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## Improving Productivity Through Enhancing Employee Wellness and Well-being

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## **Third European Congress of the Work and Labour Network**

Rome, 24-26 September 2008

### **Workshop 10: The Role of Participation for Occupational Health and Safety and a Good Working Life**

## **Improving Productivity Through Enhancing Employee Wellness and Well-being**

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### **Introduction**

There has been increasing interest in improving workplace performance to increase productivity in a context of increased global competitiveness. A growing body of evidence also indicates the impact of the work environment on organisational productivity as well as broad economic and social benefits of employment practices which contribute to employee wellness and well-being (Quinlan et al. 2001; Oxenburgh et al. 2004; WorkUK Survey 2005; Pocock 2003). At the same time, substantial evidence over a long period suggests that one specific employment practice, employee participation and influence in decision-making in the workplace, impacts positively on organisational performance and the broader work environment (Markey 2001). However, rarely have these three elements been brought together in research endeavours.

This paper outlines the rationale and methodology for an international comparative project investigating the links between workplace productivity and employee wellness and well being via the operation of representative employee participation structures in Denmark and New Zealand. It specifically focuses on how the nature and effectiveness of representative participative structures impact on productivity and key indicators of the work environment, such as rates of labour turnover and absenteeism, incidence of occupational injury and disease (including stress), work/life balance, employees' opportunities to learn new things on the job, employees' sense of appreciation by employer, consultation of employees over change, provision of on-the-job training, and employees' job satisfaction. Research also frequently associates absenteeism, turnover and provision of training with productivity.

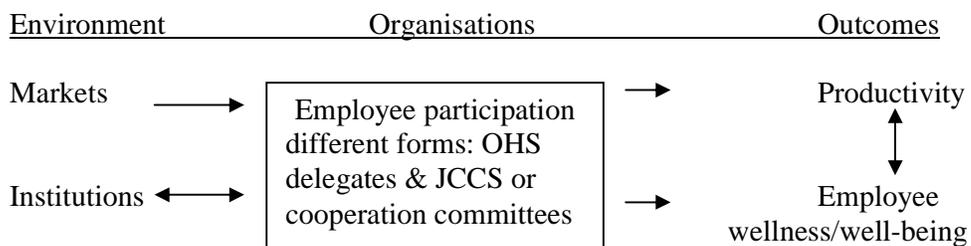
Employee participation and regulation of the working environment occur through two different but potentially interrelated processes:

*law-based regulation and Occupational Health and Safety (OHS) delegates*, focusing on physical disease/injury;

*agreement-based participative structures* such as joint consultative committees (JCCs) in New Zealand or cooperation committees in Denmark, focusing more

broadly on productivity and the work environment, including psycho-social issues affecting wellness/well-being.

Figure 1 below illustrates the links to be investigated.



Separate research teams in Australia, New Zealand, Denmark and Norway are planning to conduct parallel studies in those countries. New Zealand and Denmark have already commenced research fieldwork and will make preliminary comparisons. The countries chosen all have small economies and legislation for health and safety delegates, but in New Zealand and Australia wider participative practice are not well developed by legislation or employer/union agreement as in Denmark and Norway. The comparison between the two blocs of countries will enable us to test the impact of these wider practices on outcomes.

In Denmark the broader structure of representative participation through cooperation committees is specifically concerned with the issues of productivity and the general work environment. It has been observed frequently in international literature that OHS committees of the New Zealand kind may broaden their jurisdiction beyond narrow conceptions of OHS, particularly where no European style works councils/cooperation committees exist to facilitate employee participation (Bernard 1995: 351-74; Knudsen 1995: 45-6, 91-2, 138; Jecchinis 1997: 141-2; Walters et al. 1993, 2005). However, their broader potential is generally not evaluated. In practice it is difficult to separate health and safety from work/life and other broad work environment issues, particularly involving the rising co-occurrence of employee stress and longer working hours (Lamm 2002: 411), or the introduction of new technology or organisational change (Heller 1998: 227). For this reason it will also be of interest to ascertain the demarcation between the different types of Danish committees – cooperation and OHS – over these issues.

We have three specific research questions:

What characterises employee participation in establishments with good and less good working environments?

What correlations are there between effective employee participation, positive work environments and good business outcomes?

What is best practice in employee participation as an instrument in regulation of the work environment?

These questions will test the following hypotheses:

effectiveness of structures for representative employee participation will correlate positively with work environment quality;

work environment quality will correlate positively with business outcomes.

A multi-dimensional theoretical framework will be employed. After assessing the significance of the issues being examined, the paper analyses in turn the literature relating to productivity and performance, the impact of various employment practices on the work environment and organisational performance, and the organisational impact of representative employee participation. We explain our approach to defining productivity or organisational performance, and why we have adopted this approach. We also explore the various employment practices and indicators of the nature and quality of the work environment, and how they impact on productivity or performance. Then we examine the evidence for the impact of representative employee participation upon productivity and performance. Finally, we present the methodology developed for the project as a result of our analysis of the existing literature on productivity, work environment and representative employee participation.

