201 (0.401)	***
	1 = Sales Worker; 0 otherwise	0.098 (0.298)	0.073 (0.261)	0.123 (0.328)	***
	1 = Machinery Operator or Driver; 0 otherwise	0.065 (0.247)	0.112 (0.315)	0.020 (0.138)	***
	1 = Labourer; 0 otherwise	0.115 (0.319)	0.134 (0.341)	0.097 (0.295)	***
<b>Industry Classifications (ANZSIC Level 1)</b>					
Dummy variables (19)	1 = Agriculture, Forestry and Fishing; 0 otherwise	0.045 (0.206)	0.060 (0.238)	0.029 (0.168)	***
	1 = Mining; 0 otherwise	0.004 (0.061)	0.006 (0.080)	0.001 (0.034)	***
	1 = Manufacturing; 0 otherwise	0.131 (0.337)	0.187 (0.390)	0.075 (0.264)	***
	1 = Electricity, Gas, Water and Waste Services; 0 otherwise	0.012 (0.108)	0.018 (0.131)	0.006 (0.079)	***
	1 = Construction; 0 otherwise	0.073 (0.260)	0.126 (0.332)	0.020 (0.141)	***
	1 = Wholesale Trade; 0 otherwise	0.041 (0.199)	0.056 (0.230)	0.027 (0.161)	***
	1 = Retail Trade; 0 otherwise	0.103 (0.304)	0.088 (0.283)	0.118 (0.322)	***
	1 = Accommodation and Food Services; 0 otherwise	0.053 (0.224)	0.040 (0.196)	0.065 (0.247)	***
	1 = Transport, Postal and Warehousing; 0 otherwise	0.045 (0.207)	0.062 (0.241)	0.028 (0.166)	***
	1 = Information Media and Telecommunications; 0 otherwise	0.019 (0.137)	0.020 (0.140)	0.018 (0.133)	
	1 = Financial and Insurance Services; 0 otherwise	0.022 (0.147)	0.018 (0.132)	0.026 (0.160)	***
	1 = Rental, Hiring and Real Estate Services; 0 otherwise	0.013 (0.115)	0.013 (0.112)	0.014 (0.117)	
	1 = Professional, Scientific and Technical Services; 0 otherwise	0.056 (0.230)	0.050 (0.218)	0.062 (0.241)	***
	1 = Administrative and Support Services; 0 otherwise	0.038 (0.190)	0.042 (0.200)	0.034 (0.181)	**
	1 = Public Administration and Safety; 0 otherwise	0.054 (0.227)	0.047 (0.212)	0.062 (0.240)	***
	1 = Education and Training; 0 otherwise	0.109 (0.311)	0.069 (0.254)	0.148 (0.355)	***
	1 = Health Care and Social Assistance; 0 otherwise	0.109 (0.312)	0.037 (0.190)	0.180 (0.384)	***
	1 = Arts and Recreation Services; 0 otherwise	0.039 (0.193)	0.021 (0.143)	0.057 (0.231)	***
	1 = Other services; 0 otherwise	0.034 (0.182)	0.040 (0.196)	0.029 (0.167)	***
<b>Region</b>					
Dummy variables (12)	1 = Northland Regional Council; 0 otherwise	0.037 (0.189)	0.035 (0.183)	0.039 (0.195)	
	1 = Auckland Regional Council; 0 otherwise	0.278 (0.448)	0.282 (0.450)	0.275 (0.446)	
	1 = Waikato Regional Council; 0 otherwise	0.082 (0.274)	0.083 (0.277)	0.080 (0.272)	
	1 = Bay of Plenty Regional Council; 0 otherwise	0.059 (0.236)	0.058 (0.234)	0.061 (0.239)	
	1 = Gisborne/Hawke's Bay Regional Council; 0 otherwise	0.056 (0.230)	0.056 (0.229)	0.057 (0.231)	
	1 = Taranaki Regional Council; 0 otherwise	0.037 (0.189)	0.037 (0.188)	0.038 (0.190)	
	1 = Manawatu-Wanganui Regional Council; 0 otherwise	0.059 (0.235)	0.056 (0.231)	0.061 (0.240)	
	1 = Wellington Regional Council; 0 otherwise	0.103 (0.304)	0.102 (0.303)	0.105 (0.306)	
	1 = Nelson/Tasman/Marlborough/West Coast Regional Council; 0 otherwise	0.052 (0.223)	0.051 (0.220)	0.054 (0.226)	
	1 = Canterbury Regional Council; 0 otherwise	0.132 (0.339)	0.137 (0.344)	0.127 (0.333)	*
	1 = Otago Regional Council; 0 otherwise	0.065 (0.247)	0.065 (0.247)	0.065 (0.247)	
	1 = Southland Regional Council; 0 otherwise	0.038 (0.191)	0.038 (0.191)	0.038 (0.191)	
<b>Other job-related characteristics</b>					
Part-time	Dummy variable: 1= Part-time (working less than 30 hours a week); 0 otherwise	0.197 (0.398)	0.088 (0.284)	0.304 (0.460)	***
<b>Sample size</b>		<b>13,737</b>	<b>6,834</b>	<b>6,903</b>	

Notes: \*\*\*, \*\* and \* reflect the significance of the differences between the male and female subgroups, at the one per cent, five per cent, and ten per cent level, respectively.

#### 4. Decomposition

Given the observable characteristics detailed in the previous section, the next step of our empirical endeavour is to investigate which variables (or more accurately put – gender differences in variables) can explain the gender pay gap, and how much of the gap is left unexplained.

We use the common decomposition approach in the literature on gender pay disparities introduced by Oaxaca (1973) and Blinder (1973). The process is to, first, separately estimate the wage equations (using the natural logarithm of usual hourly wages) for males in (1) and females in (2) as<sup>4</sup>:

$$\ln(w_i^m) = \beta^m X_i^m + \varepsilon_i^m \quad (1)$$

$$\ln(w_i^f) = \beta^f X_i^f + \varepsilon_i^f \quad (2)$$

where  $m$  and  $f$  superscripts denote males and females, the  $i$  subscript denotes the  $i^{\text{th}}$  wage earner, and  $w$  stands for hourly wages.  $X$  represents vectors of explanatory variables, shown in Table 1 above, which includes information on personal, educational, regional and household characteristics, as well as occupation, industry, and other job-related characteristics.

The gender pay gap is calculated in (3) and decomposed in (4):

$$\overline{\ln(w^m)} - \overline{\ln(w^f)} = \widehat{\beta}^m \overline{X^m} - \widehat{\beta}^f \overline{X^f} \quad (3)$$

$$\overline{\ln(w^m)} - \overline{\ln(w^f)} = \widehat{\beta}^m (\overline{X^m} - \overline{X^f}) + (\widehat{\beta}^m - \widehat{\beta}^f) \overline{X^f} \quad (4)$$

where  $\widehat{\beta}$  stands for the vector of coefficients estimated in the wage equations. The first term on the right hand side of (4) is the part of the gender pay gap that can be explained by male-female differences in average characteristics (based on the explanatory variables outlined in Table 1). This ‘explained’ component can also be further broken down to show the contribution of different groupings of characteristics to the overall gap (as shown in Table 2).

The second component on the right hand side of (4) is the part of the gender pay gap left unexplained. This reflects differences in the returns to characteristics in the labour market and is more problematic to interpret. The unexplained component may indicate there are unobservable differences in the quality of characteristics between males and females, or differences in preference for non-wage components of jobs across gender, or discrimination against females in the labour market. For instance, Weichselbaumer and Winter-Ebmer (2005) argue that lower investment in on the job training, or more flexible and lower occupation levels of women could be voluntary choices made by some women, and these will not be observed in the data at hand, but could be responsible for part of the unexplained component.

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<sup>4</sup> There are two weighting schemes that are possible with such a decomposition. The first uses the male wage structure when valuing the characteristics of men and women, and the opposite is true for the second. We use the first, which is the more commonly reported one in the gender pay gap literature.

**Table 2: Oaxaca decomposition (pooled), dependent variable = ln hourly wage**

	Explained	Unexplained
<b>Model (A):</b> With only personal characteristics		
Overall pay penalty = 12.71% ***	-1.13%***	13.84%***
<b>Model (B):</b> Model (A) + educational attainment		
Overall pay penalty = 12.71% ***	-3.88%***	16.59%***
<b>Model (C):</b> Model (B) + occupation and industry sector controls		
+ other job related characteristics		
Overall pay penalty = 12.71% ***	1.81%**	10.90%***
<b>Model (D):</b> Model (C) + regional characteristics		
Overall pay penalty = 12.71% ***	1.97%**	10.74%***
<b>Model (E):</b> Model (D) + household characteristics		
Overall pay penalty = 12.71% ***	2.15%**	10.56%***

Note: \*, \*\*, and \*\*\* denote significance at the 10%, 5%, and 1% levels, respectively. N = 13,737

Five specifications are presented in Table 2 (labelled Models A through to E), each of which includes additional explanatory variables in an iterative fashion. Our decomposition analysis begins with Model A which includes only the personal characteristics listed in Table 1, i.e. age, ethnicity and migrant status (and we also include age squared to allow age to play a non-linear role in our specification). Model B then replicates this analysis with the addition of educational attainment variables. Model C includes the covariates from Model B and adds occupation and industry sector controls, as well as other job related information on part-time status of the individual. Model D then controls for regional characteristics in an additive manner. Finally, the decomposition analysis culminates with Model E which includes all the aforementioned variables and household characteristics regarding sole/joint parenthood; marital status; and information on the number and ages of dependent children in the household (again details of all these variables are listed in Table 1).

From Table 2, it can be seen that, regardless of the model used, the pay gap equates to a penalty of 12.71 per cent for females. With the exception of Model B, incorporating additional controls in to the specification results in a decline in the unexplained component of the gender pay gap from 13.84 per cent to 10.56 per cent, a drop of 3.28 percentage points or 23.7 per cent.

With respect to Model B, which contains controls for personal characteristics and educational attainment, female characteristics appear to be better than males, as shown by the negative explained component. However, this model yields the largest unexplained component of 16.59 per cent. The main driver of the unexplained component appears to stem from age, which is also a proxy for experience in this analysis. More specifically, the unexplained total of 16.59 per cent is made up the following elements: 30.53 per

cent age, and age squared; -0.74 per cent other personal characteristics; -0.004 per cent education; and a constant of -13.20 per cent. Hence, it appears that males are receiving a much higher rate of return for age, relative to their female counterparts. It is also worth noting that adding job specific information to the mix (via inclusion of occupation, industry dummies, and an indicator for part time status) in Model C does little to quell the role of age in terms of the unexplained component.

Adding regional controls (shown by Model D) has a negligible effect on both the overall results for the explained and unexplained, as well as their sub-components. Finally, when household characteristics are added (i.e. moving from model D to E) the explained component rises marginally from 15.5 per cent to 16.9 per cent of the total gap (1.97 and 2.15 percentage points out of 12.71 per cent, respectively). To delve further into the drivers of the unexplained figure, we breakdown this component of the pay gap into the following sub-parts: 7.41 per cent age; -0.83 per cent other personal characteristics; 1.02 per cent education; -2.94 percent occupation, industry and part-time status; -0.38 per cent region; 5.62 per cent household characteristics; and a constant of 0.66 per cent. There is one result shown in these figures that is worth highlighting. The role of age appears to have diminished with the addition of household characteristics, i.e. controlling for differences in marital status and childcare responsibility has helped reduce the magnitude of the large unexplained positive returns for age/experience found for males (relative to females) in Models A through to D.

It is important to note that, even for the fullest specification (model E), characteristics and endowments still only account for 16.9 per cent of the gap, leaving just over 83 per cent unexplained.

How does this compare with the international literature? Such comparisons are fraught with difficulty (see for example, Blau and Kahn, 2001; 2016). However, Christofides, Polycarpou, & Vrachimis (2013) consider the pay gap across 26 European countries using the Oaxaca decomposition and data from the 2007 European Union Statistics on Income and Living Conditions. They find considerable heterogeneity in the size of the raw gender pay gap and also in the unexplained component of the gap. The percentage of the gap unexplained varies from values similar to what we find here for Denmark (74.2 per cent), Germany (75.8 per cent) and Norway (87.2 per cent) to those that are considerably higher (Poland – more than 100 per cent<sup>5</sup>) or lower (United Kingdom, 45.3 per cent).

Similarly, the OECD in its report “Closing the Gender Gap” (OECD, 2012) find considerable variation in the unexplained component of the gender pay gap, with the unexplained component varying from 15 per cent in Australia to 137 per cent in Slovenia.

As detailed earlier, the unexplained residual can encompass any unobserved differences in characteristics or preferences between males and females as well as discrimination against females in the labour market. Therefore, the “unexplained” cannot be unproblematically equated with the extent of labour market discrimination against females. Such unobservables include personality, attitudes, motivation, and ambition for example. While many of these will be difficult to quantify, one set of unobservables that could be included in future research is the subject studied by those that undertook bachelor’s qualifications or higher. For instance, recent research by Frölich (2007) finds that the subject of degree was an important variable in explaining gender wage differences in the United Kingdom. Future research could use the Income Survey linked with Ministry of Education data in the Integrated Data Infrastructure provided by Statistics New Zealand to include this explanatory variable.

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<sup>5</sup> In this case, the explained portion is negative, indicating that female characteristics are better than male characteristics.

## 5. Correcting for selection bias

The Oaxaca-Blinder approach may suffer from sample selection bias (Heckman, 1979) as wages can only be observed for individuals that are employed. The decision to enter the labour force may be systematically correlated with potential wages, meaning that limiting our analysis to only the employed may result in biased estimates. For example, one of the traditional explanations for a gender pay gap is different levels of experience between the genders; therefore, to understand the potential drivers of this difference, we have to better understand the factors associated with the decision to participate in the labour market and accumulate experience. Additionally, females are more likely to change their participation decision during child bearing and rearing years, and it is important to take this into account. Another aspect of the participation decision that is also relevant here are education levels. Given that there are rising levels of education for both males and females in New Zealand (and at a faster rate for the latter), and knowing that education and wages are positively correlated, changing levels of educational attainment will likely affect the participation decision, and thus influence the pay gap.

To correct our estimates for sample selection bias, we apply the Heckman procedure and do this for both females and males<sup>6</sup>. The procedure requires one additional step before (1)-(4) above. This is to separately estimate probit models for males in (5) and females in (6) as:

$$LFP^m = \vartheta^m Z^m \quad (5)$$

$$LFP^f = \vartheta^f Z^f \quad (6)$$

where  $m$  and  $f$  superscripts denote males and females, respectively and the full HLFS sample is utilised, i.e. not restricting analysis to the waged employees, as was done in Section 4. In equations (5) and (6)  $LFP$  stands for labour force participation (with =1 for wage earners, unpaid workers or volunteer job takers, self-employed and unemployed, and =0 for those not in the labour force).  $Z$  represents vectors of explanatory variables shown in Table 1, except for occupation, industry and other job related characteristics. Then for each male in (7) and female in (8), the probability of participating in the labour force is predicted as:

$$\widehat{LFP}_j^m = \widehat{\vartheta}_1^m Z_{1j}^m + \widehat{\vartheta}_2^m Z_{2j}^m + \dots + \widehat{\vartheta}_k^m Z_{kj}^m \quad (7)$$

$$\widehat{LFP}_j^f = \widehat{\vartheta}_1^f Z_{1j}^f + \widehat{\vartheta}_2^f Z_{2j}^f + \dots + \widehat{\vartheta}_k^f Z_{kj}^f \quad (8)$$

where  $k$  and  $j$  subscripts denote the  $k^{\text{th}}$  explanatory variable and the  $j^{\text{th}}$  male or female in the sample, respectively.

A selection-correction parameter for each male in (9) and female in (10) is generated as:

$$mills_j^m = \frac{(\text{normalden}(-\widehat{LFP}_j^m))_j}{1 - (\text{normal}(-\widehat{LFP}_j^m))_j} \quad (9)$$

$$mills_j^f = \frac{(\text{normalden}(-\widehat{LFP}_j^f))_j}{1 - (\text{normal}(-\widehat{LFP}_j^f))_j} \quad (10)$$

<sup>6</sup> Most prior literature has only corrected for selection bias for females. There are a few exceptions of recent studies that control for sample selection for both genders. See Perugini and Selezneva (2015), and Christofides, Li, Liu and Min (2003).

where *normalden* and *normal* denote the standard normal density function and the cumulative normal distribution function, respectively. The selection-correction indices (inverse mills ratios)  $mills^m$  for males and  $mills^f$  for females are added as additional variables into the decomposition process shown in (1)-(4), giving the decomposition results corrected for selection bias. These results are provided in Table 3, and included in this table are the uncorrected estimates for the full specification from Table 2, for comparison purposes.

**Table 3: Oaxaca decomposition of full specification – with and without adjustment for sample selection bias**

	Not corrected	Correction for females	Correction for males	Correction for females and males
Explained	2.15% **	2.15% **	2.46% **	2.46% *
Unexplained	10.56% ***	18.00% ***	2.10% *	9.54% ***
Total gap	12.71% ***	20.14% ***	4.56% **	12.00% ***
Inverse mills ratio (std error)	N/A	0.205** (0.106)	0.373*** (0.085)	Females: 0.205** (0.106) Males: 0.373*** (0.085)

Note: Full specification = Model E. \*, \*\*, and \*\*\* denote significance at the 10%, 5%, and 1% levels, respectively. N = 13,737.

Table 3 presents three new specification results, the decomposition corrected for sample selection bias for females only, males only and, in the last column, for both genders. A useful way to conceptualise these results is as follows. The working age population (All) for each gender is made up of those in the labour force (Employed (E) and Unemployed (U)) and those not in the labour force (NILF). The first column which provides the uncorrected results of the decomposition compares the pay gap between  $E^f$  and  $E^m$ , where  $f$  and  $m$  superscripts denote females and males, respectively<sup>7</sup>. The second column compares the same pay gap under the scenario where the females that are NILF now join the labour force; the third column repeats this exercise but changes the scenario to that of NILF males joining the labour force; and then the final column provides the predicted pay gap if both genders that are NILF join the labour force.

For both males and females in Table 3 we find that the inverse mills ratio is positive and significant. This means that there is positive selection into the labour market - those participating in the labour force have favourable unobservable characteristics (relative to those not in labour force) that positively affect their wages<sup>8</sup>.

When correcting for selection bias for only females (column 2), the predicted pay gap rises to 20.14 per cent. This is the scenario where all NILF females join the labour force. This result is expected as including females not in the labour force (who have less favourable unobservable characteristics) in the comparison reduces the average predicted wage of this group, relative to employed males. In a similar fashion in column 3, correcting for selection bias for only males reduces the predicted pay gap to 4.56 per cent. Again, this means that males not in the labour force have less favourable unobservable characteristics compared to males in the labour force, as the unobservables that would increase the likelihood of

<sup>7</sup> Noting that we exclude employed individuals with zero wages.

<sup>8</sup> Note that while we cannot show that the NILF group have poorer unobservables relative to those in the labour force, we can check the observable characteristics as a potential proxy. For instance, we find that 29.4 per cent of the NILF group have no school qualifications, compared to the 15.2 per cent of the group in the labour force. Additionally, 11.73 per cent of the NILF group have a bachelor's qualification or higher, compared to 23.29 per cent of the group in the labour force.

participating in the labour force simultaneously increase the likelihood of higher predicted wages. Including these males in the comparison substantially reduces the predicted gender pay gap.

Finally, as the last column in Table 3 shows, correcting for sample selection bias for both females and males reduces the gap marginally from 12.71 per cent (when uncorrected for both genders) to 12.00 per cent. This decrease indicates that the males out of the labour force have slightly less favourable unobservables compared to the females out of the labour force. Once the selection adjustment has been taken into account, the explained proportion of the pay gap rises a little to 20.50 per cent (which corresponds to 2.46 percentage points out of 12.00 per cent).

## 6. Matching

Another way of assessing the gender pay gap in New Zealand is to apply the semi-parametric technique of propensity score matching (PSM). We follow Frölich (2007), who argues that the functional form assumptions inherent in the parametric Oaxaca decomposition may potentially give misleading results (see Barsky, Bound, Charles, & Lupton (2002); Mora (2008), and Nopo (2008) for further discussion of this). In contrast, PSM does not specify linear regression functions and only simulates the adjusted mean wages for the common support subpopulation (Frölich, 2007). This distinguishes PSM from Oaxaca and allows PSM to serve as an alternative approach to test the reliability of our initial results from the Oaxaca decomposition. The process is to first estimate a probit model for males and females together:

$$f_i = \vartheta X_i \quad (11)$$

where  $f_i$  is the gender dummy equal to 1 for female observations and 0 for males, and  $\vartheta$  is a vector of coefficients.  $X_i$  is a vector of control variables that are the same ones as those in Oaxaca equations (1) and (2). The probability of being female, namely the propensity score, for each observation of males and females is predicted as:

$$\hat{p}_i = \hat{\vartheta} X_i \quad (12)$$

where  $\hat{\vartheta}$  is a vector of the estimated coefficients from equation (11). Male observations are then matched to the female observations who have exactly the same (or the closest) propensity scores. Then, the wages (or average of those wages) of those matched male observations are assigned to those female observations. This provides a counterfactual for females' observations of the potential wage they would receive if they experienced the same wage returns to their characteristics that males are receiving.

The pay gap can then be broken down into explained and unexplained components. The unexplained part encompasses the difference between the females' mean counterfactual wages and the females' mean actual wages. This corresponds to  $(\hat{\beta}^m - \hat{\beta}^f)\bar{X}^f$  in the Oaxaca decomposition from equation (4). The explained component reflects the difference between the males' mean actual wages and the females' mean counterfactual wages and corresponds to  $\hat{\beta}^m(\bar{X}^m - \bar{X}^f)$  from the Oaxaca decomposition in equation (4).

It is useful to point out that by applying PSM to the decomposition of the gender pay gap, the females' counterfactual wage is not estimated (unlike Oaxaca), but assigned using the matched males' actual wages. The results are provided in Table 4.

**Table 4: PSM decomposition of full specification – with and without adjustment for sample selection bias**

	Not corrected	Correction for females	Correction for males	Correction for females and males
Explained	3.54% ***	3.54% ***	4.26% ***	4.27% ***
Unexplained	9.17% ***	16.60% ***	0.30%	7.73% ***
Total gap	12.71% ***	20.14% ***	4.56% **	12.00% ***

Note: Variables used in PSM stem from the full specification of Model E. \*, \*\*, and \*\*\* denote significance at the 10%, 5%, and 1% levels, respectively. N = 13,737

As shown in Table 4, the gender pay gap is unchanged from Table 3 – as it is based on mean wage outcomes for each gender. What has changed a little is the proportion of the gap accounted for by our observable characteristics for the individual, household, region, industry, occupation and part-time status.

Focussing on just the final column (which are the results after the adjustment for sample selection bias for both males and females), we can see that 4.27 percentage points out of 12 per cent is now explained by the explanatory variables, compared to Table 3 where the comparable proportion was 2.46 percentage points out of 12 per cent. This is a jump from 20.50 per cent to 35.58 per cent of the total gap. Nevertheless, the pay gap still remains dominated primarily by the unexplained component.

## 7. Quantile regression

The purpose of this section is to explore gender wage disparities at different points in the wage distribution. More specifically to investigate the existence of both “sticky floors” (where the disparity is greater at the lower end of the distribution) and “glass ceilings”. The latter refers to “a greater earnings gap at the top end of the distribution” (Chi & Li, 2008, p.244).

In this final section, we undertake an unconditional quantile decomposition and follow the approach by Firpo, Fortin and Lemieux (2009), which is an improved version of the approach detailed in DiNardo, Fortin and Lemieux (1996)<sup>9</sup>. Other relevant literature utilising this approach includes Chi and Li (2008), Ahmed and Maitra (2015), and Barón and Cobb-Clark (2010).

