**Archives of Business Research – Vol.2, No.3**
**Publication Date:** June 30, 2014
**DOI**:10.14738/abr.23.316
Cheema, L. J., Hussain, N. N., Ishaq, M. I., Asim, A. I. & Ullah, A.(2014). Antecedents of workplace safety and performance in emergency service provider company: An empirical investigation. *Archives of Business Research, 2*(3), 30-41.

# Antecedents of Workplace Safety and Performance in Emergency Service Provider Company: An Empirical Investigation

**Luqman J. Cheema**
Department of Management Sciences. Global Institute Lahore, Pakistan

**Nazia Munazer Hussain**
Department of Management Sciences. Global Institute Lahore, Pakistan
*naxia.m.hussain@live.com*

**Muhammad Ishtiaq Ishaq**
Department of Management Sciences. Global Institute Lahore, Pakistan

**Ali Ijaz Asim**
Department of Management Sciences. Global Institute Lahore, Pakistan

**Abid Ullah**
University of Peshawar, Peshawar, Pakistan

**ABSTRACT**

**High Performance Work Practices (HPWP) is considered as best player to improve performance (financial and operational) and productivity. This notion is also proved by a meta-analysis conducted by Combs et al. (2006) by taking 92 studies accompanied by 19,319 organizations into considerations. However, the scant literature is available in Pakistani context especially in Emergency Service Provider Company. So, the current study explored the impact of ten HR practices (employee hiring, measurement, training, compensation, employee security, information sharing job quality, status distinction, decision making and transformational leadership) on workplace safety. Regression analyses was employed to test the study hypothesis and the results revealed that only three practices were found to be significant predictor of workplace safety and five dimensions for organizational performance. The implications and recommendations for future researchers were discussed hereunder.**

**Key Words:** Workplace Safety, High Performance Work Practices, Emergency Service Provider Company, Pakistan

## INTRODUCTION

High Performance Work Practices (HPWP) considered as a junction of different human resource policies that briefly referred as "a HRM approach that relies on human resource practices that help employees to identify with the firm's goals so that people's behavior is self-regulated to work hard to accomplish those goals, rather than being controlled by sanctions and pressures" Wood and Albanese (1995). Different researchers proved the credible relationship between different HR practices with organizational and extra-role performance (Ishaq et al., 2012; Huselid 1995). But the relationship between HR practices, performance in emergency service providing organization is almost zero. This scarcity endorsed the

applicability of this research that aimed to create theortical framework of HR practices, performance and workplace safety.

In underdeveloped countries like Pakistan, it is assumed that organization sshould take necessary preventive measures to safeguard their employees from any sort of injuries at workplace. The official report of PEILER's survey of Labor Force Survey (2010-11) claimed that around 74% Pakistani workforce working in informal small and medium scale industries like metal, leather, pharmaceutical and textile factories who are operating in Pakistan without any legal and moral obligations of worker's occupational health and safety (OHS). In this scenario, organizations are already deteriorated the OHS measures and did not compensate any financial and medical treatment if any worker faced permanent injury or accidental death. During 2000-2008, Pakistan Labor and HR Statistics pointed that 419 industrial accidents were happened in this number increased to 101 in 2011 year only. These alarming conditions, establishment of an emergency service provider company hold significant importance. In this situation, a provincial assembly passed a legislation of the establishment of Emergency Service Provider Company that includes Disaster Emergency Response Teams, Fire Services, Rescue and Emergency Ambulance, whereas Fire services, Ambulance and Trained emergency paramedics are not available.

