

Under Pressure: OHS of Vulnerable Workers in the Construction Industry

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Abstract

The New Zealand construction industry provides a good illustration of the changing nature of work and the impact this has had on the occupational health and safety (OHS) of sub-contracted construction workers. In particular, we examine the vulnerability of workers in the context of the construction industry post-2010 Canterbury earthquakes. In doing so, we apply Quinlan and Bohle's (2004; 2009) 'Pressures, Disorganization and Regulatory Failure' (PDR) model to frame the changing nature and organisation of work and the impact this has had on the OHS of sub-contracted construction workers. Finally, we discuss what can be done going forward in terms of creating a more effective regulatory regime and a safer and healthier industry.

Key words: occupational health and safety, vulnerable workers, construction industry, the changing nature of work.

Introduction

In the past four decades, there have been profound global changes to the organisation of work (James, 2006; Standing, 2009; Quinlan, 2014). Large organisations in particular have pursued more flexible employment and working arrangements as a way of either shedding their employment obligations by outsourcing work to small, often less regulated companies or by having a largely precariously employed workforce who compete for fewer and fewer jobs (Quinlan & Wright, 2008; Weil, 2014). Outsourcing has also created complex chains of suppliers, distributors and contractors, and has shifted the risk onto a burgeoning casualised workforce who are forever chasing diminishing employment opportunities (Weil, 2014; Lamare, Lamm, McDonnell, & White, 2015). The cumulative result has been declining wages, eroding benefits, inadequate health and safety conditions, and an ever widening income inequality (Wilkinson & Pickett, 2009). The construction industry, with its increasing use of contracted labour, epitomises the changes to working arrangements that we see across many other industries. The construction industry is notorious for its short-term contracts, complex sub-contracting chains and informal employment practices; all of which leave workers open to exploitation (Lingard, Cooke & Blismas, 2009). Moreover, over half of all construction businesses in OECD (Organisation for Economic Co-operation and Development) countries are small firms employing fewer than 10 employees, (OECD, 2008) in which a large percentage of the employees are contingent, migrant workers (OECD, 2009). Compared to other

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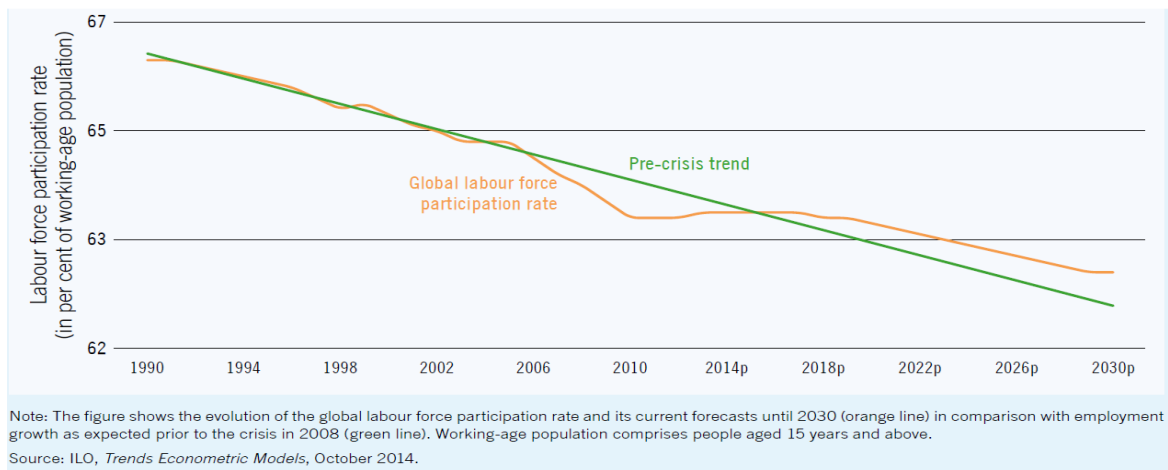
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occupational groups, the injury, illness, and fatality rates amongst construction workers are some of the highest in New Zealand (Workplace Safety & Health Institute, 2014; Statistics New Zealand, 2015a).

Using Quinlan and Bohle's (2004; 2009) 'Pressures, Disorganization and Regulatory Failure' (PDR) model and the construction industry to frame the changing nature and organisation of work and the impact this has had on the OHS of sub-contracted construction workers, we consider the issues in the wider context of the vulnerability of workers. By focusing on the construction industry in New Zealand, post-2010 Canterbury earthquake, we hope to shed light on why the rates of injuries, illness and fatalities among vulnerable construction workers remain stubbornly high. To support our arguments, we draw on government data and secondary data located in scientist reports, and the like. Finally, we discuss what can be done going forward in terms of creating a more effective regulatory regime and a safer and healthier industry. In so doing, we consider (albeit briefly) recent developments in vulnerability theory (e.g. Fineman, 2008) in order to assess their applicability. However, it is necessary to first define what we mean by "vulnerable workers" as well as commenting on the increase in the number of vulnerable workers and under what circumstances workers become "vulnerable".