The first step is to calculate the re-centred influence function (RIF) for each male observation and each female observation, for each quantile of their respective distributions:

$$RIF_i^{m,\tau} = w^{m,\tau} + \frac{(\tau - 1\{w_i^m \leq w^{m,\tau}\})}{DEN(w^{m,\tau})} \quad (13)$$

$$RIF_i^{f,\tau} = w^{f,\tau} + \frac{(\tau - 1\{w_i^f \leq w^{f,\tau}\})}{DEN(w^{f,\tau})} \quad (14)$$

where,  $i$  is the  $i^{\text{th}}$  observation,  $\tau$  is the  $\tau^{\text{th}}$  quantile of the log wage distribution (males’ or females’),  $w^{m,\tau}$  is the log wage at the  $\tau^{\text{th}}$  quantile of the males’ log wage distribution,  $1\{ \}$  is an indicator function, which is equal to 1 if  $w_i^m \leq w^{m,\tau}$  is true, otherwise 0.  $w_i^m$  is the  $i^{\text{th}}$  male’s log wage, and  $DEN(w^{m,\tau})$  is the density at the  $\tau^{\text{th}}$  quantile of the males’ log wage distribution.

<sup>9</sup> An alternative method is the conditional quantile decomposition (see Machado and Mata (2005); and Melly (2005)); however it is generally recognised as problematic to implement as it is computationally intensive (Chi & Li, 2008).



As shown in Firpo et al. (2009), we then follow the Oaxaca steps detailed in (1) to (4), and replace the dependent variable of log wage with the calculated RIF obtained from equations (13) and (14). Equations (15) and (16) are then run for each quantile:

$$RIF_i^{m,\tau} = \beta^m X_i^m + \varepsilon_i^m \quad (15)$$

$$RIF_i^{f,\tau} = \beta^f X_i^f + \varepsilon_i^f \quad (16)$$

where  $m$  and  $f$  subscripts denote male and female wage earners, respectively,  $w$  stands for wages, and  $X$  represents vectors of explanatory variables shown in Table 1 above.

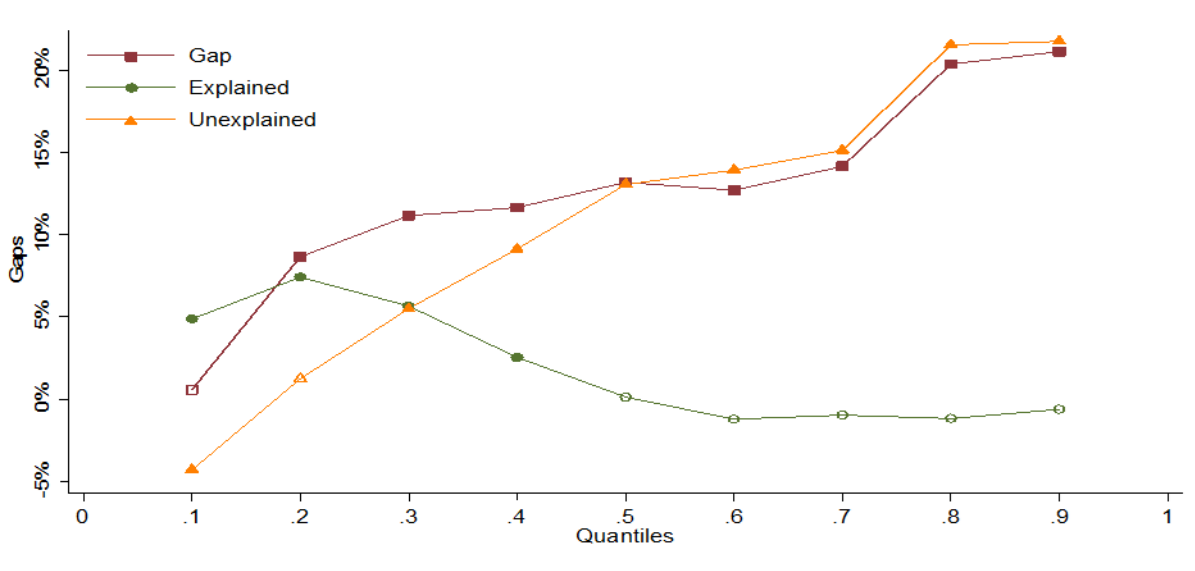
The gender pay gap at the  $\tau^{\text{th}}$  quantile of the log wage distribution (males' or females') is calculated in (17) and decomposed in (18) as:

$$\overline{RIF}^{m,\tau} - \overline{RIF}^{f,\tau} = \widehat{\beta}^m \overline{X}^m - \widehat{\beta}^f \overline{X}^f \quad (17)$$

$$\overline{RIF}^{m,\tau} - \overline{RIF}^{f,\tau} = \widehat{\beta}^m (\overline{X}^m - \overline{X}^f) + (\widehat{\beta}^m - \widehat{\beta}^f) \overline{X}^f \quad (18)$$

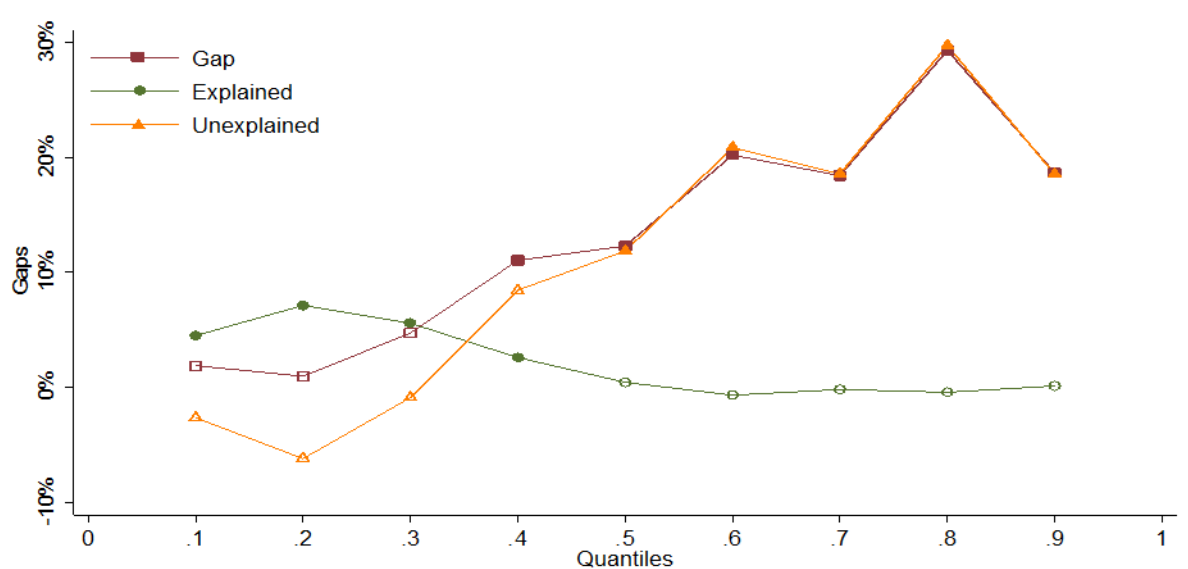
where  $\widehat{\beta}$  stands for the coefficients estimated in the RIF equations ((15)-(16)). The first term on the right hand side of (18) is the part of the calculated gender pay gap in (17) at the  $\tau^{\text{th}}$  quantile of the log wage distribution (males' or females') that can be explained by male-female differences in means of those explanatory variables. The second term in (18) is the part of the gap left unexplained (reflecting differences in returns)<sup>10</sup>.

**Figure 3: Gender pay gaps across wage distribution**



Note: Hollow markers indicate insignificant gaps at 10 per cent significance level. Source: 2015 IS. Author's compilation.

<sup>10</sup> The specific stata command is rifreg which is available for download as an RIF-regression STATA ado file from Firpo, Fortin and Lemieux (2009): <http://faculty.arts.ubc.ca/nfortin/datahead.html>.

**Figure 4: Gender pay gaps across wage distribution, with adjustment for sample selection bias**

Note: Hollow markers indicate insignificant gaps at 10 per cent significance level. Source: 2015 IS. Author's compilation.

Figures 3 and 4 illustrate the total gender pay gap at the following wage cut-offs: 10<sup>th</sup>, 20<sup>th</sup>, 30<sup>th</sup>, 40<sup>th</sup>, 50<sup>th</sup>, 60<sup>th</sup>, 70<sup>th</sup>, 80<sup>th</sup>, and 90<sup>th</sup> quantiles. These graphs also show the proportion of the gap that is explained and unexplained. Figure 3 provides the uncorrected results, while Figure 4 shows the results corrected for selection bias.

Regardless of which figure is viewed, there are a couple of noteworthy trends. First, the gender pay gap appears to increase as we move up the wage distribution – from zero per cent to 21.15 per cent in Figure 3 (when moving from the 10<sup>th</sup> to 90<sup>th</sup> quantile), and from zero per cent to 18.69 per cent in Figure 4. This is evidence in favour of the glass ceiling hypothesis. Other studies that also find strong evidence of only the glass ceiling and not the sticky floor include Kee (2006) for Australia; and Booth, Francesconi and Frank (2003) for the United Kingdom.

In a similar fashion to Kee (2006), we also find that the proportion of the gap that is unexplained rises as we move up the wage distribution. In particular, it is clear in both Figures 3 and 4 that the explained component tends to be statistically significant at the lower quantiles, and insignificant at the higher quantiles; while the reverse is true for the unexplained component. For instance, viewing the selection corrected results in Figure 4, we can see that the unexplained component is statistically insignificant for the first four quantiles; while the explained component then becomes statistically insignificant for the last five quantiles.

Why is there no evidence of a sticky floor? This is potentially due to the high relative minimum wage ratio in New Zealand. Most recent data from the OECD<sup>11</sup> (from 2013) shows that the minimum wage in New Zealand is 60 per cent of the median wage of full time employees. This high minimum wage ratio provides minimal room at the bottom of the wage distribution for sizable wage disparities by gender.

<sup>11</sup> See <https://stats.oecd.org/Index.aspx?DataSetCode=RMW#>

## 8. Conclusions

This research presents empirical evidence of the gender pay gap in New Zealand, based on Income Survey data from Statistics New Zealand. It is the first rigorous empirical look at the drivers of the pay gap since 2003. We find that the pay gap (based on 2015 data) is approximately 12 per cent and unchanged since this topic was last analysed in 2003. Additionally, regardless of the approach undertaken, the majority of the gap appears to be unexplained. This result persists even after correcting for selection bias.

While the unexplained portion dominates the pay gap, it is not a simple concept to tackle. The unexplained could relate to unobservables (such as subject of qualification), or differences in preferences for non-pecuniary aspects of the job by gender, or unconscious bias, or discrimination, or all of the above. Additionally, our methodology cannot deal with differences between men and women in terms of access to endowments, such as training and promotion opportunities, and this could mean that our decomposition approach is underestimating the size of the gender pay gap in general.

This research also illustrates that the size of the gender pay gap depends heavily on the location in the wage distribution. There is strong evidence pointing to a glass ceiling effect in New Zealand. Future work could delve further into the drivers of this outcome. For instance, it may be related to the differential impacts (by gender) of parenthood on labour market outcomes, and it would be useful to follow the evolution of life-course earnings by gender in New Zealand to assess the point at which the gender pay gap emerges.

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# Service Sector Employee Insights into the Future of Work and Technological Disruption

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## Abstract

Recently there has been significant attention given to the fourth industrial revolution and its impact on employment. The present study aims to provide employee insights into their perceptions of the future of work, specifically around their job and career. These insights are important, as the respondents show how they plan to adapt (or more importantly, not plan or not adapt) to new jobs and careers in a rapidly changing world. Based on insights from 60 employees, which were collected online, the key findings suggest that people in the same line of work have varying degrees of knowledge and opinions about automation and how it may impact on their jobs. In addition, many employees are generally *optimistic* about the future of work and their long-term careers, with them acknowledging potential job changes around automation, but with a strong belief their type of work will remain. These are important findings when we consider how people plan their careers in the face of automation.

**Key Words:** *Future of Work, Career Planning, Robotics, Artificial-Intelligence, Technology.*

## Introduction

Uber, the world's largest taxi company, owns no vehicles. Facebook, the world's most popular media owner, creates no content. Alibaba, the most valuable retailer, has no inventory. And Airbnb, the world's largest accommodation provider, owns no real estate. Something interesting is happening (Goodwin, 2015, n.p)

The pace of change in business and employment is increasing, the average life expectancy of a Fortune 500 company has fallen from an average of 67 years in the 1920s to 33 years in 1965 and is expected to be less than 15 years in 2026 (Ioannou, 2014; Mochari, 2016). This disruption of *business as usual* will ultimately impact on employees, as traditional businesses are likely to need to make changes to existing processes and cut costs to remain competitive. The automation of human labour can be a cost-effective way of bringing down overheads within an organisation. Automation does not need to do the entire job of one person; it simply needs to do part/s of the job. Examples of automation can be robotics, driverless technology, algorithms, artificial intelligence etc., as well as the use of smart phone applications and a complete redesign of existing labour practices. Brougham and Haar (2018) refer to this as STAARA: smart technology, artificial intelligence, automation, robotics, and algorithms.

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The employment landscape has changed significantly over the decades. Employees can no longer expect lifetime employment, and careers have become more transient (Inkson, Gunz, Ganesh, & Roper, 2012). It has been predicted that 57 per cent of OECD jobs could be affected by technology worldwide over the coming decades (Citigroup, 2016). Within New Zealand, it has been estimated that 46 per cent of jobs could be automated between now and 2035 (Chartered Accountants Australia and New Zealand, 2015). Some experts have suggested that the level of disruption to jobs could be as low as 9 per cent (Arntz, Gregory & Zierahn, 2017). However, even at the lower estimate, 9 per cent of jobs being disrupted within a short amount of time would pose a substantial challenge to many countries. Overall, very little is known about how employees view the future of work in relation to their own job and career. This is important, given the potentially rapid changes to the workplace as a result of technology, automation and general disruption.

While new jobs will always be created (Deloitte, 2015; Scarpetta, 2016), it is clear that the nature of traditional work and career paths is changing dramatically as people move away from linear careers (Baruch, 2004). However, similar dire predictions have been made before. During the 1930s, John Maynard Keynes prophesied that *technological unemployment* would become a familiar part of language. The phrase described “our discovery of means of economising the use of labour outrunning the pace at which we can find new uses for labour” (Keynes, 1930, n.p). A *job for life* is a term that disappeared decades ago, and such a phenomenon of work is even less likely today, given the disruption companies potentially face. For example, the casualisation of labour is more common around the world (De Stefano, 2016), and within New Zealand, we have seen the impacts of zero-hour contracts, and other variations of temporary work (Wilson, 2014) such as the ‘gig economy’ (i.e., highly casual and project based labour). It is difficult to know what the future will look like, it may be a “difficult transition” rather than a “sharp break with history” (The Economist, 2016, n.p)

The present study will not try to predict the future. Our main objective is to gain an insight into what employees think the future of their job and career will look like as a result of technology (i.e., STAARA). This is an important area to investigate – especially for employees, employers and Government – so we can gain an insight into how employees currently perceive STAARA and its influence on jobs and career planning. The following literature review outlines some technological advancements that are currently in flux – career planning, perceptions of control and predicting the future. We then highlight the study we conducted to answer our research objective, and detail the insights collected.

## Literature Review

According to many futurists, we are entering a fourth industrial revolution (e.g., Schwab, 2017). We have already seen major advancements in technology and the way we do business. Future advancements will see the refinements of multipurpose robots, 3D printing in production and construction, driverless vehicles (Bellamy & Pravica, 2011; Solon, 2016), automated ports (Ports of Auckland, 2016), automated food production, and automated commercial pilots (Frey & Osborne, 2013). Other changes include virtual employees powered by AI (EtTec, 2016), automated accounting, legal research and teaching services to name those currently existing. In addition, the makers of smart phones and tablets – Foxconn – are using more robots, while Amazon refines its automated delivery service. In our supermarkets, self-serve checkouts have existed for a number of years already, supplanting the original ‘checkout person’. The future suggests that even the mainstream adoption of synthetic meats and milks

could have a significant impact on New Zealand's agribusiness sector. These last examples represent only a handful of exemplars that are currently being refined by tech companies. It is also expected that the cost of each technology will continue to fall (Nolan, 2015) while the performance outcomes will increase.

Technology could be a key driver within some industries to reduce worker control (Cohen, 2015), and it has the ability to polarise the labour market, meaning we have the bulk of the workforce in low skilled/low paid work – or high skill/high pay work, but with fewer middle-class jobs in between (Acemoglu & Autor, 2011). However, we cannot discount the positives that technology has and will provide in the future (Holland & Bardoel, 2017; Deloitte, 2015), and this includes potentially expanding work sectors. Ultimately, it is contested whether fewer or more jobs will be created as a result of technology. For example, a study of futurists reported that:

Nearly half of the respondents (48%) predicted that robots and AI will displace more jobs than they create over the coming decade... Many experts told Pew they expect the jobs created by the rise of the machines will be lower paying and less secure than the ones displaced, widening the gap between rich and poor, while others said they simply don't think the major effects of robots and AI, for better or worse, will be in evidence yet by 2025 (Bercovici, 2014, p.12).

In summary, the effects of technology on employment are widely debated, and a balanced argument might suggest that:

AI will not cause mass unemployment, but it will speed up the existing trend of computer-related automation, disrupting labour markets just as technological change has done before, and requiring workers to learn new skills more quickly than in the past" (The Economist, 2016, n.p).

If this is the case, employees still need to plan accordingly. Significant changes to the labour market have been seen over the previous decades due to "a combination of fast developments in multiple areas – economy, technology, and society in general" (Baruch, 2004, p.54). Baruch (2004) discussed the importance for employees of being their own 'free agent', accepting the external changes that are likely to impact on them. This aligns with the work of Orpen (1994), who noted the importance of individual career planning in relation to career success.

Recent research into employee perceptions on technological disruption causing redundancy found that over 91.4 per cent of participants out of a sample of 190 New Zealand employees were not concerned about their job being automated (Brougham & Haar, 2016). This is despite over 40 per cent of New Zealand businesses looking into technology solutions to create efficiency (Smylie, 2016). Thus, while employees feel there is likely little change forthcoming, their employers appear to be considering the potential cost benefits of STAARA more readily. The present study aims to give an insight into how employees view the future of their job, career and work, in general, in relation to technology.

The present study focusses on employees' perceptions of the role of technology on their jobs and careers. However, uncertainty is a very important construct to consider. Hatch (1997) suggested that, within uncertainty, one needs to consider complexity and the expected rate of change. Complexity considers the number of elements in a given environment, whereas the rate of change takes into account how rapidly things change at (Duncan 1972 as cited in Hatch,



1997). However, Hatch (1997) stated that “the problem with the environmental uncertainty perspective was that it assumed that conditions in the environment were experienced in the same way by everyone” (p. 89). Thus, environmental conditions might be seen as certain to occur by one group of people but not by another, possibly leading to radically different perceptions when one industry workforce is threatened by automation while another is not. That said, some employees will be able to identify the role that technology might play in influencing their job and career. Research has found that experts predict the impact of technological unemployment will take much longer compared to non-experts (Walsh, 2017). Thus, while some changes are occurring – such as Foxconn with robot production lines, and the automated shipping ports within New Zealand – the widespread influence of technology on employees may take decades to be fully realised. In addition, the Gartner Hype Cycle also illustrates how “hyped” something is in the media and public perception compared to how far away commercial viability is (Gartner, 2018)

We expect to see a wide range of opinions regarding the future of work and what the future of work may look like from the employee perspective. This might also reflect employees’ views regarding how much control they have over their lives. Locus of control is defined as “the extent to which people believe that they have control over their own fate” (Ng, Sorensen, & Eby, 2006, p.1057), whether internally (one’s own actions) or externally (by other forces, such as STAARA). These opinions can influence factors including promotions, salary increases and career advancement (Spector, 1988).

Given the media attention given to such potentially radical changes to the workplace, the present study explores the generic research question of *What do employees think their job and career might look like in the future, due to STAARA?* We acknowledge that such perceptions are likely to vary across employees, including those in similar jobs. However, we note that Bercovici (2014), in his research of futurists, found almost an even split between these ‘experts’ on the future of work. Thus, the opinions and perceptions of workers provides, at least, a voice which is currently limited in the literature. Thus, the present study is exploratory and provides an opportunity for the voice of employees around STAARA to be captured.

## Method

Questionnaires were distributed by research assistants in New Zealand’s main centres via an online survey, as part of a wider study of STAARA. The present study focusses on open-ended questions (outlined below). The research assistants used purposeful sampling to attract respondents from a wide range of industries and job titles, specifically from the service sector (Coyne, 2008). We targeted many responses to give depth to our sample, to ensure we were not gathering data from a narrow sample of workers in specific occupations. Hence, our sample size target was in excess of 50, which is quite high for qualitative comments, but we wanted to ensure that we gained enough voices across a broad range of occupations. Research assistants initially targeted employees in retail, sales, food preparation and administration roles, as these occupations make up a large pool of employees that could be impacted significantly by automation. We also sought multiple respondents from the same organisation and position to provide better comparisons. Once enough sample was attained in this area, the research assistants were then required to target people in lower risk professions, such as executive management, law and nursing etc. Overall, the list of professions offers a well distributed representation of the jobs that could be automated as per the list offered by Frey and Osborne (2013). The service sector was targeted as a lot of automation has already been used in the

primary and secondary sectors. Many of these workers, over the decades, have transitioned into the service sector. However, now, many of the tertiary sector jobs are set to be affected by these disruptions. The present study focusses on responses from 60 employees. The sample had an average age of 35 years (SD=11) and 71 per cent of the respondents were female. Private sector workers made up 65.9 per cent of the sample, with 26.1 per cent public sector workers and 8.0 per cent worked in the not-for-profit sector. The education level was roughly half with a university degree, with the majority being non-union members (90 per cent).

### ***Study Questions***

The present study used two open-ended questions in an online form to give an insight into how employees view the future of their job and career, and we included a definition/explanation of STAARA. Respondents could write as much as they wanted within the fields provided.

Questions were: (1) *Describe what you think your work will look like in 10 years as a result of STAARA.* This question was designed for employees to think about their current job/work; (2) *Describe how STAARA might affect your future career prospects,* and this question focussed on their future career. The 10-year timeframe was used in previous research regarding future perceptions (Bercovici, 2014).

### ***Procedure***

The present study used thematic analysis to look for trends amongst responses (Braun & Clarke, 2006). This enables identifying and presenting the perceptions of the respondents in the contextual setting. The goal of this research was to understand how the respondents from a wide range of settings perceived the threat of technology in relation to their employment. Qualitative research enables the researcher in understanding “how people understand concepts” (Barbour, 2008, p.12) and enables researchers in “seeing through the eyes of the people” (p. 402). Aligned with our focus on work and careers, this approach provides meaning as attributed by respondents within their context (Bryman & Bell, 2011), specifically work.

This study does not claim to meet the criteria of generalisability. Indeed, Stebbins (2001) argues against the usage of generalisations in exploratory research. Each author coded responses and then they were triangulated, to help minimise bias in the analysis. Ultimately, we used thematic analysis (Braun & Clarke, 2006), which enabled us to identify and present the perception of STAARA as seen by the respondents in the contextual setting. This allowed us to identify common themes amongst the respondents.

## **Results**

The results from this study offered an insight into how employees view the future of their job and career while considering the role of technological changes. These perspectives were wide ranging. However, general themes have been outlined below.

### ***Theme 1: The importance of soft skills***

A clear trend from respondents was that face-to-face interactions or complex interactions (between humans) would become more important, while paper work and administration would be more automated. Two respondents in the banking sector said that STAARA would “take

away all the manual tasks, leaving only the social/relationship side of things which could be done by my manager,” and:

My role will become more reliant on relationship building, supported by automation of the banking industry. This will give me the ability to respond to clients faster. It would affect my prospects if I did not adapt to it. My role uses systems and automation, but is heavily reliant on relationships with customers, so it is not likely to affect my role, or future job prospects (#28-29).

Someone in the IT sector stated:

The basic help desk job will still exist. A lot of standard tasks are already automated (a/c reset/unlocks, changes to access rights/permissions, software installations, etc.), but human interaction will still be needed when issues are being reported (#38).

Thus, there is strong support that employees see soft skills as something that STAARA cannot replace.

Within this theme, the following quotes provide a useful comparison: both are within the sales and automotive sector but see the potential of STAARA disrupting their job and career. Respondent #54 stated that:

Online ordering of cars will become part of the future. Traditionally 90 per cent of people had to physically see and drive a vehicle before they could buy it. However, recently Tesla sold 100,000 cars without a single test drive so that is definitely possible.

Another employee in this sector said, “not much change to be fair, new computer software and maybe some newer tech but basically the same” (#55). This individual also noted that “It would make some areas of work better but ultimately you can’t do this job with just technology alone; a human presence has to be there”. An administrator in retail stated:

I suppose the customer service aspect of my job could be replaced but I am not confident this would work. I think people today still appreciate great customer service... for me it is often the difference between buying one similar product over another (#56).

