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11. Using HPWP to drive towards growth: the impact of occupational health and safety leadership

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1. INTRODUCTION

In recent years, investigations into several major industrial accidents, for example the Three Mile Island nuclear accident, the Chernobyl disaster, and the King's Cross fire, have prompted a growing concern among scholars to derive new models and approaches to the management of occupational risks to health and safety (Nunez and Villanueva, 2011; O'Dea and Flin, 2003). Occupational accidents and injuries are generally known to provoke a broad range of negative consequences on the performance of an organization. They can cause significant losses to an organization's human capital, generate huge costs due to losses in labour productivity, damage workplace equipment and decrease the organization's corporate reputation (O'Dea and Flin, 2003; Fernández-Muñiz et al., 2007; Ring, 2011). Moreover, unsafe working conditions may undermine employees' commitment to the organization, increase the likelihood for workplace conflicts and stifle the organization's potential for growth and competitiveness (Fernández-Muñiz et al., 2009). As a result, occupational health and safety (OHS) matters are given high priority among scholars, managers and regulators.

Research in OHS has shown that human resource management (HRM) is important for achieving acceptable levels of safety performance (Barling et al., 2003; Zacharatos et al., 2005; Griffin and Neal, 2000). According to Fernández-Muñiz et al. (2007), the human factor accounts for a high percentage of accidents occurring in complex process industries, and thus places an obligation on employers to adopt advanced HRM strategies to promote better safety-related work behaviours. Indeed, OHS scholars have argued that occupational risks and hazards are better managed where firms adopt the commitment-based approach to HRM that allows

employees to participate actively in workplace decision-making activities, rather than management practices that focus on rule enforcement and increased supervisory control (Zacharatos et al., 2005; Ring, 2011). The commitment-based approach to HRM, also known as high-performance work practices (HPWP), creates opportunities for employees to develop useful skills for enhancing the safety performance of the organization (Askenazy, 2001; Barling et al., 2003; Tregaskis et al., 2012). Thus, whereas managers are exposed to a range of ‘competing’ business priorities (Buenger et al., 1996; Michael et al., 2005), they also need to devise more innovative ways of managing OHS concerns in order to achieve better organizational growth.

The primary aim of this chapter is to highlight the fundamental role of HPWP in promoting improved OHS outcomes, as a way to drive organizational growth and effectiveness. Accordingly, the main objectives of this chapter are:

- To describe the concept of HPWP and review some of the main constituents;
- To describe the nature of the relationship between HPWP and the realization of better OHS outcomes. Three perspectives on this relationship will be presented: the mainstream approach, the approach based on employee attitudes, and the critical perspective;
- To highlight the role of leadership in strengthening the links between HPWP and OHS;
- To examine the underlying mechanisms via which the relationship between HPWP and OHS may engender organizational growth.

2. THE HPWP FRAMEWORK

Research into HRM has progressively shifted from the traditional, Tayloristic forms of work (characterized mainly by hierarchical decision-making structures and high levels of supervisory control) to a more flexible, commitment-based form of management (Edwards and Wright, 2001; Dell’Arima et al., 2003). This new approach to HRM, which forms the bedrock for the concept of HPWP, is largely claimed to have strong beneficial effects on organizational success (Huselid, 1995; MacDuffie, 1995; Appelbaum et al., 2000; Combs et al., 2006). Although the term ‘HPWP’ does not have a single binding meaning among HRM researchers, the dominant view suggests a system that embodies bundles of HRM practices aimed at developing a committed workforce who can be empowered to use their discretion in conducting their job roles in ways that are valuable

to the organization (Arthur, 1994; Ichniowski et al., 1997; Wood, 1999; Dell'Aringa et al., 2003; Gould-Williams and Davies, 2005).

The HPWP literature has often underscored the need to analyse HRM practices in certain coherent combinations or groups, rather than in isolation, to exploit their existing complementarities and accrue the largest organizational gains (Schulte et al., 2006; Guest et al., 2004; Huselid, 1995; Arthur, 1994). This idea is premised on the assumption that single HRM practices are driven from a common philosophy (Beltrán-Martín et al., 2008) and are more likely to mutually strengthen one another when taken together as a group (MacDuffie, 1995; Ichniowski et al., 1997; Delery, 1998; Wood, 1999; Schulte et al., 2006). In contrast, however, some sceptics believe that the idea of 'grouping' individual HRM practices may substantially undercut their valuable, unique effects; not least because each practice presents a varying and/or opposing degree of association with various outcome variables (Kalmi and Kauhanen, 2008; Bryson and White, 2008). In other words, when a single HRM practice is analysed in combination with others, its unique, independent effects may be underplayed, leading to only a partial estimation of its actual influences. To fully understand the intricacies of the HPWP framework, it is worthwhile to examine the various HRM practices thought to constitute an innovative HRM system.

The consensus among many scholars regarding the main constituents of the HPWP concept is the assumption that it embodies four overlapping dimensions including: (1) the selective hiring of potentially skilled job candidates; (2) the provision of extensive training to reinforce their skills; (3) the adoption of workplace practices that increase job discretion and employee involvement; and (4) the establishment of a climate of care and support at work (Huselid, 1995; Guest et al., 2004; Combs et al., 2006; Wood and De Menezes, 2011; Lawler et al., 2011).

The selective recruitment of qualified job candidates is arguably a very crucial, preliminary step in the process of implementing HPWP, considering its usefulness in strengthening the nature of the organization's workforce (Beltrán-Martín et al., 2008; Whitener, 2001; Batt et al., 2010). Extensive recruitment procedures, incorporating various personality and competency tests, may afford a large pool of qualified employees and allow employers to achieve better person-job fit (Carless, 2005; Beltrán-Martín et al., 2008). Consequent to an effective recruitment exercise, it is also important to enhance the skills and abilities of employees through various staff development programs such as on-the-job training and career development workshops (Huselid, 1995; MacDuffie, 1995; Lawler et al., 2011). Owing to the significance of the 'rareness' element of employees' competencies in attaining sustainable competitive advantage for an

organization, the proper training of employees in modern workplaces remains of key value (Paré and Tremblay, 2007).

Another crucial aspect of HPWP has to do with creating job designs that afford employees a degree of discretion in the way they conduct their job tasks (Appelbaum et al., 2000; Beltrán-Martín et al., 2008; Wood and De Menezes, 2011). As often reported in HRM studies, such practices allow employees to autonomously apply their knowledge in addressing workplace issues more efficiently and/or more innovatively, rather than being overly restricted to managerial dictates (Paré et al., 2007; Kalmi and Kauhanen, 2008; Cañibano, 2011). Similarly, practices such as compressed working weeks, flexi-time schemes, work shifts, job sharing and career breaks, which afford employees some freedom as to how they maximize their working hours and balance the work-family interface, have also been identified as being integral to the HPWP framework (Kelliher and Anderson, 2010; Atkinson and Hall, 2011).

Increasingly prominent in the HPWP literature is the need to actively involve employees in both workplace activities and in decision-making processes, in order to fully engage employees' potentials (Huselid, 1995; Ichniowski et al., 1997; Appelbaum et al., 2000; Barling et al., 2003; Kalmi and Kauhanen, 2008). This body of literature has advocated the adoption of team-based work systems (such as self-directed teams and quality circles) and various participative decision-making activities within the HPWP regime, to foster a sense of responsibility among employees, and create opportunities for them to make innovative contributions to the work process (Appelbaum et al. 2000; Wood and De Menezes, 2011).

