



UNDERSTANDING INSECURE WORK

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HISTORY OF THE PROJECT

The '*Understanding Insecure Work*' project began with a question from **Bill Rosenberg** (NZCTU) in 2014 asking **Philip Morrison** (VUW) what we could learn from the second Survey of Working Life (SoWL, 2012) that had recently been released by Statistics NZ. While some excellent analytic work had resulted from the first SoWL in 2008, there was little official work planned on the second survey, and many issues around insecure work in NZ remained to be addressed.

In order to cover some of the key questions Philip assembled a team of researchers: **Gail Pacheco** from AUT, **Bill Cochrane** from University of Waikato, **Stephen Blumenfeld** from Victoria University of Wellington and **Bill Rosenberg** from NZCTU. Our bid for funding from the **Industrial Relations Foundation**, (IRF) (administered by MBIE) was accepted in June 2014 and we used our planned collaboration to encourage the set-up of a remote **Statistics NZ** data lab at the University of Waikato. (There was already a remote lab at AUT and the two VUW members continued to use the Wellington lab.)

Statistics NZ agreed to pool the unit records of the two SOWL surveys (2008 and 2012) and make the necessary metadata available to the research team on the same virtual site. This team approach allowed code and results to be shared within the data lab environment and this was complemented by several face to face team meetings. The team presented their initial results at the IRF dissemination day, organised by MBIE on Sept 10, 2015. Reports on the project were submitted to IRF annually.

This report is a collation of summaries of the draft papers. As of July 2016, the individual papers remain at different stages of submission to academic journals. Those interested in receiving copies of submissions or the published paper are urged to contact the individual authors.

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We would like to acknowledge the Industrial Relations grant from the Ministry of Business, Innovation and Employment, which has supported the project and this report.

Access to the data used in this study was provided by Statistics NZ 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 NZ.

INTRODUCTION

This report examines insecure work in NZ from four perspectives. It is a collaborative effort to increase our understanding of the insecure work landscape in NZ by utilising two waves of the Survey of Working Life (2008 and 2012). While we acknowledge that the perception of job insecurity and precarity in general could also apply to permanent workers, data availability means we restrict our forthcoming analysis to often equating insecure work to temporary employment.

Over the last two decades, insecure work has gained increasing currency in the OECD countries. There are many reasons for this. This includes free choice whereby workers choose temporary work due to its preferable characteristics, such as flexibility, shorter hours, based on childcare arrangements, etc. Apart from free choice there are often three drivers identified in terms of rising levels of 'non-standard' work. First, globalisation has forced a greater worldwide division of labour, more volatile international market conditions, and employers forced to become more flexible in a bid to remain competitive. Second, demographic forces have resulted in rising female labour force participation rates and a growing motivation for new working arrangements that are compatible with childcare responsibility. Thirdly, cyclical reasons – policy makers often bid for greater labour market flexibility when unemployment is high.

NZ is an interesting case study for more research on temporary employment. According to the 'OECD indicators on employment protection legislation', NZ has the third lowest level of protective regulation for temporary workers, with a score of 0.92 compared to an OECD average of 2.07 (with 0 equating to least restrictions and a score of 6 indicating most restrictions).

Nevertheless, empirical research on the experiences of insecure workers and the links that can be established with their employment conditions remains negligible in NZ. Thus, a group of researchers from three universities in NZ was supported by Industrial Relations Fund (MBIE) to attempt to address this research gap. This report presents a range of perspectives and latest research on insecure work. A variety of angles are explored – from investigating the existence of an unexplained wage gap between temporary and permanent workers; to better understanding the contributing factors towards precarity (in a bid towards constructing an index of job precarity); to assessing the association between precarious employment and employer-provided training; and then finally to understanding the nature of the relationship between job insecurity and satisfaction at work. The data mainly came from the 2008 and 2012 Survey of Working Life, which represents a rich source of information on the employment conditions, working arrangements, and job quality of employed New Zealanders.

BY GAIL PACHECO
AND BILL COCHRANE

THE WAGE GAP BETWEEN PERMANENT AND TEMPORARY WORKERS

We draw on the Statistics NZ, Survey of Working Life to investigate the wage gap between temporary and permanent workers. Using a variety of methodological approaches, we demonstrate that, on average, temporary workers have a 4% unexplained pay gap with their permanent counterparts. Results are varied across the different types of temporary workers, with no wage penalty evidence for fixed-term workers, and a sizeable unexplained difference for casual workers (approximately 13-14%).

Recent years have clearly seen an increased impetus for greater market flexibility. Therefore, policymakers have made concerted efforts to loosen the rigidities surrounding employment protection. As a result, temporary employment has grown across a number of OECD countries. This expansion has been accompanied by concerns about temporary jobs being an additional source of insecurity and precariousness for workers. Among the numerous negative outcomes associated with temporary work, such as job insecurity and lack of access to tenure related benefits, temporary workers encounter systematic disadvantages in pay. This wage difference is often referred to as the temporary pay penalty.

Many theoretical frameworks have been advanced to explain wage differentials between temporary and permanent workers, and it is clear that there are both push and pull factors that could explain the existence of a pay penalty for temporary workers. On one side, the compensating wage differentials theory states that a competitive labour market will reward poor job security (Hagen, 2002; Hamersma, Heinrich, & Mueser, 2014). On the other side, human

capital theory would argue that a firm has to invest greater firm-specific training in temporary workers, and any wage penalty is an outcome of this additional cost borne (Jahn & Pozzoli, 2013). Dual labour market theory (Daniel & Sofer, 1998) is highly prevalent in this field and characterises the labour market as segregated into a relatively advantaged primary employment and a relatively disadvantaged secondary segment.