### **Significance**

Productivity, employee wellness and well-being, and employee participation separately comprise major issues of public policy in both New Zealand and Denmark. The links between these issues amplifies their individual significance. Our integration of all these streams for the first time also represents a significant innovation.

### ***Productivity***

New Zealand has faced low productivity growth for 30 years. The average annual growth rate for labour productivity in New Zealand from 1978 to 2007 was 2.0 per cent. In the early 1980s it fell to 1.4 per cent, then improved to 2.9 per cent in the late 1980s before declining slightly and fluctuating in the 1990s after radical and wholesale decollectivisation of the industrial relations system under the Employment Contracts Act 1991. From 2000 to 2007 annual labour productivity growth fell again to 1.1 per cent, after the Labour government's efforts to recollectivise the industrial relations system with the Employment Relations Act 2000. However, growth in capital and multifactor productivity was also weak, and actually negative for capital productivity in 1978-2007 (-0.7 per cent). Whereas capital deepening was the main contributor to New Zealand's labour productivity growth in the 1980s, multifactor productivity was the main subsequent contributor, and the capital-labour ratio fell from a high of 7.2 at the end of the 1980s to 1.2 immediately after the Employment Contracts Act 1991 (StatsNZ 2008). This probably reflects the low wage regime which this legislation ushered in, removing major incentives for employers to invest in capital. However, the capital-labour ratio has only improved slightly to 1.6, and for the government this represents a major failure of policy, notwithstanding the tripartite Productivity Agenda which has brought unions and employers together in attempting to raise awareness and develop cooperative approaches to improving workplace productivity.

Denmark has also experienced low productivity growth since the mid 1990s. From 1996 to 2006 average annual growth in hourly productivity in the market economy was only 1.0 per cent. This represented a major decline after an average of 3.9 per cent for the previous 30 years (Iverson & Riishøj 2007: 3). This has led for calls for measures to increase working hours, reduce tax rates to incentivise labour supply,

reduce welfare expenditure, encourage later retirement and increase public sector privatisation (OECD 2005).

### ***Work environment***

Some critical contributors to the work environment, notably work/life balance and occupational health and safety, have been major policy concerns in New Zealand and/or Denmark, often linked with productivity. For the New Zealand Department of Labour these are the three key issues in policy development and implementation. How and why these issues are significantly linked with productivity are outlined below. In addition, the significance of labour turnover and absenteeism is considered as an indicator of the quality of the work environment.

Work/life balance has assumed importance for New Zealand because its employees work some of the longest hours in the developed economies, second only to Iceland: 19 per cent work over 50 hours per week, 40 per cent work more than 45 hours per week, 10 per cent are multiple job holders, and 18 per cent do shift work. Part-time workers, who comprise over a quarter of the workforce, are included in these statistics (DoL 2006). Low unemployment of 3.6 per cent, and skills shortages, accentuate the problem. Although Denmark has enjoyed shorter working hours, there appears to be pressure on this practice because of declining productivity growth (OECD 2005).

New Zealand's occupational injury and illness rates are poor. In 2004 the estimated cost of occupational injury and disease accounted for 4-8 per cent of New Zealand's GDP, with, per annum, up to 1,000 deaths from occupational disease, 100 deaths from occupational injury and about 200,000 incidents resulting in compensation claims (Pearce et al. 2004). Denmark's occupational accident and fatality rates, 2561 and 3.4 respectively per 100,000 workers, are close to those for New Zealand (2699 and 3.5), and exceed those for European neighbours such as Sweden, Norway and the United Kingdom (Hamalainen et al. 2006). Dorman (2000) estimated that the associated costs accounted for 2.7 per cent of Danish GDP. Apart from major accident incidents, the way in which work is organised can itself be sub-optimal for employee wellness and well-being. Shift work, for example, common in the hotel industry, has often been associated with stress and relationship problems leading to stress (Wedderburn 2006).

Workplace health and safety risks have the potential to be very costly for organisations, in terms of insurance premiums and replacement costs for injured and ill staff alone. Costs, however, can extend to administration involved with compensation and investigation, damage to equipment, disruption to work of other workers, recruitment, selection and training of replacement employees, and lower productivity of replacement employees (Mylett & Markey 2007). The NZ National Occupational Health and Safety Advisory Committee (NOHSAC) reported that for 2004/5 there were 7431 compensated incidents in the accommodation, cafes and restaurants sector, at a total cost of \$13 million (this includes production disturbance costs, staff turnover costs, human capital costs, health and rehabilitation costs, administration costs, and transfer costs, e.g. welfare)(NOHSAC 2006).