Some researchers have also advocated, as part of the HPWP framework, the need to actively involve employees through formal employee representation structures like trade unions and consultative committees (Kalmi and Kauhanen, 2008; Godard, 2009; Wood and De Menezes, 2011). Often theorized as the concept of 'voice', these mechanisms can be important ways in which employees or their representatives have the opportunity to express their dissatisfactions and reactions to new organizational policies and initiatives. Employee voice mechanisms are thought to be important contextual factors surrounding the effects of organizational processes on performance outcomes (Edwards and Wright, 2001; Godard, 2009; Wood and De Menezes, 2011). Relevant studies have illustrated the value of union-management partnerships in building the trust relationship and in defining and reinforcing a shift in safety behaviour as part of a HPWP program (Walters, 2011; Tregaskis et al 2012).

The HPWP literature has also highlighted the importance of adopting mechanisms for enhancing employee motivation through adequate levels of managerial support (Lawler et al., 2011; Schulte et al., 2006). In this

regard, commentators have emphasized the adoption of family-friendly work practices such as parental-care and child-care support services (Ngo et al., 2009; Lobel, 1999), information sharing activities, as well as the provision of equitable monetary and non-monetary rewards like performance-related pay, promotion, and profit-sharing schemes (Applebaum et al., 2000; Beltrán-Martín et al., 2008; Wood and De Menezes, 2011). Employees may perceive the provision of such services as a sign of care and support from the organization, and therefore feel obligated to reciprocate through desirable work-related attitudes and safety compliant behaviours.

3. LINKS BETWEEN HPWP AND OHS (THE MAINSTREAM PERSPECTIVE)

Research evidence indicates that adequate investments in HPWP may enhance various organizational performance outcomes such as financial profits (Huselid, 1995) and productivity (MacDuffie, 1995; Ichniowski et al., 1997; Askenazy, 2001). Zacharatos et al. (2005) further noted that the impacts of HPWP may actually surpass these traditional performance outcomes to enhance the safety-related aspects of work. Indeed, safety performance is arguably a subset of overall organizational performance and should be analyzed in a similar way as other organizational performance outcomes (Zacharatos et al., 2005; Wu et al., 2008; Tregaskis et al., 2012).

Safety performance has been described as a measure of the quantity and quality of those workplace activities geared towards assessing the nature and consequences of occupational risks and injuries. It is measured through 'pre-incident' data collection practices such as safety inspections or audits, as well as 'post-incident' practices like measuring incident frequency and severity or estimating lost time costs (Lin and Mills, 2001; Fernández-Muñiz et al., 2009; Giovanis, 2010). The literature has also underlined a range of behaviours as relevant indicators of positive safety performance (see Hofmann et al., 1995; Simard and Marchand, 1995; Griffin and Neal, 2000; O'Dea and Flin, 2001, 2003; Barling et al., 2003). The first, 'safety compliance' (e.g. adhering to lockout procedures or wearing protective gear at construction sites), refers to those activities that predict an employee's propensity to follow OHS rules and procedures. The second, 'safety knowledge', is often demonstrated in the employees' ability to show sufficient knowledge of the general working environment and in conducting the complex aspects of their jobs in a safe manner. The third, 'safety motivation', puts more emphasis on employees' propensity to take proactive actions towards OHS rather than their mere willingness to abide by safety-related rules and procedures.

Scholars have typically discussed OHS matters in the light of two basic HRM perspectives: the control-based and the commitment-based approach (Arthur, 1994; Barling and Hutchinson, 2000; Barling et al., 2003; Ring, 2011). The control-based approach to OHS management emphasizes the enforcement of safety rules, and encourages the use of reward and punishment structures in achieving predetermined OHS goals. In contrast, the commitment-based approach is aimed at encouraging higher levels of employee trust and commitment by allowing employees some decision-making authority instead of simply compelling them to comply with safety rules and regulations. The latter approach is believed to produce stronger effects on enhanced safety performance and consequently, organizational growth (Zacharatos et al., 2005; Ring, 2011).

Some studies have revealed useful links between the various components of HPWP and the safety performance of a firm. Zacharatos et al. (2005), for instance, suggested that employers who adopted a more extensive selection procedure such as using personality tests to exclude high-risk job candidates such as those with drug or alcohol dependence, may realize lower incidence of occupational accidents and injuries. Some scholars (Carless, 2005; Sekiguchi, 2004) have offered useful insights into explaining this relationship, based on Person–Environment (P-E) fit theories. Paying particular attention on two generic forms of the theory (Person-Organization fit and Person-Job fit), it is argued that an individual's attraction to and intent to remain in an organization depends on the level of compatibility between their individual characteristics and various aspects of the job. By interpretation, employees who are hired such that there is some congruence between their career-relevant personalities and the requirements of their job will demonstrate better work-related attitudes (Sekiguchi, 2004; Green and Tsitsianis, 2005; Carless, 2005) and display less vulnerability to occupational accidents and injuries (Zacharatos et al., 2005).

The implementation of discretionary work practices within the HPWP regime has also been associated with enhanced safety performance. As much as increased levels of job autonomy allow employees to exercise a degree of freedom in the way they conduct their jobs, such practices may also broaden their capacity to minimize the occurrence of occupational injuries over time (De Jonge et al., 2000; Barling et al., 2003). Echoing this, Simard and Marchand (1995), in their study of manufacturing plants, noted that the provision of greater job autonomy to employees might increase their scope for initiatives and enable them to deal with occupational risks and hazards more efficiently. The rationale for this relationship, as indicated in the Job Demand-Control (JD-C) Model of stress, rests on the claim that greater levels of freedom to decide how, when and where to meet one's job demands may abate high levels of work-related

stress (Bakker and Demerouti, 2007). Work-related stress in this context is seen to be a condition that may impair one's cognitive abilities, leading to the display of non-safety compliant behaviours (Daniels et al., 2008). As such, jobs with higher demands and time constraints combined with low employee autonomy are those that may give rise to increased work-related stress and consequently affect the firm's safety performance and growth (De Jonge et al., 2000; Boisard et al., 2003; Macky and Boxall, 2008).

Relying further on this theoretical backdrop, some authors have suggested that the adoption of flexible working arrangements may mediate the undesirable consequences of work-related stress and other occupational injuries; not least because such practices optimize the worker's choice over where and when to carry out their job tasks (Atkinson and Hall, 2011; Judge and Colquitt, 2004; Kelliher and Anderson, 2010). More so, considering that flexible work patterns allow workers to achieve a more suitable work-life balance, employees enjoy greater freedom to cope with and recover from high work demands, such that they are able to concentrate better at work and display desirable safety-related behaviours (Kelliher and Anderson, 2010). Along similar lines, it has also been suggested that the implementation of family-friendly work practices like dependent-care support programs, within the HPWP framework, could attenuate feelings of distress at work by allowing employees to satisfactorily balance their work and family lives (Lobel, 1999). Reiterating this claim, Ngo et al. (2009) noted that the adoption of such practices provides the right resources for employees to manage the likely debilitating work-life interferences that could otherwise constitute a source of emotional distraction at work and lead to a weaker disposition towards OHS.