Hence, there is this perception (rightly or wrongly) that humans have certain skills and abilities that cannot be replicated by STAARA.

### ***Theme 2: STAARA will enhance my job, the future is bright!***

In addition, respondents saw automation as providing new opportunities, perhaps even enhancing their current jobs. For example, a teacher in the education sector said, “I think technology is enhancing education and careers but don’t know the specifics” (#5), with another teacher in education noting

As an educator it is highly important that we keep up-to-date with the latest technology. The students we have need to be taught skills to be able to use the

current technology available and have the skills to draw on when facing new technology (#5).

Towards specific benefits from STAARA, common thoughts included “I think it could be a really powerful tool for augmenting my skill set in my current role” (#18) The following comment offers a balanced approach towards STAARA:

For the most part I do not believe my role in construction could be replaced by STAARA. The amount [of] problem solving, and public liaison required in my role makes the idea unrealistic in the next 10 years. I do, however, believe certain parts of my role could be replaced which would allow me to focus on other aspects, reducing potential issues in other areas that may have occurred due to lack of attention. I also believe that some roles within the industry could be replaced by STAARA, just not the management on the projects. Definitely not in the next 10 years anyhow (#33).

This retail manager suggested STAARA would provide “More updates in future to streamline things...already use technology on a daily basis – would just improve in the future” (#43).

Within the accounting sector, this respondent noted that STAARA would make things “More efficient in terms of getting the information presented to you and allowing for more time in decision making” (#60). Many of the respondents could identify specific types of technology that could be used to augment, enhance or replace parts of their job. For example, an architect provided a number of suggestions that would enhance their work:

Robotic PA for meetings, emails, scheduling. Transport PODs to meetings, or automatic video conference setup. Algorithms are currently used to help us find data required for technical consultants to design a solution to provide to the customer (#28).

Someone in customer service suggested: “A virtual assistant that will help with basic enquiries to ease the workload on the digital customer service” (#37), while another respondent in construction noted

I think the possibility of STAARA affecting the communications industry is very exciting – it poses huge potential, but it does mean that, as a consultant in this field, I need to be open-minded and constantly adaptable to new technologies. As far as the construction industry is concerned, I think STAARA will have HUGE changes, but due to there being BIG shortages of sub-contractors and good people to manage projects I believe it would be hugely beneficial if we could rely on more Automation and Robotics (#40).

Finally, some suggested that the repetitive and routine parts of their job would be removed, enabling more creativity. Someone in product manufacturing, for example, suggested their job “would become more creative and would push towards more ‘thinking outside the box’/disruptive strategies.” Many of the respondents see their jobs and careers as being much of the same with respondent #35 (surveyor) stating that it will be “much the same” and “I don’t think it can affect my current career as my work involves a lot of people interaction.” “Automation and better data collection through algorithms or AI would allow the time to create more experimental, unique, and potentially more advanced marketing campaigns” (#30 – manager in manufacturing). A consultant also noted positives, stating

It could replace the more routine parts of my role, leaving more space for me to focus on the real 'value add' aspects. It could also create opportunities for us to package and sell new service products which were previously labour intensive (#31).

***Theme 3: Unsure... But job and career change is coming...***

Jobs and careers have been in a state of flux or change over the decades. This was outlined by respondent #15, a construction sector project manager, who stated "My role is forever changing so haven't considered this but know that it will not be the same as I do now." Many of the respondents were simply not sure about what the future would hold, with respondent #9 stating "I am not sure whether it will affect my particular role at all!?" and a financial analyst stating "I will need to understand in more detail what the impact of STAARA is on my role, but I believe I will need a greater knowledge of what STAARA is and how it affects society and financial institutions" (#25). Another respondent stated, "I think it will impact on my future career prospects, however, am unsure how it would benefit myself or the organisation I work for" (#57). Overall, it appears that part of the issue for some employees is that there is a lack of understanding of just how STAARA might influence their work. One respondent in retail stated, "The technology would improve but the selling aspect would still be the same" and "[I] don't think it will affect my career. Already use technology on a daily basis – would just improve in the future" (#42-43), highlighting how some see the entwined nature of work-job-career-life. On the flip side, one respondent (retail sales) was defiant around the potential threat of STAARA to their job and career, stating "Retail is based on customer interaction...[regarding a potential career change] no mate, not going to happen!" (#51).

***Theme 4: Age and Career Stage***

We identified a significant theme around age, career stage and STAARA. Several respondents had career stage related comments with respect to automation. For example, a manager (aged 58 years) stated that "My age might hold me back from learning new technology type skills" (#8), while a lawyer (aged 68 years) stated "Not applicable [to me] - near retirement!" (#10). A communications analyst (53 years) similarly noted "Nearing the end of my career. I don't believe it will affect my future career prospects" (#22), while a younger (32 years) manager in manufacturing noted that STAARA might have a major influence on the future of their career. They stated:

Due to the creative and social engagement required by my role, it is not as 'at risk' as others. However, as you are asking about future career prospects, I am prepared for and do realise that 'retirement' for me will be very different to retirement for the current generation of elderly. Specifically, simple, structured employment, often taken up by retirees wanting to remain active will be mostly replaced by automation – meaning that any type of employment in the later years will be very difficult. For example, bus drivers, will be replaced by self-driving vehicles and/or ride sharing. Check out assistants – automated counters/online ordering (#30).

This highlights that young employees are aware of STAARA but do not necessarily see the future as being 'paved' with opportunities. There appears to be real worry around future careers. Two younger respondents (both 22-years-old) stated that: "When I graduate I will be

seeking employment with business in the marketing/e-business sectors and I'm aware that the latter will be heavily impacted by this" (#48), and similarly "I will have to finish my degree because most of the jobs I could apply for now could be replaced with STAARA" (#58). Related to these concerns, several respondents were worried about unemployment as a result of automation. A 34-year-old in manufacturing noted "It might be more difficult to find a job and upskilling will be critical to keep competitive" (#41), while another respondent (21-years-old) stated STAARA would lead to an "increase in unemployment" (#46). There was clear concern around potential job losses although this was somewhat limited to a smaller group of participants. Another highlighted that, while STAARA was a threat, other factors – like young new entrants to the sector – were likely to be more of a threat, stating

...given my greatest strengths are human focussed (networks established) and confined to the industry I work in my career prospects are grim – very few jobs. [my] ability to go outside my area of speciality is limited and young people pose more of a threat than technology to myself personally – tech generally (#39).

#### ***Theme 5: Low risk jobs still see changes coming***

Employees have a wide range of perceptions regarding STAARA replacement of their job, irrespective of their roles. According to Frey and Osborne (2013), lawyers occupy a very low risk position, and thus are unlikely to be widely replaced. Our sample included six lawyers who were generally in agreement with this rating, with one suggesting that things will be "the same" (respondent #9). Some thought that change would occur but is unlikely to change their job in the majority. One stated: "More automated documents but advice still tailored to individuals" (#10) and "similar to now, but more focus on customer relationships and getting the work rather than doing the work" (#12). One suggested the change would be beneficial, stating "I consider we will still have a role in the personal dealings with those clients and representing them, but will be significantly assisted by STAARA in the formulation of our advice to our clients".

Some respondents saw the potential for change from STAARA being dramatic, but positive, for example "I believe our research databases will be expanded to enable them to more effectively trawl through large volumes of legislation and case law precedents to identify patterns and suggest possible outcomes for our clients" (#14). A theme around technology simply enhancing the job, with no real impact on their career, was a key theme, with one respondent stating: "I consider that there will remain a need for lawyers and the Court process, but we will be assisted in part by the tools that will come from STAARA" (#14).

#### ***Theme 6: High risk jobs have contrasting views about the impact of automation***

Respondents in higher risk professions (e.g., retail sales) gave contrasting views. Some indicated uncertainty "Unsure if my workplace would change but with technology nowadays anything is possible" (#45), while others highlighted modest change "More jobs being done tech wise and robotically rather than face to face communication" and "Maybe quicker systems in point of sale system and EFTPOS advancements, but not any STAARA advancements with customer service/interactions" (#46-47). Some did acknowledge a strong threat, stating "A plethora of simple tasks will become automated and therefore humans will have to concern themselves with the more complicated decision-based aspects of their jobs. In certain sectors, STAARA will likely cause worker redundancies" and "Less staff, less customer service" (#48-49). Despite these acknowledgements, others thought there was little threat, such as: "The

same, apart from till service” and “Retail is based on customer interaction” (#50-51). Overall, retail staff showed the broadest range of variation and appear consistently to differ in the way they perceive changes that STAARA may evoke.

## Discussion

Previous research from Brougham and Haar (2017) found that the public was generally not concerned about automation to their job. The present study uncovers a range of themes as to why this might be – while also discussing a range of insights into what employees think the future of work may look like. The insights from our respondents suggest many think they will be working alongside technology to enhance their current job. They saw that technology could also free up time from the monotonous and repetitive tasks that their current work entails. This way of looking at automation aligns with Gale (2017), who suggested that we should not aim to replicate human work with machines, but to see the benefit that humans and technology can provide in combination. We see our respondents’ willingness to use technology to change their job and drive productivity to be an important theme from this research. Because of this, many respondents do not see technology as a ‘threat’, but something that can ultimately benefit their job, career and organisation.

Employees see personal interaction at work and soft skills to be more important moving forward. This aligns with Frey and Osborne (2013) who suggested that social intelligence such as negotiation, persuasion, social perceptiveness and caring for others would be harder to automate than things like automatic data entry. This was also highlighted by the World Economic Forum which stated that “social skills—such as persuasion, emotional intelligence and teaching others—will be in higher demand across industries than narrow technical skills, such as programming or equipment operation and control” (Berlin, 2017, p.8). So, our respondents do seem to understand the potential value in their soft skills. Several other commentators in the area have also discussed the importance of creativity, critical thinking and jobs with more purpose (e.g., Erb, 2017). In addition, many of the respondents within this study felt that parts of their job could be automated, but not the entire job. This is because jobs tend to be made up of a wide range of tasks. For example, one administration job in one organisation firm may have a different set of tasks when compared to another administration job within another organisation. Because of these varying tasks within jobs, the likelihood of an administrator being made redundant because of technology needs to include what kinds of work they do on a day-to-day basis. Because of this, the impacts of automation may be overstated (Arntz, Gregory & Zierahn, 2017).

While many respondents were unsure of what the future may look like, they knew that it would look different to what we experience now. Respondent #15 offers a great insight into this by simply stating that “My role is forever changing so haven’t considered this but know that it will not be the same as I do now”. Indeed, jobs and careers have been in a state of change for hundreds of years. New and different jobs have been created, and more will be created in the coming decades (Deloitte, 2015). This statement from Kirchner (2017) highlights how we can think about the future of jobs: “Let us not be lulled into the misconception that industrial employment is a zero-sum game; that a finite number of jobs exist in industry and for everyone job replaced by a robot an industrial job disappears” (n.p).

Age and career stage also influenced how people felt about the future of work in relation to technology. This paper found that older workers do not feel threatened by STAARA as they could exit the workplace in the coming decade. On the flipside, it is known that younger people

who are digital natives have a greater awareness of the capability of current technology. As a result, younger people can foresee how competitive STAARA will be. Similar findings were reported by Brougham and Haar (2018) in an empirical study of New Zealand employees; finding that age was a predictor of STAARA awareness around potential job loss through technology. Age also appeared to align with how people felt they could use technology to their advantage, with older participants suggesting that they would struggle to adopt new technology to remain competitive in the workplace. This has serious implications for training, and we see increased demand for rapid training systems for people of all skill levels and age. This will be needed in order to redeploy and repurpose staff where their job, or parts of their job can be automated rather than making them redundant (Gale, 2017).

An interesting finding was that many respondents had varying differences in how they see the future of their job and also the future of their career, regardless of a respondent's job being in a low risk or high-risk category of automation. This sits in line with the expert futurists who have varying views on what the future of work will look like, and how it will impact on human workers (Bercovici, 2014). For example, our sample of lawyers discussed how some parts of the job could be automated or enhanced, but relationships with clients would be more important moving forward. We also noted several respondents with low risk jobs (according to calculations by Frey & Osborne, 2013) who reported that they were concerned about automation. On the flip side, we also noted many cases where respondents in high risk jobs were mixed – with some being highly concerned and others not being concerned at all about automation impacting on their job. For example, our sales and retail respondents largely felt their jobs would be unchanged. This is despite a retail landscape that has been disrupted over the decades by online sales, with many more disruptions expected to come. While New Zealand has faced more online sales, we have not (yet) faced the Amazon effect to the same extent as the USA or Europe. Overall, the results from this study provide useful insights into how employees view the future of work. It shows that New Zealand respondents appear to have a broad understanding of STAARA although the different viewpoints on whether jobs will be replaced is understandably mixed because the future is uncertain. Overall, the themes provided new depth and insights to existing employee studies STAARA and provide greater depth towards understanding employee perceptions. Perhaps the most intriguing perception is that employees do see job changes coming through STAARA, but perhaps more positive change – whereby repetitive parts of roles are automated only.

#### *Limitations and Future Research*

Research into the future of work is in its infancy. It is important that we know about how employees perceive the potential threat or benefit of STAARA and how employees plan to adapt (or not) for the future of work. For example, are truck, taxi- and bus-drivers looking for new careers as the likelihood of driver-less vehicles become a reality? What does this do for the supply of truck drivers that are needed while the driverless technology is not on-board yet? Future research should also look at which businesses are looking to use STAARA within their operations and how, and what their intentions are behind this? Is it to replace workers? Or is it to increase efficiency? What are firms planning to do with employees that no longer fit within their old job? Do they simply make them redundant? Do they provide training to them so they can find work in another field? Or do they try and retain these workers for new roles within their organisation? These are important questions that researchers need to explore. Overall, this area of research is limited, and we encourage researchers to undertake more exploration.



A limitation for the present study was that the responses were collected online. They were not in-depth interviews, meaning follow-up questions were not asked to the respondents involved. Furthermore, some respondents provided limited dialogue in their response. It is, however, important to mention that the purpose of this study was to provide a broad insight into what a wide range of employees think about STAARA at that point in time. A benefit of using this method to attract respondents was that a wide range of industries and occupations were able to be included in the research. We also achieved a sizeable sample (60 employees), providing a wider range of insights from our respondents to look at our research questions.

It is also important to note that not all futurists predict STAARA will have detrimental effects on employment. This potential for job loss through technology is not a foregone conclusion, but a prediction about that future that has not happened (yet). While it is likely that *parts* of a job may or will be automated, it might be that the result will be a change a job or role, rather than the strict removal of that job (i.e., redundancy). Some researchers are very critical of any detrimental STAARA future. Miller and Atkinson (2013) stated that “robots, automation, machines, productivity: these are key enablers of human progress and absolutely no threat to overall employment” (p.2). Furthermore, research from Deloitte (2015) suggested that technology has created more jobs in the last 140 years. This could be a limitation because we may not be on the cusp of a new industrial revolution. We must also consider the fact that new jobs will be created in the coming years, ones that we cannot begin to imagine. In addition, Frey and Osborne (2013) suggested that there will be a multitude of external considerations that could play a role in shaping the future of work, such as wages, labour shortages and political pressure. In addition, current issues, such as the temporary and casual labour, are in a state of change. These constant changes mean that the future is difficult to predict. Furthermore, respondents may be looking to transition into new work because they want a career change, more meaningful work, higher wages or more flexibility. So even though we asked about technology, their ideas around their future job and career may be based in a profession they are not currently working in.

## **Conclusion**

Much of the research on the future of work has been presented from the position of ‘the experts’. This paper sought to highlight the current employee outlook into the future of work. We suggest that employees offer a different and meaningful insight into the complexity of their own work, and how hard it might be to automate the entire process. This is not to say they have a greater or lesser insight into the future of work, but it is an insight that is missing from the literature. Knowledge of these perceptions is very important for organisations and policy makers. It is a useful part of the puzzle for assessment moving forward. We encourage further research to develop the understanding and influence of STAARA on workforces from a range of different perspectives. This will enable better planning insights for all affected.

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## Psychological autonomy and well-being of employees in low-skilled occupations

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### Abstract

Psychological autonomy and the impact it has on employees' well-being has seldom been examined for those employed in low-skilled occupations. Using self-determination theory (SDT) as the theoretical grounding, this study aimed to investigate the relationship between supervisors' support for psychological autonomy and employee outcomes such as well-being, stress, and job performance, for those in low-skilled occupations. SDT proposes that the effect of supervisors' autonomy support is mediated through the satisfaction and frustration of employees' needs. Survey data were collected from 171 employees at four different organisations in New Zealand. Regression analysis indicated that supervisors' autonomy support was positively related to the satisfaction of employees' autonomy, competence and relatedness needs, and negatively related to frustration of employees' autonomy and relatedness needs. In addition, supervisors' autonomy support was related to job performance through competence and relatedness satisfaction and to well-being through autonomy satisfaction. Findings highlight the importance of supervisors' autonomy support for employees' well-being and job performance, giving organisations ways to improve well-being and job performance.

**Keywords:** low-skilled occupations, well-being, supervisors' autonomy support, autonomy

### Introduction

Autonomy at work has been shown to have positive effects on employees' well-being. For example, job autonomy, where an employee has control over the nature and type of task, has a positive relationship with employees' well-being (Boxall & Macky, 2014). Autonomy in scheduling or timing, where employees control the start and end of their working hours, is also positively related to well-being (Nijp, Beckers, Geurts, Tucker, & Kompier, 2012). While both job and time autonomy contribute to the well-being of employees, neither of these forms of autonomy are widespread in low-skilled occupations (Wheatley, 2017). Low-skilled occupations can be defined as occupations where work experience of up to a year is required with little or no formal education required to perform the tasks (Australian Bureau of Statistics, 2006). The nature of work in these occupations is typically characterised as highly routinised with fixed production or service hours, and therefore limited in job and time autonomy. These occupations can also be physically and psychologically demanding. Karasek and Theorell (1990) suggest that occupations such as assemblers and machine operators, where job-holders tend to work in isolated work stations, are found to have low control and social support, but

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are high in physical and psychological demands. Similarly, front-line hospitality occupations are also low in autonomy and high in demands (Walters & Raybould, 2007). According to Marmot (2005), those holding low-skilled jobs with less control tend to experience an increased level of alienation and boredom and a reduced level of social contact. Individuals working in these occupations are more prone to experience adverse outcomes, such as health and mental health complaints, fatigue and low job satisfaction (de Jonge, Bosma, Peter, & Siegrist, 2000; Pelfrene et al., 2002).

This research generally supports the notion that high job demands and psychological strain generate negative well-being outcomes for both organisations and employees. The well-being of employees in low-skilled occupations is commonly investigated from the work system and design perspective, such as lean manufacturing practices (e.g., Cullinane, Bosak, Flood, & Demerouti, 2014) and has often neglected the individual psychological aspect within well-being. This study provides an understanding of the individual psychological process by investigating the role of psychological autonomy in the well-being of employees in low-skilled occupations, hence providing organisations with another means to improve their well-being. Using self-determination theory (SDT) as a framework, we discuss psychological autonomy, the autonomy-supportive environment and basic psychological needs.

## **Self-Determination Theory (SDT)**

The core concept of SDT concerns the facilitation or hindering of human flourishing (Ryan & Deci, 2000a). The basic assumption of SDT is that humans are innately curious, active and desire social connection, and much of SDT research focusses on the social conditions that enhance or undermine an individual's capacity for psychological growth, wellness and engagement (Ryan & Deci, 2017). An individual's capacity for growth is grounded in two fundamental principles: firstly, the need for an environment that supports psychological autonomy and, secondly, the satisfaction of basic psychological needs. These are discussed below.

### ***Autonomy***

Autonomy is commonly seen as being synonymous with independence, having the ability to behave and think outside the bounds of societal conformity, and making decision based on personal judgement (Ryff & Keyes, 1995). This view of autonomy is consistent with a great deal of the organisational research on job and time autonomy, which suggests that autonomy is having the independence to decide how tasks can be completed and the flexibility to decide when to start and end work. In contrast, SDT defines autonomy as *interdependence*. Deci and Ryan (2000) suggest that autonomy, in essence, is self-organisation and self-regulation, where one endorses one's own action while *finding coherence between the inner self in association with the external environment or conditions*. Drawing on SDT research in the workplace, Nie, Chua, Yeung, Ryan and Chan (2015) and Williams et al., (2014) found the experience of interdependent autonomy, measured as autonomous motivation, was facilitated by an autonomy-supportive environment.

Interdependent autonomy has a broader application *to* work than the view of independent autonomy, because employees are not independent of the organisation and its policies, but are commonly subjected to organisational standards which employees may not fully endorse. Moreover, employees in low-skilled occupations often follow a routine and are required to

strictly adhere to procedure. Thus, they may find work less interesting (Morgeson & Humphrey, 2006) and, consequently, more challenging to engage autonomously at work. Therefore, interdependent autonomy, where employees willingly engage in an activity at work without having their values and goals undermined, while also being aware of the expectations and standards of the organisation, may be more relevant to low-skilled occupations which lack job and time autonomy. The key to this willing engagement with organisational standards and activity at work is supervisors' autonomy support for the employees (Ryan & Deci, 2000a).

### **Supervisors' autonomy support (SAS)**

Employees' autonomy can be supported by the supervisors who act as their first line of report. An autonomy-supportive supervisor tends to provide an explanation for a given task, be open to employees' points of view, encourage initiative-taking and minimise the use of punishment or external rewards to motivate or change behaviour (Slemp, Kern, Patrick, & Ryan, 2018). In summary, SAS is a supervisory style aimed at fostering a supportive and understanding climate within the supervisor–employee relationship.

However, SAS is also commonly associated with being permissive and providing minimal guidelines (Reeve, 2009), which may lead supervisors in highly routinised occupations to discount the practicality of SAS. Nevertheless, studies have shown that SAS is a supervisory style that promotes well-being (Deci et al., 2001) without neglecting order and guidelines (Jang, Reeve, & Deci, 2010). Therefore, in a routinised work environment, SAS can be demonstrated through providing the rationale for seemingly repetitive and meaningless tasks, acknowledging and accepting employees' views when issues arise, avoiding controlling language (e.g., should, must) when outlining guidelines and expectations, and providing personal development opportunities. Through SAS, employees' basic psychological needs are satisfied, leading to better well-being and benefitting the organisation through improved performance (Deci, Olafsen, & Ryan, 2017).

#### ***Autonomy support and needs satisfaction***

SDT posits that the optimal functioning and well-being of an individual is dependent on the satisfaction of the three fundamental psychological needs – autonomy (self-regulating one's behaviour; achieving inner coherence with external demands and goals), competence (engaging in optimal challenges and mastery in the physical and social world) and relatedness (seeking attachment and desiring the feelings of security, belongingness and intimacy with others) (Deci & Vansteenkiste, 2004). Similarly, the satisfaction of employees' basic psychological needs is key to their well-being (Ryan & Deci, 2000b). As such, SAS aims to provide an environment allowing employees to make choices and take action to satisfy the need for autonomy, competence and relatedness (Ryan & Deci, 2017). While such relationships have been widely studied in various occupational groups (Gillet, Fouquereau, Huyghebaert, & Colombat, 2015), the effect of SAS specifically on employees in low-skilled occupations is not known. Based on previous findings that SAS is positively related to needs satisfaction, the following hypotheses are proposed for employees in low-skilled occupations:

H1a: SAS is positively related to autonomy need satisfaction.

H1b: SAS is positively related to competence need satisfaction.

H1c: SAS is positively related to relatedness need satisfaction.