Rise of the Vulnerable Workers

The post-war standard form of employment began to deteriorate in many of the OECD countries from the late 1980s onwards for a number of reasons (Quinlan, Mayhew, & Bohle, 2001; Auer, 2006; Burgess, Campbell, & May, 2008; Connelly & Gallagher, 2004; MacEachen, Polzer, & Clarke, 2008; Kalleberg, 2009; Quinlan, 2012). Increasing globalisation, mounting competitive pressures, and an expanded labour market created the need for greater labour flexibility, further threatening standard employment and traditional tripartite employment relationships (ILO, 2015). Moreover, labour force participation rates have been falling over recent decades, reflecting a loss of more than 37 million potential workers from the global labour force (ibid). It should be noted, however, that in the construction industry, labour participation fluctuates dramatically as a result of the 'boom and bust' nature of the industry (Ministry of Business, Innovation and Employment, 2016a). Nonetheless, long-run trends point to further declines, with participation rates predicted to fall significantly below 63 per cent of the global working-age population by 2030 (ILO, 2014; see Figure 1). In New Zealand, the unemployment rate, particularly among young workers and ethnic minorities, has crept upwards, and the participation rate has begun to slide downwards (Ministry of Business, Innovation and Employment, 2016b). More specifically, there are pockets of structural unemployment, a widening income and wage inequality, the rise in insecure work and the reliance on migrant labour to plug skill shortages in industries, such as construction, tourism and hospitality (Rasmussen, Lamm, & Ravenswood, 2016). Another related trend is the prevalence of reclassifying a 'full-time, permanent employee' to 'an independent contractor' or 'casualised employee' which has significantly altered the employment relationship as the former status is often linked to employment benefits and entitlements not afforded to the latter (refer to Donahue, Lamare, Kotler, & Fred, 2007; Nuttall, 2011; Lamare et al., 2015).

Figure 1: Global labour force participation rate: Projections vs trends, 1990-2030

Structural phenomena, such as a downturn in the economy and resultant unemployment, weakened trade union presence and shifts in industry, and occupational employment patterns have also created an underclass of vulnerable workers who are powerless “...to maintain desired continuity in a threatened job situation” (Greenhalgh & Rosenblatt, 1984: 438). However, Quinlan, et al. (2001), Evans and Gibb (2009) and Croucher, Stumbitz, Quinlan, & Vickers (2013) note that deteriorating employment conditions and wages are not new issues. What is new is the ‘great risk shift’ that has occurred in recent years, whereby key social risks are increasingly transferred away from governments and employers onto the individual. This, together with corporate and public policies giving “...a greater role to market forces within the workplace, have been key determinants in the erosion of the standard employment relationship” (Evans & Gibb, 2009: 5).

With unemployment and underemployment, there are degrees of vulnerability whereby some individuals and groups are more exposed to exploitation than others (Sargeant & Tucker, 2009:1). Highlighting the factors that contribute to the vulnerability of workers has also been part of a wider discussion that includes the ILO’s Decent Work Agenda and the Living Wage Campaigns (Anker, 2011). As noted in the ILO’s ‘Decent Work Agenda’:

People throughout the world face deficits, gaps and exclusions in the form of unemployment and underemployment, poor quality and unproductive jobs, unsafe work and insecure income, rights which are denied, gender inequality, migrant workers who are exploited, lack of representation and voice, and inadequate protection and solidarity in the face of disease, disability and old age (ILO, 2006:1)

Not only have there been attempts to expose the working conditions of vulnerable workers, but there have also been attempts to identify particular groups of vulnerable workers, as outlined below in Table 1 (see the British Trades Union Congress’ (TUC) Commission on Vulnerable Workers, (2007) and ILO (2012) – From Precarious Work to Decent Work).

Table 1: Groups of vulnerable workers

<ul style="list-style-type: none"> Agency workers and other ‘atypical workers’ (for example, casual workers and some freelancers) 	<ul style="list-style-type: none"> Young workers: who are not entitled to the same rates of the minimum wage as others and are more likely to face exploitation
<ul style="list-style-type: none"> Industrial home-workers: who are often denied even the most basic employment rights 	<ul style="list-style-type: none"> Unpaid family workers: employed across a range of businesses with no legal protection at work
<ul style="list-style-type: none"> Recent migrants: who are more likely to face extreme discrimination, dangerous working conditions, and a range of other abuses – including forced labour 	<ul style="list-style-type: none"> Informal workers: working across many industries, with those already facing disadvantage the most likely to be exploited

A great deal of the empirical work and conceptualisation on the vulnerability of workers starts with the premise that precarious employment is at the heart of the problem (see Quinlan & Mayhew, 2001; Tucker, 2002; Fineman, 2008; Sargeant & Tucker, 2009; Standing, 2011). For most workers, the precarious nature of their pay and conditions have eroded minimum standards set out in collective agreements and employment law, thus creating a situation where workers have become increasingly vulnerable. The PDR model attempts to explain the poor OHS outcomes of precariously employed, vulnerable workers (Quinlan & Bohle, 2004: 2009). The model, outlined in Table 2, is useful in that it organises a number of factors that have a negative impact on the OHS of precarious workers into three categories: economic and reward pressures; disorganisation at the workplace; and regulatory failure (ibid). The first category entails employment and income insecurity as well as intense competition for work, which in turn can contribute to a range of hazardous practices, including work intensification, working when injured, and holding down multiple jobs (ibid).

The second category, disorganisation, concerns the lack of commitment by businesses to invest in a stable workforce. Here, disorganisation is not simply a result of employer oversight, it is “...a characteristic feature of the relationship between contingent workers and their employers” (Quinlan & Bohle, 2004: 93). Using the PDR model to explain the how precarious employment affects the health and safety at work, Underhill and Quinlan (2011: 399) note that:

Where workforce instability prevents the sustaining of established rules, procedures and roles, then OHS knowledge and management systems become fractured, whilst inter-worker communication, task co-ordination, and lines of management control are weakened. Under-qualified, under-trained and inexperienced workers become more commonplace. In this setting, contingent workers are less able to collectively organize or be heard at the workplace. Use of temporary workers affects employer attitudes to induction, training, participation in workplace committees, and other activities with implications for safety.

Regulatory failure is the third and critical category and refers to the extent to which OHS and employment legislation is weakened by precarious employment arrangements (Underhill & Quinlan, 2011). Quinlan and Bohle (2004) argue that employment protection and minimum entitlements become ineffectual when vulnerable workers are less cognisant of their entitlements and their employers are less inclined to comply. OHS regulatory inspectors also encounter difficulties, such as identifying those with legal responsibility in multiple-employer worksites (Quinlan and Bohle, 2004; Underhill & Quinlan, 2011).