Furthermore, the OHS literature has indicated that a more decentralized managerial approach (involving the adoption of participative decision-making activities) to OHS would motivate employees to take ownership and responsibility for their safety-related work behaviours and give them the opportunity to change practices (Hofmann et al., 1995; Lin and Mills, 2001; O'Dea and Flin, 2001, 2003). This argument has been reinforced in studies that have demonstrated associations between participative management style and the extent to which employees proactively engage in OHS activities, rather than merely complying with safety rules and regulations (Simard and Marchand, 1997; Barling et al., 2003; Zohar and Luria, 2005). Active employee involvement through team-based work systems is also believed to play a prominent role in accruing better OHS outcomes for an organization. Teamwork activities amplify the potential for social interaction among employees, increase their level of cooperation, and prompt them to take responsibility for each other's safety-related behaviours at work (Simard and Marchand, 1997; Ring, 2011). In

support of this, Tregaskis et al. (2012) noted that greater cohesion within problem solving teams may instigate team members to show stronger commitment towards safeguarding each other's safety as a way to stimulate better safety performance and organizational growth.

Enhanced safety performance has also been linked to the adoption of an open, two-way communication path to information sharing in innovative workplaces (Hofmann et al., 1995; Clarke, 1999; Lin and Mills, 2001). More specifically, the plausibility for employees to work more safely depends largely on the availability of information as to the safety aspects of their jobs (Tervonen et al., 2009). In fact, it is argued that managers who implemented effective feedback systems, characterized by greater levels of employer-employee interaction, were able to realize lower accident rates compared to those who avoided direct contacts with employees (O'Dea and Flin, 2003). Similarly, evidence is also growing to suggest a positive relationship between the adoption of formal employee representation structures and improvements in the safety performance of a firm (O'Dea and Flin, 2003; Zacharatos et al., 2005; Michael et al., 2005; Walters, 2011). It is argued that active trade union activities at work, for instance, could provide the useful two-way communication path to quality employer-employee relations that help employees to identify and channel their work-related concerns, including matters pertaining to OHS, to the appropriate managers (Walters, 2011). As such, these mechanisms could serve as a platform for reducing feelings of dissatisfaction and distrust among workers (especially if management demonstrates appreciable levels of responsiveness to employees' contributions), prompting them to display favourable work-related behaviours that could translate into better OHS outcomes (Edwards and Wright, 2001; O'Dea and Flin, 2003; Walters, 2011). Research in organizational psychology has indicated that the level of care and support offered to employees could enhance their psychological well-being (Daniels et al., 2008; Newman et al., 2011) and promote better safety-related behaviours (Hofmann et al., 1995; O'Dea and Flin, 2003; Ring, 2011). This assertion is often explained based on the Job Demands-Resource (JD-R) Model of stress. According to the JD-R model, the adverse effects of high work demands and other occupational risks to health and safety can be minimized through the provision of valuable resources like training and coaching, counselling services, promotion prospects and rewards (De Jonge et al., 2000; Balducci et al., 2011).

Drawing on this model, some scholars have argued that extensive safety training could create opportunities for employees to acquire greater competencies for conducting their jobs more safely, and therefore engender improved safety performance (Barling et al., 2003; Fernández-Muñiz et al., 2007; Ring, 2011). This positive relationship is also linked to the

assumption that well-trained employees are potentially aware of the inherent risks at work and are better informed about the procedures available for the prevention of such risks (Fernández-Muñiz et al., 2007). Accordingly, employees who receive better safety training may suffer reduced occupational risks and injuries compared to those who are untrained. On a related note, a number of studies have proposed that the provision of monetary and non-monetary incentives to employees, based on their performance in safety-related matters, might reduce the occurrence of occupational accidents and injuries (O'Dea and Flin, 2003; Zacharatos et al., 2005). This assumption is contingent on the idea that rewards are a means by which employees recognize what their employer values; hence, by expressly linking rewards with specific work behaviours, performance expectations become clearer and less ambiguous for employees. As such, if OHS issues are constantly overlooked by the employer, such that rewards are offered mostly for meeting production targets rather than for appropriate safety behaviours, then employees might assume a low managerial priority for OHS, and consequently display poor safety-related behaviours (Hofmann et al., 1995; Zohar and Luria, 2005).

Another prominent theme in the HPWP literature is the assumption that individual HRM practices may accrue larger organizational benefits when they are used together in concert (MacDuffie, 1995; Combs et al., 2006; Beltrán-Martín et al., 2008). The key tenet here is that individual HRM practices interact in mutually supportive ways to produce stronger effects on organizational performance outcomes. This perspective has also been supported in the OHS literature where several authors have demonstrated useful links between bundles of HRM practices and safety performance (Barling and Hutchinson, 2000; Barling et al., 2003; Tregaskis et al., 2012). Barling et al. (2003), for example, showed how one such bundle, high-quality work (comprising employee autonomy, task variety and extensive training), was inversely associated with occupational injuries. Likewise, Zacharatos et al. (2005) found useful links between a single index of HPWP, consisting of ten different HRM practices, and various safety performance indicators. These studies demonstrate that complementarities exist between individual HRM practices, and in combination, these practices produce greater influences on OHS and promote organizational growth.

HPWP – Employee Attitudes – OHS

The non-safety work attitudes and behaviours of employees (e.g. job satisfaction, trust, commitment, and citizenship behaviours) are equally important in improving OHS (Barling and Hutchinson, 2000; Griffin and

Neal, 2000; O'Dea and Flin, 2003; Tervonen et al., 2009; Ring, 2011). From this standpoint, commentators presume that worker behaviours and attitudes mediate the relationship between HPWP and safety performance. In other words, the adoption of HPWP may accrue positive safety-related outcomes and drive organizational growth by increasing levels of employee satisfaction, commitment or trust in management (Michael et al., 2005; Fernández-Muñiz et al., 2007). Drawing on Kanfer and Ackerman's (1989) cognitive resources framework, Barling et al. (2003) gave an explanation for the mediating role of positive employee attitudes in the HPWP-OHS relationship. On the one hand, when the quality of work is low (perhaps due to poor work design), employees become more disconnected from on-task activities (such as productivity, quality, and safety compliance) and channel their cognitive resources (e.g. creative reasoning or attention) toward less productive workplace activities like taking long breaks or intentionally working sluggishly. Conversely, when the quality of work is high, as presumed in the case of HPWP, employees deploy these cognitive resources to on-task activities, leading to better organizational and safety performance outcomes.

Consistent with this line of reasoning is the norm of reciprocity or social exchange theory. Accordingly, employee perceptions regarding the extent to which their employer values and cares about their well-being may instigate them to respond through positive work-related behaviours and attitudes (Whitener, 2001; Gould-Williams and Davies, 2005; Bakker and Demerouti, 2007; Newman et al., 2011). These theories have also been successfully applied in various OHS studies where it has been stated that perceptions of favourable managerial treatment, perhaps emanating from the adoption of a commitment-based approach to HRM and OHS management, could motivate employees to respond through better safety-related behaviours (O'Dea and Flin, 2003; Michael et al., 2005; Zacharatos et al., 2005; Ring, 2011). In other words, if employees perceive the OHS management strategy of the employer as being driven by a sincere concern for their well-being, then their safety-related behaviours may become considerably stronger than if they felt such practices were inspired by the employer's propensity just to enforce safety compliance (Barling and Hutchinson, 2000).