### *Autonomy support and needs frustration*

Needs, if frustrated or thwarted, will have a negative outcome on the person's well-being, which is likely to diminish the person's ability to function optimally (Deci & Vansteenkiste, 2004). Deci and Ryan (2000) suggested the lack of satisfaction of needs may reflect a lower state of well-being, but the active or constant frustration of needs may lead to a more negative outcome such as anxiety, depressive symptoms and other maladaptive coping strategies. Needs satisfaction and frustration are negatively related to each other (Chen et al., 2015). However, they are not antithetical, as the antecedent and outcome of needs satisfaction and needs frustration tend to correlate, but they do so in the opposite direction (Vansteenkiste & Ryan, 2013). The effect of SAS on needs satisfaction has been widely studied, but the same could not be said about the effect of SAS on needs frustration. Although Vansteenkiste and Ryan (2013) suggest that SAS could prevent needs frustration, not many organisational studies have chosen to confirm this path, except for a few, such as those by Gillet, Fouquereau, Forest, Brunault and Colombat (2012), Gillet, Forest, Benabou and Bentein (2015) and Schultz, Ryan, Niemiec, Legate and Williams (2015). These studies found a negative relationship between SAS and needs frustration at work. However, needs frustration was analysed as a composite unit. Hence, how SAS is related to the frustration of each need is not known, and to our knowledge, no other prior research has informed about this relationship. Nevertheless, based on the findings that SAS is negatively related to needs frustration, the following hypotheses for employees in low-skilled occupations are proposed:

H2a: SAS is negatively related to autonomy need frustration.

H2b: SAS is negatively related to competence need frustration.

H2c: SAS is negatively related to relatedness need frustration.

### *Needs satisfaction and frustration as mediators*

SAS has been found to have a significant positive relationship with the following: employees' tendencies to self-initiate and regulate (Baard, Deci, & Ryan, 2004); acceptance of organisational change (Gagné, Koestner, & Zuckerman, 2000); organisational identification, work satisfaction and job performance (Gillet, Colombat, Michinov, Pronost, & Fouquereau, 2013); well-being and task engagement (Deci et al., 2001); and decreased burnout (Fernet, Guay, Senécal, & Austin, 2012). A meta-analysis by Slep et al., (2018) found a similar effect of SAS on well-being and needs satisfaction across individualistic and collectivistic cultures. Thus, they concluded that SAS universally supports employees' well-being. As SAS is commonly known to contribute to employees' well-being and a positive organisational outcome, we hypothesised the following specific outcomes for employees in low-skilled occupations:

H3a: SAS is positively related to job performance.

H3b: SAS is positively related to well-being.

H3c: SAS is negatively related to stress.

While SAS is related to positive organisational outcomes, it is often mediated by the satisfaction of needs (Baard et al., 2004; Deci et al., 2001). Employees whose needs are satisfied showed increased work performance in a banking firm (Baard et al., 2004), greater well-being and job satisfaction in a shoe factory (Ilardi, Leone, Kasser, & Ryan, 1993), reduced symptoms of anxiety and depression in Bulgaria where employees are dominated by a "top-down" management approach (Deci et al., 2001) and a higher level of organisational citizenship behaviour in New Zealand organisations (Roche & Haar, 2013). Other studies with Dutch-speaking employees also found needs satisfaction leads to better well-being (Van den Broeck,

Vansteenkiste, De Witte, Soenens, & Lens, 2010) and lower stress (Van den Broeck, Vansteenkiste, De Witte, & Lens, 2008). SAS provides the environment in which needs may be satisfied, which leads to positive outcomes.

On the other hand, research suggests that when employees' needs are frustrated, this can lead to negative outcomes such as employees engaging in counterproductive behaviours: taking long breaks and turning up late to work (Van Den Broeck et al., 2014); experiencing burnout, high turnover intent, absenteeism (Schultz et al., 2015); psychological distress, psychosomatic complaints (Gillet et al., 2015; Trépanier, Forest, Fernet, & Austin, 2015); and higher levels of stress (Olafsen, Niemiec, Halvari, Deci, & Williams, 2017). Needs frustration also mediates between SAS and employee well-being and job satisfaction (Gillet et al., 2012). Although research examining needs frustration is growing, to our knowledge, no research has been conducted with low-skilled occupations.

Based on studies which found needs satisfaction and frustration as mediators between SAS and outcome variables, we hypothesise the following relationships:

H4a: The relationship between SAS and job performance, well-being and stress will be mediated by satisfaction of the need for autonomy.

H4b: The relationship between SAS and job performance, well-being and stress will be mediated by satisfaction of the need for competence.

H4c: The relationship between SAS and job performance, well-being and stress will be mediated by satisfaction of the need for relatedness.

H4d: The relationship between SAS and job performance, well-being and stress will be mediated by frustration of the need for autonomy.

H4e: The relationship between SAS and job performance, well-being and stress will be mediated by frustration of the need for competence.

H4f: The relationship between SAS and job performance, well-being and stress will be mediated by frustration of the need for relatedness.

High performance and well-being as well as lower levels of stress are not only good for the employees, but they are also indicators of a healthy organisational culture (Cooper & Cartwright, 1994; Grabovac & Mustajbegovic, 2015). This study aims to understand how needs satisfaction and frustration may mediate the relationship between supervisors' autonomy support and employees' well-being, job performance and stress, hence providing information on the antecedent and psychological process leading to positive outcomes.

## **Method**

### ***Participants and procedure***

The data for this study were collected from employees in low-skilled occupations in New Zealand. Employees from three factories and one hotel participated in the study. The survey was distributed to the participants during a pre-arranged meeting. Arrangements were also made for the employees to return the completed survey forms via survey boxes placed in different locations (i.e., cafés and the clock-out machine area). The survey boxes were then collected by the lead researcher a week after the survey forms were distributed.

A total of 171 employees (out of 229) completed the survey with a response rate of 74.7 per cent. Of the 171 employees, 39 were from Organisation 1, 61 from Organisation 2, 28 from Organisation 3 and 43 were from Organisation 4. The majority of the participants were male (66.7 per cent), 28.7 per cent were female, and the remainder did not specify their gender. The mean age of the participants were 39.6 years (SD = 13.2). Most of the participants were factory operators (74.9 per cent) while 25.1 per cent were from various services in the hotel industry (i.e., housekeeping, food and beverage, receptionist, etc.).

### **Measures**

The questionnaire administered to the employees consisted of five different scales and all the measures were administered in English.

#### *Supervisors' support for autonomy*

Employee perceptions of supervisors' autonomy support (SAS) were assessed using the Work Climate Questionnaire (WCQ). The WCQ uses 15 items (e.g., *My manager listens to how I would like to do things*) and a 7-point response scale from *strongly agree* to *strongly disagree*. Beard et al. (2004) adapted the scale to the work context by changing the reference person to manager from Williams, Grow, Freedman, Ryan and Deci (1996) who used the survey with patients to assess the autonomy-supportiveness of their healthcare provider ( $\alpha = .92$ ) and Williams and Deci (1996) who used the survey with students to assess autonomy-supportiveness of their instructor ( $\alpha = .96$ ).

#### *Basic psychological needs satisfaction and frustration*

The needs satisfaction and frustration 24-item scale (BPNSF-W) was designed to measure the satisfaction and frustration of competence, relatedness and autonomy needs at work. The scale was initially developed by Chen et al. (2015) and was adapted to a work context by Schultz et al. (2015), with Cronbach's alpha of 0.90 for needs satisfaction and Cronbach's alpha of 0.88 for needs frustration. Participants responded to a series of items such as "*At work, I feel a sense of choice and freedom in the things I undertake*" for needs satisfaction and "*I feel insecure about my abilities on my job*" for needs frustration, using a 7-point scale ranging from 1 *totally disagree* to 7 *totally agree*.

#### *Employees' well-being*

The well-being of employees was measured using the WHO-5 Well-being Scale (WHO-5) and the Perceived Stress Scale (PSS-4). The WHO-5 scale was developed by the World Health Organization (WHO) from the WHO-10 and has been phrased to reflect subjective positive well-being. The scale consists of five items, where the participants rated their well-being with items such as "*I have felt cheerful and in good spirits at work*" on a scale of 0 *at no time* to 5 *all of the time* (Topp, Østergaard, Søndergaard, & Bech, 2015).

The Perceived Stress Scale (PSS-4) scale was used to measure the perceived stress of employees. The PSS-4 scale was a short version of the 14-item scale originally developed by Cohen, Kamarck and Mermelstein (1983). The Cronbach's alpha for the 4-item scale was 0.72. The items in the scale asked the participants to rate the items such as "*In the last month, how often have you felt that you were unable to control the important things in your life?*" from 0 *never* to 4 *very often*. In general, the greater the score, the higher the level of stress reported.

### *Job performance*

The job performance scale was adapted from Abramis (1994), which characterised job performance into technical ( $\alpha = 0.83$ ) and social performance ( $\alpha = 0.76$ ), absenteeism and lateness. In this study, technical and social performance are used as a measure of job performance. The items in the scale included, “*In the past four weeks you worked, how well did you perform without mistakes?*” and participants rate it from 1 *very poorly*, to 5 *exceptionally well*. Self-rated job performance was chosen in consideration of the pressure the employees might feel about their prospects in the organisation if supervisor- or organisational-rated job performance was used.

## **Results**

### *Reliability and validity*

Most scales demonstrated high reliability, ranging from .70 to .96. The reliability value for the scale measuring stress was relatively low ( $\alpha = .57$ ) and the inter-item correlations were considerably weak (range from  $r = .11$  to  $r = .39$ ). Hence, the PSS-4 scale has been removed from further analysis.

### *Preliminary analysis*

Correlations between the variables are presented in Table 1. From the correlation analysis, needs satisfaction (i.e., autonomy satisfaction) showed stronger correlations with well-being ( $r = .58$ ,  $p < .01$ ), while needs frustration (i.e., autonomy frustration) showed weaker correlations with well-being ( $r = -.26$ ,  $p < .01$ ).

**Table 1** Means, Standard Deviations, and Correlations for Employees

	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9
1. SAS	5.1	1.2	<i>(.96)</i>								
2. Autonomy satisfaction	4.6	1.1	.48**	<i>(.75)</i>							
3. Competence satisfaction	5.8	.9	.29**	.46**	<i>(.70)</i>						
4. Relatedness satisfaction	5.0	1.1	.35**	.47**	.36**	<i>(.76)</i>					
5. Autonomy frustration	3.8	1.4	-.23**	-.19*	-.09	-.19*	<i>(.76)</i>				
6. Competence frustration	2.6	1.2	-.07	-.14	-.34**	-.16*	.51**	<i>(.78)</i>			
7. Relatedness frustration	3.2	1.2	-.26**	-.16	-.26**	-.35**	.51**	.58**	<i>(.77)</i>		
8. Job performance	4.0	.5	.16*	.24**	.40**	.41**	-.14	-.40**	-.32**	<i>(.82)</i>	
9. Well-being	3.2	1.1	.37**	.58**	.24**	.36**	-.26**	-.16*	-.08	.35**	<i>(.84)</i>

\*\* $p < .01$ , \* $p < .05$ ;  $n = 154$ .

Note: Alpha reliabilities presented in italics on the diagonal

### ***Regression analysis***

#### *SAS and needs satisfaction and frustration*

A series of hierarchical regression analyses were run using SPSS version 24, to test the hypotheses of SAS as a predictor of autonomy, competence and relatedness needs satisfaction and frustration individually. The organisations, types of contract, and tenure of employment were first entered in the regression analysis as controls. In the second step, SAS was entered. Results of the regression analysis showed a significant positive relationship between SAS and the satisfaction of autonomy, relatedness, and competence needs, as shown in Table 2.

**Table 2** Hierarchical regression analysis for SAS and autonomy, competence and relatedness needs satisfaction and frustration

	Autonomy satisfaction				Competence satisfaction				Relatedness satisfaction			
	$\beta$	<i>SE B</i>	$R^2$	$\Delta R^2$	<i>B</i>	<i>SE B</i>	$R^2$	$\Delta R^2$	$\beta$	<i>SE B</i>	$R^2$	$\Delta R^2$
Step 1 (Control variables)												
Employment term	-.02	.08			.03	.06			.02	.08		
Org 1 <sup>a</sup>	-.15	.25			-.02	.18			-.29**	.24		
Org 2 <sup>b</sup>	-.14	.25			-.23*	.18			-.39**	.24		
Org 3 <sup>c</sup>	-.12	.28			-.02	.20			-.16	.27		
Fulltime & Part-time	-.18	.23			-.11	.17			-.14	.22		
Fulltime & Fixed term	-.24	.27			-.18	.20			-.21*	.26		
Fulltime & Others	.02	.32			-.03	.23			-.08	.31		
Model summary			.08				.05				.11*	
Step 2												
Employment term	-.03	.07			.06	.06			.05	.07		
Org 1 <sup>a</sup>	-.14	.23			.00	.18			-.26**	.23		
Org 2 <sup>b</sup>	-.08	.23			-.20	.17			-.36**	.23		
Org 3 <sup>c</sup>	-.08	.25			.01	.19			-.13	.25		
Fulltime & Part-time	-.15	.21			-.06	.16			-.07	.21		
Fulltime & Fixed term	-.17	.25			-.12	.19			-.14	.24		
Fulltime & Others	.01	.29			-.04	.22			-.09	.29		
SAS	.44**	.07			.31**	.05			.36**	.07		
Model summary			.26**	.18**			.14**	.09**			.23**	.12**

Note:  $N = 162$ ; \*\* $p < .01$ , \* $p < .05$ . <sup>a</sup>Org 4 vs Org 1; <sup>b</sup>Org 4 vs Org 2; <sup>c</sup>Org 4 vs Org 3

Table 2 continued

	Autonomy frustration				Competence frustration				Relatedness frustration			
	$\beta$	<i>SE B</i>	$R^2$	$\Delta R^2$	<i>B</i>	<i>SE B</i>	$R^2$	$\Delta R^2$	$\beta$	<i>SE B</i>	$R^2$	$\Delta R^2$
Step 1 (Control variables)												
Employment term	.07	.10			-.02	.09			.07	.09		
Org 1 <sup>a</sup>	-.12	.30			-.23	.29			-.30**	.29		
Org 2 <sup>b</sup>	.01	.30			-.04	.29			-.05	.29		
Org 3 <sup>c</sup>	-.07	.33			-.17	.31			-.21*	.31		
Fulltime & Part-time	.22*	.28			.12	.26			.05	.26		
Fulltime & Fixed term	-.01	.32			-.03	.31			-.01	.30		
Fulltime & Others	.14	.38			.06	.37			.06	.36		
Model summary			.06				.07				.10*	
Step 2												
Employment term	.06	.10			-.02	.09			.05	.09		
Org 1 <sup>a</sup>	-.14	.30			-.23*	.29			-.31**	.28		
Org 2 <sup>b</sup>	-.01	.30			-.05	.29			-.07	.28		
Org 3 <sup>c</sup>	-.08	.33			-.17	.32			-.23*	.30		
Fulltime & Part-time	.18	.27			.12	.27			.01	.26		
Fulltime & Fixed term	-.05	.32			-.03	.31			-.05	.30		
Fulltime & Others	.14	.38			.06	.37			.07	.35		
SAS	-.17*	.09			-.03	.09			-.23**	.08		
Model summary			.09*	.03*			.07	.00			.15**	.05**

Note:  $N = 162$ ; \*\* $p < .01$ , \* $p < .05$ . <sup>a</sup>Org 4 vs Org 1; <sup>b</sup>Org 4 vs Org 2; <sup>c</sup>Org 4 vs Org 3



Hypotheses 1a, 1b and 1c are supported. SAS also predicted reduced frustration of relatedness and autonomy needs, but not competence need. Hypotheses 2a and 2c are supported, but not 2b. Generally, SAS accounted for greater variance in needs satisfaction ( $R^2$  of .09 to .18) than in needs frustration ( $R^2$  of .03 to .05).

*Multiple mediation analysis*

According to Preacher and Hayes (2008), a multiple mediation analysis is an appropriate analysis for multiple potential mediators, which, in this study, are autonomy, competence and relatedness needs satisfaction and frustration. Based on the recommendation by Van den Broeck, Ferris, Chang and Rosen (2016), individual needs should be analysed separately to test the unique effect of each need on the outcome variables. Therefore, the relationship between SAS and the outcome variables were first tested. Following this, autonomy, competence and relatedness satisfaction and frustration were tested as mediators of the relationship between outcome variables and SAS. Analyses were conducted using SPSS version 24, Process version 3.0. The coefficients and confidence intervals for the outcome variables based on 10,000 bootstrap samples are presented in Table 3 and 4.

**Table 3** Summary of mediation analysis with SAS as predictor, needs satisfaction as mediators and outcome variables

Predictors	Outcome							
	Job performance <sup>a</sup>				Well-being <sup>b</sup>			
	<i>Coeff</i>	<i>SE B</i>	95% CI		<i>Coeff</i>	<i>SE B</i>	95% CI	
<i>LL</i>			<i>UL</i>	<i>LL</i>			<i>UL</i>	
SAS	.08*	.03	.01	.05	.35**	.06	.22	.47
Autonomy satisfaction	-.02	.04	-.10	.06	.46**	.08	.31	.61
Competence satisfaction	.26**	.05	.16	.36	-.04	.10	-.23	.15
Relatedness satisfaction	.15**	.04	.08	.23	.10	.10	-.05	.24
Model <i>R</i> <sup>2</sup>	.30**				.36**			
SAS								
Total effect	.08*	.03	.01	.15	.35**	.06	.22	.47
Direct effect	-.02	.03	-.08	.05	.12	.07	-.01	.25
Total indirect effect	.10*	.03	.05	.15	.23*	.05	.15	.33
Indirect effect via								
(A) Autonomy satisfaction	-.01	.02	-.04	.03	.21*	.05	.13	.31
(B) Competence satisfaction	.06*	.02	.02	.10	-.01	.03	-.06	.04
(C) Relatedness satisfaction	.05*	.02	.02	.09	.03	.03	-.03	.10

Note: <sup>a</sup> *N* = 165; <sup>b</sup> *N* = 165. \*\* *p* < .01, \* *p* < .05. CI = Confidence intervals based on bias-corrected *k* = 10,000 bootstrap samples, *LL* lower limit, *UL* upper limit.

**Table 4** Summary of mediation analysis with SAS as predictor, needs frustration as mediators, and outcome variables

Predictors	Outcome							
	Job performance <sup>a</sup>				Well-being <sup>b</sup>			
	Coeff	SE B	95% CI		Coeff	SE B	95% CI	
			LL	UL			LL	UL
SAS	.08*	.03	.01	.15	.35**	.06	.22	.47
Autonomy frustration	.08*	.04	.01	.15	-.16*	.07	-.30	-.02
Competence frustration	-.17**	.04	-.25	-.09	-.13	.08	-.29	.04
Relatedness frustration	-.05	.04	-.13	.03	.18*	.08	.02	.34
Model $R^2$	.19**				.21**			
SAS								
Total effect	.08*	.03	.01	.15	.35**	.06	.22	.47
Direct effect	.08*	.03	.01	.14	.35**	.07	.23	.48
Total indirect effect	.00	.02	-.03	.04	.22	-.01	.03	-.06
Indirect effect via								
(A) Autonomy frustration	-.01	.01	-.04	.00	.03	.02	-.00	.08
(B) Competence frustration	.00	.01	-.02	.04	.01	.01	-.01	.04
(C) Relatedness frustration	.01	.01	-.01	.04	-.04*	.03	-.11	-.00

Note: <sup>a</sup>  $N = 165$ ; <sup>b</sup>  $N = 165$ . \*\*  $p < .01$ , \*  $p < .05$ . CI = Confidence intervals based on bias-corrected  $k = 10,000$  bootstrap samples, *LL* lower limit, *UL* upper limit.

### *SAS and outcome variables*

The main effect analyses showed SAS was significantly related to job performance ( $\beta = .08$ ,  $p < .05$ ) and well-being ( $\beta = .35$ ,  $p < .01$ ). Therefore, hypotheses 3a and 3b are supported. Following the significant main effect results, mediation analyses were conducted.

### *Needs satisfaction as mediators*

The mediation analysis showed a significant relationship between SAS and job performance through competence and relatedness satisfaction only. Hence, hypotheses 4b and 4c are supported for job performance only. Autonomy satisfaction mediates the relationship between SAS and well-being, with an effect size of .21. Therefore, hypothesis 4a is supported only for well-being.

Competence and relatedness satisfaction mediate SAS and job performance while autonomy satisfaction mediates SAS and well-being. The mediation model provides a better explanation of the relationship between SAS and job performance and well-being than the direct relationship between SAS and job performance and well-being.

### *Needs frustration as mediators*

The total direct effects between SAS and job performance and well-being were significant, while the indirect effect through needs frustration were not significant. Therefore, the mediation hypotheses between SAS and the outcome variables through needs frustration were not supported. This relationship can possibly be influenced by SAS contributing to less variance in needs frustration, as demonstrated in the second set of hypotheses and the mixed results between needs frustration and outcome variables.

## **Discussion**

This study investigated (1) the relationship between supervisors' autonomy support and the satisfaction or frustration of employees' autonomy, competence, and relatedness needs, and (2) the relationship between supervisors' autonomy support and organisational outcomes mediated through needs satisfaction and frustration. The results showed that autonomy support is uniquely related to satisfaction and frustration of each of the three needs satisfaction, as demonstrated by different effect sizes. Although SAS predicts autonomy and relatedness frustration, it does so to a lesser degree than needs satisfaction. These findings are consistent with Bartholomew, Ntoumanis, Ryan, Bosch and Thøgersen-Ntoumani (2011) and Gillet et al. (2012), who found autonomy support relates to needs satisfaction to a greater degree than needs frustration. The findings suggest SAS functions to increase positive resources rather than preventing needs frustration of employees in low-skilled occupations. Therefore, if employees continuously operate under a controlling management style that is rigid, prescriptive and frequently uses punishment as a corrective method (Ryan & Deci, 2017), SAS may not be able to prevent employees' needs from being frustrated.

It was hypothesised that the satisfaction of needs through SAS would lead to better job performance and well-being. Competence and relatedness satisfaction mediate job performance, while only autonomy satisfaction mediates well-being. Mixed results were found, suggesting that each need uniquely mediates the relationship between SAS and the outcome variables, hence reinforcing the requirement to examine

each need individually (Van den Broeck et al., 2016). On the other hand, the results do not imply that needs that did not mediate the relationship between SAS and job performance and well-being should be ignored, as needs satisfaction varies daily and with different activities (Reis, Sheldon, Gable, Roscoe, & Ryan, 2000). Future studies focussing on activities and daily variation might be able to provide insight into the role of each need in employees' well-being. However, what we can infer through this study is that, despite limitation in job and time autonomy, psychological autonomy plays an important role in the well-being of employees in low-skilled occupations.

On the other hand, needs frustration does not mediate SAS and job performance and well-being. This result contrasts with that of Gillet et al. (2012), who found that needs frustration mediates SAS and organisational outcomes such as job satisfaction, happiness and self-realisation. In their study, needs frustration was investigated as an overall index while, in this study, needs frustration was analysed separately as three mediators. This difference in the analysis might influence the mediation effect. In addition, the evidence of needs frustration as a mediator between controlling and negative outcomes is stronger than needs frustration as a mediator between autonomy-support and positive outcomes. For example, Vander Elst, Van Den Broeck, De Witte and De Cuyper (2012) found that needs frustration mediates the relationship between job insecurity and emotional exhaustion and vigour. Needs frustration also mediates the relationship between workplace bullying and burnout (Trépanier, Fernet, & Austin, 2015). Our study suggests that, although SAS can prevent autonomy and relatedness frustration to a certain degree, it is not sufficient to impact job performance and well-being of employees in low-skilled occupations.

Finally, the PSS-4 scale demonstrated low reliability and was removed from further analysis. The scale chosen for this study, consisting of two positively and two negatively worded items, might appear confusing to the participants in low-skilled occupations who might not be used to filling in surveys. Since the scale has not been used extensively with people in low-skilled occupations, it may be that a brief stress scale for our participants might not be the best measure, especially when the scale has both positive and negative items. Therefore, studies with low-skilled occupations in the future should consider using the 10-item stress scale, which is a two-factor model, instead of the more popular single-factor model (Taylor, 2015).

## **Limitations and future research**

There are a few limitations in this study to take note of when interpreting the results and considering directions for future research. First of all, the data collected was cross-sectional. Though no single factor emerged after performing Harman's one-factor test, we do not deny that cross-sectional data is still subject to other common method biases (Podsakoff, Mackenzie, Lee, & Podsakoff, 2003). Moreover, cross-sectional data cannot conclude causality. Future organisational studies can consider using longitudinal or experimental methods to establish the relationship between SAS and employees' well-being through needs satisfaction and needs frustration.

Secondly, the relatively weak effect sizes of SAS on job performance through needs satisfaction suggest that future studies should include types of motivation as potential mediators (Deci et al., 2017). Moreover, since only SAS was investigated as a predictor, researchers might also want to include supervisors' controlling behaviour in relation to needs frustration and organisational outcomes. Bartholomew et al. (2011) suggested needs frustration has different antecedents and predicted outcomes. Therefore, future

studies could measure controlling behaviours that might lead to needs frustration and negative outcomes to gain better understanding of the predictors as well as the outcomes of needs frustration.