Calculating the costs of OHS, however, will not necessarily motivate employers to improve OHS. A major United States study considered how costs are distributed, and found that most costs were borne by workers (80 per cent), with consumers paying 9 per cent through higher prices, and employers only paying 11 per cent (Dorman 2000:

29 - 30 citing Leigh et al 1996). The Australian Productivity Commission put the share of costs borne by employers at 40 per cent (including workers' compensation, loss of productivity and overtime), by injured workers at 30 per cent (including loss of income, pain and suffering, loss of future earnings, and medical), and the community at 30 per cent (including welfare, medical and health, and loss of human capital) (1995 cited in Pearce *et al.* 2004: 5). This externalisation of a cost of production reduces the incentives for employers to invest in OHS, particularly SMEs in competitive markets with lower capacity to carry overheads. But such firms also bear significant 'opportunity costs' from wasting human resources.

More generally, the work environment is a critical factor in the labour exit decision. As noted by Boxall, Macky and Rasmussen (2003), voluntary labour turnover represents one end of a continuum from retention at the other end. This continuum includes a sequence of withdrawal responses including lateness and absenteeism, in response to unsatisfactory employment. Absenteeism includes absence from work because of injury or sickness, which indicates an unsafe work environment if it is work related. A recent Danish study confirmed that a third to a half of absenteeism is due to poor work environments (Lund et al. 2003).

Boxall et al. (2003) identified the following general links between labour turnover and the work environment:

- perceived job security is negatively associated with the propensity to leave a job;
- the extent to which employees feel that their contributions are valued and their well being cared for by the employer is inversely related to voluntary turnover;
- overall job satisfaction is consistently and negatively associated with turnover, and job dissatisfaction is positively associate with turnover;
- the extent to which employee needs with full/part time work and shifts is also a significant factor in the labour exit decisions;
- satisfaction with pay is a major determinant of labour retention; and
- interesting work is a major retainer, and if the employer listens and recognises merit and work/life balance.

Hinkin & Tracey (2000: 18) list the following costs of labour turnover: pre departure productivity loss, learning curve for replacement staff, errors and waste, supervisory and peer disruption, to which could be added customer dissatisfaction, reduced business, and temporary workers. The Council for Equal Opportunity Employment in Australia estimated turnover costs in 2004 at 50-130 per cent of an incumbent's salary, including separation costs (exit interviews, administration costs, separation pay), staff replacement (job advertisements, interviews, testing, staff meetings, post employment information dissemination), training, lost productivity, and lost business costs (CEOEA 2004). Similar estimates have been offered in the USA, by the Society for Human Resource Management and others (Blake 2006). There is general consensus that labour turnover impacts significantly on overall productivity (Poulsten 2006)

In addition, costs associated with absenteeism, whether from injury or sickness, or lack of commitment to the job, can also be significant for an enterprise. International studies over many years have shown a consistent average absenteeism rate of 3-4 per

cent per day (e.g. Morehead et al. 1997; Cully et al. 1999). It is estimated that in 2003 New Zealand employers lost \$4.6 billion in productivity because of absenteeism. The direct impact on a business is estimated to average 8 per cent of payroll, but may be closer to 20 per cent. New Zealand employees took over 3.8 million days off work in 2003 (Care NZ 2004).

### ***Representative employee participation***

Denmark has a long history of extensive representative employee participation, whereas New Zealand's is more recent. Consequently, the issue is of more critical concern in New Zealand than in Denmark, where there is a large degree of consensus regarding the desirability and effectiveness of representative employee participation. Nevertheless, the connections between different forms of representative employee participation in Denmark have rarely been researched in the context of productivity and employee wellness and well-being.

Although recent surveys indicate that 50 per cent of New Zealand employees experience some form of representative participation (Haynes et al., 2005) and there has been a number of Government initiatives, including statutory amendments for collective worker participation, there is clearly a need for more New Zealand-based research leading to 'best practices' in this area. In particular, as the legal requirement to implement health and safety committees is a relatively new initiative in New Zealand there has been little research investigating the impact of the employee representative processes mandated under the 2002 Act.

Furthermore, high involvement work practices are associated with employee empowerment and participation. Boxall et al. (2003) found that the propensity to leave a job was mitigated by feelings of empowerment and a sense that employee contributions are valued by employers. Consistent with these findings, a recent New Zealand Department of Labour report on productivity (DoL 2004) claimed that 'it is critical that employees at all levels of a firm have an opportunity to contribute to work organisation and to provide relevant practical advice from their respective positions'. The New Zealand Department of Labour reported that 29 per cent of managers felt employees have 'significant' input into workplace organisation, and 49 per cent considered that employee input was 'reasonable', but most employees felt that they have limited input to productivity discussions and work organisation. Representative forms of employee participation, such as delegates and committees under the *Health and Safety in Employment Amendment Act 2002*, directly address this issue.