4. LINKS BETWEEN HPWP AND OHS (THE CRITICAL PERSPECTIVE)

Insofar as the foregoing review may have implied a positive relationship between HPWP and employee-level outcomes (including safety-related

behaviours), there is also an emerging stream of research suggesting otherwise (Ramsay et al., 2000; Askenazy, 2001; Sparham and Sung, 2007; Kalmi and Kauhanen, 2008; Macky and Boxall, 2008). Generally, scholarly debates in this respect have been fashioned around a critical perspective, counter-positioned against treating HPWP as mutually beneficial for employers and employees (Harley et al., 2007; Van De Voorde et al., 2011). Mutual gains, as has been illustrated so far in this chapter, suggests that employers gain through improved productivity and reduced turnover rates, whereas employees benefit through higher levels of support and job satisfaction (Ichniowski et al., 1997; Macky and Boxall, 2008; Kalmi and Kauhanen, 2008). In contrast, an alternative view, the critical perspective, suggests that HPWP may actually accrue far-reaching gains for both the organization and its employees, but these benefits are not without associated increases in work intensification (Ramsay et al., 2000; White et al., 2003; Harley et al., 2007; Sparham and Sung, 2007). Work intensification has been defined as a measure of the amount of effort expended at work in relation to the amount of hours invested therein (White et al., 2003; Kelliher and Anderson, 2010). It is usually reported as emanating from an exposure to high working speeds, tight deadlines, and poor interpersonal working relationships, all of which may lead to poor safety performance outcomes (Boisard et al., 2003; Cañibano, 2011).

With regards to the mechanisms by which safety performance is adversely affected through work intensification, studies have revealed various processes that may explain the likely negative consequences of HPWP. It is argued, for instance, that the implementation of discretionary work activities may not always accrue desirable outcomes in the 'real' workplace scenario (Appelbaum et al., 2000; Askenazy, 2001). According to Kalmi and Kauhanen (2008), employers may relinquish their operational control only as far as is essential to achieve the loyalty of their employees. That means, while employees may be allowed a degree of autonomy in certain work activities, they do not necessarily have full control over their work pace and workloads, and therefore remain quite susceptible to increased levels of occupational strain and burnout. In a similar way, the adoption of flexible work arrangements may also lead to increased work intensification, despite offering higher work time flexibility (Kelliher and Anderson, 2010). Accordingly, flexible work arrangements may alter the traditional conceptualization of 'a typical working day' by creating a degree of irregularity in the work schedules of employees, forcing them to work at times when they would otherwise prefer not to. Moreover, Askenazy (2001) has noted that time flexibility may adversely impact on safety performance since the frequency of occupational accidents is significantly related to the frequency of alterations in the number of hours expended at work.

Although a number of empirical studies (see Appelbaum et al., 2000; Scott-Ladd et al., 2006; Paré and Tremblay, 2007; Wood and De Menezes, 2011) have acknowledged the value of high-involvement practices such as teamwork activities, participative decision-making and employee representation structures in reducing feelings of alienation and dissatisfaction at work, there is also some support for the claim that such practices may increase work intensity (White et al., 2003; Kalmi and Kauhanen, 2008; Mohr and Zoghi, 2008; Macky and Boxall, 2008). Attempts to explain this relationship have often relied on the linkages between the level of formalization at work and the concept of 'role stress' (Adler and Borys, 1996; Bainbridge, 1998; Tubre and Collins, 2000; Nygaard and Dahlstrom, 2002). It is assumed that workplace activities that afford employees some decision-making latitude may degrade hierarchical structures at work, thereby increasing perceived levels of role ambiguity, role conflict and role overload. For example, some authors (Kalmi and Kauhanen, 2008; Mohr and Zoghi, 2008) have noted that the adoption of team-based systems may reduce the level of formalization of workplace activities, and induce workers to monitor one another, leading to more stressful work conditions. Similarly, other authors have suggested that active employee involvement through participative decision-making activities (Adler and Borys, 1996; Nygaard and Dahlstrom, 2002), and perhaps through employee representation structures (Bainbridge, 1998; Tubre and Collins, 2000), may prompt workers to overly exert their authority as a way of making their voices heard. This could trigger an increased sense of disorderliness in the delegation of authority at work; the ultimate consequence of which could be occupational distress (Nygaard and Dahlstrom, 2002).

The case is also quite similar for the provision of performance-linked rewards and incentives as part of HPWP. Although the offering of performance-linked rewards may improve staff morale and satisfaction, such practices are also believed to instigate employees to expend more effort at work, driven largely by their desire to obtain these rewards (Macky and Boxall, 2008; White et al., 2003). As such, employees could become unduly motivated to work extra shifts, or take up more job tasks, leading to increased work intensification, and consequently, to increased rates of occupational accidents.

5. THE ROLE OF LEADERSHIP IN THE HPWP–OHS RELATIONSHIP

To gain better insights into the role of leadership in the linkages between HPWP and OHS, it is worth recognizing the 'competing' nature of business

goals and the complexity of choices facing managers. Based on Quinn and Rohrbaugh's (1983) competing values model, Buenger et al. (1996) explained that the business challenges facing managers ensue mainly from the inherent competition among various business values and the likely adverse consequences that may result when managers pay more attention to certain values and neglect others. In other words, managers are exposed to a range of conflicting business priorities, and may need to create a balance by focusing more on business aspects which they consider useful for organizational success, while overlooking others (Michael et al., 2005). In a similar vein, OHS concerns in an organization compete daily with other business values like ensuring product quality or providing better customer services, and managers have to balance the need to promote better OHS with these other responsibilities (Lin and Mills, 2001; Michael et al., 2005; Zohar and Luria, 2005). Drawing on this, it makes sense to argue that the path towards achieving enhanced safety performance lies around the corporate decisions and choices (including the prioritizing of OHS matters) made at the top management level. In many ways, the decisions made at the top management level of an enterprise could affect those at lower managerial levels, and consequently, the safety-related behaviours of employees (Simard and Marchand, 1995; Reason, 1997; O'Dea and Flin, 2001; Alli, 2001). Thus, if the top management exhibits a high degree of commitment to OHS matters, supervisors and employees alike would most probably respond favourably to OHS concerns.

A stream of research evidence has indicated that board-level management's commitment to OHS is reflected in the prevalence of a positive safety culture in the workplace (Griffin and Neal, 2000; O'Dea and Flin, 2001; Tervonen et al., 2009; Wu, Chang, Shu, Chen and Wang, 2011). A company's safety culture entails a range of safety-related policies, procedures and attitudes that reflect a high degree of concern and commitment to the reduction of occupational accidents and injuries (Clarke, 1999; Tervonen et al., 2009). It may be considered as a subset of a firm's overall culture where formal and informal organizational structures are dedicated solely to OHS matters, such that employees are encouraged to take responsibility for their own and each other's safety (Clarke, 1999; OECD, 2003; O'Dea and Flin, 2003). A positive safety culture is generally argued as comprising two broad components – a well-defined safety management system and a suitable safety climate (Clarke, 1999; Tervonen et al., 2009; Ring, 2011).