Finally, research with low-skilled occupations posed some unique challenges, such as lower literacy skills, leading to the possibility of participants misunderstanding certain items in the questionnaire. Moreover, as employees in low-skilled occupations work with machines or in service areas that run continuously and under tight schedules, it can be challenging to motivate them to participate in the study as they are unable to move away from their work station, and they might not see the benefit of participating in a study. Because of this, the sample size of this study, although sufficient, is limited.

However, these limitations should encourage rather than discourage researchers to study low-skilled occupations, as they present unique contexts for the application of SDT. Future studies could pay closer attention to simplifying the items in the questionnaire and providing literacy support to the participants. In addition, researchers could attempt to gain support from management prior to the study so employees are able to take time away from their work station to participate in the study. This could both increase the participation rate and also convey organisational commitment to improving employee well-being.

## **Practical implication and conclusion**

Following the results of this study, we offer a practical suggestion that might improve well-being and job performance of employees in low-skilled jobs. Our findings suggest that for employees in low-skilled occupations where job and time autonomy are limited, supervisors' support for psychological autonomy plays an important role in the satisfaction of autonomy, competence and relatedness needs, which, in turn, leads to better job performance and employee well-being. Organisations should consider encouraging supervisors to practise an autonomy-supportive interaction style with employees. One of the ways to increase autonomy supporting interaction is through training supervisors in autonomy-supportive behaviours. Autonomy-supportive skills training includes providing a meaningful rationale when assigning a task, accepting rather than correcting employees' views when assigning tasks that are not of employees' interest, using informational rather than punitive language in correcting behaviour, and providing opportunities for development, learning and interactions at work. Studies have shown that autonomy-supportive training with managers, coaches, health practitioners and teachers resulted in more autonomy-supportive interactions with their employees, athletes, patients and students (Su & Reeve, 2011). Therefore, investing in such training could provide great benefit to the employees and organisation.

In conclusion, this study has provided insight into the relationship between supervisors' autonomy support and organisational outcomes (job performance, well-being and stress). While the relationship between supervisors' autonomy support and job performance and well-being was mediated by needs satisfaction, there is no evidence that needs frustration mediates the same relationships. In conclusion, supervisors' autonomy support plays an important role in the satisfaction of needs and improvement of job performance and well-being.

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## Another swing of the pendulum: rhetoric and argument around the Employment Relations Amendment Act (2018)

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### Abstract

2018's Employment Relations Amendment Act (ERAA) reversed many of the employment relations (ER) regulatory changes introduced by the preceding National-led administration. It, thus, continued the pattern of yo-yo policy-making that has held in New Zealand since 1991, where significant changes to the ER system have been made with each change of government. Regular pendulum swings in policy settings (where each government begins by reversing policy changes made by the previous administration) generate negative outcomes, including uncertainty and, most likely, a sub-optimal policy equilibrium. In order to understand and (hopefully) move past this impasse, this paper analyses the arguments made for and against this new Act. Texts drawn from parliamentary debates, the Select Committee process, and media coverage are analysed to show the linguistic and rhetorical means used by actors on either side of the debate to make their competing arguments appear legitimate and compelling.

The article notes the moments where the parties to this dispute failed or engage meaningfully with the arguments and evidence presented by the other side, and suggests that the "talking past each other" nature of the debate is related to the institutional forms and structures within which the debate took place. It concludes with suggestions for an institutional setting able to facilitate more constructive dialogue.

**Keywords:** discourse analysis, rhetorical analysis, unions, flexibility

### Introduction

Within its first 100 days in office, the new Labour-led coalition government introduced employment relations (ER) legislation that addressed issues of minimum protections for workers, and the role of unions and collective bargaining. To anyone with more than a passing interest in ER legislation in New Zealand, there was nothing especially surprising in any of the changes proposed. To a large extent, they simply reversed many of the changes introduced by the preceding National-led administration: changes that Labour, the Greens and (to a lesser extent) New Zealand First had strongly opposed (Skilling & Molineaux, 2017). The provisions of the Employment Relations Amendment Act, 2018 (ERAA) had been prefigured in speeches and documents released during the election campaign (Labour Party of New Zealand, 2017a; 2017b) and in the new government's statements of intent (Ardern, 2017). The ERAA does not represent the sum total of the government's ER ambition: further policy work will address issues of equal pay and of the "future of work". This Act, however, had been signalled and (being, in large part, a reversal of recent changes) had the advantage of being able to be introduced relatively quickly.

The 2018 Act can be read as the latest move in a pattern of yo-yo policy-making that has held since 1991, when the Employment Contracts Act (ECA) disrupted a long-established policy equilibrium (Rasmussen, 2009). In their turn, National MPs have stated their intention to reverse the provisions of this Act as soon as they are able to do so (Simpson, 2018; McKelvie, 2018). These pendulum swings

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with each change of government – reflecting what Foster, Rasmussen and Coetzee (2013, p.52) describe as “the on-going lack of a broadly-based consensus over employment relations” – are unsurprising in that they express historically, materially and ideologically entrenched differences. More than perhaps any other policy field, ER is an area in which the positions of the various parties are well-established and thoroughly institutionalised. These polarised positions, moreover, are reinforced and further entrenched by the institutional forms and structures within which the relevant policy debates take place.

In New Zealand’s Westminster-derived political system, a bill goes through three parliamentary readings and a select committee process that allows for public submissions on the bill and scrutiny of its clauses. While, on the face of things, this process appears designed to facilitate debate and engagement between competing perspectives, the analysis in this paper demonstrates that it does not compel competing parties to engage meaningfully with the arguments and evidence presented by the other side. In many cases, actors may choose to ignore those competing claims and continue to simply make claims that they believe will be resonant and convincing to a targeted public constituency. New Zealand’s unicameral legislature (its absence of an upper house) means that any bill simply requires a parliamentary majority at each stage to pass into law. Actors opposed to a bill may find more value in seeking to rally public and media opposition, in order to put pressure on the parties supporting the bill. In a proportional representation environment, where the government is typically comprised of two or more parties, this may amount putting pressure on one of the smaller parties to withdraw their support, or to demand changes.

The progress of any bill through the legislative process can be read as a situation of public dispute, in which a wide range of actors seek to have their perspectives heard and accepted. The logic of this situation dictates that all parties must present reasons for their position, and align those reasons with an appropriate conception of the common good (Boltanski & Thévenot, 2006; Thévenot, Moody & Lafaye, 2000). Indeed, both sides in this debate claimed that their proposals promoted a mutually-beneficial collective good, while describing their opponents’ prescriptions as merely the expression of narrow self-interest.

If we accept that regular pendulum swings in policy settings generate negative outcomes (uncertainty, but also, most likely, a sub-optimal regulatory equilibrium), we need to understand the rhetorical foundations of the arguments made on either side of the debate, and the way in which the nature of the debate reflects its institutional setting. This article briefly summarises the major changes contained in the ERAA (2018) before turning to an analysis of the arguments made on either side as the Bill progressed through parliament. The data for analysis is drawn from public texts (including parliamentary debates, submissions to and reports from Select Committee, and media coverage) associated with actors on either side of the debate. These data are subjected to discourse analytical techniques drawn from pragmatic sociology and rhetorical analysis (Boltanski & Thévenot, 2006; Gottweis, 2007). The analysis is critical in the sense that it seeks to show the presence and operation of power that makes certain partial and interested positions appear natural, neutral and necessary (Fairclough, 1992). Its attention to the ways in which the various actors exercise power within the debates foregrounds the various forms of capital available to the different actors, and the nature of the political-cultural context within which the dispute took place.

In the next section, methods of data generation and analysis are described. Following that, the article establishes the necessary context for its analysis: the main provisions of the ERAA (2018) are summarised and situated within a brief history of ER legislation in New Zealand and a brief outline of New Zealand’s political system. The subsequent Findings section identifies the linguistic and rhetorical means used by actors on either side of the debate to make their competing arguments appear legitimate and compelling. The most important findings are developed further in the Discussion

section, which focusses on the contestation in the debate over the key discursive node of “flexibility”. This section also considers how different institutional structures could better arrange these competing interests within a system that encourages and constrains them to seek shared ground. The Conclusion brings the main threads of the article together and suggests avenues for further exploration.

## Theory and Methods

The yo-yo pattern of policy change seen in ER regulation demonstrates the limitations of the rational-comprehensive model of policy-making (Simon, 1976), and its assumption that policy-makers can (or attempt to) provide ‘unequivocal, value-free answers’ to policy questions (Gottweis, 2007, p.237). It shifts our attention to the competing ideological bases of policy-making and the importance of “language and the process of utilizing, mobilizing and weighing arguments” (ibid.). This article addresses the question of the linguistic and rhetorical means used by competing political actors to make their competing arguments compelling to decision-makers and the public. It draws on Boltanski and Thévenot’s (2006) pragmatic sociology as a way of analysing the various arguments made during this policy debate, and of showing how different arguments offer different accounts of what is important, how it should be measured, and how human actors should be understood.

Pragmatic sociology offers a useful typology for analysing how arguments are made in the public sphere. It offers, more specifically, a framework to analyse “the struggles over legitimacy” (Cloutier & Langley, 2013, p. 360; see also Patriotta, Gond, & Schultz, 2011) that arise in situations of public dispute. According to Boltanski and Thévenot (2006), social life is regulated by multiple (but not infinite) “orders of worth”. Boltanski and Thévenot identify and outline six orders of worth (the *market*, *industrial*, *civic*, *domestic*, *opinion*, and the *inspired*), where each order of worth has its own standards for assessing the worthiness of actors, objects and arrangements.<sup>1</sup> These orders are explicitly moral: each grounds its claims by appealing to a conception of the common good that is widely understood and acknowledged. Boltanski and Thévenot (2006, p. 66) describe these orders of worth as “systematic expressions of the forms of the common good ... commonly invoked in today’s society”. The three orders of worth most relevant in this instance (*market*, *industrial* and *civic*) are summarised in Table 1 below.

**Table 1: Summary of the six orders of worth**

	<i>Market</i>	<i>Industrial</i>	<i>Civic</i>
<b>Mode of evaluation</b>	Price, cost	Technical efficiency	Collective welfare
<b>Test</b>	Market competitiveness	Competence, reliability, planning	Equality, solidarity
<b>Form of proof</b>	Monetary	Measurable: criteria, statistics	Formal, official
<b>Qualified objects</b>	Freely circulating market good or service	Technical object, method, plan	Rule and regulations, welfare policies
<b>Qualified human being</b>	Consumer, seller	Professional, expert	Equal citizens, solidarity unions
<b>Time formation</b>	Short-term, flexible	Long-term planned future	Perennial

Source: adapted from Thévenot et al., (2000, p. 241).

Worthiness within the *market* order, for example, is established by the market competitiveness of a freely circulating good or service, with market participants (the buyers and sellers of those goods and services) designated as the qualified evaluators of worth. This can be seen as the expression of a moral

<sup>1</sup> Subsequent work in pragmatic sociology has proposed additional orders of worth (Thévenot, Moody, & Lafaye, 2000) but these are not relevant here.

vision since the market's "invisible hand" is held to align the individual interests of market participants with the collective good by promoting economic efficiency and innovation. Meanwhile, worthiness is determined in the *civic* world not by the buyers and sellers of the market order, but by the collective will of equal citizens. The common good is assured here not through the pursuit of individual interests, but through the conscious pursuit of the "general interest" (Boltanski & Thévenot, 2006, p. 187). And in the *industrial* world, worthiness is based not on the short-term calculations of market actors, but on considerations of long-term productive efficiency. This order privileges strategy, data and the status of technical experts.

In practice, many situations are stabilised and legitimated through a compromise between two or more orders. Boltanski and Thévenot (2006, p. 325) refer often to workers' associations and workers' rights, observing that the figure of the worker, "supported by the arrangements of unionism and by the equipment of labor laws" originated in a compromise between *industrial* and *civic* worths. Historically, they argue, workers have been treated *both* as market commodities assessed according to their contribution to firm performance *and also* as citizens: members of a political society and possessed (therefore) of certain basic rights. More broadly, they also argue (2006, p. 332, and see also p. 194) that "the need to work out a compromise between an order governed by the market and an order based on efficiency [i.e. the industrial order] lies at the very heart of a business enterprise".

This typology of orders of worth is useful here because it foregrounds how different arguments base themselves on different understandings of the common good. As a result, they support different understandings of what and who is important and (therefore) different regimes of measurement (should we focus on the metrics of profits, economic growth and GDP, or should we measure the distribution of wealth and job satisfaction?) and different understandings of human actors (are workers most fundamentally units of labour power, human beings with specific physical and social needs, or political citizens possessed of inalienable rights and dignity?)

The data for analysis in this article are texts in which policy actors stated and offered justifications for their position on the proposed changes to a public audience. The specific texts for analysis include the transcripts of the parliamentary debates at the first, second and final readings of the Bill; selected submissions to the Select Committee process, and media coverage of the Bill. The Select Committee submissions included in the analysis were those associated by the most prominent voices on either side of the debate (on the one side, the Employers and Manufacturers' Association (Northern) (hereafter EMA); Business New Zealand (BNZ), Canterbury Employers Chamber of Commerce (CECC), the Auckland Chamber of Commerce (ACC) and the National Party; on the other side, the New Zealand Council of Trade Unions (NZCTU), FIRST Union, Unite! Union, E Tu, and the Labour, Green and New Zealand First Parties.

The data was coded based on the explicit arguments that were made in support of, or in opposition to the proposed changes. The arguments were analysed in terms of the different orders of worth that they appealed to, and the linguistic and rhetorical means by which actors attempted to make their partial, interested prescriptions appear natural, neutral and necessary.

## Context and Background

As we saw above, ER has been built historically on a compromise between the *market* order of worth (that positions labour as a market commodity whose value is determined by the price a willing buyer is willing to pay for it) and the *civic* order (that posts certain basic rights that workers possess due to their underlying status as equal citizens.) These compromises can be seen in the history of ER

legislation in New Zealand. The provisions of the Industrial Conciliation and Arbitration Act (ICAA 1894) established a “state-imposed system of conciliation and arbitration” in place of the informal approaches and laissez-faire policies that had led to widespread exploitation of labour (Rasmussen, 2009, p. 43). These provisions enacted a relatively stable equilibrium that shaped New Zealand’s ER system for almost a hundred years, “up to the passage of the Employment Contracts Act in 1991” (Rasmussen, 2009, p. 55). This equilibrium supplemented the compromise between the *market* and the *civic* orders of worth with the *industrial* order’s insistence on the importance of long-term planning and efficiency (Boltanski & Thévenot, 2006).

The principles and provisions of the ECA (1991) marked a sudden and marked shift to the terms of this compromise, with a great deal of additional weight given to the *market* order and its assessment of labour as a commodity whose value is determined not by collective institutions but by market actors (see Foster, Murrie, & Laird, 2009; Rasmussen, 2009). Employment relations were imagined as a realm of legal contracts between consenting and (formally) equal parties (Rasmussen, Foster, & Farr, 2016). Since workers were seen as rational agents capable of looking after their own interests in negotiation with prospective employers, the provisions of the ECA denied unions any privileged position. Rather, unions were positioned as self-interested vested interests. Ignoring problems of collective action, free-riding and the presence of public goods, unions, like all other parties, were returned to the market. Their fortunes under the ECA would be based on the *market* order’s criterion of their capacity to persuade willing buyers to purchase their services. As Foster et al. (2009) note, union density was reduced by a half within five years.

The changes contained in the ECA responded to calls by international organisations (notably the IMF and the OECD) and business lobby groups for more flexibility within the labour market (Rasmussen et al., 2016). The calls made in New Zealand were situated within a broader global movement in the 1980s (ibid.). The ECA was based on the objective of promoting “an efficient labour market”, and efficiency was held to arise from labour market flexibility (Brosnan & Walsh, 1996, p. 158). These changes marked a “radical departure” from the *civic* and *industrial* orders of worth embedded in the collectivist nature of earlier legislation and the “blanket coverage” of the award system (ibid., p. 158) towards a much heavier reliance on *market* signals and disciplines. Crucially, proponents of the ECA presented labour market flexibility as beneficial for all. In 1990, for example, the National Party (as cited in Brosnan & Walsh, 1996, p. 158) argued that flexibility would generate economic growth, “improved productivity, income and employment”.

The principles underpinning the ERA (2000) were diametrically opposed to this reading of the situation. The Act was explicitly designed to “acknowledge... and address... the inherent inequality of power in employment relationships” (New Zealand Legislation, n.d.) and its principles re-asserted the *civic* order’s core belief that human beings are marked by their fundamental equality *qua* citizens, not their inevitable inequality *qua* market actors (Brown, 2015). Fundamentally, they understood the labour market not as a realm of free and fair exchange between rational actors, but as a realm of power and domination. The provisions of the ERA, thus, offered protections to workers, restored certain powers to unions, and “sought explicitly to bolster collective bargaining and more ‘productive employment relationships’” (Foster et al., 2013, p. 52; see also Rasmussen et al., 2016). These provisions re-balanced the compromise between the *market*, *civic* and *industrial* orders of worth, but they did not amount to a return to the pre-ECA era of state-imposed arbitration and conciliation, or tripartite bargaining.

In the years since the introduction of the ERA, a series of amendments to its basic architecture have continued a pattern of yo-yo policy-making. Successive amendments under National-led governments from 2008 – 2017, while not as radical or as (obviously) ideological as the ECA, had the cumulative effect of weakening collective bargaining mechanisms and enhancing the flexibility available to



employers (Foster et al., 2013; Rasmussen et al., 2016). Discursively, these changes were legitimated through appeal to the *market* order's construction of the common good: that the invisible hand would ensure that each actor's pursuit of their own interest would promote the benefit of all; that workers, even (and especially) vulnerable and marginalised workers would benefit from laws that allow for firm flexibility.

The parties that comprise the current government (the Labour, Green and New Zealand First Parties) were united in their opposition to almost all of the changes introduced under National (Skilling & Molineaux, 2017). Further, Labour's ER policy going into the election (Labour, 2017a;b) included promises to reverse many of National's changes, including the 90-day 'fire at will' law, provisions around rest and meal breaks, remedies in cases of unfair dismissal, and union powers and access. The ERAA, signed into law in December 2018, contained 16 main provisions (summarised in Table 2, below) designed to enhance protection of workers' rights and to encourage collective bargaining and enhance union rights (Lees-Galloway, in NZPD, 1 February 2018).

**Table 2: Major provisions of the ERAA (2018)**

<b>Changes in effect from 12 December 2018</b>	<b>Changes in effect from 6 May 2019</b>
Union representatives can now enter workplaces without consent, provided the employees are covered under, or bargaining towards, a collective agreement	The right to set the number and duration of rest and meal breaks will be restored
Pay deductions can no longer be made for partial strikes	90-day trial periods will be restricted to businesses with less than 20 employees
Businesses must now enter into bargaining for multi-employer collective agreements, if asked to join by a union	Employees in specified 'vulnerable industries' will be able to transfer on their current terms and conditions in their employment agreement if their work is restructured, regardless of the size of their employer
Employees will have extended protections against discrimination on the basis of their union membership status	The duty to conclude bargaining will be restored for single-employer collective bargaining
If requested by the employee, reinstatement will be the first course of action considered by the Employment Relations Authority	For the first 30 days of their employment, new employees must be employed under terms consistent with the collective agreement
Earlier initiation timeframes have been restored for unions in collective bargaining	Pay rates will need to be included in collective agreements
New categories of employees may apply to receive the protections afforded to 'vulnerable employees'	Employers will need to provide new employees with an approved active choice form within the first ten days of employment and return forms to the applicable union
	Employers will need to allow for reasonable paid time for union delegates to undertake their union activities
	Employees will need to pass on information about the role and function of unions to prospective employees

(Employment New Zealand, 2018).

As noted above, there is nothing particularly surprising in this list. Most of these changes are instances of the new government reversing changes made by the previous administration. For their part, National MPs have promised to reverse its provisions as soon as they can (Simpson, 2018; McKelvie, 2018). What has been more interesting is the way in which the progress of the Bill through the legislative process has revealed some of the tensions within the coalition government. In the period 2011-2017, New Zealand First consistently voted against National's proposed ER amendments and its position on

ER aligned more logically with the centre-left than with the centre-right (Skilling & Molineaux, 2017). Specifically, New Zealand First had supported higher minimum wages, longer paid parental leave, more protections for casual workers, and the abolition of ‘starting out’ wages. During the progress of the Employment Relations Amendment Bill (ERAB) 2018 through parliament, however, it was New Zealand First who argued for retaining 90-day trials for workplaces with less than 20 employees, for allowing some businesses to not opt in to multi-employer collective agreements (MECA), and for placing some restrictions on union access to workplaces (Mitchell, 2018).

## Findings

The brief historical overview presented above demonstrates the constant pendulum swings that have marked ER legislation in New Zealand since 1991. In order to move beyond the impasse created by these regular changes, it is necessary to understand the logic of the arguments associated with the two established sides in these policy disputes.

### *Arguments against the Bill*

Arguments against the ERAB were built around five major themes. These arguments, associated primarily with the opposition parties, business lobby groups and some industry associations, presented, *firstly*, a positive assessment of the status quo. Arguing that the changes made by the previous National-led administrations had led to positive labour market outcomes, these groups held that the Bill’s proposed changes were at best unnecessary, at worst willfully destructive. *Secondly*, the proposed changes were held to be bad because they reduced the flexibility that firms need to remain competitive. *Thirdly*, the previously existing flexible ER system was seen not as a zero-sum game of conflicting interests, but as affording mutual benefit, where gains accrued not just to firms but also to workers (including, and especially those workers most weakly attached to the labour market). The obverse argument claimed, *fourthly*, that the Bill was designed to benefit some groups (unions and – especially – union officials) at the expense of firms and, ultimately, the collective good. At its most extreme, this critique extended to impute corrupt motivations for the Bill, describing it as pay-back for unions’ financial and political support of the Labour Party. *Fifthly*, arguments against the Bill described it as a return to the past (and specifically the “bad old days” of the 1970s), at odds with the needs of a fast-changing labour market.

### *A positive assessment of the status quo*

Unsurprisingly, this theme was most commonly associated with National Party MPs, who took it as a chance to promote their sound political and economic management. Steven Joyce claimed (in NZPD, 1 February 2018) that “we have the highest rate of employment, ... the highest rate of job creation, ... the highest rate of wage growth, [and] some of the best-performing statistics of our labour market in the developed world”. These positive aspects of the status quo, he concluded, set “a very high bar for change”. This argument was repeated with minor variations by several National MPs, including Sarah Dowie and Paul Goldsmith (in NZPD, 1 February 2018). Seeming to argue causation from correlation, the National Party (2018, p. 1) held that low unemployment figures and increasing wages showed that “the system is working as intended”. Phrasing things a little more cautiously, the CECC (2018, p. 1) stated their belief that the “incremental changes to the [ERA] introduced by former governments” have “generally helped to create conditions in which business can grow and provided the flexibility needed to respond to changes in market demands” (see also Campbell, 2018; Nicholls, 2018; McKelvie, 2018; Business NZ, 2018a).

### ***The importance of flexibility in the ER system***

Opponents of the Bill agreed that ‘flexibility’ is an unalloyed good in the ER system. The EMA (2018, p. 4) emphasised “the need to be highly flexible, responsive and nimble in a very competitive market place”, while the CECC (2018, p. 1) endorsed existing policy as providing “a flexible and easy structure that encourages employment”. These groups opposed the Bill precisely because they held that it would reduce flexibility. According to the National Party (2018, p. 1), the Bill would “return our framework to a rigid, overly prescriptive requirement”; the EMA (2018, p. 3) held that the Bill entails “more compulsion ... more regulation [and] less flexibility” (see also Mackenzie, 2018). Meanwhile, the CECC (2018, pp. 1, 3) argued that the Bill would unhelpfully re-introduce “rigidities” and “an unacceptable level of bureaucracy” into the employment environment’.