### **Defining productivity and performance**

We have adopted a multi-faceted definition of productivity and performance, for four main reasons. First, the limitations in standard definitions of productivity, in terms of application and interpretation are substantial, as discussed in the following section which reviews the literature. Second, a huge degree of slippage between different terms that refer to the performance of an organisation has occurred in the productivity and related literature. Apart from productivity and performance, effectiveness, efficiency and profitability are also commonly referred to in the literature, but there can be subtle differences in meaning between these terms; for example, it is certainly possible to conceive of organisations with both high productivity and low profitability, or low productivity and high profitability because of the influence of different variables such as market position and relative cost of labour. Third, the

traditional definition of productivity does not offer the comprehensive picture of organisational performance that consideration of a range of different indicators of performance does. Finally, many organisations, perhaps a majority, do not measure productivity in a traditionally defined sense, although they may use other measurements of performance, notably profitability. Different organisations in different sectors also tend to use different measurements of performance. Under these circumstances, the narrow traditional definition of productivity is more useful for industry sectors or the economy as a whole rather than at the organisational level.

For all these reasons, we have preferred to refer to productivity and performance, taking into account, where possible, traditional notions of productivity, profitability, return on capital invested, and other indicators of organisational efficiency, as well as the performance measures which different sectors consider important for contextual reasons, such as public sector versus private sector environments. In the absence of other measurements, four proxies for performance at the workplace level have commonly been utilised: labour turnover, absenteeism, incidence of injury and occupational disease in the workforce, and the degree of on-the-job or other training in an organisation. The first three of these proxies indicate costs or negative influences on productivity and performance, whereas training represents an investment with a potentially positive influence on productivity and performance. We have also adopted these proxies, and their significance in the organisation is discussed in more detail in a later section on work environment and performance.

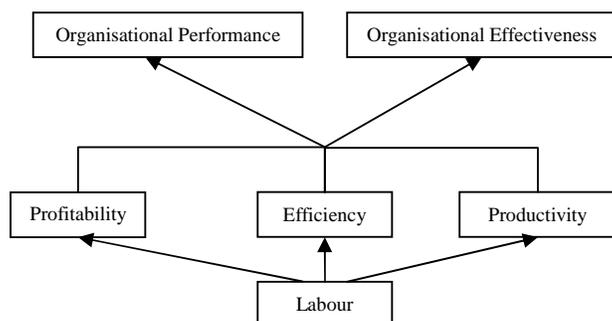
### **Productivity and performance literature**

Organisational productivity literature relies upon an economic definition of productivity which calculates the total cost to the organisation by dividing total outputs by the total inputs (2004: 1; Kopelman, Brief, & Guzzo, 1990; Mathew, 2007). It must be noted that while it is not often specified, the organisational productivity literature refers to *labour* productivity which is one factor of total productivity. Labour productivity is generally used as an indicator of total productivity because it is easier to find measures for labour inputs and outputs that can be quantified, such as sales divided by number of employees (Huselid, 1995; Koch & McGrath, 1996; Kopelman et al., 1990). Labour productivity is based on the overall labour outputs of the organisation, contributed to by individuals. Although an economic definition of labour productivity is assumed in studies of organisational productivity, it is seldom explicitly referred to and different terminology tends to be used interchangeably to indicate various measures of performance. The use of the terms performance, effectiveness, efficiency and profitability are often used interchangeably (Forth & McNabb, 2008). These terms all refer, depending on context of the study, to measures of success in the organisation. Generally, the literature points to organisational performance and organisational effectiveness as umbrella terms to discuss the overall outcomes for the organisation (Arthur, 1994; Black & Lynch, 2001; Campbell, 1977; Cappelli & Neumark, 2001; De Greef & Van den Broek, 2004; Forth & McNabb, 2008; Kopelman et al., 1990).

Within the literature, organisational performance tends to be associated with 'objective' data gained from cost based figures, whereas organisational effectiveness denotes overall outcome based on 'subjective' data gained from the perceptions of managers or employees. Indicators, or factors that contribute to the overall outcome are profitability, efficiency and productivity with 'labour' as the primary input

(Guthrie, 2001). Despite profitability and productivity being confused in the literature it is clear that they are separate indicators of overall outcome for the organisation (Cappelli & Neumark, 2001; Katz, Kochan, & Weber, 1985; Markey & Shulruf, 2008). An example of this is if productivity increases because of an increase in the number of hours worked. Productivity measures the quantity of outputs, whereas profit measures the revenue earned in relation to costs. In this case an increase in sales may be mitigated by the corresponding increase in labour costs (Cappelli & Neumark, 2001; Dobni, Ritchie, & Zerbe, 2000; Fairris, 2002). Efficiency in turn relates to how the resources are used to create outputs and is often associated with technological and organisational change: 'efficiency relates to the output achieved relative to inputs, regardless of level of output performance' (Mahoney, 1988, p. 20). Efficiency is not dependent on productivity and may increase or decrease as productivity increases. Increased efficiency may contribute to productivity and organisational performance. These relationships are illustrated in Figure 2 below.