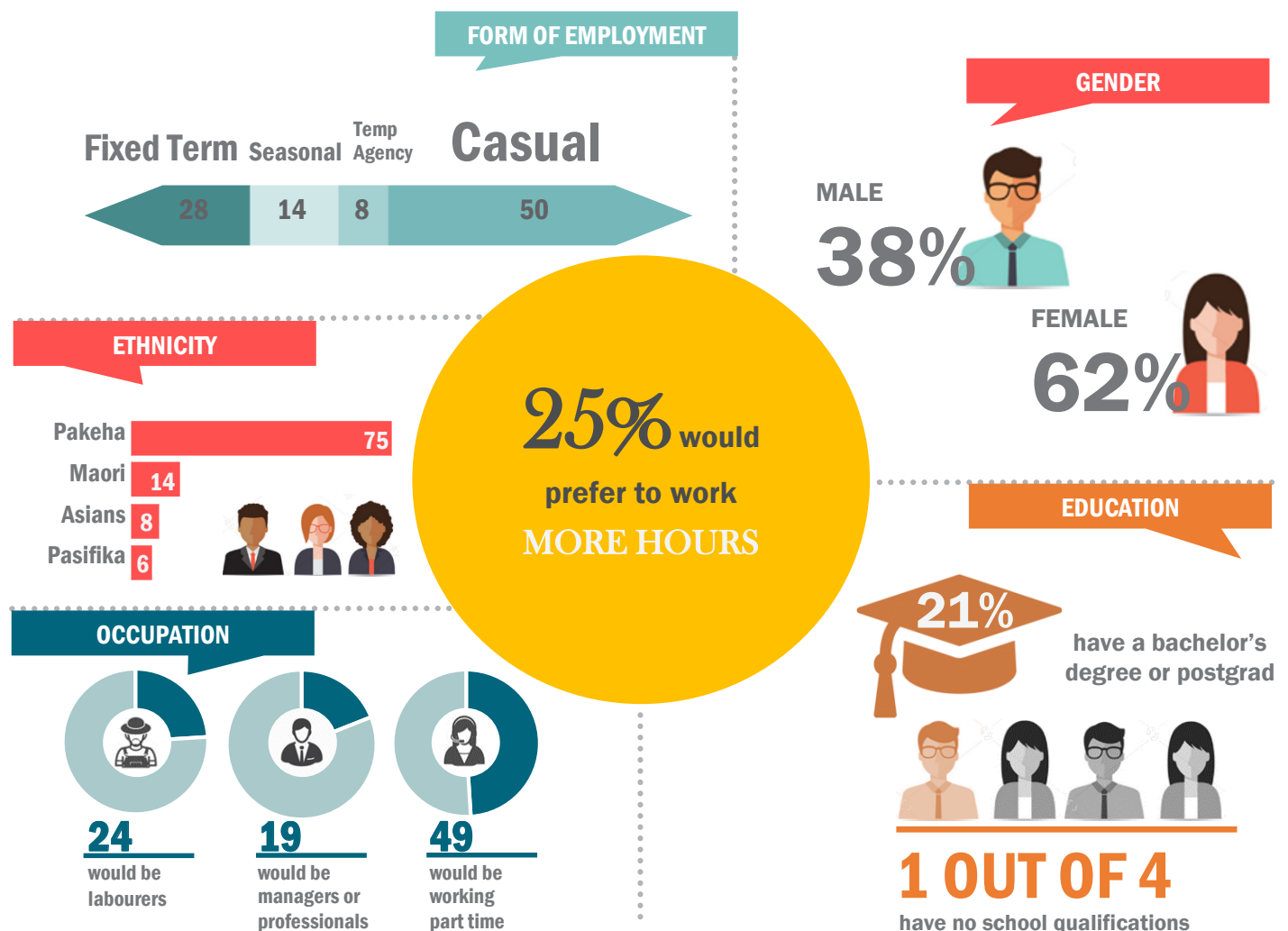
“The pursuit of flexible labour relations has been the major direct cause of the growth of the global precariat.”
Standing (2011)



PORTRAIT OF TEMPORARY WORKERS IN NZ

Using two waves of the Survey of Working Life (2008 and 2012), we find approximately 9.5% of the workforce is in a temporary form of employment.

If these temporary workers were 100 people

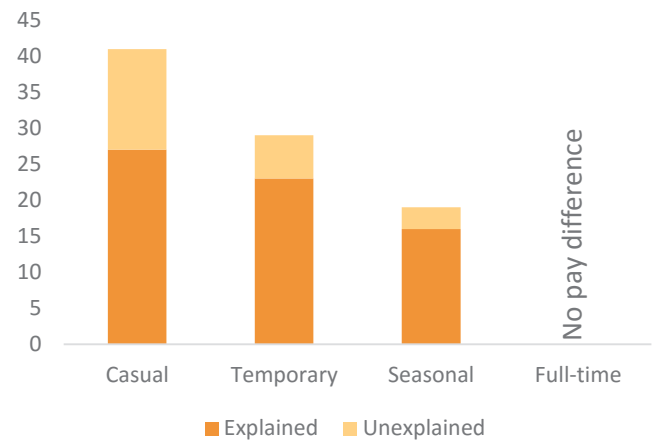


Source: Survey of Working Life (2008 & 2012); Author's compilation

Using two waves of the Survey of Working Life (2008 and 2012), we investigate the existence of a wage penalty for temporary workers in NZ, and apply two approaches to understand the underlying reasons behind the wage gap. We find that the average temporary worker had a real hourly wage of \$16.66, with permanent workers earning on average 20% more. Moreover, using standard econometric techniques, we decompose the wage gap into 'explained' and 'unexplained' components for a range of different types of temporary workers – including casuals, temp agency workers, fixed-term contracts, and seasonal workers.