Safety Management System

A safety management system is conceived as encompassing the more tangible elements of a firm's safety culture such as OHS policies, strategies

and procedures, which serve as a platform for achieving good safety performance within the firm (OECD, 2003; Fernández-Muñiz et al., 2007; Tervonen et al., 2009). Based on a review of relevant OHS studies, a good safety management system is thought to include the following key dimensions:

- A clear and implementable OHS policy statement that adequately defines the main objectives, principles, strategies and guidelines to follow as regards OHS (Alli, 2001; O’Dea and Flin, 2003; Fernández-Muñiz et al., 2007; Tervonen et al., 2009). This is essential as without such policies, the OHS function of the firm may be marred by infinite safety management models, which could make the OHS system rather difficult to assess (Nunez and Villanueva, 2011). Moreover, the policy statement should not only fulfil the basic requirements of relevant OHS legislation, but should also specify OHS functions in terms of the precise responsibilities of both management and employees (Lin and Mills, 2001; OECD, 2003).
- A well-defined mechanism for allocating sufficient resources (both financial and otherwise) to ensure a smooth and efficient running of OHS concerns (Alli, 2001; Tervonen et al., 2009). Just like every other aspect of an organization’s business operation, better safety performance cannot be realistically achieved in the absence of adequate resources. In support of this, O’Dea and Flin (2003) noted that managers who demonstrated their commitment to OHS by providing resources such as time and money, among other things, reported lower levels of industrial accidents.
- A system of continuous re-education of employees to update their knowledge on critical safety-related matters. Safety training is allegedly quite central to achieving better safety performance (Fernández-Muñiz et al., 2007; Ring, 2011). Managers have the core responsibility of ensuring that their employees are suitably informed about all aspects of OHS and are empowered with requisite skills to take care of their own safety, as well as the safety of others who might be affected by their activities at work (Lin and Mills, 2001; Alli, 2001; Fernández-Muñiz et al., 2009).
- A communication system that encourages an open, two-way exchange of information regarding the potential risks and hazards within the workplace (O’Dea and Flin, 2003; Tervonen et al., 2009; Fernández-Muñiz et al., 2009). This communication system should incorporate both formal and informal elements that promote better employer-employee interaction with respect to the dissemination of

OHS information. Such a system would possibly stimulate the active involvement of all members of the organization in OHS activities (Hofmann et al., 1995; Fernández-Muñiz et al., 2007).

- A system for controlling and monitoring the safety-related behaviours of employees, perhaps through regular OHS inspections and the enforcement of OHS rules and regulations (Wu et al., 2008; Giovanis, 2010). Evidence suggests that safety compliance can be encouraged through appropriate incentives such as easy access to safety equipment and safety guidelines (Lin and Mills, 2001). Where necessary, non-compliance may need to be attended to through disciplinary procedures. However, a fundamental dimension to achieving compliance appears to be identifying and establishing safety rules and procedures that employees can relate to, understand and use.
- A well-defined mechanism for keeping records of information pertaining to OHS and the overall working environment (Alli, 2001). Such information might include records of all occurrences of occupational accidents and injuries, records of cases of near misses and records of harmful substances in the workplace (O’Dea and Flin, 2003; Zacharatos et al., 2005). Records of this nature can be used to estimate the level of success achieved with regards to the firm’s safety performance and progress over time (Alli, 2001).
- A structured system for undertaking regular reviews of the safety policies, procedures and performance of the organization. The organization’s commitment to safety can be reviewed by conducting a detailed audit of the entire OHS system to estimate the level of success achieved, and identify areas for possible improvements (OECD, 2003; Giovanis, 2010). Given the likelihood for the OHS function of a firm to change over time, relevant safety policies and procedures require periodic review (Alli, 2001).

Safety Climate

The safety climate of an organization incorporates the more intangible (e.g. psychological and behavioural) elements of an organization’s safety culture (Griffin and Neal, 2000; Giovanis, 2010). It is concerned with the attitudes and perceptions of employees as to those workplace characteristics that reflect the degree of managerial commitment to OHS (Alli, 2001; O’Dea and Flin, 2003; Wu et al., 2008; Ring, 2011). Accordingly, an atmosphere where both the employer and employees express similar perceptions of care and concern for OHS matters can be deemed as constituting a good safety climate (Clarke, 1999; Zohar and Luria, 2005).

Although scholars may have varying opinions regarding the specific features of a good safety climate, there is consensus that it encompasses three key facets – the degree of managerial commitment to OHS, the nature of managerial actions (either actual or spoken) directed towards OHS, and perceptions of the level of risk in the work environment (Griffin and Neal, 2000; O’Dea and Flin, 2001, 2003; Zohar and Luria, 2005; Ring, 2011).

To a large extent, managers are believed to influence the safety climate of their organization through their various attitudes, behaviours and leadership actions (O’Dea and Flin, 2003). Some studies have highlighted a range of managerial behaviours, classified under the broad term ‘participative management’, as being connected to better safety performance (Hofmann et al., 1995; Clarke, 1999; O’Dea and Flin, 2001). From this perspective, it is often advocated that managers should adopt a more decentralized approach to safety management where status distinctions between managers and employees are underplayed to allow more effective open and honest dialogue around achieving better safety performance. This decentralization contrasts with traditional centralized and bureaucratic models where safety rules and procedures are driven from the top and often removed from everyday practice (Simard and Marchand, 1995; Zacharatos et al., 2005). As such, when managers seek a more cooperative relationship with their employees, both parties are more likely to feel an increased responsibility towards safeguarding each other’s health and safety.

Research has also shown that success in establishing a good safety climate through progressive HRM practices may promote better safety performance in much the same way as effective management systems may impact on organizational performance through an influence on the organizational climate (Wu et al., 2008). This proposition is strengthened by the claim that safety climate and safety performance are subcomponents of organizational climate and organizational performance respectively (Griffin and Neal, 2000; Wu et al., 2008). Several authors have suggested that managers may achieve enhanced safety performance where their efforts are geared towards establishing a strong safety climate (Fernández-Muñiz et al., 2007; Ring, 2011; Wu et al., 2011; Tregaskis et al., 2012). In particular, Wu et al. (2008) found that safety climate mediates the relationship between quality management of OHS and the achievement of greater safety performance. As such, a leader’s display of safety leadership through creating a positive safety climate, may improve workers’ ability to take proactive steps towards OHS matters and promote better safety and organizational performance.

6. THE ROLE OF HPWP AND OHS IN DRIVING ORGANIZATIONAL GROWTH

Having so far explored the nature of the links between innovative workplace practices and the safety performance of an enterprise, it is equally useful to examine the precise mechanisms via which such relationships might engender organizational growth and effectiveness. Owing to the claim that occupational accidents may disrupt the production process and diminish the quantity and quality of production achieved, commentators have often stressed the usefulness of a well-structured OHS system in enhancing the productivity of a firm, as a way to attain improved organizational growth (Fernández-Muñiz et al., 2009; Nunez and Villanueva, 2011). In fact, some studies have reported that managers who prioritize OHS matters and integrate them into production processes may experience appreciable levels of organizational success (OECD, 2003; O'Dea and Flin, 2003; Zohar and Luria, 2005). This argument seems quite reasonable given that healthier workers are more likely to contribute to better-quality products and services (Alli, 2001). In recognition of this, HRM systems should therefore be designed such that they are akin to achieving better safety performance and greater productivity gains for the organization (Fernández-Muñiz et al., 2009; Alli, 2001).