**Figure 2: Ravenswood Model of Productivity, Efficiency and Profitability as referred to in literature**



Source: K. Ravenswood, 'Improving Productivity Through Enhancing Employee Wellness and Well-being in Health and ICT Industries in New Zealand', unpublished work in progress for PhD thesis, Auckland University of Technology, 2008.

Regardless of whether the data is subjective or objective, most of the research is quantitative in nature and uses the same types of data in its analysis. Labour productivity is measured using factors such as rates of absenteeism, hours of work, 'lost days', turnover, quantity of sales, quantity and quality of product, financial outcomes and market performance. There is little difference in the chosen measures for subjective and objective data, with subjective data looking at *perceptions* rather than numerical data (Delaney & Huselid, 1996; Dess & Robinson Jr, 1984; Forth & McNabb, 2008). The literature has been criticized for a lack of homogeneity in its definitions and measures of productivity as this limits generalisability in the literature and renders the data of little use for comparative purposes (Delaney & Huselid, 1996; Rosenberg & Rosenstein, 1980). However, we would argue given the above model of productivity that the majority of the literature is referring to the same concept of organisational outcomes.

### ***Problems with economic definition***

As mentioned earlier the concept of labour productivity is based in economic theory, and as such, assumptions made in economics on how organisations and markets operate. Economics focuses on 'the ways in which individuals and communities

produce, distribute and consume goods and services' (Dorman, 2000). Organisations are therefore concerned with competing for resources with the goal of increasing profit and avoiding loss (Alchian & Demsetz, 1972; De Greef & Van den Broek, 2004; Dorman, 2000). This leads to a focus solely on cost in monetary terms to the organisation and how to minimise those costs. In economic terms costs may be defined as internal or external to the organisation. Those that are external are costs that are attributable to the organisation, but which it does not pay (Dorman, 2000). An example of this may be environmental contamination or lost household production of a victim of occupational injury. Measures of organisational performance that look at outputs compared to inputs will not take external costs into consideration. It has also been pointed out that using measures of monetary costs excludes a number of factors such as impact on the lives of workers (De Greef & Van den Broek, 2004), and also what type of work is valued (Herzog & Morgan, 1992). Fairris (2002) indicates that changes in the organization of production have often led to worsening conditions for workers as organisations seek to increase productivity. Economic theory could argue that this will be regulated by employees in the market because it is assumed that all workers have perfect knowledge and can make informed decisions about their working conditions, and will therefore move employers if they are dissatisfied (Oxenburgh, Marlow, & Oxenburgh, 2004). Indeed Alchian and Demsetz (1972) argued that employees, rather than being managed as resources, are party to an agreement and that both parties are continually negotiating terms that are agreeable to both.

Clearly an economic assessment of organisational performance overlooks the involvement of workers or employees as humans and encourages a view of humans as resources or costs to the organisation. The focus on labour as a resource or input has influenced what research has been undertaken. There is a growing area of literature that links human resource practices with increased productivity (Arthur, 1994; Black & Lynch, 2001; Delaney & Huselid, 1996; Katz et al., 1985; Kopelman et al., 1990; Pfeffer, 2005; Theriou & Chatzoglou, 2008; Wright, Gardner, Moynihan, & Allen, 2005), in particular those termed 'high performance workplace practices' (Cappelli & Neumark, 2001; Guthrie, 2001; Huselid, 1995; Koch & McGrath, 1996). This field of literature arises from a 'resource based view' of the organisation, similar to the economic view of organisations described above.

The resource-based view of the organisation asserts that the organisation can only maintain its competitive advantage through creating value or resources that are difficult to be imitated. In the resource based view of the organisation resources such as natural resources, technology, economies of scale and others are easy to replicate. It then follows that the development of human resources strategies create a resource that is more difficult to imitate (Becker & Gerhart, 1996; Huselid, 1995; Koch & McGrath, 1996). In addition to developing a competitive resource it has been established that human resources practices and strategy contribute to overall performance of an organisation not only through minimizing costs, but adding value to the organisation (Becker & Gerhart, 1996). Indeed Arthur (1994) categorises HR systems into those that aim to increase productivity through minimising cost, named 'control systems', and those that aim to build a psychological link between employee and the organisation and consequently encourage desired behaviours, termed 'commitment systems'. Costs that can be minimised through HR strategy and practice are in the recruitment, selection and retention of employees leading, hopefully, to

higher quality employees and lower turnover and absenteeism (Koch & McGrath, 1996; Kopelman et al., 1990). However it is the latter system, one of building employee commitment, that has become the focus of high performance workplace practice (HPWP) literature. HPWP places an emphasis within the organisation on developing the abilities and knowledge of employees, in other words building human capital (Koch & McGrath, 1996). This is done within a structure of decentralised decision making so that employees have more responsibility for deciding what work to carry out and how to do so (Cappelli & Neumark, 2001). This is controlled through incentives to motivate employees and strengthen their connection with the organisation so that they will make decisions according to the organisation's desired behaviours and outcomes (Black & Lynch, 2001; Delaney & Huselid, 1996; Theriou & Chatzoglou, 2008).