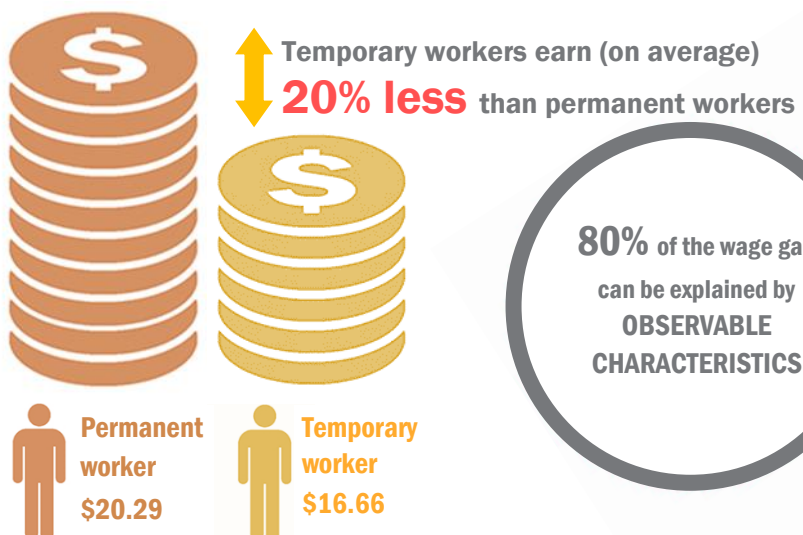
There are two interesting observations made with this decomposition analysis. First, we find that much of this gap is due to observed difference in the characteristics of the worker, their job and their occupation/industry. For instance, half of this gap is explained by characteristics of the job, occupation and industry, and another third is explained by personal characteristics such as age, gender, ethnicity and qualification, leaving just under 20% of the wage gap as unexplained. Secondly, the two types of

Wage gap decomposition in terms of explained and unexplained factors for different work types



temporary workers that had more than 10% of their wage gap unexplained were casual and temp agency workers, indicating the possibility of wage discrimination against this subset of the temporary workforce.

Wage gap: its decomposition



The wage gap was further decomposed at different points in the wage distribution to better understand whether the gap varies across the distribution. For instance, we discover that the gap increases as we move up the wage distribution. Therefore, these results clearly indicate a glass ceiling effect.

Finally, we use the nearest neighbour matching, which attempts to match temporary and permanent workers that are as similar as possible (in terms of observable characteristics). This method provides us with a valid counterfactual, and allows us to ask the question: If a worker had no change in their individual or job characteristics (i.e. same age, education, job tenure, union status, etc) and moved from permanent to temporary status, would there be a wage penalty attached to this change in work status?

We discover strong evidence of a wage penalty for casual workers, which is in accordance to the decomposition results. As the casual workers are often treated as a 'buffer stock', the 'insider/outsider' argument may be most relevant here. These workers are treated as outsiders, and therefore have the least protection and bargaining power.

“Results indicate that the wage gap increases as we move up in the distribution – in favour of the glass ceiling hypothesis.”

There are, of course, two necessary caveats to these findings. First, we are assuming that similar levels of education, tenure, etc. equate to similar levels of productivity. However, temporary workers may be less productive due to lack of firm-specific knowledge. Secondly, such research methods only allow us to control what is observable, and permanent workers may have higher levels of unobserved worker quality, that is not captured in current data.

There are key policy implications of this research avenue. Large unexplained wage penalties for casual workers are a potential sign that there may be wage discrimination present in the labour market - therefore loosening of employment protection legislation for these workers could have negative consequences.

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INDICATORS OF PRECARIOUS WORK

Three indicators play a significant role in determining the relative precarity of a job: ‘certainty of ongoing employment’, ‘degree of regulatory and union protection’ and ‘degree of employee control’.

The drive for increased labour market flexibility has been accompanied by mounting concern over the apparent growth of precarious work, with estimates of its extent being as high as 30% of NZ’s workers or over 635,000 people (NZCTU, 2013). Though there is no consensus on the precise definition of precarious work, it is often defined by the nature of the employment relationship - casual work, fixed-term contract work, temporary, or seasonal – as well as by such job characteristics as uncertainty of pay, conditions and duration of work.

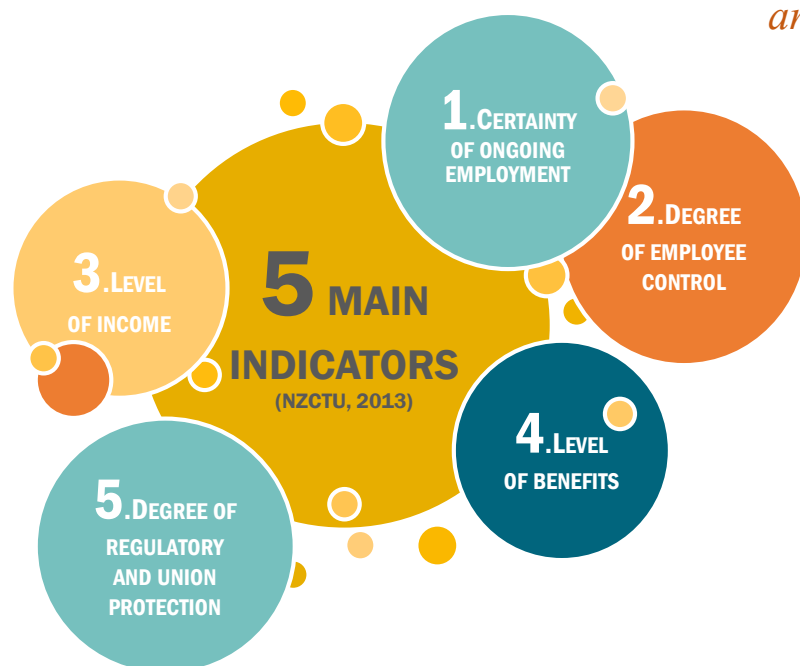
There have been a number of useful contributions towards describing characteristics of temporary work in NZ, a form of work closely related to precarious employment. Among these, two studies have used the Survey of Working Life, which was

literature review, drivers, prevalence, impacts on workers, legal context, and policy alternatives. Although more researchers have taken interest in the field of insecure work, here we try and identify the main indicators of precarity in the NZ context.