Table 2: Risk Categories Associated with the PDR Model

Economic & Employment Pressures	Disorganisation at the Industry & Workplace	Regulatory Failure
Insecure jobs (fear of losing job)	Short tenure, inexperience	Poor knowledge of legal rights, obligations
Contingent, irregular payment	Poor induction, training, and supervision	Limited access to OHS, workers' compensation rights
Long or irregular work hours	Ineffective procedures and communication	Fractured or disputed legal obligations
Multiple jobholding	Ineffective OHSMS/ inability to organize	Non-compliance and regulatory oversight (stretched resources)

Source: Underhill, E. & Quinlan, M. (2011) How Precarious Employment Affects Health and Safety at Work: The Case of Temporary Agency Workers, *Industrial Relations Quarterly Review*, 66(3): 397-421.

Underhill and Quinlan (2011) argue that many of the risks associated with economic pressures and disorganisation are based upon and compounded by regulatory failure. Indeed, limited resources allocated to OHS regulatory agencies result in a preference for 'demonstration effect' prosecutions of large stable companies. That is, larger employers are more readily identifiable by regulators, have more capital and reputation to protect, and are unable to 'disappear' when threatened with prosecution. Conversely, smaller businesses often operate without fear of prosecution in the knowledge they can 'disappear' should an employee be sufficiently severely injured to warrant prosecution (also see Lamm, 2002). Moreover, the OHS legislation in New Zealand, as in many other countries, exempts small businesses from having to provide formalised employee participation systems (e.g. have elected worker representatives and establish health and safety committees). These regulator features, together with other factors, such as the difficulties many vulnerable workers face when raising health and safety issues within small businesses, can compromise the OHS outcomes of these workers.

In the next two sections, we endeavour to apply Quinlan and Bohle's (2004; 2009) PDR Model to help understand the interrelated factors that characterise the New Zealand construction industry. In doing so, we hope to explore why traditional approaches to OHS are no longer viable in protecting vulnerable workers and that new solutions and theories are necessary.

Economic and Employment Pressures in the Construction Industry

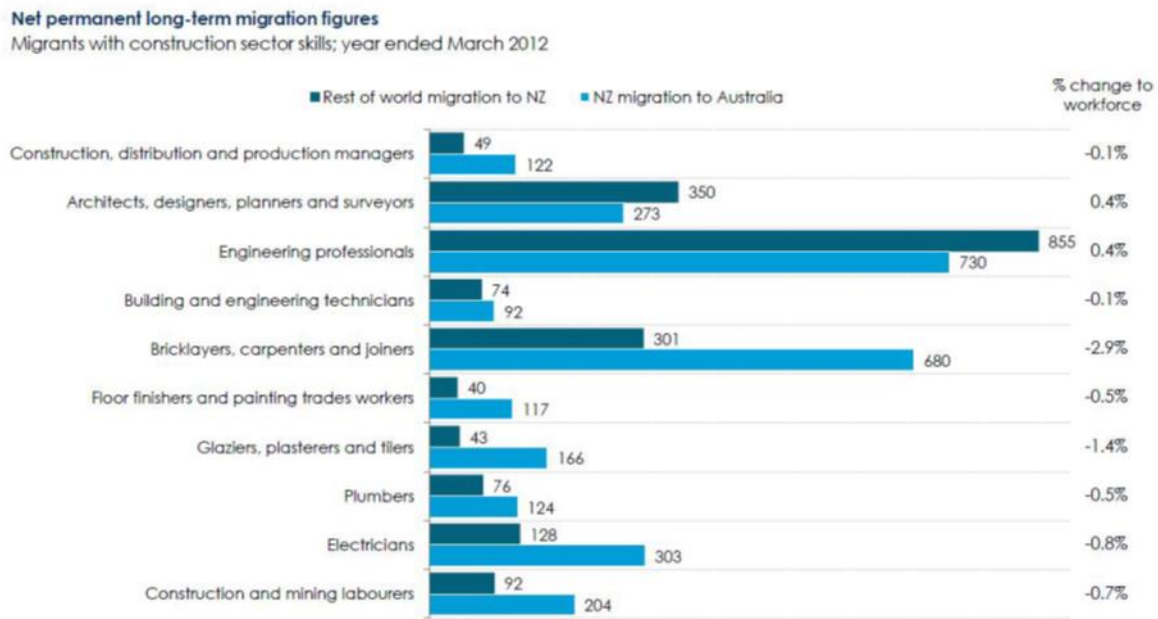
The construction industry is the fifth largest in the New Zealand economy and represents 12 per cent of the total workforce (Ministry of Business, Innovation and Employment, 2016b). The New Zealand construction workforce itself covers a wide range of skill levels, from labourers and tradespeople to project managers and engineers (Ministry of Business, Innovation and Employment, 2016c). Moreover, 97 per cent of businesses in the construction industry are small, employing 20 or fewer workers, with many operating as self-employed contractors (Statistics New Zealand, 2016a). These small businesses also operate within complex sub-contracting environments across multiple sites (Ministry of Business, Innovation and Employment, 2016a). These facts have two important implications. First, a higher proportion of businesses relative to employment indicates that the average business size for

this industry is smaller than that of other industries in the economy. In addition, as the average size of businesses in this industry is small, it is likely that most firms lack the breadth and depth of finances and/or business acumen to invest and implement, human resource policies and practices, such as training and development and OHS (Lamm & Walters, 2004; Lamm, 2014, Nagar, 2015). Second, the productivity rate for the New Zealand construction industry is 30 per cent below that of Australia (Ministry of Business, Innovation and Employment, 2014; 2016c; also see Kane, (2012)). Some have argued that the significant proportion of small construction businesses, which typically suffer from short life-cycles and are likely to be under-resourced, may help to explain the industry's relatively low productivity (New Zealand Building and Construction Sector Productivity Taskforce 2009). Tran and Tookey (2011: 58) in their study into labour productivity in the New Zealand construction sector noted that:

Between 1997 and 2007, the basic construction costs (material and labour) remained stable while values of works grew at significantly higher rates. This result suggests that, in theory, NZ construction should have performed exceptionally well in terms of labour productivity. However, productivity statistics showed that overall the performance of NZ construction was actually decreasing. This contradiction suggests that when extraneous factors are taken into consideration, labour productivity might have performed much worse than we had expected.