HPWP views employees as resources, like the economic view, and consequently has focused on strategy and outcome, rather than the process of how practices are implemented (Black & Lynch, 2001; Theriou & Chatzoglou, 2008). HPWP has been criticised because of this focus on outcome, and because 'transformed' workplaces may have the effect of worsening conditions for workers (Fairris, 2002). Furthermore, the focus on business outcomes has meant that the importance of aspects such as employee wellbeing in their own right have been overlooked (Baptiste, 2008). Inkson notes that 'it is not the person that is the real resource, but the knowledge and expertise the person possesses' (Inkson, 2008). He suggests that this view of resources places all the power in a 'mighty' organisation and detracts from the attributes that are held by actual people.

The terminology and rhetoric used to discuss human resources emphasises employees as a passive resource that is moulded and developed by managers and the organisation (Inkson, 2008). This points to a conflict within the literature which places more responsibility for performance on the individual employee, yet does not credit the employee with the power or ability to act. This has been noted by several studies that show that HPWP will only impact positively on organisational outcomes if employees are given the opportunity use their knowledge and abilities 'to design new and better ways of performing their roles' (Huselid, 1995, p. 638). Having the opportunity to use their knowledge entails employees having decision making authority and influence within the organisation (Black & Lynch, 2001; Levine & D'Andrea Tyson, 1990; Theriou & Chatzoglou, 2008). Employee involvement in the organisation is often associated with mutual decision making and consequently working not as individuals, but co-operatively (Cooke, 1989; Markey & Shulruf, 2008). With a focus on individuals in HPWP the role of collaboration and teamwork is often overlooked. Chillemi (2008) found if employers promote a sense of 'mutual concern' amongst employees this will have a positive effect on profit increases. Likewise, workplace practices and systems are more likely to be effective if they are mutually agreed to by employer and employee (Markey & Shulruf, 2008) within the organisation. The HPWP focus on individuals, again like the economic model, assumes perfect knowledge and choice on the employee's part and ignores the power relationship between workers and management.

By using an economic model for productivity the literature has been confined largely to quantitative research. The research has for the majority used 'objective' data and 'subjective' data has been viewed as less valid and reliable than objective data (Black

& Lynch, 2001). This has led to the research being undertaken almost exclusively in the manufacturing industry for which it is easier to gain numerical productivity data (Mathew, 2007). The impact on research, particularly in New Zealand, is that there is little research establishing factors that may lead to improved productivity in sectors such as service based industry and knowledge sectors (Mathew, 2007; New Zealand Tourism Research Institute, 2007; Theriou & Chatzoglou, 2008). These are increasingly important sectors to the New Zealand economy. Qualitative research is often used to provide in depth information on organisations and the context of employee, management and government. Indeed these three agents and the power relationships between them form the theoretical basis behind industrial relations theory (Dunlop, 1993). The lack of qualitative research in the literature also means that while productivity phenomena have been noted, the reasons behind them may still be unexplained. Becker and Gerhart (1996) noted the need for more qualitative research in order to understand why managers make the decisions they do, and other studies have called for further research into the interactions between organisations and their environment and the effect on their labour productivity (Levine & D'Andrea Tyson, 1990). A lack of qualitative, contextual data also means that issues of gender and diversity and any impact these may have on labour productivity have largely been overlooked. In New Zealand in particular this compounds with the lack of research in the service sector as women are predominantly employed in the service and retail sectors (StatsNZ 2006).

Therefore, expanding the definition of productivity as we have here to include a range of aspects of organisational outcomes, as well as and taking into account the context and relationship between worker, management and government, seems to be the most appropriate approach (Theriou & Chatzoglou. Kopelman et al. 1990). In addition, it is important to consider both quantitative and qualitative data that may help explain the context of labour productivity. Our definition allows this inclusive approach.

### **Work environment and performance**

Implementing workplace policies that promote an employee friendly environment is commonly assumed to increase business performance, and particularly profitability (Faleye & Trahan 2006; Lau 2000; Patterson, West, Lawthom & Nickell 1997). A comprehensive meta-analysis by Harter, Schmidt and Keyes (2002) on the effect of workplace well-being on profitability suggested that business units at the top quartile on employee engagement achieved US\$80-100,000 higher revenue or were 1%-4% more profitable than businesses at the bottom quartile. Lau's (2000) model suggests that high quality services within organisations increase employees' satisfaction, which then increases employee retention and productivity leading to greater external service value. Greater external value increases customer satisfaction and loyalty and this creates more revenue and higher profitability. Although Lau's model mostly relates to service industries it could be generalised since all businesses have customers who wish to receive quality products and services. However, research in this area is scarce, particularly in New Zealand (NZ).