Both Tucker (2002) and Standing (2011) recognise the multidimensional nature of precarious work and create short lists of worker and job characteristics. Tucker’s set of indicators was designed especially for NZ, and in 2013 the NZCTU presented a reduced form with five main indicators.

The objective of our study was to identify a smaller number of dimensions of precarity on the basis of those descriptors. We selected from the Survey of

“What is the best way to capture precarity, and what are the multidimensional factors to acknowledge in the context of NZ?”



published in 2008 and 2012 to describe the nature of temporary employment and its quality (Dixon, 2011; Ongley, 2014). Of even more direct relevance, in 2013 the NZ Council of Trade Unions (NZCTU) produced a study of precarious work in NZ, incorporating

Working Life a range of variables that were reflective of potential indicators of precariousness identified by the NZCTU (2013). However, the exception to this was the ‘income indicator’. The income indicator could not be included in the measure of precarity because we wanted to explore the relationship between precarity and low wages. The figure on page 7 shows the allocation of Survey of Working Life variables to the NZCTU indicators.

Applying a number of different approaches to factor analysis, adjusted for the categorical nature of most of the variables, we find that all these yielded similar solutions. On the basis of this analysis our preferred model (see the figure on page 8 - How to identify precarious work: 6 factors) included an additional factor to the NZCTU classification related

to part-time work. The factor structure reveals the importance of three indicators in establishing the relative precarity of a job, and their role as latent variables.

- Certainty of ongoing employment
- Degree of regulatory and union protection
- Degree of employee control

INDICATOR	SURVEY OF WORKING LIFE VARIABLE
1. CERTAINTY OF ONGOING EMPLOYMENT	<ul style="list-style-type: none"> - Employer decides hours worked - Tenure (inverse) - Changed occupation in last three months - Has multiple jobs - Part-time worker - Likelihood of losing job
2. DEGREE OF EMPLOYEE CONTROL	<ul style="list-style-type: none"> - Employer decides hours worked - Works non-standard hours - Frequency of weekend work - Frequency of non-standard work
3. LEVEL OF INCOME	- NA
4. LEVEL OF BENEFITS	<ul style="list-style-type: none"> - Access to training - Access to unpaid leave - Access to flexible working hours
5. DEGREE OF REGULATORY & UNION PROTECTION	<ul style="list-style-type: none"> - Covered by Collective Employment Agreement - In a union - Subject to harassment at work - Workplace health and safety (WHS) is handled poorly or very poorly

How to identify precarious work: 6 factors



Variables and Indicator Mapping

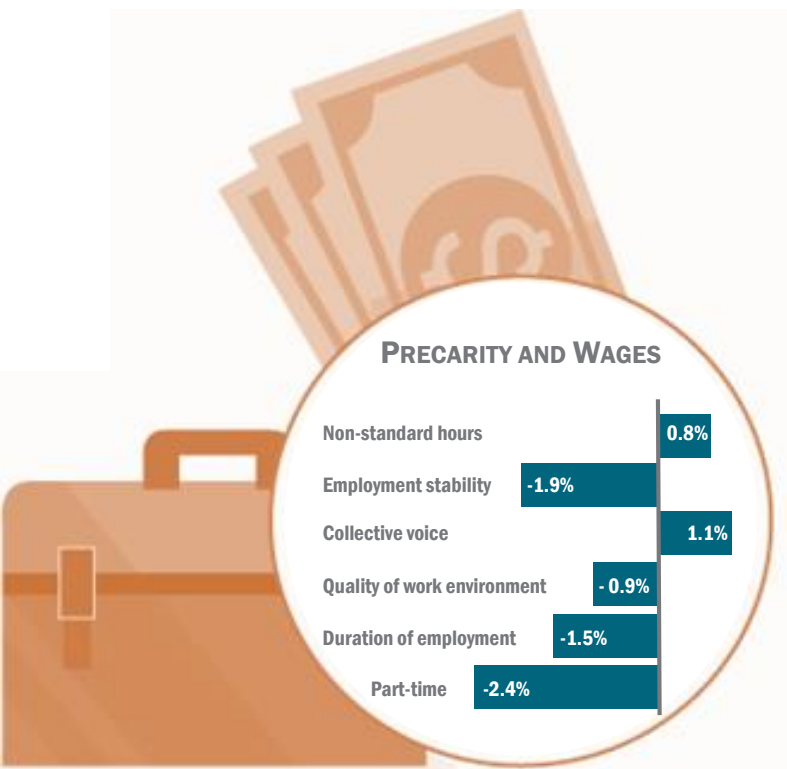
1 INDICATOR: Degree of employee control VARIABLES: <ul style="list-style-type: none"> - Works non-standard hours - Frequency of weekend work - Frequency of non-standard work 	2 INDICATOR: Degree of employee control and Certainty of ongoing employment VARIABLES: <ul style="list-style-type: none"> - Likelihood of losing job - Employer decides hours worked
3 INDICATOR: Degree of regulatory and union protection VARIABLES: <ul style="list-style-type: none"> - In a union - Covered by CEA 	4 INDICATOR: Degree of regulatory and union protection VARIABLES: <ul style="list-style-type: none"> - Subject to harassment at work - Workplace health and safety is handled poorly or very poorly
5 INDICATOR: Certainty of ongoing employment VARIABLES: <ul style="list-style-type: none"> - Changed occupation in last-three months - Tenure (inverse) 	6 INDICATOR: Certainty of ongoing employment VARIABLES: <ul style="list-style-type: none"> - Part-time worker - Has multiple jobs

In order to apply our findings to the exploration of the relationship between precarity and various policy relevant outcomes such as income, we examined the relationship between the dimensions of precarity and (the natural log of) hourly wages for the pooled 2008 and 2012 waves of the Survey of Working Life.