### ***The widely-shared benefits of the existing ER system***

An important thread that runs through the first two themes is the insistence that the flexibility established by the status quo is good *not just* for firms *but also*, more broadly, for workers and for economic growth. Flexibility, said National (2018, p. 4) allows employers to “boost productivity” and this leads “to greater rewards to employees”. The proposed changes, by contrast, would put these widely shared rewards at risk. Nikki Kaye (in NZPD, 1 February 2018) held that these changes “will lead to a loss of jobs” and to additional “costs for businesses”, meaning that “some of our most vulnerable workers [will not get] the opportunities that they deserve”. As such, the existing ER system, according to National MPs was not just good for workers generally (giving them, as Goldsmith (in NZPD, 1 February 2018) said, the “dignity and respect” that comes with “getting a job”) but especially good for workers who find themselves marginalised in the labour market (see also Campbell, 2018).

Underlying this theme is the more fundamental assumption that the employment relationship is a mutually beneficial arrangement between more-or-less equal parties. This denial of any inherent inequality of power in the employment relation is seen in National’s (2018, p. 2) claim that the Bill’s proposals are “patronising to employees by pretending they cannot negotiate with their employers for a fair outcome”, and in Amy Adams’ (in NZPD, 1 February 2018) insistence that workers “are grown up, so deserve the right to decide for themselves whether they want to join the union”. In the same speech, Adams contrasted National’s treatment of workers as “adults who can actually work out for themselves what makes sense”, with Labour’s approach of “infantilising the workforce”. In an opinion piece, Mike Hosking (2019) characterised the ECA as giving workers a choice whether to “back yourself, or stick with collective deals negotiated on your behalf by unions” and concluded that “most chose to back themselves”.

### ***A critique of the Bill as promoting the sectoral interests of unions***

If arguments against the Bill held that the existing ER system worked to the shared benefit of all, they also claimed that the Bill represented a zero-sum game: imposing additional costs on firms while offering enhanced powers and protections to unions and – especially – union officials. Joyce (in NZPD, 1 February 2018) argued that the Bill will “shift the balance in favour of union officials”, before pointedly adding “not workers—nothing to do with workers”. Business NZ (2018b, p. 2), meanwhile, held that the Bill would “create extra work and compliance costs for employers where the primary beneficiary of the extra work is unions”. This theme developed, at times, into the stronger claim that the Bill was designed as “Labour Party payback for the great union support that they got at the election” (MacIndoe in NZPD, 1 February 2018, see also Joyce, in *ibid.*; MacKelvie, 2018; Hosking, 2019). Kaye (in NZPD, 1 February 2018) also noted union involvement in selecting Labour Party leaders, implying that any prospective or existing Labour leader is constrained to respond to union interests. These and similar accusations prompted warnings from the Speaker (based on page 49 of Speakers’

Rulings) that MPs “cannot imply that a Government is funded from an organisation that is influencing what they're doing” (NZPD, 1 February 2018. See also, however, the second reading (NZPD, 27 November 2018) where the ruling was applied less consistently).

### *A critique of the Bill as an (undesirable) return to the past*

In stressing the external pressures of a rapidly changing global market, opponents of the Bill claimed that it was not fit for the challenges of the future. Rather, according to Amy Adams, the Bill “will take New Zealand backwards” and result in “more strike action, the likes of which we haven't seen in this country for many years”. More specifically, it was claimed that the proposed changes would take New Zealand back to the “the regular industrial disruptions of the 1970s” (MacIndoe, in NZPD, 1 February 2018). This reference to the 1970s was echoed in Joyce’s accusation (in *ibid.*) that the Bill was “harking back to 1970s-style trade unionism”, and Dowie’s claim (in *ibid.*) that it was based on “the bad old days” of “the 1970s”. By the second reading, Scott Simpson (in NZPD, 27 November 2018) expanded on this theme to refer to the militant trade unions who “used to bring this country to its economic knees” in the 1970s. The twin scare-phrases “militant” and “1970s” subsequently became a regular feature of media and online opposition to the Bill, especially (but not only) by National MPs (see MacKelvie, 2018; Nicholls, 2018; Hosking, 2018; Mackenzie, 2018).

### *Arguments for the Bill*

On the other side of the debate, arguments in support of the ERAB (2018) were built around five diametrically opposed themes. They presented *firstly*, a negative assessment of the current situation. While acknowledging positive outcomes in terms of economic activity and employment, these groups stressed that these headline numbers hid serious inequalities in terms of how the benefits of economic growth were shared, and the conditions faced by many workers. These negative outcomes were held, *secondly*, to flow from the unequal nature of the employment relationship. As a consequence, changes to the ER system were required in order to level the playing field and ensure that the benefits of work are fairly shared. *Thirdly*, the trope of “flexibility” was critically assessed in the argument that it often refers to flexibility for employers, often at the expense of security and stability for workers. It was claimed, *fourthly*, that the proposed changes would benefit not just workers but also firms and the broader economy, since workers who feel themselves to be secure and well-rewarded are likely to be more motivated, productive and innovative. *Fifthly*, arguments for changes to the ER system held that the Bill provided the necessary framework for the future, as opposed to the backwards-looking and regressive changes made by the preceding National-led government.

### *A negative assessment of the current situation*

While it was acknowledged that recent years had seen “economic growth” (Lees-Galloway, in NZPD, 1 February 2018) and record “labour force participation rates” (NZCTU, 2018a, p. 59), the governing parties and unions insisted that the system had not distributed the benefits of growth and jobs fairly. During the election campaign, Labour (2017b) argued that “after nine years of National, working people’s share of the economy is falling (see also FIRST Union, 2018). Less than 40 per cent of economic growth under National has gone into working people’s wages”, and (Labour, 2017b) that “low wages, little say on rosters or hours of work, and an erosion of conditions” mean that “for too many Kiwis, the current employment relations system is failing” (see also Lees-Galloway and Logie in NZPD, 1 February 2018). The NZCTU submission (2018a, pp. 3, 7, 59) added that the changes introduced by National had resulted in “poor wage growth”, in poor quality jobs, and in a situation where “all the increase in income in the economy ... has gone to the highest income 10 percent of households”. National’s positive assessment of the status quo, it was claimed, was simply a result of selecting metrics that hid the important issues of under-employment and the distribution of incomes

(Mitchell, in NZPD, 1 February 2018; Lubeck, in *ibid.*; NZCTU, 2018a, pp. 30, 59. See also MBIE, 2017, p. 6).

### *Negative outcomes for workers reflect the unequal nature of the employment relationship*

Those arguing in support of the Bill held that these negative results were predictable: that the ER landscape is not a level playing field populated by rational actors with roughly equal amounts of power, but a realm of asymmetric power relationships. As Jan Logie (in NZPD, 1 February 2018) put it, “an employee can't fire their boss, they can't cut or change their hours, and they can't send their employer into an unsafe situation”. Specific changes enacted by National, such as the 90 day ‘fire at will’ law, had the effect not of enabling employers and workers to negotiate towards mutually-beneficial outcomes, but of shifting “cost and risk from employers onto a group of vulnerable workers” (NZCTU, 2018a, p. 41). The 2018 Bill was presented as a recognition of “the imbalance in the employment relationship” (Lubeck, in NZPD, 1 February 2018) and the “start of fixing [the current unbalanced system] to make sure that the people who are actually creating the wealth get a ... fair share” (Logie, in *ibid.*) Mutual benefit, in other words, is possible, but it does not occur automatically. Rather, it requires policy settings that counteract inherent inequalities of power.

### *Contestation over the trope of flexibility*

While opponents of the Bill represented flexibility in ER as good *for everyone*, proponents of the Bill contested this, insisting that it is always necessary to ask “flexibility for who?” Unions and the governing parties argued that flexibility in the ER system often means increased freedoms for employers at the expense of worse conditions and less security for workers. The NZCTU (2018a, p. 57) quoted an OECD (2017) report to argue that the

downside of flexible labour market regulations is that the costs of economic restructuring largely fall onto individual workers’ and that ‘in the absence of sound bargaining and representational arrangements, all forms of “flexibility” will be imposed and can be used to repress wages, working conditions and job security.

Clayton Mitchell (in NZPD, 1 February 2018; see also Lees-Galloway, in *ibid.*) agreed that the goal of an ER system should be to balance employers’ need for flexibility with employees’ need for ‘job stability, safe working conditions, and good remuneration packages.’

### *The widely shared benefits of the proposed changes.*

As we have seen above, business groups and the National Party argued that their preferred ER system (a system providing maximum flexibility for employers) promised widely-shared benefits to all, since successful firms would provide more and better-paying jobs. Arguments in support of the Bill (arguments, in a sense, for a “less flexible” ER system) reversed the direction of the causal arrows. Unions and the parties of government argued that workers who feel secure and well-compensated are likely to perform better for their employers: to be more engaged, productive and innovative. Such arguments were put most clearly in the NZCTU (2018a, p. 20) submission, where collective bargaining was said to “improve the quality of the employment relationship between workers and firms, leading to more efficient allocation of resources, greater motivation and ultimately productivity” (see also FIRST Union, 2018, pp. 5-6). Further, the NZCTU (2018a, pp. 18, 20, 65) claimed that “collective bargaining”, “workers’ voice” and “rising wages” tended to “make labour markets function more efficiently”, to “reduce conflict” and to enhance “engagement, co-operation and innovation from workers”. Indeed, “excessively flexible labour laws” carried perverse outcomes: workers who feel

themselves to have low job security will likely “see little point in gaining sufficient firm-specific knowledge to develop and improve processes” (NZCTU, 2018a, p. 68).

Arguments for the mutual benefits promised by the Bill often looked to Scandinavian models (and, most often, the Danish model) for inspiration and to provide evidence of the link between fair wages and conditions and increased productivity. A report (Salmon, 2015) published by Labour’s Future of Work Commission praised Denmark’s active approach to the labour market and advised that New Zealand seek to replicate it. Finance Minister, Grant Robertson (2017), endorsed the report and argued for the benefits of ‘Active Labour Market policies’. While the NZCTU (2016, p. 17) welcomed “the interest the Commission is showing in the Danish model of flexicurity and industry development”, they also sounded a note of caution. Replicating the Danish model in New Zealand, they argued, would require attention to the underlying factors that allowed it to work in Denmark: a much stronger role for unions and collective bargaining, a greater acceptance of co-ordination of the market, and a genuine sense of a social partnership between business, labour and the state.

### ***The proposed changes are the best fit for the labour market of the present and the future***

This theme was essentially a direct riposte to the critique that the Bill represented a return to 1970s-style industrial disruptions. Marja Lubeck (in NZPD, 1 February 2018) described such claims as “scaremongering” and characterised the proposed changes, instead, as “a sign of us being a very modern Government, because they will give us an opportunity to improve, modernise, and innovate the workplace” (see also Logie, in *ibid.*, Tinetti, in *ibid.*) Indeed, it was said that it was National’s changes to the ER system that had been “a backwards leap ... towards the failed paradigm of the 1990s” (NZCTU, 2018a, p. 3; see also Willie Jackson, in NZPD, 1 February 2018).

The core assumption of these arguments was that National’s changes (2008-2017) had swung the balance of power in favour of employers (Logie, in NZPD, 1 February 2018; NZCTU, 2018a; NZ Police Association, 2018). For proponents of the Bill, the status quo gave undue weight to the *market* order of worth, positioning workers as market actors responsible for maximising their own value proposition within a competitive labour market, and firms as market actors responsible primarily for maximising their own competitiveness. The Bill, committed also to the *civic* order’s insistence on the fundamental equality of citizens, held that workers needed further protections, and unions further powers in order to allow employers and workers to interact fairly. And, in keeping with the *industrial* order’s emphasis on long-term productivity and efficiency, it held that economic activity required intervention and planning rather than the *laissez-faire* approach of leaving things to the short-term decisions of self-interested market actors.

## **Discussion**

Most of the key findings presented above can be understood as dimensions of a fundamental dispute over the meaning and relative importance of the key discursive node of flexibility. This contestation offers a particularly clear expression of the underlying ideological disagreement: business groups and the National Party construct flexibility in terms of the central importance of negative freedom (Berlin, 2017): freedom *from* state coercion. In keeping with the *market* order of worth, the common good is supposed here to be generated through the operation of Smith’s “invisible hand” (Boltanski & Thévenot, 2006), whereby market actors’ pursuit “of their own advantage naturally, or rather necessarily, leads [them] to prefer that employment [of their capital] which is most advantageous to society” (Smith, 1999, p. 30). On the other side of the debate, unions and the government understood flexibility in ER as a zero-sum game where employers’ freedom *from* regulation comes at the expense of workers’ positive freedom *to* determine the conditions of their work. As Bourdieu (2003, p. 58) puts

it, the label “flexibility” is often used in neoliberal contexts to hide the reality of “the inflexible demands of one-sided employment contracts”.

This section considers how, in their constructions of the meaning and role of flexibility, the competing parties (a) consciously invoked and leveraged emotional language, (b) elided or inserted human actors, and (c) were able to ignore the arguments and evidence presented by the other side.

The tradition of rhetorical analysis (Gottweis, 2007) reminds us that arguments become persuasive through multiple means: not just through the rational coherence of their claims but also through the force of their emotional appeal and through the status or character of the speaker. Business groups and the National Party did not typically construct their arguments for flexibility in a rational (*logos*) register. They seldom explained explicitly why more flexibility was desirable, beyond simply stating that it “encourages employment”, productivity and so on. They certainly never acknowledged the arguments and evidence presented by unions as to the potential long-term benefits of certain “rigidities” within the system (NZCTU, 2018a; Acharya, Baghai, & Subramanian, 2010), or that New Zealand’s ER system is already considered one of the most flexible in the world (NZCTU, 2018a; Vamvakidis et al., 2010; OECD, 2008). Their arguments reflect research by Foster et al., (2013, p. 62) showing that New Zealand employers “are still of the opinion that the legislation is fairly evenly balanced or may even be in favour of employees”. Despite their success in advocating for more flexibility, New Zealand employers “still regard their flexibility as being [unduly] constrained” (Rasmussen et al., 2016, p. 901).

Arguments against the Bill operated more in the emotional (*pathos*) mode, relying on the intuitive interpretation of flexibility, agility and dynamism as good; rigidity, prescription and compulsion as bad. In everyday usage, the term flexibility carries a set of positive connotations: it is widely accepted that it is better to be flexible than tight, rigid or sclerotic. Critics of the Bill evoked these positive connotations: business groups and the National Party articulated a set of positively-coded synonyms (dynamic, innovative, agile, responsive) set in explicit opposition to a set of negatively-coded antonyms (rigidity, compulsion, prescriptive, bureaucratic.) These opposing lists mirror the broader neo-liberal narrative of individual rights and freedoms threatened by an over-bearing and oppressive state (see Kelsey, 1997). Given the cultural dominance of the neo-liberal insistence on the immutability of the market (Skilling, 2018) it was rhetorically effective for these groups to state that “we support flexibility” and “they (i.e. the government) favour compulsion and bureaucracy”, even in the absence of any demonstration that a flexible ER system really did offer widely-shared benefits.

The other key move in these groups’ construction of flexibility was their refusal to specify the relevant actors, let alone the different ways in which different actors are impacted by flexibility. There was only one instance within the data where it was stated *who* flexibility is for, and in this case it was “flexibility of employees *and* employers” (National Party, 2018, p. 2.) In other instances, flexibility was decidedly agent-less. Existing policy settings, it was said, provide “a flexible and easy structure” and “the flexibility needed to respond to changes in market demands” (CECC, 2018, p. 1), and the Bill will mean “reducing this flexibility” (National Party, 2018, p. 4).

While it is possible to infer from some of these quotes that flexibility is primarily necessary for firm competitiveness, the absence of agents implies that flexibility is good for all. This reflects the Party’s position of almost 30 years previously, which held flexibility to lead to “improved productivity, income and employment” (National Party, 1980, cited in Brosnan & Walsh, 1996, p. 158). Bill Birch, Finance Minister at the time, argued that “[w]orkers and employers alike are being inhibited by laws, regulations and restrictions” (cited in *ibid.*). When we hear that flexibility is “needed to respond to changes in market demands” (CECC, 2018, p. 1), it is constructed as necessary, and as neutral between actors. The linguistic act of removing human actors from this construction of flexibility is an act of de-

problematization (Stone, 1989) in that it moves ER out of the realm of human actions (where problematic outcomes are caused by the decisions of actors who can, thus, be held responsible) and into the realm of “accident, nature and fate” (p.281).

Proponents of the Bill responded by consistently re-inserting actors into their construction of flexibility, and noting the asymmetric power of those actors. Flexibility, they maintained, granted privileges to some (employers) in a way that imposed burdens and liabilities on others (workers), as in the argument that the “downside of flexible labour market regulations is that the costs of economic restructuring largely fall onto individual workers” (OECD, 2017, cited in NZCTU, 2018a, p. 37). Returning actors to the equation was an insistence that ER regulation is fundamentally about balancing the conflicting interests and needs of the two parties. Employers naturally desire “to have flexibility in how they run their businesses”, but that flexibility needs to be balanced in “an effective ER system” with the valid desires of workers for security, stability, safety, dignity, and decent terms and conditions (Lees-Galloway, in NZPD, 1 February 2018). It was not – as National (2018) and business groups claimed – the case that flexibility for firms would automatically and necessarily lead “to greater rewards to employees” (p.4).

The fundamental point of contention here was the way in which workers were understood. Groups opposing the Bill drew on the *market* order of worth to construct labour as ‘just another’ factor of production and (therefore) primarily as a cost to be minimised (Sikka, 2015) in firms’ pursuit of competitiveness. On the other side of the debate, the government and unions drew on the *civic* and *domestic* orders to stress that workers were, more fundamentally, citizens and human beings. What was important here was the insistence on workers as socially embedded (New Zealanders “should have the job security they need to live a decent life, buy a house and raise a family if that is what they want to do” [NZCTU, 2018a, p. 3]) and as irreducibly biological beings (rest breaks should be scheduled based on workers’ “rest, nutrition and psychosocial needs” (NZCTU, 2018a, p. 43; FIRST Union, 2018). Stressing the obvious but crucial point that workers are human beings stands against the *market* order’s assessment of workers as units of labour within a market. While other factors of production can be traded within a market, workers have civic rights, biological needs, emotional attachments and psychological make-ups that mean that they must be treated differently. The human nature of workers means that they *cannot* be endlessly flexible.

Where opponents of the Bill based most of their arguments on the positive emotional resonance of terms related to flexibility, union groups (most notably the NZCTU) grounded their construction of “flexibility” through empirical argument. They presented evidence, firstly, to show that New Zealand’s ER system is already among the most flexible in the world (OECD, 2017; NZCTU, 2018a). They also presented evidence to show that this degree of flexibility carries certain negative effects for workers. Data and examples showed that, even in the presence of high levels of employment, many workers currently remained under-employed, and many workers (NZCTU, 2018b; FIRST Union, 2018) were experiencing low wages, and a lack of security, stability and dignity in their workplaces. The previously existing flexible system, moreover, was held to be differentially bad for workers. In contrast to National’s assertion of strong wage growth, the NZCTU (2018a) showed that almost all of the gains had been captured by those near the top of the distribution, while wages nearer the bottom were stagnating.

Developing this theme, the NZCTU (2018a) argued that an overly flexible system can, paradoxically, lead to greater rigidities within that system. In an ER system where workers do not have security and certainty (a system where taking a new job would leave a worker vulnerable to dismissal without explanation during the first 90 days, for example) there is an incentive to remain in an existing job, even if that job is not the best match for a worker’s skills. In a system where workers feel disempowered and insecure, they are less likely to experiment, to take risks, to innovate, or to raise



important concerns. In a system where wages are suppressed, workers are less likely to be fully engaged, motivated and productive. At the firm level, FIRST Union (2018) argued that introducing certain rigidities such as the “establishment of base terms and conditions” would benefit firms and the overall economy, since employers would be “incentivised to compete by increasing productivity” rather than simply by “driving down wage costs” (pp.5-6).

Such arguments draw on the *industrial* order of worth, with its preference for long-term planning, rather than the short-term time horizon of the *market* order. Within the industrial order, wages and conditions are not seen primarily as costs to be minimised, but as a long-term investment in enhancing productive efficiency. Just as business groups presented their prescriptions as promoting the best interests of workers, here, union groups presented their prescriptions as promoting the best long-term interests of New Zealand firms and the overall economy.

Pragmatic sociology holds that public disputes cannot be reduced to a play of deception and coercion. Participants in public disputes, it assumes, are constrained by the public nature of the process, to engage in good faith. Such participants are held to be motivated not by a desire to “win” the debate (Annisette & Richardson, 2011) but by the desire to arrive at a mutually acceptable outcome (Boltanski & Thévenot, 2006). While these assumptions have been severely criticised for their weak analysis of power (Wagner, 1999), they seem to be aligned with the institutional structure for this particular dispute. The processes of formal parliamentary debates and select committee hearings are intended to provide a setting in which disputants can put forward their respective perspectives, presenting and demanding reasons and evidence in the pursuit of the best outcomes. In the findings presented above, however, we see many instances where actors did not engage with the arguments or evidence presented by the opposing side. Opponents of the Bill, for example, never responded to the NZCTU’s presentation of evidence on the downsides of excessively flexible ER systems. Rather, they continued their initial insistence that flexibility was necessary for the productivity of firms, and for job opportunities for workers.

We might argue, then, that the primary audience for many of the arguments analysed here was not those on the other side of the debate, or the other members of parliament, but rather a targeted public audience of stakeholders (business owners, workers, employer groups, and unions) and prospective voters. Contrary to the assumption of pragmatic sociology that parties to a dispute will engage in good faith, in the findings above we see many imputations of bad faith: the Labour Party, for example, was accused of designing the Bill not in the interests of New Zealand firms and workers, but as “pay-back” for their paymasters in the union movement (MacIndoe in NZPD, 1 February 2018): a morally questionable ‘quid pro quo’ made by a ‘conflicted’ Labour Party (Joyce in *ibid.*; Kaye in *ibid.*). One problem here is that the legislative process has no institutional mechanism to force the parties into a constructive dialogue with each other. The political incentive structure of the process encourages actors to make the most extreme argument that a certain segment of the population will find persuasive, and to disparage (rather than engaging with) the arguments and evidence presented by the other side.

It is salient here that the business groups and the National Party both started advertising and online campaigns that deliberately by-passed the parliamentary process, and directly addressed the public in seeking to rally opposition to the Bill. The four “members of the Business NZ family” joined forces in the #fixthebill campaign: “an advertising campaign using outdoor billboards, press and digital advertising [that asked] Government MPs to “Please Fix the Bill”, at the same time encouraging its members to ask the same of the coalition Government”<sup>2</sup> The National Party, meanwhile, launched the ‘Protect NZ Jobs’ campaign, using a wide variety of video-based and other online content to ‘explain’ how the “proposed changes will have far reaching effects on business and employees”, leading to

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<sup>2</sup> The fixthebill.co.nz website has since been deleted

“increased cost to business and reduced job opportunities and wage growth” (Upston, 2018). Rather than engaging with evidence that the existing ER system was not working for all New Zealanders, this campaign, repeated to a public audience the claim that “all the evidence shows New Zealand's employment settings are some of the best and most successful in the world”, before asking rhetorically “what exactly is the Labour-led Government trying to fix?” (English, 2018).<sup>3</sup>

The ERAA (2018) continues an established pattern of significant changes being made to ER policy settings with each new government. This pendulum pattern of policy making generates negative outcomes, including uncertainty and, most likely, a sub-optimal policy equilibrium. It makes it difficult for the various parties to work together towards a mutually beneficial system that allows for New Zealand firms and workers to create a high-value, high-productivity situation that could deliver benefits to everyone. One way to move beyond this current impasse would be to develop institutional forms and structures that would require and incentivise parties to the debate to genuinely engage with the arguments presented by the other side. This could potentially involve creating a deliberative forum such as a citizens' assembly (Warren & Pearse, 2008; Farrell, O'Malley, & Suiter, 2013; Fischer, 2009) or a citizens' jury (Smith & Wales, 2018), where the various sides would present their arguments not to each other, or to their political supporters, but to a panel of representative citizens. These citizens would then be given the time, the impetus and the information to make a comprehensive evaluation of the competing arguments. An institutional setting like this (where its recommendations, whether binding or simply advisory, were well publicised) would give the parties to the dispute a strong incentive to prepare persuasive arguments, and to respond substantively to the arguments and evidence presented by the opposing side.