Key organisational policy areas which contribute significantly to the work environment include: work/life balance and flexible (family friendly) job arrangements, training and health promotion. Work/life balance has demonstrated links with productivity, because of the impact on labour retention and human resource

costs. Family friendly workplaces or flexible work arrangements, therefore, are generally perceived as beneficial for both employees and employers. They include childcare (provision or subsidy), flexible work time, leave arrangements for caring for others (young, sick, old), work from home, and job share (Lewison 2006; Strachan & Burgess 1998). Arguments supporting family friendly arrangements mostly focus on relationship improvement between employers and employees, enhancement of mutual trust, increasing job satisfaction and eventually business productivity (Akerlof & Yellen 1986). However, this literature provides more evidence of benefit for employees than for employers (Amin 1989; Heiland & Macpherson 2004; Lewison 2006). New Zealand research suggests that the most important family friendly policy for employees is childcare provision (Pringle & Tudhope 1996), as well as flexible leave arrangements and flexible working hours (Liddicoat 2003). A recent New Zealand Department of Labour study (Yasbek 2004) suggests that by providing family friendly job arrangements in a competitive labour market, employers can attract better recruits and reduce cost by improving staff retention, but these conclusions are context specific with no evidence for generalisability. A more general study by Markey & Shulruf (2008) has confirmed that flexible work arrangements do contribute significantly to business profitability.

Skilled personnel at all levels within the organisation (management, professionals and other staff) appear to enhance business productivity and profitability (Bassi & McMurrer 2005; Black & Lynch 2001; Van Buren 2002; Faley & Trahan 2006). Many businesses enhance their human capital through workplace training (Durbin 2004), which has been found to increase employees' performance directly associated with business productivity (Levenson 2003; O'Connell 2001). Bartel's (2000) review of the literature, suggested that the return on investment in workplace training/education is estimated to be 7–50 per cent, though it may reach 200 per cent. Within the OECD New Zealand is ranked high on both employees' rate of participation in workplace training and hours per employee (Brunello, Bassanini, Booth, De Paola 2005), but New Zealand's GDP per capita is below most OECD countries. This raises an important question about the effectiveness of employee training on productivity and profitability. Markey & Shulruf (2008) recently showed that whilst training does contribute to organisational performance and profitability, it needs to be specifically targeted rather than available to all employees.

Health promotion programmes at any of primary (preventive), secondary (when event occurs), or tertiary (remedial) levels are perceived as important tools to improve employee physical and mental health as well as workplace productivity (Grawitch, Trares & Kohler 2007; Tetrick & Quick 2001). There is mounting evidence of huge cost relating to occupational health risks (Dorman 2000; Pearce, Dryson, Feyer, Gander & McCracken 2004; Tooney, Borthwick & Archer 2005; Burton, Conti, Chen, Schultz & Edington 1999). Furthermore, a recent study reports that satisfaction with healthy workplace practices can predict employee outcomes, suggesting that it is not only what practices are actually put in place, but also employees' perceptions about these practices that matter (Grawitch et al. 2007). Therefore, health promotion programmes in workplaces are likely to improve businesses performance (Aldana 2001; Grawitch, Gottschalk & Munz 2006). Chapman's (2005) meta-evaluation estimated that workplace health promotion programmes decreased about 25 per cent of employers' cost for sick leave, workers' compensation and disability

### **Impact of Representative Participation**

The concept of employee voice encompasses direct task-oriented practices (problem solving groups or quality circles, semi autonomous teams) as well as representative structures (trade unions, joint consultative committees, works councils). An extensive literature argues that employee participation in decision-making improves motivation, communications and cooperation in the workplace, and hence, productivity. Employee participation has been recognised as a key ingredient in high performing work systems, potentially increasing output by 15-20 per cent (Arthur 1994; Delaney & Huselid 1996; Doucouliagos 1995; Meyer & Topolnytsky 2000). No studies directly addressing these connections have been undertaken in New Zealand, however.

More specifically the impact of health and safety committees is likely to be significant based on international experience. British and Australian studies (Walters 2004; Walters *et al.* 2005), for example, have found that worker representation and consultation through committees similar to the New Zealand ones produced better outcomes in occupational health and safety than management acting alone. Similar studies have also suggested that trade union presence has a positive impact on health and safety outcomes (Fairbrother 1996; Bohle and Quinlan 2000; Saksvik and Quinlan 2003). Evidence indicates economic and social benefits in introducing improved health and safety measures via worker participation structures that regulate work environments. The potential benefits are decreases in lost-time injuries; workers' compensation costs and damaged goods (Brady, et al, 1997; Bohle & Quinlan, 2000; Cox & Cox, 1996). However, the impact of health and safety committees on health and safety outcomes is also affected by a range of other factors, including 'strong legislative steer', management commitment, adequate training and information for employee representatives, and communication channels with fellow employees and management (Walters *et al.* 2005). In addition, the existence of a broader framework of participative practice through cooperation committees or works councils, as exist in Scandinavian and other European countries, is likely to impact on the effectiveness of health and safety committees and their scope of operation (Harris 2004; Knudsen 2005).