Controlling for demography, education, industry and occupation, the results show that the “Part-time” factor explained the largest wage penalty observed (-2.4%) while lower “Employment Stability” accounted for a penalty of -1.9% and workers with lower “Duration of Employment” experience a -1.5% wage penalty. On the other hand, greater “Collective Voice” is associated with a wage premium of +1.1%.

“Precarity is a multidimensional phenomenon that is not reducible to a single latent construct.”

In conclusion, precarity is a multidimensional phenomenon that is not reducible to a single latent construct. However, its various dimensions can be fruitfully incorporated in empirical analysis. In terms of future work we intend to explore the extent to which the factors identified here might be represented by data available in large scale regular surveys such as the HLFS or the Census. We would also like to examine the relationship between the six factors identified and various outcomes for workers.



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BY STEPHEN BLUMENFELD

WHO RECEIVES EMPLOYER-SUPPORTED TRAINING?

This study identifies the characteristics of employees who are the least and most likely to participate in employer-funded education or training. Findings from this study enhance our understanding employers' decisions to invest in training and the types of employees who receive that training. It also shed light on problems associated with continued reliance on employer-funded training as a means of skill development in an era of greater precariousness and job insecurity.



In addition to increasing the productivity of firms, education and training are known to enhance the skills and the employability and earnings of employees. Nonetheless, while skill development is critical in building a productive workforce and achieving sustainable quality growth, the limited evidence available (see Bellett, et al., 2012) suggests that the actual volume of training and the proportion of employees in New Zealand participating in employer-funded training has declined over the past decade (GIAB, 2004; Statistics New Zealand, 2008; Statistics New Zealand, 2012). Report on Research and Growth in Innovation, Ministry of Research, Science, and Technology, Wellington, New Zealand. Employers face the risk of not being fully able to capture the returns to an investment in human capital, they are often reluctant to fully fund skills training (Mok et al., 2012).

Access to training by employees varies considerably across the labour market. As anticipated by the standard human capital framework developed by Becker (1962; 1993). Employers' investment in training of their employees is positively associated with the expected returns to the employer (e.g., Blundell et al, 1996; Booth and Bryan, 2005; Booth & Katic, 2011). Thus, employers' investment in training varies according to worker attributes, as well as by characteristics of the workplace and the job itself.

Past research findings suggest that employees who are considered as being more likely to bring in larger returns to their employer from training are more likely to receive such skills development, such as

younger employees, full-time employees and more highly educated employees (Shields, 1998; Long et al., 2000; Gray and McGregor 2003; Billett et al. 2011; Xu and Lin, 2011). There is also evidence that workers in occupations requiring a higher skill level are more likely to receive training (Booth, 1991; Gobbi, 1998; Draca & Green, 2004; Long et al., 2000). Public ownership has also been linked to higher rates of employer-funded education and training (Shields, 1998). There is also evidence that employees in larger firms are also more likely to receive training (Black, et al., 1999).

The empirical literature also suggests that an employer's willingness to invest in training varies with the nature of employment and number of hours the employee typically works. Because they spend relatively fewer hours at work during a given period, and are less likely to have a stable long-term attachment to the employer, the likelihood of an employee receiving employer-supported training has been found to be lower for those who work on a temporary basis than for those in full-time employment with the same employer (Booth, 1991; Blundell et al., 1996; Draca and Green, 2004; Maximiano and Oosterbeek, 2007).

In general, what the literature suggests is that if employers concentrate their training efforts and expenditures on their core workers an increasing share of the workforce will receive little, if any, employer-sponsored training. This implies that contingent on the extent to which vulnerable segments of society find themselves disproportionately amongst

“Changing employment patterns - in particular, the growing trend toward more precarious and insecure work - may have significant implications for training and skills development.”

Who are most likely to receive employer-sponsored education or training?



The odds ratio of receiving employer-sponsored training for **MALES** are **27% GREATER** than for female employees



Workers in the **45-54 AGE BRACKET** are most likely to receive employer-sponsored training



Young male between **15 and 19 years old** appears to be **5 TIMES** as likely to receive employer-sponsored training than male between 70 and 74 years old



Workers covered by a **COLLECTIVE EMPLOYMENT AGREEMENT** are **44% more** likely to receive employer-sponsored training



Employees in the **PUBLIC SECTOR** are far more likely to receive employer-sponsored training than employees in the **PRIVATE SECTOR**

those in precarious employment, the trend towards less employer-sponsored training likely exacerbates longstanding inequalities across demographic groups.

We applied a logistic regression model to the pooled 2008 and 2012 Survey of Working Life to estimate the likelihood of staff receiving employer-sponsored training in the previous 12 months. The results demonstrate that between 30 and 35% of all surveyed employees received employer-funded study or training. As previous studies have shown, permanent employees are the most likely to benefit from employer-funded training.