Not only does the New Zealand construction industry have stubbornly low levels of productivity but, as stated earlier, the industry is also susceptible to boom and bust cycles (Chang-Richards, Wilkinson, Seville, & Brunsdon, 2012; 2013; Ministry of Business, Innovation and Employment, 2014). It should also be noted that construction workers are the fourth lowest paid in New Zealand (Statistics New Zealand, 2015b). The industry also employs a relatively young workforce with high concentrations of Maori and Pasifika workers (ibid). These attributes tend to increase the industry's vulnerabilities to disturbances in social and economic climates (Chang-Richards, et al, 2012, 2013). As the graph below shows, there was a dramatic downturn in employment in the construction industry prior to the Canterbury earthquakes which led to the shrinking number of skilled labour (Figure 2). The subsequent labour shortage of skilled construction workers at a time of high demand post-2010 earthquakes and the expansion of Auckland, (New Zealand's largest city), meant that skilled labour has had to be largely imported. This was predictable as the cyclical construction industry has always relied on migrant labour when there has been upturn in the industry (McLeod & Maré, 2013; Rotherham, 2016). Moreover, because the New Zealand construction industry has traditionally lost workers to Australia in search of better prospects, it has become highly dependent on migrant workers during so-called 'building booms' (Ministry of Business, Innovation and Employment, 2016b).

Figure 2: Employee Migration in the Construction Industry to and from New Zealand



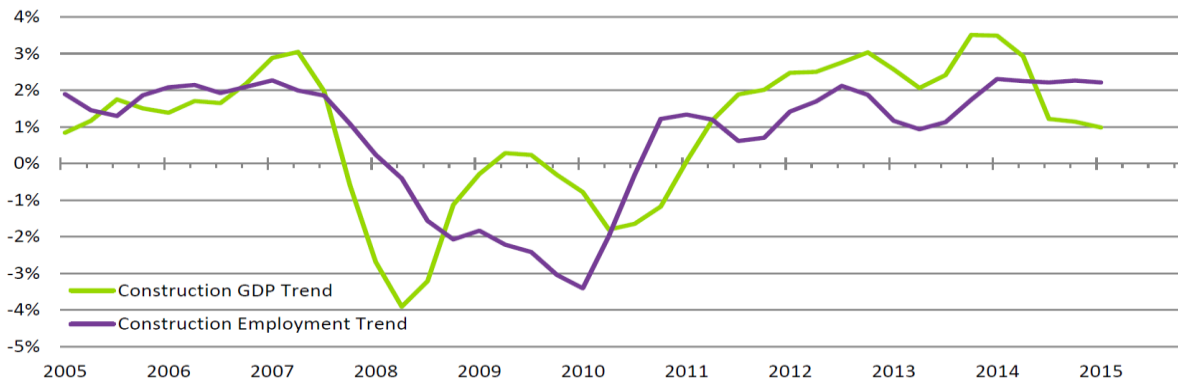
(Source: Ministry of Business, Innovation and Employment, 2016b)

While the number of temporary migrants decreased across New Zealand in the 2010 and 2011 following the global economic crisis (see Figure 3), the numbers rebounded from the 2012 onwards with the beginning of the Canterbury rebuild and the economic recovery (ibid). Many of the jobs, however, are temporary and the scale of precarious employment in the construction industry was highlighted in a recent article by Rotherham (2016: 1):

On a typical day, the country’s largest recruiter and temporary labour provider, AWF Madison Group, has 3500 blue-collar workers out on the job. Most are Kiwis, though the company hired 350 Filipinos for the Christchurch rebuild. Now chief executive Simon Bennett wants to hire a further 1000 migrants by the end of 2017 to fill a shortage of skilled construction workers in Auckland. A road map of the unprecedented levels of forecast growth in the Auckland construction industry through to 2018, when it’s expected to peak, shows a “wall of work” that will create 32,000 extra jobs.

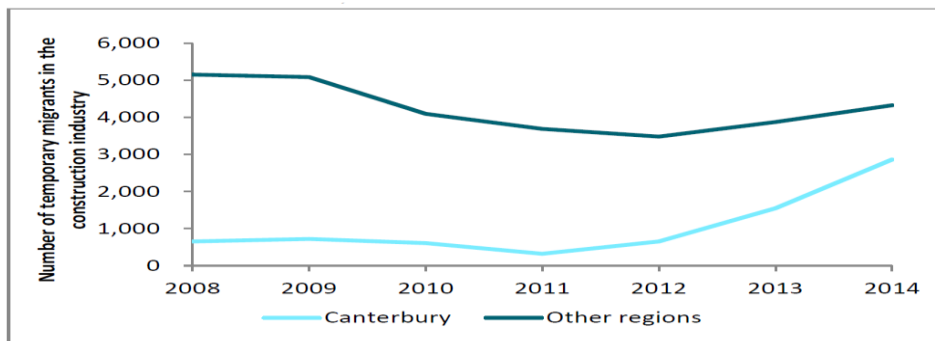
As stated, the number of temporary migrants working in construction in Canterbury has accelerated and now accounts for 40 per cent of all temporary migrant construction workers in New Zealand (Ministry of Business Innovation and Employment, 2015a). While New Zealand data is fairly crude, it does show that the largest increase in immigrant workers has been from the Philippines, with almost half of the work visas granted for the Canterbury rebuild were allocated to Filipinos, working as carpenters and joiners and painting trades workers (see Figure 4 and 5).