## Conclusion

This article has presented the changes contained in the ERAA (2018) as the latest swing of the ER policy pendulum. Suggesting that regular and substantial changes to the ER system are less than ideal, it has analysed the arguments that have been presented on either side of the political dispute that attended the progress of this legislation through parliament. This analysis has shown a fundamental contention over the meaning of the key discursive node of “flexibility”. Arguments *for* the Bill insisted that flexibility in the ER system typically means flexibility for employers at the expense of the security and stability sought by workers. Arguments *against* the Bill almost always elided the presence of human actors: a flexible ER system was simply presented as self-evidently good and as offering benefits to everyone. Critics of the Bill were thus driven to ignore any evidence that suggested that flexibility is damaging to workers and (potentially) to the long-term interests of business.

Both sides in this policy dispute presented data, statistics and other forms of evidence that, they said, grounded their arguments. There was, however, no engaged process by which competing arguments and competing forms of evidence were tested and evaluated. At the end of the debate, none of the key actors had changed their position due to the presentation of evidence that challenged their starting position. As noted above, this is unsurprising. The key actors in the debate represent well-established blocs of ideology and interest. This policy dispute problematises any belief that public policy is developed in a “rational comprehensive” way that provides (or that can provide) “unequivocal, value-free answers” to policy questions (Gottweis, 2007, p. 237; Simon, 1976).

It is unlikely that policy disputes in the ER field will ever be determined on the basis of which side has the strongest evidence on their side. There is the more fundamental question of what it is that a given society decides to value and promote. What would constitute success in ER policy? What are “we”

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<sup>3</sup> The protectNZjobs.co.nz website has since been deleted, though many of the image- and video-based content remains online.

trying to achieve, and how is “we” to be defined? Answers to these question will determine which forms of evidence (and, therefore, what measures and metrics) are seen as important. The analysis presented here demonstrates that the two sides disagree fundamentally about the appropriate measures for success. Opponents of the Bill privileged measures of firm competitiveness and economic activity, arguing that success on these measures would generate benefits for all, including (and especially) workers. Supporters of the Bill privileged measures that focussed on the experience of workers (wage growth across the distribution, and job satisfaction, for example) arguing that success on these measures would enhance the long-term performance of firms and the overall economy.

These differences derive from a fundamental disagreement over power asymmetries in the employment relationship, and over the figure of the worker. Are workers to be seen as commodities in the labour market whose value is to be determined by the price that willing buyers are prepared to pay; as citizens possessed of a fundamental equality and certain fundamental rights; or as partners in the long-term productive efficiency of firms? It is argued that the existing process by which ER policy is made (a process where competing actors, seeking to persuade a time-poor public, are incentivised to use emotive language and already-existing tropes, and to ignore evidence that challenges their position) is ill-suited to the task of resolving these difficult questions. Given the entrenched and polarised positions that mark this policy field, the article suggests that ER policy could benefit from a system where these fundamental differences could be surfaced and addressed in a deliberative process.

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# Talking, listening and acting: Developing a conceptual framework to explore ‘worker voice’ in decisions affecting health and safety outcomes

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## Abstract

The aim of this article is to identify a conceptual framework for exploring how new statutory provisions for worker engagement, participation and representation (EP&R) in workplace health and safety (WHS) are contributing to ‘worker voice’ in the high-risk construction industry. Literature from employment relations, health and safety, human resource management and organisational behaviour debates are reviewed. Drawing on lessons from the past and contemporary perspectives, the favourable conjunctures theory is integrated with deconstructed concepts of ‘employee/worker voice’ and the key factors for effective voice in WHS. The authors conclude that this research has the potential to help clarify ambiguity and misunderstanding of terms that influence the interpretation and enactment of EP&R duties in the Health and Safety at Work Act 2015 (HSWA). By investigating ‘worker voice’ in WHS through an expanded conceptual framework, this study captures the link between ‘worker voice’ in WHS and the employment relations context.

**Keywords:** Worker voice, employment, engagement, participation, representation, WHS outcomes, construction

## Introduction

There is a substantial body of research exploring the concept of ‘employee voice’ in decisions that directly affect workers’ work security, health, safety and wellbeing. The plethora of work spanning decades and multiple disciplines reflects the importance of ‘worker voice’ for all of the key parties in employment relationships, governments, employers, and workers and their representatives. Several authors have mapped waves of interest reflecting responses to critical political and economic events that stimulate employer interest in participatory schemes. In addition, recent incidents in high risk industry sectors have highlighted the lack of ‘worker voice’ in the systematic management of hazards and risks as a contributing factor to these incidents. This paper explores different perceptions of ‘employee/worker voice’ across academic debates and the context within which employee/worker voice occurs in New Zealand. Then engagement, participation and representation (EP&R) in the workplace and in the Health and Safety at Work Act 2015 (HSWA) are defined. This is followed by the development of a conceptual framework and theory for exploring the research question: How are the new statutory provisions for EP&R in workplace WHS contributing to ‘employee voice’ in the high-risk construction industry in New Zealand?

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## **Understanding Different Perceptions of ‘Employee and Worker Voice’**

Overall, interest in employee/worker voice has fluctuated over the years. Interest has generally been stimulated by a desire to increase employee productivity and organisational profitability (Morrison, 2011; Van Dyne & LePine, 1998), and/or an interest in improving social and economic outcomes (Anderson & Nuttall, 2014; Barry & Wilkinson, 2016; Lamm, 2010; Marchington, 2015; Rasmussen, 2009a). The latest ‘wave’ of academic interest in ‘worker voice’ has been stimulated by the universal decline in unions (Barry & Wilkinson, 2016; Gollan & Patmore, 2013; Walters, Quinlan, Johnstone, & Wadsworth, 2016; Wilkinson, Donaghey, Dundon, & Freeman, 2014), new technology with the associated drive for more flexible work arrangements and an increase in vulnerable work (Lamare, Lamm, McDonnell, & White, 2015; Lamm, 2010; 2012; Weil, 2014). High-performance work systems (HPWS) became popular in the New Millennium, with the associated concepts of ‘employee/worker voice’ (Johnstone & Ackers, 2015; Kwon, Farndale, & Park, 2016; Mowbray, Wilkinson, & Tse, 2015; Wilkinson, Gollan, Kalfa, & Xu, 2018), ‘employee/worker involvement’ (Budd, 2014; Gollan, Kaufman, Taras, & Wilkinson, 2015; Marchington, 2015), ‘employee/worker engagement’ (Arrowsmith & Parker, 2013; Barton, 2018; Foster & Farr, 2016; Houghton & Lovelock, 2016; WorkSafe, 2016), and ‘worker EP&R’ (Anderson & Nuttall, 2014; Lamare et al., 2015; Pashorina-Nichols, 2016; Sissons, 2016).

These fluctuations are reflected in distinct bodies of literature spanning multiple academic disciplines. The literature review revealed that ‘employee/worker voice’, ‘involvement’, ‘engagement and participation’, ‘empowerment and control’ are explored within multiple disciplines including, but not limited to; employment law (Anderson & Nuttall, 2014; Bogg & Novitz, 2014), employment relations (ER) (Barry & Wilkinson, 2016; Markey, Harris, Ravenswood, Simpkin, & Williamson, 2015; Wilkinson et al., 2014), human resource management (HRM) (Marchington, 2015), organisational behaviour (OB) (Van Dyne & LePine, 1998), and occupational/workplace health and safety (Burton, 2010; Lamm, 2010; Walters & Nichols, 2009; Walters et al., 2016). However, terms defining ‘employee voice’, have been used interchangeably with variable objectives and meanings (Wilkinson et al., 2014; Wilkinson, Gollan, Marchington, & Lewin, 2010; Wilkinson, Townsend, & Burgess, 2013).

Practices vary at the industry and workplace levels and may include a range of direct and indirect ‘employee voice’ mechanisms. Direct informal mechanisms include: ad hoc individual and group interactions, meetings and complaints to line managers. Direct formal mechanisms include: planned meetings and grievance procedures. Indirect formal representation may occur through union representation and collective bargaining and/or employee/worker representation (NER) such as joint consultation committees (Barry & Wilkinson, 2016; Marchington, 2015; Markey et al., 2013; Wilkinson et al., 2014; Wilkinson et al., 2010).

Clearly, the difference in objective and meaning of ‘employee voice’ highlights how macro-level contextual factors, such as the social, political and economic environment, have influenced the forms of ‘employee voice’ that have emerged and co-existed in organisations (Wilkinson et al., 2010). Ideologically driven attitudinal differences shape decisions about the intended purpose, form, scope and outcome of worker voice initiatives selected at national, industry and organisational levels. This complexity is compounded by different research paradigms used to explore this concept across multiple disciplines. Theoretical assumptions inform expectations and choices about how much influence employees should have and what forms of ‘employee voice’ are used. Pluralist perspectives developed from political science scholars’ interest in industrial democracy. The industrial relation/employment relations and employment law disciplines predominantly focus on indirect representative participation, i.e. union collective bargaining and social partnership practices. Union

representation was the recognised form of employee participation until the decline of unions in the 1980s (Gollan & Xu, 2015). The HRM and OB disciplines reflect unitarist assumptions (Kaufman, 2014). ‘Employee involvement and engagement’ is popular in HRM which essentially utilises ‘employee voice’ as a motivational tool to enhance employee commitment and raise organisational performance (Gollan & Patmore, 2013). OB scholars explain ‘employee voice’ as a “... discretionary, pro-social, largely, informal behaviour” (Van Dyne & LePine, 1998, p.262)

Although the occupational health and safety (OHS) voice occurs as an independent debate, it is similar to the HRM and OB disciplines in that it has adopted a functionalist unitarist management led approach focussing ‘employee voice’ at the task level. The ‘Safety Pays’ unitarist approach to improving OHS risk management is based on the assumption that “... there is no inherent conflict between the goals of WHS and profitability” (Brown & Butcher, 2005, p.2). However, OHS scholars in New Zealand (Lamm, 1989; Lamm, Massey, & Perry, 2007) and internationally (James, Johnstone, Quinlan, & Walters, 2007; Markey & Patmore, 2011; Quinlan & Johnstone, 2009; Walters & Nichols, 2007; 2009; Walters, Nichols, Connor, Tasiran, & Cam, 2005) were challenging this approach even before the catastrophic Pike River event. There is, nevertheless, agreement on the importance of employees having an independent voice in WHS matters (Barton, 2018; Lamm, 2014; Markey et al., 2015; Walters et al., 2016).

The health and safety literature includes critiques of proposed institutional reforms and reflections on the effectiveness of established reforms. Browne (1973) and Robens (1972) focus on the shift towards deregulatory institutions that follow the Robens’ model established in the UK. Others explore the shift towards de-collectivist employment relations in New Zealand (Anderson & Nuttall, 2014; Jeffrey, 1995; Lamm, 2010; Pashorina-Nichols, Lamm, & Anderson, 2017; Wren, 1997) and Australia (Quinlan & Johnstone, 2009). As New Zealand laws and institutions have been influenced by the systems in the UK and Australia, it is worth noting the changing focus to health and wellbeing. The early legislative minimum standards in the UK and New Zealand were also concerned with the conditions of workers’ health, rather than safety, especially the conditions of females and children. Furthermore, Campbell (1995) found that lobbying for regulatory safety interventions follows catastrophic industry events, largely in the mining industry. And although statutory frameworks are essential, other key factors are required to achieve effective worker EP&R in health and safety (Lamm, 2010; Walters & Nichols, 2009).

Walters and Nichols (2009) and Lamm (2010) have identified key factors for effective worker EP&R in WHS. These were:

1. the influence of a broader co-operative approach to employment relations
2. longstanding social partnerships
3. statutory requirements
4. supported by rigorous enforcement and inspection of health and safety regulations
5. adequate, available and accessible training programmes for managers and workers, and mandatory for health and safety representatives (HSRs)
6. an organisational climate conducive for participation and collaboration
7. employer and worker agreement on the function of health and safety committees (HSCs) and worker representatives
8. sufficient resources, including time allocated to HSRs, and proper support.

Another stream of research explores the meaning and purpose of ‘worker silence’. In this discourse, power is central to ER concepts of ‘worker voice’ as power and control are perceived to stem from labour institutions and power structures that prevent employees from exercising voice (Barry & Wilkinson, 2016; Donaghey, Cullinane, Dundon, & Wilkinson, 2011). Whereas, OB concepts focus

on 'why' employees choose to remain silent (Morrison, 2011; Van Dyne, Soon, & Botero, 2003). Worker 'silence' emerges in health and safety literature as workers' fear of retribution and HSRs' reactive 'resistance' to management decisions, when management imposed decisions failed to prevent or control hazards in the high-risk mining industry (Walters et al., 2016). This suggests that there may be some ideological tension between the traditional HRM/OB approaches and the new WHS approach, regardless of the apparent convergence in efforts to consider both direct and indirect 'worker voice' across all the disciplines mentioned. It is within this national, industry, and organisational context that worker involvement in WHS occurs. Yet, Quinlan and Johnstone (2009) and Quinlan (2018) highlight a persistent dearth of literature exploring the link between WHS and ER.

There have been numerous attempts to assist cross-disciplinary debates by deconstructing concepts to facilitate in-depth analysis of the nature and extent of participatory initiatives and systems. Typologies, analytical models and theories of employee participation, influence and control in decision-making have been developed and tested in some key industries. The initial focus of the application of these theories was primarily in the manufacturing and public sector, and then extended to capture the service sector and smaller sized organisations. While there is some empirical research in the construction and mining industries, few studies adopt management models and theories to explore employee EP&R in WHS in high-risk industries. There are also concerns about the relevance of current theoretical frameworks in the contemporary global environment defined by the gig economy (project work, IT platforms and precarious work) (Barry & Wilkinson, 2016; Budd, Bray, & Macneil, 2015; Heery, 2016a). These concerns are supported by calls to learn from the past (Barry & Wilkinson, 2016; Budd et al., 2015; Heery, 2016b) and a need for more in-depth research on how health and safety systems function and the role of HSRs (Hasle, Seim, & Refslund, 2016; Lamm, 2014; Markey et al., 2015; Walters et al., 2016).

## **The Context Within Which Worker EP&R Occurs in New Zealand**

There have been a number of institutional mechanisms and voluntary schemes, to allow employees and their representatives to have influence in workplace decision-making in New Zealand since 1894. Rasmussen and Tedestedt (2017) refer to the waves of interest in a commentary of employee participation in New Zealand. The Arbitration System that operated for nearly 100 years gave employees some form of collective influence in decision-making through collective bargaining. There was also financial participation and profit sharing, for example, the Companies Empowering Act 1924, providing for employees to have shares in the company. In 1927, the New Zealand Railways introduced workshop committees, but there was little interest. Interest in establishing regulated industry level consultation committees emerged during World War II (Rasmussen, 2009a).

Another wave of interest in worker participation schemes occurred in 1960s and 1970s in attempts to stabilise the effects of industrial disruption. But these were largely management driven (Smith, 1978). In New Zealand during the 1980s, attempts were made to improve joint consultation in WHS through a voluntary Code of Practice for HSRs 1987. In 1989, a Commission of Enquiry into industrial democracy in New Zealand recommended formal representative councils for all businesses with more than 40 employees. However the recommendations were never implemented, partly because of employer resistance (Haynes, Boxall, & Macky, 2005). In the 1990s, the concept of workplace reform was taken up by a number of organisations with the aim of creating a stable, productive workforce. Worker participation was part of this workplace reform mix, but again, there was little interest from most employers and unions (Foster & Mackie, 2002).

In 2000, the fifth Labour government introduced a more collaborative approach to workplace change. A Partnership Resource Centre was established to promote employer and union collaboration in the

public and private sectors. The National government disestablished the Centre in 2011 (Lamm, 2010). Overall, the bipartite (government and employer) and tripartite (government, employer and union) initiatives have not achieved sustainable worker participation and influence in workplace decision-making (Anderson & Nuttall, 2014).

Consequently, the ER environment experienced a shift away from indirect voice, under the Arbitration System, to one of individual or direct voice (Anderson & Nuttall, 2014; Foster, Rasmussen, Murrie, & Laird, 2011). This came about with the introduction of the Employment Contracts Act (ECA) in 1991, the Health and Safety in Employment Act 1992 (HSEA) and a raft of other institutional reforms that led to a predominantly individualist climate in ER and WHS management decision-making. The HSEA was the first attempt at adopting the self-regulatory Robens' model in New Zealand. One of the objectives of this model was to enhance flexibility within which employers and workers could collaboratively develop, implement and continuously improve WHS risk management systems to reduce or eliminate workplace risks. The model requires action at both industry and workplace levels, and included statutory duties for employers to consult and engage workers (Browne, 1973). However, New Zealand did not originally adopt these duties (Pashorina-Nichols, 2016). According to the literature, this lack of representation and an inactive health and safety regulator, key objectives of the Robens model, were contributing factors in the Pike River Mining disaster (Adams, Armstrong, & Cosman, 2014; ITWHS, 2013; Lamare et al., 2015; Royal Commission on the Pike River Coal Mine Tragedy, 2012).

Following a Royal Commission inquiry into the disaster, a new regulator was established – WorkSafe New Zealand. The Royal Commission stated that worker participation is essential for the effective management of workplace hazards. Furthermore, noting that the previous government in 2007 had ratified the ILO Occupational Safety and Health Convention 1981 (C155), requiring worker participation (Royal Commission on the Pike River Coal Mine Tragedy, 2012). Moreover, the members of the Independent Taskforce on Workplace Health and Safety (ITWHS) concluded that the provisions for worker participation under the HSEA were not being fully implemented and that levels of worker engagement in WHS issues were inconsistent (ITWHS, 2013). The forestry (Adams et al., 2014) and construction (Construction Safety Council, 2012) industries also carried out reviews of their WHS systems. There was unanimous agreement that it is essential to create a safe workplace environment where workers feel confident to raise issues. Further, employers must involve workers in matters that affect their health and safety, listen to and consider workers issues before making decisions.

## **A New Health and Safety System in New Zealand**

Both the reports of the Royal Commission and the ITWHS recommended strengthening the provisions over worker participation and greater union representation in WHS. The Commissioners referred to staff members and contractors having 'voiced concerns', but used employee and worker participation throughout the report (Royal Commission on the Pike River Coal Mine Tragedy, 2012). The importance of respecting 'worker voice' and fear of reprisal emerge in the taskforce report (ITWHS, 2013). However, concerns have been raised about New Zealand consistently blocking attempts to adopt statutory requirements for HSRs and HSCs. This is not the first attempt to establish formal employee participation systems in WHS. Neither is tension between recognising the importance of joint management and worker participation in the effective management of WHS and employer resistance to mandatory standards novel. This tension is evident in employer submissions on the recent reforms proposed in the Health and Safety Reform Bill (Sissons, 2016) and preceding the enactment of the Code of Practice for HSRs and HSCs, 1987 (Mullen, 1990; 1991). Refer to Anderson and Nuttall (2014), Pashorina-Nichols et al. (2017) and Sissons (2016) for further reflection of the changes.

Comparing the two Acts, the HSWA 2015 is more explicit than the HSEA 1992, both in its entirety and specifically concerning worker EP&R in health and safety matters. There are a number of changes that impact on worker EP&R, such as the primary duty of care. The primary health and safety duty of care resides with the person conducting a business or undertaking (PCBU) who has to ensure the health and safety of workers and others affected by the work it carries out. Therefore, the PCBU must consult, co-operate and co-ordinate with other PCBUs where there is a shared worksite or is part of a contracting supply chain. ‘Officers’ of PCBUs have a positive duty of ‘due diligence’; this includes directors and others who make decisions at the governance level.

The intention to establish a system to facilitate tripartite collaborative relationships to achieve continuous improvement in WHS outcomes is captured in both Acts. But, whereas duties to ‘involve employees’ in WHS matters were outlined in general duties in the HSEA and required providing reasonable opportunities for employees to participate effectively in the management of health and safety in the employees’ places of work. There is a significant focus on tripartite worker voice in the main purpose of the HSWA. More detailed duties and provisions follow.

There are also new regulations prescribing how the minimum standards are to be implemented and maintained (Health and Safety at Work (Worker Engagement, Participation, and Representation) Regulations 2016). Whereas the HSEA only provided for third party worker representation through HSRs, HSCs and unions; the HSWA interpretation extends the scope of a worker representative to include “any other [appropriate] person the worker authorises to represent the worker” (S16). However, “if the workers are represented by a health and safety representative, the engagement must involve that representative” (S59 (2)). More detail clarifies expectations necessary to manage WHS in complex contracting and supply chain situations. The use of the term ‘worker’ reflects a wider scope accommodating the changing nature of work. The repealed HSE Act provided for employees. Finally, the new Act and regulations allow considerable flexibility, as intended by the Robens model. But, there are concerns about exclusions of PCBUs employing less than 20 workers and some high-risk industries from duties to establish formal worker EP&R systems (Pashorina-Nichols et al., 2017; Sissons, 2016).

## **Conceptualising EP&R in the Workplace and in the WHSA**

Even though terms are used interchangeably and the meanings of terms vary, some disciplinary distinctions emerge (Budd, 2014; Budd, Gollan, & Wilkinson, 2010; Gollan & Xu, 2015; Wilkinson et al., 2018; Wilkinson et al., 2010). This section explores broad definitions of employee and worker engagement, participation and representation (EP&R). Each definition is supported with reflection on how this has been interpreted in the New Zealand context.

At the international level, employee rights to have a say are recognised by the World Health Organisation (WHO) (Burton, 2010) and in the principles of the International Labour Organisation (ILO) Convention 87 (Freedom of Association) and Convention 98 (Right to Organise and Bargain Collectively). In defining engagement, the WHO refers to involvement, influence and representation. Leadership engagement is critical for providing permission, resources and support, and is the first step and key feature of the continuous improvement process in WHS (Burton, 2010). Therefore, the scope of leadership includes all stakeholders; owners, senior managers, union leaders or informal leaders. The second key feature ‘worker involvement and influence’ in work and decisions is also crucial for effective sustainable WHS initiatives. Burton reported that few change initiatives have succeeded when a strong collective voice is absent. In fact, as two of the WHO core principles, leadership engagement and worker involvement are more than just steps in a process. Therefore, how workers must be involved is also clarified as:

...the workers affected by the programme and their representatives must be involved in a meaningful way in every step of the process, from planning to implementation and evaluation. Workers and their representatives must not simply be ‘consulted’ or ‘informed’ of what is happening, but must be actively involved, their opinions and ideas sought out, listened to, and implemented (Burton, 2010, p.62).

While New Zealand laws, policies and practices, to a large extent, reflect the principles outlined in Convention 98 (ratified in 2003) and Convention 155 (ratified in 2007), there are still some concerns regarding the limitations of the statutory provisions, duties and regulations for worker EP&R (Anderson & Nuttall, 2014; Foster & Rasmussen, 2017; Pashorina-Nichols et al., 2017; Rasmussen, Foster, & Farr, 2016). In the following sections, we endeavour to unpack the concept of ‘employee voice’ in order to see and understand its practical application in New Zealand.

## **Engagement**

‘Employee engagement’ (Kwon et al., 2016) and ‘employee involvement’ (Marchington, 2015; Markey et al., 2015; Pateman, 1970) are management driven direct forms of involvement aimed at increasing positive organisational outcomes. Pateman (1970) proposed that, although management may consult employees, the aim is for them to accept management decisions. Pateman called this ‘pseudo’ participation as influence is purely an unintended consequence of the organisational gains. Employees and workers would only be involved in operational and task level decisions on a narrow range of issues (Blyton & Turnbull, 2004; Markey et al., 2015; Pateman, 1970). Thus, worker engagement is mainly concerned about the purpose, intent and outcome of the employee/worker voice initiatives.

However, the HSWA duties on management and workers to agree to procedures for engaging and involving workers in WHS matters and decisions that are likely to affect health and safety appears to be based on the assumption of equal power in decision-making (Health and Safety at Work Act, No.70., 2015). The regulator, WorkSafe, expects management in PCBUs to provide reasonable opportunities for workers to be involved in two-way conversations about WHS. “Everyone involved in health and safety must be able to contribute and have their opinion considered when decisions are made” (WorkSafe New Zealand, 2017a, p.1). Citing Safe Work Australia, 2017 advice to employers, Barton (2018, p.9) interprets engagement as “part of employer attitudes towards worker involvement”. Participation refers to the physical activity of worker involvement in making a workplace safer. Thus, engagement is more of a mental state, whereas participation is a description of practices related to that mental state, and representation is a sub-set of participation practices. Although the Australian statutory duties to consult workers are stronger than engagement (Pashorina-Nichols, 2016), this mental state is shaped by moral and ideological beliefs about why and how workers need to be involved in workplace decisions that affect their work, health, safety and wellbeing.