Moreover, firms are normally exposed to a high degree of both financial and opportunity costs in the face of recurrent occupational accidents and injuries (Fernández-Muñiz et al., 2009; Ring, 2011). To an extent, these costs may stem from the need to pay compensation and insurance claims, medical expenditures, or costs due to disruptions in production processes (Fernández-Muñiz et al., 2007, 2009; Giovanis, 2010). The huge negative effects of these costs on a firm's potential to achieve organizational growth therefore accentuates the need for firms to adopt better OHS strategies (Fernández-Muñiz et al., 2009; Ring, 2011). On explaining the significance of enhanced safety performance on a firm's financial growth, Reason (1997) argued that companies are naturally susceptible to various forms of risks and hazards which may instil an inherent obligation, on the part of the employer, to invest in safeguarding the well-being of the workforce. Hence, if the company, right from the start, does not cater for these hazards by establishing an effective safety management system, the company could (in the long run) be forced to divert valuable resources which were originally mapped for other business operations, thereby jeopardizing their financial prospects. Such arguments suggest therefore that OHS is a salient ingredient for achieving sustainable economic growth.

Going by the positive links established in the literature between OHS and higher levels of employee satisfaction, commitment and trust in

management (see Barling et al., 2003; O’Dea and Flin, 2003; Barling and Hutchinson, 2000; Michael et al., 2005), it seems fair to argue that a good safety management system would minimize cases of absenteeism, reduce the likelihood for employees to leave the firm, and thus promote better organizational growth. Over the years, HRM scholars have established a negative relationship between increased staff turnover rates and the performance of a firm, owing to the costs associated with recruiting and training new employees (Fernández-Muñiz et al., 2007, 2009; Ring, 2011). Indeed, Fernández-Muñiz et al. (2007) argued that when employees are either partially or entirely disengaged from the productive process due to occupational accidents, the firm could experience deterioration in their growth prospects since workers’ knowledge is inevitably tied to operation of production processes. Thus, employee management strategies that incorporate the effective management of OHS matters would, in addition to reducing the incidence of occupational injuries, drive organizational growth by reducing labour absenteeism (Fernández-Muñiz et al., 2009).

Furthermore, organizations which have fared significantly well in achieving enhanced OHS records through the implementation of advanced HRM practices could ultimately build a good reputation and attain stronger relations both internally (within the workforce) and externally (among stakeholders, customers, the media and other firms) (OECD, 2003). In fact, other researchers have reinforced this claim by arguing that the corporate reputation of an organization could serve as a critical ingredient for their socio-economic growth and competitiveness (O’Dea and Flin, 2003; Tervonen et al., 2009; Ring, 2011). As an illustration, it is quite generally believed that high rates of occupational injuries may adversely affect the public image of an enterprise. Hence, if the firm fails to properly manage its OHS affairs, it could have a negative consequence on publicity and consumer loyalty to their products, ultimately impacting on the firm’s commercial performance (Barling and Hutchinson, 2000; Fernández-Muñiz et al., 2009). On account of this, it can be presumed that a well-managed OHS system would not only have a positive impact on the firm’s public image, but will also enhance its attractiveness to prospective job applicants and increase its market position and profit-making potential.

Factors to Consider on Implementing OHS Management Systems

Despite recent acknowledgements in the HRM literature as to the widespread gains associated with the effective management of OHS matters, it is purported that several managers are yet to adequately translate this knowledge into practice (Alli, 2001; Lin and Mills, 2001; O’Dea and Flin,

2003). As earlier stated, managers are often faced with the intricate task of choosing between a range of competing business priorities. Sadly, however, several authors have alleged that OHS concerns are normally the first items to be traded off in this regard (Lin and Mills, 2001; O'Dea and Flin, 2003; Zohar and Luria, 2005). In fact, it seems as though companies are progressively placing more value on production processes, while dedicating fewer resources to human capital and OHS expenditures, which, perhaps, they consider as costs rather than investments (Fernández-Muñiz et al., 2009). This orientation may have ensued from the assumption that investments into HRM and OHS systems do not necessarily yield any visible effects on production gains in the short term. Hence, to the extent that firms remain quite constrained by increasing levels of global competition, managers tend more towards shifting their attention away from the long-term economic benefits of achieving a safe and healthy workplace, leading to reduced investments in OHS affairs (Alli, 2001).

Another factor that should be considered as regards the proper integration of OHS matters into strategic HRM is the relative size of the firm. In general, it is believed that smaller workplaces (defined as having less than 50 employees) would attain poorer safety records compared to the much larger workplaces, owing to (but not limited to) the huge costs associated with establishing a good OHS framework (Alli, 2001). In support of this, Lin and Mills (2001), making reference to Holmes's (1999) study on Australian companies, noted that small construction firms were unable to manage their OHS risks as effectively as the much larger firms. This assertion, as indicated in Holmes's study, was tied mainly to the claim that managers in the small firms did not deem it necessary to promote better OHS because they felt such issues were the responsibility of employees. In contrast, however, managers in the larger firms were more aware of the importance of OHS and therefore integrated such matters into their overall management strategy. Arguably, managers in larger firms may also have access to experience and resources to make OHS systems more effective. In this light, it is suggested that managers in smaller companies, unlike their counterparts in larger firms, may not necessarily see the benefits associated with prioritizing OHS matters (Lin and Mills, 2001).

Finally, it has been argued that the prospects for incorporating OHS matters into innovative management systems depend on the geographical location of the company, as well as the economic sector or industry to which the company belongs (OECD, 2003). Some studies have shown that the implementation of HPWP may vary across national borders, owing to factors such as government regulations, differences in national culture and

educational institutions (Green and Tsitsianis, 2005; Godard, 2009; Batt et al., 2010). As such, existing OHS laws and procedures may differ considerably from one country to another, narrowing the scope for developing more flexible and innovative ways of integrating OHS matters into HRM systems. Moreover, the economic sector to which the firm belongs could greatly influence managerial decisions with respect to OHS (Hofmann et al., 1995; Alli, 2001; Lin and Mills, 2001). As reported in Alli's (2001) paper, industrial sectors like agriculture, forestry, mining and construction take the lead in the incidence of occupational accidents worldwide, while other sectors may feature at the lower end of the spectrum. Accordingly, it appears reasonable to assert that companies which fall within the lower end of the spectrum might not feel the need to prioritize OHS matters. In some ways, this flaw may consequently produce adverse effects on the likelihood of companies in low hazard sectors to apply innovative HRM systems to OHS management.

7. CONCLUSION

This chapter has illustrated the links between HPWP and OHS, and how such associations may engender organizational growth. HRM approaches which aim at enforcing compliance with OHS procedures have been shown to be less effective compared to practices aimed at instilling higher levels of employee trust and commitment through participative decision-making activities. Whereas this commitment-based approach to OHS management is believed to produce a wide range of benefits for employers and their employees, such practices may also lead to increases in work intensification and consequently, reduced employee well-being. The acknowledgement of this useful relationship has been shown to be vital in stimulating the top management of an enterprise to proactively demonstrate their commitment to matters pertaining to safeguarding the health and well-being of employees. It has also been recognized that the managerial responsibility of promoting better OHS competes daily with other key business priorities, and managers need to make sound choices in favour of those priorities associated with enhanced organizational growth. Accordingly, the evidence presented in this chapter has shown that an effective safety leadership system coupled with innovative HRM practices, such as those embodied in HPWP, may significantly increase the growth and socio-economic performance of the firm by optimizing the firm's potential for better productivity, profitability and corporate reputation, while encouraging favourable work-related behaviours.