Figure 3: Quarterly employment and real GDP growth to March 2015



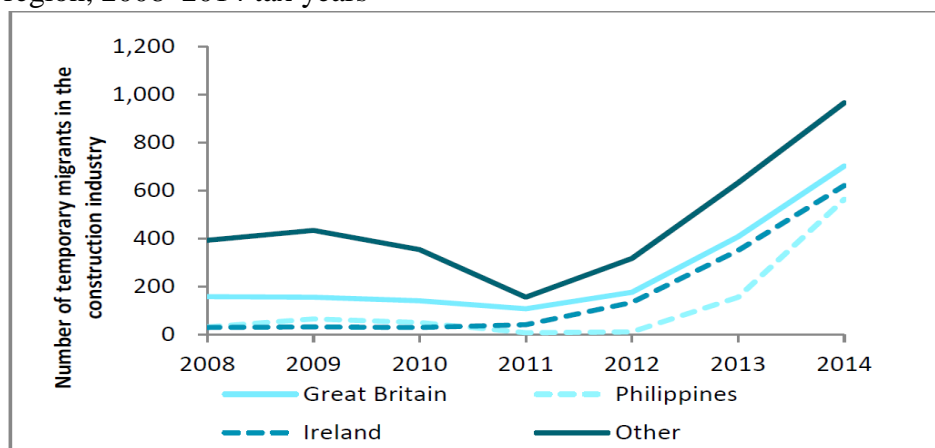
Source: Ministry of Business Innovation and Employment, (2015b)

Figure 4. Temporary migrant trends in the construction industry, Canterbury and other regions, 2008–2014 tax years



Source: Ministry of Business Innovation and Employment, (2015b)

Figure 5: Migrants in the construction industry by country of origin and tax year, Canterbury region, 2008–2014 tax years



Source: Ministry of Business Innovation and Employment, (2015b)

Growing anecdotal evidence and media attention over the exploitation of migrant workers not only by their employers but also by the recruitment agents and landlords, prompted the Ministry of Business, Innovation and Employment to commission a study – *Vulnerable Temporary Migrant Workers: Canterbury Construction Industry* (see Searle, McLeod & Ellen-Eliza,

2015). The study concluded that migrants in the Canterbury construction industry were affected by a variety of exploitative practices. Most commonly mentioned were:

- excessive amounts of money charged by recruitment agencies in the migrant worker's country of origin - migrant workers hired by labour hire companies or small businesses were also considered particularly vulnerable to exploitative practices;
- contract substitution or situations where terms and conditions of a migrant's contract were not met;
- situations where migrants were subjected to practices that were not in breach of minimum standards but were considered poor employment practices;
- situations where employers were not meeting minimum employment standards; and
- concern about the use of the 90-day trial when recruiting from overseas.

In another report on vulnerable workers in New Zealand, Lambert (2014: 36) uses the following extract to illustrate how New Zealand-based recruitment and building companies operating in rebuild of Christchurch are exploiting migrant workers:

Major Holdings Limited was registered in October 2013 and went insolvent in June 2014. During its operational months, it recruited about 7 carpenters from the Philippines and offered them a "package deal" to come to New Zealand to work. Each man paid about \$4,000 for airfares, visas, orientation and the contract with Major Holdings (and most are in debt to Filipino lenders). Major Holdings provided overcrowded accommodation (3 men to a single room with cooking facilities), and witnesses told of having eight (8) men staying in a converted garage. Despite these conditions, each man paid rent of \$150 per week. After the company liquidated, the men were left stranded at the mercy of Immigration New Zealand to decide whether they would be deported as they were in breach of their visa conditions (for not working for Major Holdings), or if another visa would be issued to them to allow them to obtain alternative employment.

In another similar study on the exploitation of migrant construction workers in Canterbury, it was found that there was evidence of racism (Searle et al., 2015). The most frequently reported instances were:

- in public places, where hostile or aversive racism commonly takes the form of verbal denigration by a stranger; and
- in the workplace, where subtle, or symbolic racism in job seeking and career advancement leads Asian migrants to have on average the lowest wages of any cultural grouping in New Zealand according to the 2006 census.

As we have seen, the New Zealand construction industry, particularly in Canterbury, typifies the primary elements of Quinlan and Bohle's (2004; 2009) model. That is, it is characterised by employment and income insecurity as well as intense competition for work, and a heavy reliance on cheap vulnerable migrant labour – all of which constitute a high degree of complexity. In the next section we will see how these features have contributed to a range of hazardous practices, including work intensification, working when injured, and multiple job holding, resulting in the construction industry having one of the highest rates of injuries and fatalities. Moreover, we assert that it is no coincidence that there is a relationship between high rates of work-related injuries and fatalities and a prevalence of exploitation of vulnerable groups of workers.

Disorganisation in the Industry

New Zealand's injury and fatality rates are high compared to other similar countries. In a recently published comparison of fatal occupational injury rates by Workplace Safety and Health Institute (2014), New Zealand's construction industry ranked ninth out of 9 countries, with a fatal occupational injury rate of 15.3 per 100,000 person years. Australia (4.4 fatalities) and Norway (4.4 fatalities) had the lowest rates in the construction industry. Unlike some other countries included in the study, official ILO data for New Zealand included self-employed workers. Given that this industry contains a high proportion of self-employed workers (over 35 per cent), Lilley, Samaranayaka, & Weiss (2013: 23) argued that, when compared with countries that exclude self-employed workers in construction, it is likely that the magnitude of New Zealand's fatal occupational injury rates could be over-estimated.