### **Methodology**

The project has adopted a multi-method case study approach targeting 5 key service industries: Hospitality, Finance, information and communication technology (ICT), Education, and Health, as well as Food Manufacturing. We have focused mainly on the service sector for three reasons. First, it has attracted less attention than manufacturing in research literature on productivity and health and safety, largely because manufacturing output is easier to measure for calculating labour productivity, and manufacturing produces easily recognised physical injury to a greater extent than service industries where stress related disease is more prevalent but also less obvious. Secondly, the service sector includes a substantial public sector in most countries, notably in our target industries of Education and Health. This enables some comparison between private and public sector practices which may affect outcomes in the relationships we are examining. Thirdly, the service sector is the major employer in modern developed market economies such as New Zealand and Denmark. The last industry, food manufacturing, is also an industry in each country.

We are conducting a total of 24 organisational case studies, 12 each in New Zealand and Denmark. Within each country 2 cases studies are being conducted in each industry, one large and one medium-sized firm where possible since size affects degree of formalisation of representative structures. More specifically, the types of organisations targeted for each industry are:

Hospitality	-	2 hotels,
Finance		2 large bank branches,
ICT		2 telecommunications providers,
Education		2 secondary schools,
Health		2 departments in hospital(s),
Food Manufacturing		1 confectionary manufacturer, and 1 bread manufacturer.

All organisations chosen as case studies have needed to meet the following criteria:

- they employ sufficiently large workforces for the mandated representative provisions of the New Zealand *Health and Safety in Employment Amendment Act 2002* and Danish *Work Environment Act 1975* to apply; i.e. 30 employees in New Zealand (Harris 2004: 4) and 20 employees in Denmark (Knudsen 1995: 91);
- 1 organisation for each industry in each country will have absenteeism and/or labour turnover rates 20 per cent above the industry average, and 2 will have absenteeism and/or labour turnover rates 20 per cent below the industry average. Absenteeism and labour turnover are strong indicators of employee well-being and job satisfaction, as well as frequently deployed proxies for productivity because of the costs associated with replacement of labour. We have found in preliminary work, however, that not all organisations keep reliable or formal records on aggregate absenteeism. On the other hand, labour turnover records are more likely to be kept reliably and in the current climate of low unemployment this is a strong indicator of employee well-being and satisfaction. As noted by Boxall, Macky and Rasmussen (2003), voluntary labour turnover represents one end of a continuum from retention at the other end. This continuum includes a sequence of withdrawal responses including lateness and absenteeism, in response to unsatisfactory employment. Absenteeism includes absence from work because of injury or sickness, which indicates an unsafe work environment if it is work related.

We have sought organisational and employee data in 3 main areas, to analyse their relationship:

1. indicators of productivity/efficiency:
  - what, if any, organisational or employee performance measures are employed,
  - how the organisation has performed in the past 2 years in terms of labour productivity, return on investment or profitability (where relevant) and any other performance measures employed,
  - the proportion of organisational budget expended on on-the-job training in the past 2 years, since this is a strong indicator for investment in employee productivity and performance;
2. indicators of wellness/well-being:
  - level of absenteeism,

- level of labour turnover,
  - occupational injury/disease rates,
  - incidence of stress,
  - length of working hours,
  - employees' degree of influence in job,
  - employees' opportunities to learn new things on the job,
  - employees' sense of appreciation by employer,
  - degree and effectiveness of communication,
  - degree of workplace change,
  - degree and type of consultation of employees over change,
  - proportion of employees who undertook on-the-job training in the past 2 years,
  - employees' job satisfaction;
3. operation of participative structures, including health and safety committees, joint consultation committees, and cooperation committees:
    - membership and chair,
    - how employee representatives chosen,
    - regularity of meetings,
    - jurisdiction,
    - how agenda is set,
    - communication with employees, and
    - how effectively issues are dealt with.

Data is being collected from four sources within each organisation:

1. Document analysis of policy, constitution, committee minutes etc. relating to representative employee participation mechanisms. This will map the policy, forms, processes, content and intensity of representative employee participation.
2. Analysis of organisational statistics relating to key performance indicator measurement, aggregate health and safety data, absenteeism and labour turnover. This will provide objective data regarding business outcomes and three key indicators of work environment quality: health and safety outcomes, absenteeism and labour turnover.
3. Semi-structured interviews of 40 minutes with chief executive manager, human resource manager, senior employee representative and one other employee representative (including a union delegate where appropriate). This will further map forms, processes, content and intensity of representative employee participation.
4. Questionnaire survey of 20 employees, from each organisation. This will provide subjective measures of work environment quality, relating to job satisfaction and health and safety. Questionnaires to be distributed by research assistant at workplace and collected from a central point subsequently or return posted.

The multi-method, multi-source approach increases the richness of the data, and with use of a triangulation process increases validity of the outcomes.

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