Despite this, only the estimates for seasonal workers and those on 90-day trials are statistically significant, suggesting that those on fixed-term/temporary or casual contracts, the self-employed, and those who work in a family business are no less (or more) likely than those on permanent contracts to receive employer-funded training. These estimates suggest that those on 90-day trials are less than half as likely to receive employer-funded training as those who are not on a 90-day trial, whether permanent, casual or fixed-term employees, after taking account of other factors that might affect training opportunities such as length of service to the employer.

Male employees are more likely to receive such skill development than female employees. The odds of male

employees receiving training is 27% greater than it is for female employees. The reasons include staggered careers or work reduced hours, at least during their child-bearing years (Booth, 1991; Long et al., 2000; Dieckhoff, and Steiber, (2011).

The chances of receiving training also varies by age. We found that those in the 45-54 age bracket appear most likely to benefit from employer-supported training, while those under 20 or over 70 are least likely. There are also differences in the marginal effect of gender according to age. Males between the ages of 15 and 19 are more than 5 times as likely to receive employer-funded training or education than are male employees between 70 and 74 years of age. Older workers are assumed to accrue smaller returns on any training investment due in large measure to their shorter remaining time in the workforce (Shields, 1998; Long et al., 2000; Gray & McGregor 2003; Billett et al. 2011), and are also frequently viewed as being less capable of learning and less willing to participate in training than younger workers (Kubeck et al. 1996).

The odds of employees covered by a collective employment agreement (CEA) receiving employer-

“Not surprisingly, permanent employees appear to be the most likely to benefit from employer-funded training than temporary workers.”

funded education and training are 44% greater than the odds for those on individual employment agreements (IEAs). Essentially the same can be said with regard to those who are union members versus those who are not, reflecting the fact that most of those covered by CEAs are union members. Union membership is therefore positively associated with employer-sponsored training.

The industry and occupation in which one is employed also affects the accessibility of employer-funded training. Those employed in the public sector are far more likely to receive more employer-funded training than those employed in the private sector.

When it comes to industries, many of the differences in receipt of training are not statistically significant from the estimated odds of employees in the primary industries (as well as in mining), the reference category.

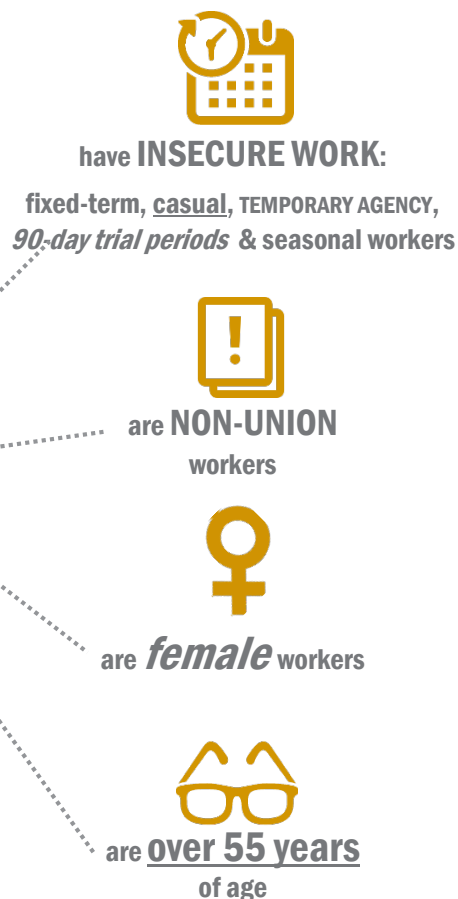
In summary with the evidence from the literature, type of employment, gender and age, education, employment agreement, industry and hours worked emerge as factors that are strongly correlated with participation in employer-funded education and training. Lower rates were identified for female, as well as for older employees. Employees in the private sector were less likely to receive training than employees in the public. The likelihood of training was also found to decrease with temporary types of employment, either as fixed-term, casual or temporary agency workers. Significant differences in training probabilities among different occupations also emerged, showing the distribution of training possibly depending on the education. Furthermore, union members had a higher training likelihood than non-union members.

Employer-funded training: Who benefits and who does not?

MORE LIKELY IF THEY:



LESS LIKELY IF THEY:



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THE EFFECT OF JOB (IN)SECURITY ON JOB SATISFACTION

While job insecurity has become an important topic of research in its own right, there has been limited attention to its impact on job satisfaction. This study analyses the relation between insecure employment, and how it affects the satisfaction NZ workers derive from their paid work.

Remarkably, there are only a handful of studies in the economics literature that recognise the profound influence that job insecurity has on job satisfaction (Clark, Knaabe and Ratzel 2009, Clark, Oswald and Warr 1996, Clark, Kristensen and Westergaard-Nielsen 2009, Clark 1998, Clark 1996). Each study confirms the strong, negative and statistically significant relationship (Blanchflower and Oswald 1999). Psychologists have paid closer attention to the relationship through case studies of the negative way lack of security affects personal wellbeing (de Witte 2005, De Witte et al. 2010, Hellgren and Sverke 2003), family relationships (Buonocore, Russo and Ferrara 2015), mental health (Fevre 2007, Fryer 2006), physical health (Heaney, Israel and House 1994) as well as people's financial investment behaviour (Munro 2000).