Notwithstanding Lilley's comments, the New Zealand construction industry, particularly residential construction, still has one of the highest injury, illness and fatality rates in the country (Statistics New Zealand, 2016b). Between 2011 and 2015 the construction industry had the second highest number of work-related deaths (33) and recorded the second highest number of work-related claims lodged by workers (21,300 claims) (WorkSafe Annual Report, 2016). The total number of reportable injuries in building and allied trades in New Zealand was some 25,557. By 2013, the occupation groups with the most work-related injury claims were trades workers (35,500 claims), compared to agriculture and fishery workers (31,200 claims) plant and machine operators and assemblers (25,200 claims) (Statistics New Zealand, 2014). While these statistics might be high, the real figures could be higher. A recent survey of workers and employers suggests that a serious level of under-reporting of accidents (see Nielson, 2015). When asked how often hazards, near misses and accidents were reported to bosses/supervisors, only two out of 10 workers and around three out of 10 employers in the construction industry said they believed this happened "all the time". More disturbingly only 28 per cent of employers said that serious harm incidents in their businesses had been reported to WorkSafe (Nielson, 2015:11). One explanation for the rise in the number of injuries and fatalities in the New Zealand construction industry is that workloads have risen exponentially, driven by the Canterbury rebuild, along with the demand for housing and infrastructure in Auckland and remedial work relating to the weather-tightness issue (Ministry of Business, Innovation and Employment, 2014: 24). These pressures potentially increase the risks to health and safety.

What was missing from the discourse around the OHS of Canterbury construction workers, however, was the exposure levels to hazardous dust particles. Pressure from health officials and the general public experiencing clouds of dust containing large quantities of silica and asbestos from fallen masonry and the liquefaction, however, resulted in WorkSafe New Zealand commissioning a pilot study – *Exposure to silica dust in the construction industry in the Canterbury rebuild: A pilot study* (Douwes, Glass, McLean, 't Mannetje, 2015). The main findings of the study show a lack of knowledge of the risk of silica dust, a lack of efficient dust suppression methods, a large number of construction workers not using respiratory protection, and sampling results of silica exposure exceeded national and international workplace exposure standards. The authors concluded that workers performing selected 'at risk' tasks in the New Zealand construction industry are being exposed to levels of respirable dust and respirable crystalline silica (RCS) exceeding national and international standards. Preliminary data suggest that control measures currently applied may not be adequate to protect workers from adverse respiratory effects. The authors argue that urgent action is required to reduce silica

exposure in the New Zealand construction industry given the results of their study and other international research (ibid).

As outlined above, the context in which Canterbury construction workers are exposed to occupational injury and disease is complex in that the workforce is diverse and comprises a network of supply chains across four construction areas (commercial, housing, civil and specialist trades), including a prevalence of small and medium-size (SMEs) subcontracting firms operating within multiple-site configurations (Ng, Cheng, & Skitmore, 2005; James, Johnstone, Quinlan, & Walters, 2007; PricewaterhouseCoopers 2011). Managing OHS among subcontractors can be difficult, because they are at risk of slipping through safety checks and often fail to adopt adequate health and safety practices, or may be shielded by contracting firms who compromise health and safety in return for completing work more quickly and profitably (Ng et. al, 2005). Further, as stated earlier, the business cycle is experienced more acutely in the construction industry when compared to other industries and has a significant impact on firms' employment and OHS (Lin & Mills, 2001; Allan, Yin & Scheepbouwer, 2008). That is, when the industry experiences a boom, the industry suffers from capacity constraints, while in the case of a bust, many workers tend to lose their jobs as firms try to cut costs, especially in areas deemed to be inconsequential (such as OHS). Also when the industry experiences a downturn, there is a tendency to price at or below cost in order to win the contract which has consequences for the quality of work, employment and training and viability of businesses (Ruddock & Lopes, 2006).

The industry is also divided, with underlying tensions coalescing around the lucrative safety training space (Sherratt; Farrell; & Noble, 2013; Bahn & Lamm, 2014). Riding on the back of the previous and current legislation, numerous industry training providers, most of which are small businesses, have been launched over the past decade. Typically these organisations offer safety training (the emphasis is on safety with little mention of health) and provide a system of identity cards showing the level and type of training the card holder has gained. As a result, there is a proliferation of OHS training providers and registration schemes. Each of the large players in the construction industry has a particular preference as to which scheme they require all their workers and their main subcontractors to subscribe to (Bahn & Lamm, 2014). Quinlan and Bohle (2004) argue, however, that workers in precarious employment are rarely afforded the same benefits, such as training, compared to those workers in more stable employment relationships. As outlined above, the construction industry and central government have failed over the years to invest in a stable workforce and instead have contributed to the fluctuations in the labour market by taking a just-in-time approach (see Rasmussen, 2010) which has implications for health and safety training for *all* its workers. As we will see in the next section, the employment relations and health and safety legislation has also done little to moderate the excessive use and abuse of casual labour.

OHS Regulatory Failure and Vulnerable Workers

As with other similar commonwealth countries, New Zealand adopted a generalist approach to managing OHS. During the 1970s, a number of jurisdictions acknowledged regulatory deficiencies in the area of OHS and in response conducted their own reviews, notably the UK with Lord Robens' Report, Safety and Health at Work (1972). Two main features outlined in the Robens' Report were seen by New Zealand and other Commonwealth governments as essential to effective administration of, and long-term compliance with, OHS legislation:

- A single Act covering all workers, administered by a single unified inspectorate; and
- The creation of a joint, self-regulatory approach where the responsibility for health and safety is placed firmly back into the workplace, that is, the ownership of ‘duty of care for workers’ is no longer solely with the State but instead with employers and employees. The participation of employees is formalised via the mechanism of representation on workplace health and safety committees.