REFERENCES

- Adler, P. and Borys, B. (1996) Two types of bureaucracy: enabling and coercive. *Administrative Science Quarterly*, 41 (1), 61.
- Alli, B. (2001) Fundamental principles of occupational health and safety. Geneva: International Labour Organization (ILO).
- Appelbaum, E., Bailey, T., Berg, P. and Kalleberg, A. (2000) *Manufacturing Advantage: Why High-Performance Work Systems Pay Off*. Ithaca, NY: ILR Press.
- Arthur, J. (1994) Effects of human resource systems on manufacturing performance and turnover. *Academy of Management Journal*, 37, 670–687.
- Askenazy, P. (2001) Innovative workplace practices and occupational injuries and illnesses in the United States. *Economic and Industrial Democracy*, 22 (3), 485–516.
- Atkinson, C. and Hall, L. (2011) Flexible working and happiness in the NHS. *Employee Relations*, 33 (2), 88–105.
- Bakker, A. and Demerouti, E. (2007) The job demands-resources model: state of the art. *Journal of Managerial Psychology*, 22 (3), 309–328.
- Balducci, C., Schaufeli, W. and Fraccaroli, F. (2011) The job demands–resources model and counterproductive work behaviour: the role of job-related affect. *European Journal of Work and Organizational Psychology*, 20 (4), pp. 467–496.
- Bainbridge, S. (1998) Privately ordered participatory management: an organizational failures analysis. *Delaware Journal of Corporate Law*, 23 (3), 979–1076.
- Barling, J. and Hutchinson, I. (2000) Commitment vs. control-based safety practices, safety reputation, and perceived safety climate. *Canadian Journal of Administrative Sciences*, 17 (1), 76–84.
- Barling, J., Iverson, R. and Kelloway, K. (2003) High-quality work, job satisfaction, and occupational injuries. *Journal of Applied Psychology*, 88 (2), 276–283.
- Batt, R., Nohara, H. and Kwon, H. (2010) Employer strategies and wages in new service activities: a comparison of coordinated and liberal market economies. *British Journal of Industrial Relations*, 48 (2), 400–35.
- Beltrán-Martín, I., Roca-Puig, V., Escrig-Tena, A. and Bou-Llusar, J. (2008) Human resource flexibility as a mediating variable between high performance work systems and performance. *Journal of Management*, 34 (5), 1009–1044.
- Boisard, P., Gollac, M., Valeyre, A. and Cartron, D. (2003) Time and work: work intensity. Dublin: European Foundation for the Improvement of Living and Working Conditions.
- Buenger, V., Daft, R., Conlon, E. and Austin, J. (1996) Competing values in organizations: contextual influences and structural consequences. *Organization Science*, 7 (5), 557–576.
- Bryson, A. and White, M. (2008) Organizational commitment: do workplace practices matter? Centre for Economic Performance, Discussion Paper No. 881.
- Cañibano, A. (2011) Exploring the negative outcomes of flexible work arrangements. The case of a consultancy firm in Spain. Paper presented at the British Academy of Management, HRM conference, London.
- Carless, S. (2005) Person–job fit versus person–organization fit as predictors of organizational attraction and job acceptance intentions: a longitudinal study. *Journal of Occupational and Organizational Psychology*, 78, 411–429.

- Clarke, S. (1999) Perceptions of organizational safety: implications for the development of safety culture. *Journal of Organizational Behavior*, 20, 185–198.
- Combs, J., Liu, Y., Hall, A. and Ketchen, D. (2006) How much do high-performance work practices matter? A meta-analysis of their effects on organizational performance. *Personnel Psychology*, 59, 501–528.
- Daniels, K., Beesley, N., Cheyne, A. and Wimalasiri, V. (2008) Coping processes linking the Demands-Control-Support model, affect and risky decisions at work. *Human Relations*, 61, 845–874.
- De Jonge, J., Bosma, H., Peter, R. and Siegrist, J. (2000) Job strain, effort-reward imbalance and employee well-being: a large-scale cross-sectional study. *Social Science & Medicine*, 50, 1317–1327.
- Delery, J. (1998) Issues of fit in strategic human resource management: implications for research. *Human Resource Management Review*, 8, 289–309.
- Dell'Aringa, C., Ghinetti, P. and Lucifora, C. (2003) *High Performance Work Systems, Industrial Relations and Pay Settings in Europe*. Institute of the Economics of Enterprise and of Work, Catholic Sacred Heart University: Milan.
- Edwards, P. and Wright, M. (2001) High-involvement work systems and performance outcomes: the strength of variable, contingent and context-bound relationships. *The International Journal of Human Resource Management*, 12 (4), 568–585.
- Fernández-Muñiz, B., Montes-Peon, J. and Vazquez-Ordas, C. (2007) Safety management system: development and validation of multidimensional scale. *Journal of Loss Prevention in the Process Industries*, 20, 52–68.
- Fernández-Muñiz, B., Montes-Peón, J. and Vázquez-Ordás, C. (2009) Relation between occupational safety management and firm performance. *Safety Science*, 47, 980–991.
- Giovanis, N. (2010) The measurement of health and safety conditions at work, theoretical approaches, tools and techniques: a literature review. *International Research Journal of Finance and Economics*, (36).
- Gould-Williams, J. and Davies, F. (2005) Using social exchange theory to predict the effects of HRM practice on employee outcomes. *Public Management Review*, 7 (1), 1–24.
- Godard, J. (2009) Institutional environments, work and human resource practices, and unions: Canada vs. England. *Industrial & Labor Relations Review*, 62 (2).
- Green, F. and Tsitsianis, N. (2005) An investigation of national trends in job satisfaction in Britain and Germany. *British Journal of Industrial Relations*, 43 (3), 401–429.
- Griffin, M. and Neal, A. (2000) Perceptions of safety at work: a framework for linking safety climate to safety performance, knowledge, and motivation. *Journal of Occupational Health Psychology*, 5, 347–358.
- Guest, D., Conway, N. and Dewe, P. (2004) Using sequential tree analysis to search for 'bundles' of HR practices. *Human Resource Management Journal*, 14 (1), 79–96.
- Harley, B., Allen, B. and Sargent, L. (2007) High performance work systems and employee experience of work in the service sector: the case of aged care. *British Journal of Industrial Relations*, 45 (3), 607–633.
- Hofmann, D., Jacobs, R. and Landy, F. (1995) High reliability process industries: individual, micro, and macro organizational influences on safety performance. *Journal of Safety Research*, 26 (3), 131–149.