The impact of expectations

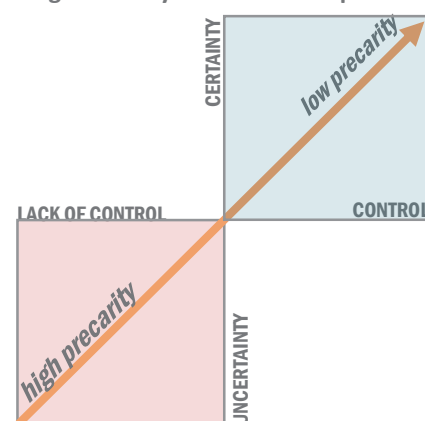
One of the reasons insecurity may have been neglected as an argument in the extensive literature job satisfaction is that, unlike personal attributes and job characteristics, job insecurity is not about the present condition or the past. Instead, security is all about the future. Insecurity is about what the worker thinks is likely to happen. Almost all studies linking job satisfaction to insecurity draw on the worker's subjective view of their own future in the job (Green 2009, Mau, Mewes and Schoneck 2012). From a modelling point of view 'Insecurity', or precarity, is an unusual variable in that it is about an event that has not yet happened, and may not happen. However the likelihood of job loss has a profound influence on people's disposition, both in terms of job satisfaction and in other domains of wellbeing.

The other feature of work that is characteristic of precarity is control, control over the conditions of work: the hours, tasks, location, leave amounts and timing and of course the ability to bargain. The two

dimensions of control and uncertainty or insecurity define jobs with high precarity from those with low precarity as suggested in Figure 1.

People's expectations about their job security (and the level of control they feel they have) affect how much they enjoy their immediate job, how they perform and behave in the workplace, how productive they are and how they invest in their own working future. More surprising, it is then that we understand so little about how people form their job expectations, the events and circumstances that condition them, and how these expectations vary from one type of person to another. Our lack of knowledge on these matters is particularly acute in NZ which has yet to witness any published study of job satisfaction let alone one that

Figure 1: Key dimensions of precarity



“Precarious work is characterised by high levels of tenure uncertainty, and lack of control over the work itself.”

also examines the role of job security.

The following brief is in three parts. The first introduces the study, the second summarises the analysis and findings and the third focusses on some possible implications.

The study

The relationship between job satisfaction and job insecurity is analysed using 22,000 employees on permanent employment contracts. They are

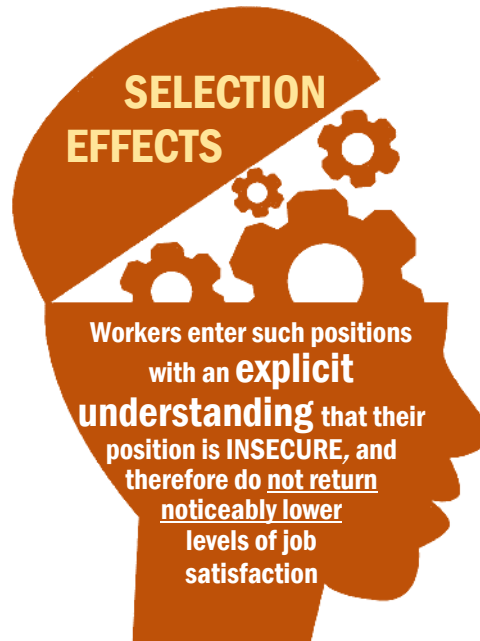
identified as such from the pooled 2008 and 2012 Survey of Working Life.

Most previous studies of employment insecurity in NZ have been based on temporary, casual and seasonal work (Tucker 2002). To the surprise of some, workers on non-permanent contracts do not return noticeably lower levels of job satisfaction despite the insecure status of their jobs (Wooden and Warren 2004, Wilkin 2013, Theodossiou and Vasileiou 2007, Origo and Pagani 2010, Kaiser 2002, Iseke 2014, Heaney et al. 1994, DeGraaf-Zijl 2012, Buddelmeyer, McVicar and Wooden 2013, Bruno, Caroleo and Dessy 2013). The reason has to do with 'selection effects'; most workers enter such positions with an explicit understanding that their position is insecure and in their responses to questions on job satisfaction, already take this information into account. A 'purer' and more informative indication of the impact of insecurity on job satisfaction is obtained by analysing those who believe their job to be secure - those on 'permanent' employment contracts.

Survey questions and results

Workers on permanent contracts are asked the following question: "In the next 12 months, what is the chance that you could lose your job for a reason beyond your control?" The outcome options are as follows: "almost certain", "a high chance", "a medium chance", "a low chance", and, "almost no chance" (along with the standard options "don't know" and "refused to answer"). Respondents are also asked to reflect on their job satisfaction: "Thinking about all aspects of your [main] job, overall, how do you feel about your job? Are you Very Satisfied; Satisfied; Neither Satisfied nor Dissatisfied; Dissatisfied; or Very Dissatisfied (Statistics NZ 2008). In addition, respondents to the SoWL are asked a wide variety of demographic, employment, and job specific questions which allow detailed stratification of

the workforce and the specification of appropriate statistical controls.



The analysis reported here involves regressing responses to the job satisfaction question on answers given to the job security question. A variety of types of workers express different degrees of satisfaction under different working conditions, however I only have space in this brief to present the results for those male workers.