The New Zealand Health and Safety in Employment Act, 1992, however, deviated from the Robens’ model in that it did not stipulate the participation of employees in the decisions affecting their health and safety; the Act made only vague reference to the involvement of employees in health and safety issues. This was not surprising, given that the employment legislation introduced by the right-wing National Government failed to recognise trade unions as legitimate representative of the workers or countenance worker participation and instead promoted the unitarist approach to work (Quinlan, Bohle & Lamm, 2010). Moreover, since the mid-1980s, successive governments have, to a greater or lesser degree, “rolled back the state” and directed the Department of Labour (now defunct) to focus exclusively on core labour market functions while taking a “side-line” position to most aspects of employment, including industrial disputes and frontline enforcement. As a result, the Department’s role shifted from one that was primarily concerned with enforcing the regulations to a more passive, consultant-like role, dispensing advice via a centralised call centre and often without the necessary expertise or staff to effectively undertake their statutory duties of enforcement.

Although the Labour Coalition Government of 2000-2008 endeavoured to remedy a number of weaknesses inherent the Health and Safety in Employment Act, 1992, including introducing worker participation, enforcement deficits were not addressed until the tragic mining accident in November, 2010. The year 2010-2011 will be known in New Zealand as *annus horribilis*. Within a period of five months, New Zealand had not only experienced a major mining disaster, killing 29 workers, 13 of whom were construction workers, but also two major earthquakes which killed 185 people. It was the disaster at the Pike River Coal Mine that finally bought action to address the failings of the OHS enforcement and compliance. The role that the OHS inspectors played in the lead up to the Pike River Coal Mine disaster was seen as a pivotal cause of the failings at the mine. Internal investigations as well as submissions made to the Royal Commission of Inquiry and the later Independent Taskforce all highlighted the fact that the enforcement role of the inspectorate had been considerably reduced and that there was a general lack of mine safety expertise among the senior public servants as well as inadequate legislation (Macfie, 2013).

The subsequent statute, the Health and Safety at Work Act, 2015, is designed to make senior managers more responsible for OHS, particularly those operating in hazardous industries. However, the final version of the OHS legislation was a pale shade of its earlier, more robust version. It was entirely predictable that the legislative process was captured by powerful lobby groups, most notably from the agricultural and small business sector who successfully argued that their sectors were not hazardous, in spite of all the evidence to the contrary (Rasmussen et al., 2016). In short, the campaign was very effective in that the problems and issues of the OHS law were redefined and then dismissed as unimportant. For example, the worker representative provisions in the new Act have been considerably diluted and now exempt non-hazardous, small businesses from any formal worker representation process. As an editorial (New Zealand Herald, 2015) succinctly notes:

The bill should not exempt small workplaces from the obligation to have a work and safety representative if their staff request one. In its original form, it did not contain an exemption but the National Party clearly came under intense lobbying from small business interests while the bill was before a select committee. It emerged with an exemption for workplaces with fewer than 20 employees, unless the industry was on its schedule of high risk. This would be a marginal improvement on the present law, which exempts employers of up to 30 people, but there is no good case for any exemptions. If there was, the Government would be making it. In the absence of a compelling reason, it can perhaps be assumed National MPs were persuaded the bill as originally drafted would have exposed small employers to external unions, giving them a foot in their door as health and safety representatives.

The question is: What does this mean for workers in the construction industry? Here Quinlan and Bohle (2004) and Underhill and Quinlan (2011) argue that OHS and employment legislation is weakened by precarious employment arrangements prevalent in the construction industry. They also argue that employment protection and minimum entitlements become ineffectual when workers are less cognisant of their entitlements and their employers are less inclined to comply. In spite of recent regulatory reforms in both Australia and New Zealand, OHS regulatory inspectors still encounter difficulties, such as identifying those with legal responsibility in multiple-employer worksites in the industry (Underhill & Quinlan, 2011; Lamm et al., 2013). Moreover, the weak regulatory oversight, together with poor levels of compliance, undermine accessibility of workers' compensation by vulnerable workers (Quinlan et al., 2010). There is a substantial evidence to show that, for a number of reasons, there is a significant under-reporting of workers' compensation claims among vulnerable workers in precarious employment (Lamm, 2014).

In summary, while Quinlan and Bohle's (2004; 2009) PDR model and other similar models, such as Sargeant and Tucker (2009), are useful as "...a means of explaining the poor OHS outcomes experienced by precariously employed, vulnerable workers", there is still a great deal to be learnt regarding the context and different forms vulnerability and more importantly, what can be done to reduce the level of vulnerability. It is argued, therefore, that it is necessary to build on the PDR and other models, in order to elevate current theorising to the next level.

Conclusions and a way forward

Using the Canterbury rebuild as an example of how and under what circumstances workers can be exploited in a so-called "civilized country", we can see that customary labour practices, underpinned by minima standards together with traditional methods of regulatory enforcement are ill-equipped to protect the OHS of vulnerable workers. Moreover, while the extant models are sufficiently robust and adroit to explain the levels of complexity in an industry, like construction, and to expose the hidden practices of extortion, blackmail and exploitation that pervades the world of the vulnerable worker, we are still no closer in determining why existing labour standards and state intervention have done little to stem the deteriorating employment conditions and pay. More importantly, how do we advance the conceptualisation of vulnerability? In this regard, Fineman (2008) offers a possible solution. In her essay, 'The Vulnerable Subject: Anchoring Equality in the Human Condition', Fineman (2008: 19) argues that:

...we must think beyond current ideological constraints and consider the possibility of an active state in non-authoritarian terms. This theoretical task—reconceptualising the role of the state—requires that we imagine responsive structures whereby state involvement actually empowers a vulnerable subject.