- Holmes, N. (1999) An exploratory study of meanings of risk control for long term and acute effect occupational health and safety risk in small business construction firms. *Journal of Safety Research*, 30 (4), 61–71.
- Huselid, M. (1995) The impact of human resource management practices on turnover, productivity, and corporate financial performance. *Academy of Management Journal*, 38 (3), 635–872.
- Ichniowski, C., Shaw, K. and Prennushi, G. (1997) The effects of human resource management practices on productivity: a study of steel finishing lines. *The American Economic Review*, 87 (3), 291–313.
- Judge, T. and Colquitt, J. (2004) Organizational justice and stress: the mediating role of work–family conflict. *Journal of Applied Psychology*, 89 (3), 395–404.
- Kalmi, P. and Kauhanen, A. (2008) Workplace innovations and employee outcomes: evidence from Finland. *Industrial Relations*, 35 (3), 430–459.
- Kanfer, R. and Ackerman, P. (1989) Motivation and cognitive abilities: an integrative/aptitude-treatment interaction approach to skill acquisition. *Journal of Applied Psychology*, 74, 657–690.
- Kelliher, C., and Anderson, D. (2010) Doing more with less? Flexible working practices and the intensification of work. *Human Relations*, 63 (1), 83–106.
- Lawler, J., Chen, S., Wu, P., Bae, J. and Bai, B. (2011) High-performance work systems in foreign subsidiaries of American multinationals: an institutional model. *Journal of International Business Studies*, 42, 202–220.
- Lobel, S. (1999) *Impacts of Diversity and Work-Life Initiatives in Organizations*. Newbury Park, CA: Sage.
- Lin, J. and Mills, A. (2001) Measuring the occupational health and safety performance of construction companies in Australia. *Facilities*, 19 (3/4), 131–138.
- MacDuffie, J. (1995) Human resource bundles and manufacturing performance: organizational logic and flexible production systems in the world auto industry. *Industrial and Labor Relations Review*, 48 (2), 197–221.
- Macky, K. and Boxall, P. (2008) High-performance work systems and employee well-being: does employee involvement really intensify work? *Asia Pacific Journal of Human Resources*, 46 (1), 38–55.
- Michael, J., Evans, D., Jansen, K. and Haight, J. (2005) Management commitment to safety as organizational support: relationships with non-safety outcomes in wood manufacturing employees. *Journal of Safety Research*, 36, 171–179.
- Mohr, R. and Zoghi, C. (2008) High-involvement work design and job satisfaction. *Industrial and Labor Relations Review*, 61 (3), article 1.
- Newman, A., Thanacoody, R. and Hui, W. (2011) The impact of employee perceptions of training on organisational commitment and turnover intentions: a study of multinationals in the Chinese service sector. *International Journal of Human Resource Management*, 22 (8), 1765–1787.
- Ngo, H., Foley, S. and Loi, R. (2009) Family friendly work practices, organizational climate, and firm performance: a study of multinational corporations in Hong Kong. *Journal of Organizational Behavior*, 30, 665–680.
- Nunez, I. and Villanueva, M. (2011) Safety capital: the management of organizational knowledge on occupational health and safety. *Journal of Workplace Learning*, 23 (1), 56–71.
- Nygaard, A. and Dahlstrom, R. (2002) Role stress and effectiveness in horizontal alliances. *The Journal of Marketing*, 66 (2), 61–82.
- O’Dea, A. and Flin, R. (2001) Site managers and safety leadership in the offshore oil and gas industry. *Safety Science*, 37, 39–57.

- O'Dea, A. and Flin, R. (2003) *The Role of Managerial Leadership in Determining Workplace Safety Outcomes*. Suffolk: Health and Safety Executive (HSE).
- Organisation for Economic Co-Operation and Development (OECD) (2003) *Guidance on Safety Performance Indicators: A Companion to the OECD Guiding Principles for Chemical Accident Prevention, Preparedness and Response*. Paris: OECD Publications.
- Paré, G. and Tremblay, M. (2007) The influence of high-involvement human resources practices, procedural justice, organizational commitment, and citizenship behaviours on information technology professionals' turnover intentions. *Group & Organization Management*, 32 (3), 326–357.
- Quinn, R. and Rohrbaugh, J. (1983) A spatial model of effectiveness criteria: towards a competing values approach to organizational analysis. *Management Science*, 29, 363–377.
- Ramsay, H., Scholarios, D. and Harley, A. (2000) Employees and high-performance work systems: testing inside the black box. *British Journal of Industrial Relations*, 38 (4), 501–531.
- Reason, J. (1997) *Managing the Risk of Organizational Accidents*. Aldershot: Ashgate.
- Ring, J. (2011) The effect of perceived organizational support and safety climate on voluntary turnover in the transportation industry. *International Journal of Business Research and Management*, 1 (3), 156–168.
- Schulte, M., Ostroff, C. and Kinicki, J. (2006) Organizational climate systems and psychological climate perceptions: a cross-level study of climate-satisfaction relationships. *Journal of Occupational and Organizational Psychology*, 79, 645–671.
- Scott-Ladd, B., Travaglione, A. and Marshall, V. (2006) Causal inferences between participation in decision making, task attributes, work effort, rewards, job satisfaction and commitment. *Leadership & Organization Development Journal*, 27 (5), 399–414.
- Sekiguchi, T. (2004) Person-organization fit and person-job fit in employee selection: a review of the literature. *Osaka Keidai Ronshu*, 54 (6), 179–196.
- Simard, M. and Marchand, A. (1995) A multilevel analysis of organisational factors related to the taking of safety initiatives by work groups. *Safety Science*, 21, 113–129.
- Simard, M. and Marchand, A. (1997) Workgroups' propensity to comply with safety rules: the influence of micro-macro organizational factors. *Ergonomics*, 40, 172–188.
- Sparham, E. and Sung, J. (2007) High performance work practices – work intensification or 'win-win'? Centre for Labour Market Studies, Working Paper.
- Tervonen, P., Haapasalo, H. and Niemelä, M. (2009) Evolution of safety management and systems in a steel production organization. *The Open Management Journal*, 2, 17–27.
- Tregaskis, O., Daniels, K., Glover, K., Butler, P. and Meyer, M. (2012) High performance work practices and firm performance: a longitudinal case study. *British Journal of Management* (in press).
- Tubre, T. and Collins, J. (2000) Jackson and Schuler (1985) revisited: a meta-analysis of the relationships between role ambiguity, role conflict, and job performance. *Journal of Management*, 26 (1), 155–169.
- Van De Voorde, K., Paauwe, J. and Van Veldhoven, M. (2011) Employee well-being and the HRM–organizational performance relationship: a

- review of quantitative studies. *International Journal of Management Reviews* (in press).
- Walters, D. (2011) Worker representation and psycho-social risks: a problematic relationship? *Safety Science*, 49, 599–606.
- White, M., Hill, S., McGovern, P., Mills, C. and Smeaton, D. (2003) High-performance management practices, working hours and work–life balance. *British Journal of Industrial Relations*, 41 (2), 175–195.
- Whitener, E. (2001) Do ‘high commitment’ human resource practices affect employee commitment? A cross-level analysis using hierarchical linear modelling. *Journal of Management*, 27, 515–535.
- Wood, S. (1999) Human resource management and performance. *International Journal of Management Reviews*, 1 (4), 367–413.
- Wood, S. and de Menezes, L. (2011) High involvement management, high-performance work systems and well-being. *The International Journal of Human Resource Management*, 22 (7), 1584–1608.
- Wu, T., Chen, C. and Li, C. (2008) A correlation among safety leadership, safety climate and safety performance. *Journal of Loss Prevention in the Process Industries*, 6 (3), 261–272.
- Wu, T., Chang, S., Shu, C., Chen, C. and Wang, C. (2011) Safety leadership and safety performance in petrochemical industries: the mediating role of safety climate. *Journal of Loss Prevention in the Process Industries*, 24, 716–721.
- Zacharatos, A., Barling, J. and Iverson, R. (2005) High-performance work systems and occupational safety. *Journal of Applied Psychology*, 90 (1), 77–93.
- Zohar, D. and Luria, G. (2005) A multilevel model of safety climate: cross-level relationships between organization and group-level climates. *Journal of Applied Psychology*, 90 (4), 616–628.