We know from previous work (Morrison 2014), that satisfaction with the job

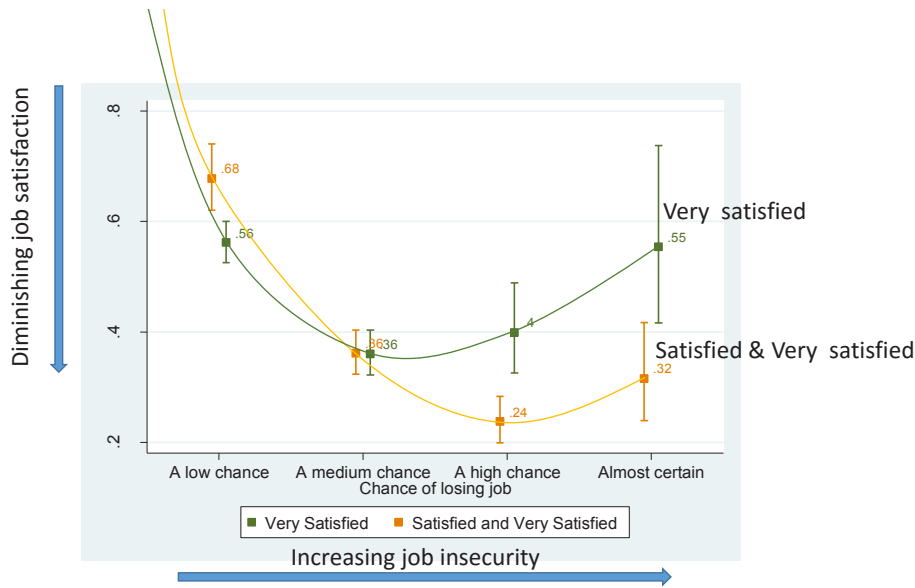
rises with skill, education and job position as does the likelihood of being able to obtain an equivalent position elsewhere should they lose their job. For many others, job security does not necessarily equal employment security (Manski and Straub 2000).

Figure 2, constructed from the logistic regression analysis shows a negative, non-linear relationship between job satisfaction and job insecurity. The "Very Satisfied" show a more marked positive response to their expectation of job loss. Most workers on permanent contracts are both satisfied with their job and they believe they have a low, or at worst, medium chance of losing their job (through no fault of their own). Those who feel less secure about their job exhibit diminished levels of job satisfaction. As the graph shows, the odds of being satisfied with the job fall from around 0.6 to under 0.4 when subjective chances of job loss fall from low to medium.

Relationship between job satisfaction and job insecurity



Figure 2: The effect of differing levels of job security on the odds of being 'Very Satisfied' and 'Satisfied + Very Satisfied' with the job. Permanent male employees in NZ 2008 and 2012.



Source: Statistics NZ: Survey of Working Life, 2008 and 2012

The U-shaped result apparent in Figure 2 is the one we would expect simply on the basis of people's response to uncertainty. Uncertainty reaches its maximum somewhere between a 'low' chance and an 'almost certain' chance of losing the job and therefore one is most certain at the extremes: that is when they are certain of retaining their job or certain of losing it. The greatest uncertainty lies in between. Therefore, even after controlling for a multiplicity of personal and job attributes, the relationship between job satisfaction and the worker's perceived chance of losing the job retains its U-shape – most notably among the 'Very Satisfied'.

Implications

There are four important inferences we can draw from the above results: the first is substantive, the second is conceptual and the remaining two are methodological. The first, substantive point is consistent with the argument that perceptions of job security (and employment security) have profound effects on job satisfaction. This becomes particularly important when related to job productivity (Tilakdharee, Ramidial and Parumasur 2010), although the strength of the relationship between job satisfaction and productivity is still under debate (Boeckerman and Ilmakunnas 2012).

Secondly, conceptually it is clear both from this NZ study and those overseas, that a worker's satisfaction with their job is sensitive to how they perceive its continuity. Perceptions of our likely future play an

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influential role in our enjoyment of the present. It follows that we need to know more about how workers construct expectations about the future and how different elements of that perception affect their enjoyment of their job.

The third inference has to do with the data we collect about the source of insecurity concerns. Overseas surveys have shown that questions on job insecurity need to be complemented by questions on employment security if the analysis is to fully capture workers security concerns. There is also a strong case for using explicit probability measures in questions on job

insecurity (Dickerson and Green 2012, Manski and Straub 2000).

The fourth point follows from the dynamic nature of wellbeing reactions to changes in perceived security. The data used above is cross sectional and therefore cannot be used to infer causality. Nor can it capture changes in perceived security, yet we know from case studies of plant closures for example (Nelson, Cooper and Jackson 1995), that changes in information about the future of jobs does influence job satisfaction. Any formal understanding of these dynamic aspects of the relationship therefore have to be estimated using longitudinal rather than cross-sectional surveys. Only then can we really be sure that changing perceptions of job security affects people's current satisfaction with their work.

“Perceptions of our likely futures play an influential role in enjoyment of, the present.”

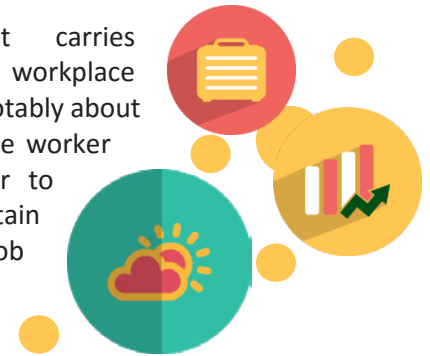
To conclude, job insecurity is an endemic feature of employment in liberal democracies. The message in this study is about the effect of the on-going presence of insecurity itself and the way it degrades job satisfaction. To better understand this relationship I have focussed on those working under so-called permanent contracts for they carry expectations of continuing work with a set of rights, as well as stable pecuniary and non-pecuniary returns. One of the

most important non-pecuniary returns is job satisfaction.

The analysis based on the 2008 and 2012 Survey of Working Life has demonstrated just how sensitive job satisfaction is to perceived levels of job security. The weaker the belief that the job is secure, the lower the level of satisfaction the job yields, and the result is robust to a variety of controls. As longitudinal studies confirm, as the level of uncertainty about job continuity rises, job satisfaction goes down. That much is known. What this study has also suggested, and now needs to be tested elsewhere, is that as this uncertainty reduces, even though it implies job termination, job satisfaction rises again, albeit to a

smaller and less certain degree. One of the reasons suggested is the reduction in uncertainty and possibly change in inter-personal dynamics within the workplace.

The main result carries important workplace implications, most notably about the need to minimise worker uncertainty in order to generate and sustain high levels of job satisfaction.



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