There has been an expectation shared by unions, employers, and the general community that, in matters concerning the health and safety of workers, some state intervention through legislation is necessary, if only to set minimum standards and punish gross violators. The justification for such legislation and its enforcement can be seen in several ways. First, management may consider the safety and health of the labour it employs to be unimportant and/or, in the face of competitive pressures, fail to provide sufficient protection for workers. Second, workers in such circumstances are relatively powerless to protect themselves, particularly when there is a large pool of unemployed labour and unions are weak. Third, enforcement is the mechanism by which people or organisations are held to account for their actions or inactions (Lamm, Rasmussen & Anderson, 2013). As Fineman (2008:19) notes the state is required to ensure that institutions and structures within its control do not inappropriately benefit or disadvantage certain members of society. She adds that:

The legislature and its actions would become the primary institutional manifestation of the state. Its mandate would be to be responsive to vulnerability, which would result in a more nuanced sense of what constitutes equal opportunity than currently theorized—one that is more sensitive to existing inequalities and more demanding of the state. This imperative would be placed on the legislature and executive in the first instance: the mandate to be more responsive to and reflective of vulnerability. The legislative and executive fulfilment of that imperative ultimately would be monitored or supervised by the courts, looking to see if the state fulfilled its responsibility in assessing individual equality claims.

The question is, then, what can be done going forward in terms creating a safer and healthier industry for all workers, including vulnerable workers? Simply being able to explain the challenges and linking them to the underperformance in OHS in the New Zealand construction industry does not remove the problem. Although challenging, it is imperative to consider possible solutions that could assist the New Zealand construction industry in developing the appropriate OHS mechanisms to protect its most vulnerable workers. Whilst there is minimal definitive research, it is not unreasonable to conclude that the New Zealand construction industry is inefficient and ineffective because of two reasons (see Statistics New Zealand, 2016b). First, the firms and the industry as a whole operate in an environment of conflict rather than collaboration (PriceWaterhouseCoopers, 2011; Bahn & Lamm, 2014). Second, the industry is structured such that the traditional divide of design and construction firms, together with the hierarchy of sub-contractors and suppliers means that much of the knowledge on how to manage OHS strategies more efficiently is fragmented and often not shared (Bahn & Lamm, 2014).

Given that construction projects are technologically and organisationally complex, there is a need to manage the interests and influences of multiple project contributors, workers

and stakeholders on OHS practices (Lingard, 2013). As a suggestion, an industry OHS network similar to the Canterbury Safety Charter would provide a useful mechanism to manage the interests of multiple stakeholders' whilst ensuring the provision of adequate OHS measures at firm level. The proposed industry network could facilitate greater interaction amongst the government, industry, and the firms on the protection of marginalised, vulnerable workers. This intra-industry collaboration could foster more collaboration and greater sharing of knowledge and resources on OHS practices aimed at reaching vulnerable workers. Collaboration at an industry level could also assist in creating an operative network at a firm level. Such an operative network would allow the firms (both contractors and sub-contractors) to gather necessary resources and knowledge, critical to maintaining appropriate OHS standards and ensuring the safety of the workers. Such a network may also encourage the development of strong integrating mechanisms, as in the absence of such measures, discrepancies can produce deep fractures, conflicting interests, communication failures and a lack of clarity concerning responsibility for OHS both for the workers and the firms (Lingard, 2013).

Furthermore, competitive tendering practices which result in most contracts being awarded to the lowest bidder often compel businesses to drive their prices low, in an effort to cut costs, which in turn, affects health and safety considerations (Nagar, 2015). Cost pressures are then usually passed down to the smaller subcontractors (Weil, 2014), causing recurrent health and safety problems (Lingard, 2013). Recognising this gap, the New Zealand government and local industry bodies (such as construction strategy group and Building Research Association of New Zealand (BRANZ)) could work together in the industry to establish funding schemes to ease the financial burden of small construction firms. In doing so, the financial support would perhaps help these firms in establishing a variety of initiatives in the form of safety promotion, and training, which can be implemented to promote safety and health in the workplace. Findings outlined in Bahn and Lamm's (2014) report show that investment is needed at the firm level to ensure that adequate OHS training is provided to *all workers*, irrespective of their employment status, at the onset of every project. It is noted that training and induction procedures are often poorly structured in industries such as construction (Wilkins, 2011). An appropriate level of training, therefore, can result in a greater level of safety awareness and better OHS performance (Pearce, et al., 2007).

The highly transient and often vulnerable nature of the subcontracting workforce and deficit of resources so characteristic of small businesses in the construction industry, tends to complicate employment relationships which in turn causes ambiguity regarding the responsibility for OHS (James et al., 2007; Lingard, 2013; Nagar, 2015). Added to this is the declining trade union density, a political and legal environment that favours individual and decentralised bargaining – all of which have contributed to the lack of employee voice over employment matters, including OHS. Within this challenging working environment, Holland, Pyman, Cooper and Teicher (2009) and others argue that creating alternative, wide-ranging worker participation mechanisms is critical in OHS. They note, however, that alternative worker participation mechanisms on individual and organisational-levels is achievable only if joint consultation is embedded in organisational processes and that there is managerial motivation for joint consultation and alternative voice channels when dealing with OHS matters.

Finally, there is clearly a need for the industry to focus on making significant improvements to the way workers are employed and the conditions they are employed under. The industry, supported by evidence, has identified the OHS issues but not necessarily the solutions. Moreover, as noted in the Royal Commission on the Pike River Coal Mine Tragedy (2012), the prevailing ethos was profit over safety. Given the points discussed in this paper, it is, therefore, suggested that improving the OHS standards and practices within the New Zealand construction industry that takes account of the vulnerability of workers will require deliberate, sustained attention and action from those working in government, related industry agencies and the industry as a whole.

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