## **Participation**

Some define ‘employee/worker participation’ as encompassing all the direct and indirect forms of voice that involve workers in decisions about their work (Gollan & Xu, 2015; Marchington, 2015). These forms of participation processes make up worker involvement systems, and impact on the degree of influence employees/workers will have in management decisions. Others require participation to be between groups of employees and their manager (Budd et al., 2010). Markey et al. (2015) confine employee participation to collective indirect representation by unions, HSRs or other employee representatives. Pateman (1970, p.68) argues that:

The whole point about *industrial participation* is that it involves a modification, to a greater or lesser degree, of the orthodox authority structure; namely one where decision making is the 'prerogative' of management, in which workers play a part.

Situations where employees have some influence over some tactical and strategic level decisions within a context of unequal power are classified as, 'partial' participation. 'Full' participation is founded on equal power between management and employees/workers. The level of leadership openness to share decision-making and the amount of participation will be influenced by a range of individual and organisational factors (Tannenbaum & Schmidt, 1958). The stakeholders will need to agree on how employees/workers will participate, at what level of the organisation will they participate, the range of subject matter they will talk about, and what degree of influence they will have in management decisions.

Even though management and workers must agree on engagement and participation procedures, the HSWA allows PCBUs management to determine the best way to meet their duties to provide reasonable opportunities for workers to participate effectively in improving WHS on an ongoing basis (WorkSafe New Zealand, n.d.). This flexibility accommodates workers' views and needs, organisational size and nature of WHS risks. Moreover, PCBUs are allowed to keep existing engagement and participation practices if they are effective and comply with the HSWA (WorkSafe New Zealand, 2017a).

## Representation

'Employee/worker representation' includes traditional forms of indirect union bargaining, and workplace HSRs and HRCs. These may be replaced or complimented by non-union employee representation (NER). NER are useful for short-term task focussed working groups, but the HSWA requires that elected HSRs must be involved. Moreover, the practice of combining union representative voice with individual voice is not a new phenomenon, (Arrowsmith & Parker, 2013; Gollan & Xu, 2015; Kaufman & Taras, 2010; Wilkinson et al., 2010). Complimentary practices first occurred in Anglo-American countries in the 1970s as traditional ways of conducting industrial relations and managerial decision-making were expanded to capture individual employee rights (Marchington, Goodman, Wilkinson, & Ackers, 1992; Ramsay, 1977; Rasmussen, 2009a).

The effectiveness of traditional forms of representation in WHS is well established (Quinlan, 2008; Sissons, 2016; Walters et al., 2005; Walters et al., 2016). Elected HSRs and HSCs facilitate employee/worker participation in the continuous improvement of WHS outcomes. Independent regional roving HSRs (Burton, 2010; Frick & Walters, 1998; New Zealand Council of Trade Unions, 2012; Walters, 2010) and industry HRS (Walters et al., 2016) are also valuable in supporting worker voice and participation in high-risk industries and small and medium-sized enterprises (SME). Kaufman and Taras (2010) note that employer-led voluntary NER systems, such as joint consultation committees (JCCs), aim to enhance organisational flexibility and efficiency in identifying and resolving workplace matters. However, effectiveness depends on the purpose and extent it is used to integrate employee involvement or bargaining (Kaufman & Taras, 2010; McGraw & Palmer, 1995). In fact, Markey (2007) found that the Australian regulatory environment constrained the formation of a genuine independent non-union works council style employee participation initiative, and encouraged union substitution. These findings suggest that even when the legal aim is to enhance worker participation NERs may be used to undermine unions.

Research on motivation for establishing voluntary NER joint consultation committees (JCCs) to meet statutory duties in Australia, shows these forms require similar conditions as those for compulsory

HSCs including: management commitment and responsive to issues raised by the JCC members; provision of adequate resourcing and training; effective interpersonal communication between JCC members, JCC representatives and employees; inter-JCC links within an organisation; ensuring employee representation and participation is genuine; and gaining union support (McGraw & Palmer, 1995). The JCCs tended to deal with relatively trivial organisational issues and either complemented union collective bargaining or competed with unions' efforts to improve productivity. Kaufman and Taras (2010) concur with McGraw and Palmer (1995) that NERs are challenging to manage successfully, require considerable employer commitment, attention and investment. They found NERs can quickly atrophy. Both articles develop analytical models, the latter, based on a comprehensive review of the NER literature, includes consideration of the degree of power and permanence. However, research suggests that NERs are relatively ineffective as a forum for distributive bargaining and employee interest representation because they lack power, independent resources and autonomy to exert leverage on a company (Haynes, 2005; Haynes et al., 2005; Kaufman & Taras, 2010; McGraw & Palmer, 1995)

There are detailed provisions for HSRs and HSCs in the HSWA and new regulations (Health and Safety at Work (Worker Engagement, Participation, and Representation) Regulations 2016), yet representation is only one form of participation. Furthermore, PCBUs who employ fewer than 20 workers or do not operate in specified high-risk industries do not have to use traditional indirect forms of participation.

While there is evidence that the new statutory duties are encouraging employers to improve the management of WHS, weaknesses and areas for improvement are apparent. The most recent results from annual surveys, started in 2012, show 49 per cent of businesses making significant changes to their WHS policies and systems (Ministry of Business Innovation and Employment (MBIE), 2013; 2014; 2016; 2018). This is a statistically significant increase compared to previous years (34 per cent in 2015/16, 24 per cent in 2014/15, 20 per cent in 2013/14 and 24 per cent in 2012/13). How the business involved their workers in WHS was only the fourth most common change made by these employers (49 per cent). Employers appeared to be more concerned about developing policies or systems (75 per cent), the training of workers, including inductions (63 per cent) and risk management (53 per cent) (MBIE, 2018). Foster and Farr (2016) also found some employer willingness to engage workers in SMEs, and Rasmussen and Tedestedt (2017) argue that employee participation has been embedded in the statutory provisions. In addition, annual reports suggest there have been some recent improvements in EP&R within some state sector organisations that are modelling good practice (Department of Conservation, 2018; Department of Corrections, 2018; New Zealand Police, 2018).

Another annual survey nevertheless highlights significant differences between employer and worker perceptions of how the statutory WHS duties are implemented in practice (Nielsen, 2015; 2017; WorkSafe New Zealand, 2017b). Weaknesses in complex PCBU EP&R systems are also starting to emerge in Enforceable Undertakings accepted by the regulator (WorkSafe New Zealand, 2018). The annual MBIE surveys from 2012-2017 show decreasing numbers of informal HSRs, trained HSRs and HSCs in New Zealand. And there are concerns about the Labour Party not delivering on their election promise to extend the right for workers to elect a HSR to all workplaces (Rudman, 2019).

## **Occupational and Workplace Health and Safety**

The terms 'occupational health and safety' and 'workplace (worker) health and safety' have varied over time. The terms defining the employment relationships are also used interchangeably with some researchers referring to 'worker' (Lamm, 2010; Ramsay, 1977; Smith, 1978; Wall & Lischeron, 1977; Walters & Nichols, 2007), while others to 'employee' (Arrowsmith & Parker, 2013; Blyton &



Turnbull, 2004; Marchington, 2015; Marchington et al., 1992; Pateman, 1970; Rasmussen & Tedestedt, 2017).

Finally, Wilkinson et al. (2018, p.711) recently concluded that ‘employee voice’ is weaker than terms such as participation “because it does not denote influence or power-sharing and may thus be at times no more than a trickle up voice”. Furthermore, proposing that ‘voice’ is a prerequisite for participation practices. However, the Worksafe interpretation of worker EP&R duties of PCBU’s (presented in Figure 1.a.) does not appear to encompass the broader WHO conceptualisation of leadership engagement or the context of continuous improvement common in WHS management systems (presented in Figure 1.b.). Although Barton (2018) agrees engagement is a precursor and element of continuous improvement participation processes, his suggestion of the distinction between engagement and participation being insignificant appears to deviate from this body of reviewed literature.

Figure 1.a. WHO Healthy Workplace Model: Avenues of Influence, Process, and Core Principles (Burton, 2010, p.13), and Figure 1.b WorkSafe Worker EP&R Duties of a PCBU (WorkSafe, 2016, p.12)

Figure 1.a.

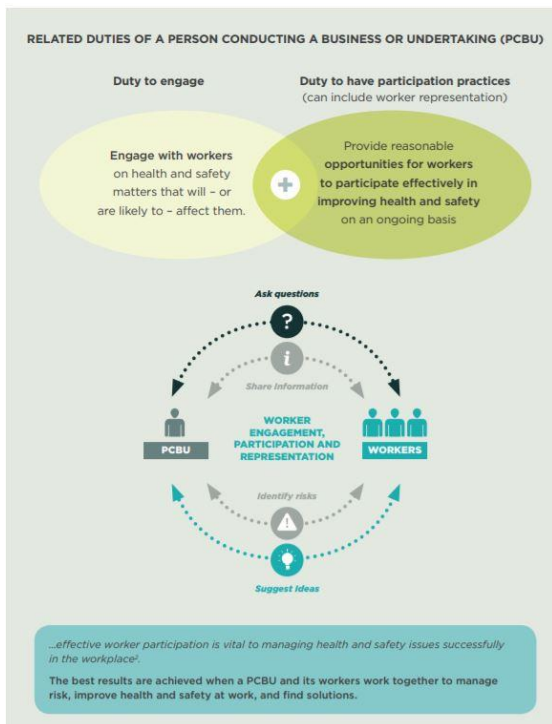
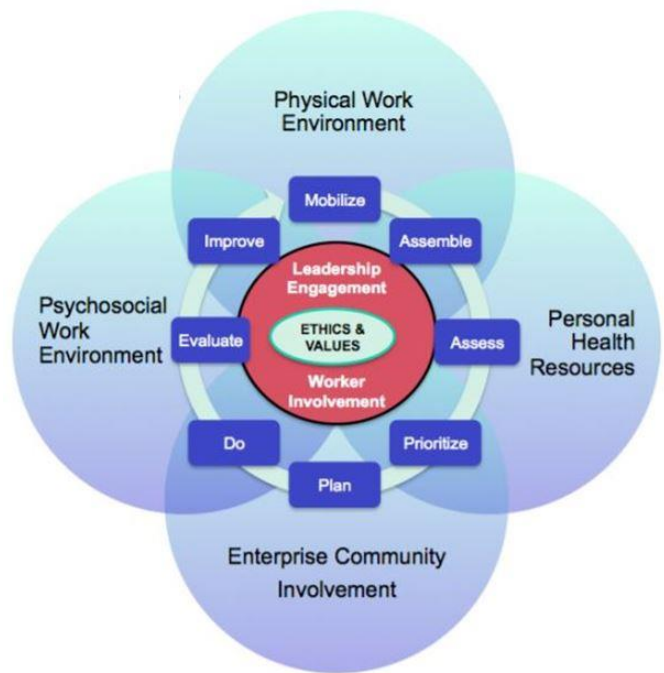


Figure 1.b.



The literature suggests it is the intent, purpose, depth, breadth and intersection of worker EP&R policies and processes at the national, industry and organisational levels that will impact on the effectiveness and sustainability of WHS initiatives. This research adopts the term ‘worker EP&R’ to explore all forms of ‘pseudo’, ‘partial’ and ‘full’ worker engagement, participant and representation between management and employees, contracted workers, and PCBU and worker representatives.

There is agreement that all disciplines need to broaden their scope when exploring ‘employee voice’. For example, ER scholars recognise the need to complement collective voice with individual voice in the contemporary work environment (Barry & Wilkinson, 2016; Wilkinson et al., 2014; Wilkinson et al., 2013). This research will also contribute to the academic debate concerning the relevance of statutory ‘worker voice and participation’ protections in neo-liberal context that lean towards unitarist employment relations systems (Bogg & Novitz, 2014; Quinlan & Johnstone, 2009; Walters et al., 2016; Weil, 2014).

## **Discussion and Development of a Conceptual Model for Exploring Worker EP&R**

The reviewed literature draws on a growing body of multi-disciplinary research exploring the concept of ‘worker voice’ in the contemporary environment. Of central importance is enhancing outcomes of ‘worker voice’ for the organisation and workers. Nevertheless, the literature shows that implementing sustainable ‘worker voice’ systems has been challenging in Anglo-Saxon countries. The waves and cycles theories have helped researchers analyse the macro level external socio-political and economic factors that influence the forms of ‘worker voice’ implemented in organisations and the level of influence workers have in decision-making affecting their work (Blyton & Turnbull, 2004; Marchington et al., 1992; Ramsay, 1977; Rasmussen & Tedestedt, 2017). The ‘waves’ model is useful for understanding the socio-political background of ‘worker voice’ and the implementation of the Robens model in New Zealand (Anderson & Nuttall, 2014; Campbell, 1995; Rasmussen & Tedestedt, 2017). But it also focusses attention on the vulnerability of voluntary and compliance-based ‘worker voice’ schemes and systems.

The literature shows that neither employer willingness (Kaufman & Taras, 2010; Marchington, 2015), nor statutory provisions are sufficient (Lamare et al., 2015; Pashorina-Nichols et al., 2017; Walters & Nichols, 2009; Walters et al., 2016). The importance of EP&R in the effective management of WHS suggests that the government, employers and workers have to collaborate to ensure the system functions as one of continuous improvement, rather than just fading away as another ineffective fad (McGraw & Palmer, 1995; Ramsay, 1977). However, concerns about implementing the Robens model in a largely individualist context in New Zealand indicate that it may be challenging to establish sustainable tripartite systems at the organisational and enterprise levels (Anderson & Nuttall, 2014; Pashorina-Nichols et al., 2017). Blyton and Turnbull’s (2004) interpretation of cycles as having little impact in progressing objectives and outcomes (in relation to what?) may help distinguish between strategic level organisational choices of forms of ‘worker voice’, and understand challenges to the sustainable implementation of strategic choices at the tactical and operational levels, in complex supply chains.

The multi-disciplinary research debates have also highlighted the interchangeable use of a wide range of terms defining and deconstructing ‘worker voice’ and the need for the development of analytical tools to help comparative researchers talk to each other, rather than over or around each other. In summary, the reviewed empirical research demonstrates efforts to explore the depth and breadth of direct and indirect, formal and informal forms of ‘worker voice’. Marchington’s (2015) amended model explicitly highlights the socio-political factors that shape decisions about the objectives and meaning, whereas, ideological frames may get limited consideration in some industry and organisational level empirical studies (Markey, Harris, Knudsen, Lind, & Williamson, 2014; Walters, 2010; Wilkinson et al., 2013). Some researchers have applied Varieties of Capitalism (VoC) theory in comparative analysis (Marchington, 2015; Markey et al., 2014). However, Poole, Lansbury, and Wailes (2001) propose the favourable conjuncture model to overcome the limitations of VoC, and help account for the complexity and diversity of forms of participation within a country. The latter model also captures a related factor as it allows for consideration of the relative power governments, employers and workers and their representatives have in decision-making. However, integrating the model with Marchington’s (2015) internal and external factors shaping depth and breadth of ‘worker voice’ (degree, level, range and form) and including the prerequisites for effective EP&R (Lamm, 2010; Walters & Nichols, 2009) will facilitate deconstruction of the meso-organisational level structures and process to gain in-depth insights at the firm level.

Typologies, frameworks and models of ‘worker voice’ have emerged from conceptual and empirical research, alongside concerns about the relevance of classical theories in the contemporary

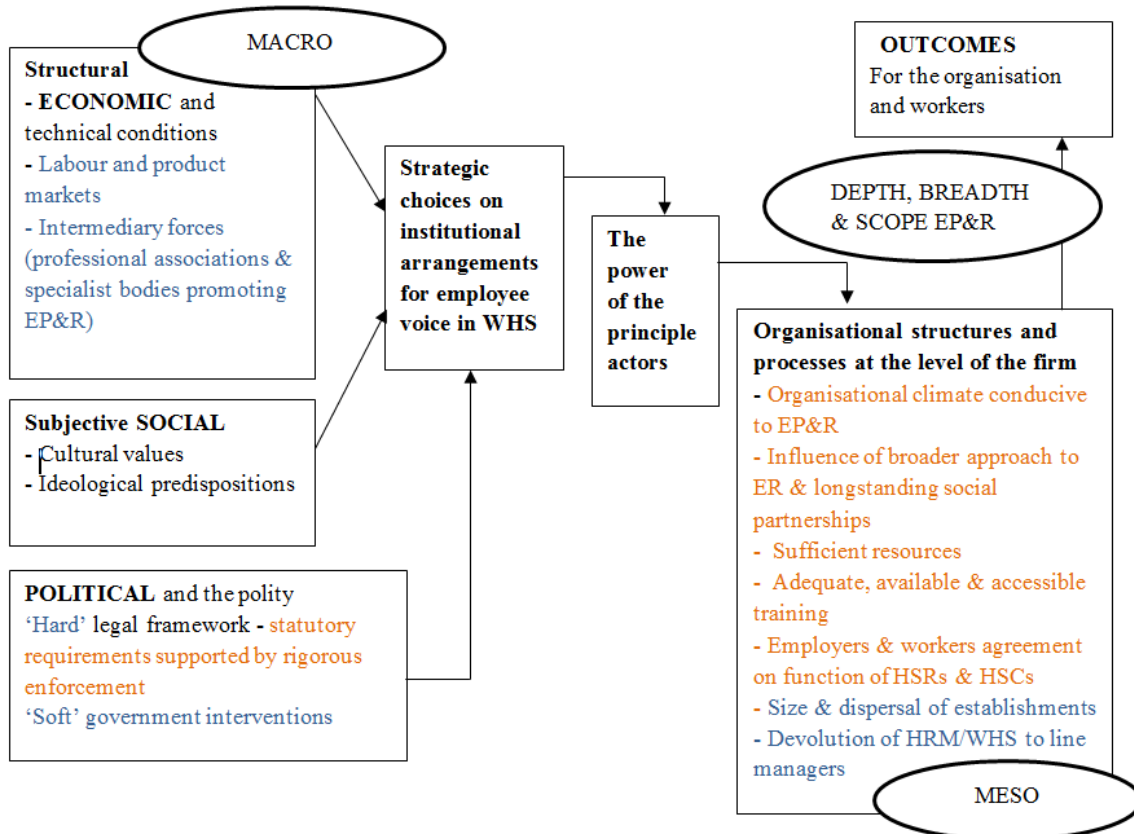
environment. Some seminal work is still prominent in contemporary debates, such as (Marchington et al., 1992; Pateman, 1970; Ramsay, 1977) and new perspectives have also emerged across these debates (Budd, 2014; Kaufman & Taras, 2010; Lamm, 2010; Rasmussen et al., 2016; Walters & Nichols, 2009; Weil, 2011; Wilkinson et al., 2014). But, whereas different typologies and frameworks emerge from empirical studies, the ideological frames of reference are widely used across disciplines (Arrowsmith & Parker, 2013; Gollan & Xu, 2015; Ramsay, 1977; Smith, 1978; Walters, 2010).

There are numerous continuums classifying ‘worker voice’ and influence. Although Pateman’s (1970) distinctions between the pseudo, partial and full involvement and power in decision-making that may occur at different levels in an organisational hierarchy, this applied to exploring participation and industrial democracy. In addition, Marchington, et al.’s (1992) escalator captures a wider range of voice and influence, therefore, it may be helpful for exploring and developing a tool to help understand the level of worker influence in health and safety. Contemporary terms may need to be added to reflect current understanding and practice. The prominence of continuums suggests that these would be familiar to academics; managers, workers and their representatives; and practitioners. Empirically developed tools and measures that have the potential to enhance the understanding of the duties and regulatory requirements for EP&R should be useful for policy and decision makers.

Reflecting on Rasmussen’s (2009b) discussion of the three major theories used in ER, systems theory, conflict theory (ideological frames of reference) and social action theory. Poole, et al.’s (2001) analytical framework encompasses basic systems theory (inputs, conversion processes and outputs) applicable and at the meso-organisational level. Systems theory is a useful foundation for interpreting theory into practical models. Dunlop’s (1958) industrial relations system expands to external level contextual factors influencing industrial relations matters, including ideology (unitarism, pluralism and radicalism). As the outcomes also expand to include the government, this can be applied at the macro level. Rasmussen’s observation that Dunlop’s ideological frames of reference are widely used in the literature, despite criticism, is supported in this review. Social action theory focusses on the ‘actors’ and individual differences in understanding, goals and expectations, thus narrowing to the individual level. However, the model does not allow consideration of external factors nor does it address the imbalance of power in the employer-worker relationship. Poole et al.’s (2001) favourable conjunctures model for comparative analysis of industrial democracy has the potential to be adapted to analyse the new legislative changes. It develops on a systems theory structure and reflects some concepts emanating from the ‘worker voice’ literature. As such, it may be useful for academic analysis that could be adapted for policy makers and practitioners. The current contextual factors have to accommodate the gig economy (platforms and projects) with the related increases in precarious work arrangements (contract, casual, part-time).

In summary, having defined the scope of the forms of ‘worker voice’ to be included in the study, a conceptual model is developed drawing on lessons from the past and contemporary perspectives (presented in Figure 2). In order to explore the research question, ‘worker voice’ will be deconstructed using Marchington’s (2015) forces shaping employee involvement and participation (EIP) and the four dimensions to measure EIP (*degree* of influence in management decisions, *levels* of participation, *range* of subject matter, and *form* of participation). This framework is expanded to capture the key factors for ‘worker voice’ in WHS (Lamm, 2010; Walters & Nichols, 2009). These deconstructed factors are integrated with Marchington, et al.’s (1992) escalator of employee participation and influence, and Poole et al.’s (2001) favourable conjectures model. The latter model will help distinguish between differences and similarities in the case studies, thus overcoming a limitation in VoC theory.

Figure 2 Model for Comparative Analysis of ‘Worker Voice’ in Health and Safety



Note: This model is adapted from Lamm (2010), Marchington (2015), Marchington (1992), Poole, Lansbury and Wailes (2001), and Walters and Nichols (2009). Blue additions from Marchington. Orange additions from Lamm, Walters and Nichols.

## Conclusions

As academic debates have explored management trends and the relevance of theories over the centuries, the plethora of ‘worker voice’ research provides opportunities to identify lessons from the past that shape expectations and decisions in the contemporary workplace environment. Firstly, the importance of ‘worker voice’ in the effective management of matters affecting worker health and safety is well documented. Yet, the catastrophic Pike River mining tragedy highlighted the limitations of Robens’ light national health and safety system that had been operating in New Zealand for almost two decades. Secondly, the reviewed historical accounts suggest that it will be challenging to implement sustainable effective ‘worker voice’ systems and initiatives. The literature has demonstrated the need to explore the complex socio-political and economic context shaping strategic decisions. Furthermore, diversity in the purpose and forms of ‘worker voice’ implemented in workplaces shows that in-depth analysis is required to determine similarities and differences in practices in the case studies. And although there are numerous attempts to classify the degree to which the ‘worker voice’ empowers workers to influence organisational decisions and impinging on managers’ prerogative, there is little empirical research exploring the link between WHS and ER. Finally, empirical researchers define and deconstruct the characteristics of ‘worker voice’ in different ways, depending of the research discipline and aim of the study. Therefore, the analysis and integration of the models is appropriate for exploring EP&R in health and safety in the contemporary New Zealand context.

An Interpretivist multiple-case study methodology will be adopted, with purposive sampling techniques applied to recruit key stakeholders for the Phase 1 interviews and the PCBUs explored in the case studies in the construction industry. The revised and adapted model will be used to explore the following research question: How are the new statutory provisions for EP&R in WHS, contributing to ‘worker voice’, particularly in high-risk industry sectors in New Zealand?

This empirical research has the potential to clarify ambiguity and misunderstanding of terms that influence the interpretation and enactment of duties in the WHSA. It will also provide new insight and an in-depth understanding of what effect this legislation has on ‘worker voice’ in the high-risk construction industry. The empirical findings will contribute to the debates informing policy, processes and practices aimed at enhancing worker EP&R in matters that affect their health and safety. By investigating ‘worker voice’ in WHS through an expanded conceptual framework, this exploratory study captures the link between ‘worker voice’ in WHS and the ER context. Thus adding to conversations about the relevance of statutory ‘worker voice’ provisions and participation protections in neo-liberal social, political and economic environments that lean towards unitarist employment relations systems (Bogg & Novitz, 2014; Quinlan & Johnstone, 2009; Walters et al., 2016; Weil, 2014).

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