As very limited studies are available on HPWP in emergency providing companies, therefore we took the researches of other industries to take different dimensions of HPWP related with emergency providing companies. To evaluate the best HR practices for this study, several large-scale theoretical and empirical studies on higher performance work practices were considered publication in last decade (Pfeffer, 1998; Pfeffer et al., 1995; Morgan, 2001; Huselid, 1995; Hartog and Verburg,2004; Delery and Doty, 1996;Becker and Huselid, 1998; Guest et al., 2004). In these studies, the researchers took minimum seven and 24 maximum dimensions of HR work practices were highlighted. Wood and Albanese (1995) defined high performance work systems as "a HRM approach that relies on human resource practices that help employees to identify with the firm's goals so that people's behavior is self-regulated to work hard to accomplish those goals, rather than being controlled by sanctions and pressures". Many related terms have emerged to refer to this HRM approach, such as high commitment work system (HCWS) or high involvement work system (HIWS), which have been regarded as synonymous by most studies. Arthur (1994) claimed that traditional HRM systems were responsible for improve efficiency, specified rules and procedures, reduce direct labor costs and measuring rewards on some laid criteria whereas HPWS seeks to influence employee motivation, abilities, commitment, knowledge, skills, and opportunities (Batt 2002; Appelbaum 2000; MacDuffie 1995). The basic aim of this current research is to find out the relative importance of ten HR practices named employee security, training, information sharing, contingent compensation, team and decentralized decision-making, measurements, job quality, transformational leadership and selective hiring on workplace safety and organizational performance in Emergency Service Providing Company in Pakistan.

## LITERATURE REVIEW

In last two decades, Warech and Tracey (2004) claimed that practitioners and scholars put substantial amount of efforts to investigate the linkage between HR practices and firms' performance. These studies are strongly created the linkage between performance, and HR practices and argued that these practices gives an imitable competitive advantage. Murphy and Olsen (2009) also contended that different HR practices cannot operate or implement single handed and hence these strategies considered as overall competitive strategy because of their interrelated aspects. Becker and Huselid (1998) argued that "the systems identified in these

studies have become known as high performance work practices systems or high involvement work practices systems in the literature within the field of strategic human resource management. Firms able to implement such systems through complementary internal alignment have been shown to increase the intangible value of their human capital and create greater economic value for the business". Organizations implemented combination of HR practices successfully can compete more effectively that leads to greater organizational performance.

As stated by Pfeffer, (1999), Milgrom & Roberts (1995), MacDuffie (1995), Jackson & Schuler (1995), Ichniowski, et al. (1997), Huselid (1995) and Arthur (1994) claimed the overall importance of HR systems and suggested that "it is the systemic and interrelated influence of HRM policies and practices that provides their impossible to imitate, and there-fore provides a strategic growing force for the firm. Such internally consistent and externally aligned with the firm competitive strategies of work systems are generally thought to include rigorous recruitment and selection procedures, performance-contingent incentive compensation systems, management development and training activities linked to the needs of the organizations, and significant involvement of employees commitment". Barney (1991) argued that organization used human resource management systems for attain the competitive advantage. Numerous researchers (e.g., Collins and Smith, 2006; MacDuffie, 1995; Ichniowski, Shaw and Prennushi, 1997; Batt, 1999, 2002; Huselid, 1995; Delery and Doty, 1996) found the strong positive relationship between high-commitment, involvement, firm performance and higher performance work systems / human resource management systems. Recently, the studies of Sun, Aryee and Law (2007), Zheng, Morrison and O'Neill (2006) and Zhang and Li (2009) in Asian countries (China) demonstrated the positive association of HRM system (high performance HR practices) with the firm performance.

Gallie et al. (2001) pretended about HRM systems as "a high-commitment strategy has been one of the most accepted and coherent human resource systems. In this sense, the empirical evidence shows a tendency for many of the presumed commitment practices to be found together". Various attributes of the human resource management system and the consequences thereof are assumed to underlie the employee antecedents that affect customer metrics. Kirkman, Rosen, Tesluk and Gibson (2004) explained empowerment as potential but valuable aim of an organization. The results of Batt (2002) study showed that "involvement significantly predicted quit rates and sales growth in residential and small business sectors but not in large business sectors". Kirkman, Rosen, Tesluk and Gibson (2004) conducted a research in virtual team contexts and found that team empowerment is positively associated with process improvement and customer satisfaction. Service recovery performance also affected by empowerment via commitment and satisfaction (Yavas, Karatepe and Avci, 2003).

It has been hypothesized that training may lead to customer outcomes such as satisfaction (Eaglen et al., 2000). Evidence for this is mixed, however with some positive findings (e.g. Babakus, et al., 2003) and others finding no relationship (Batt, 2002; Liao & Chuang, 2004). However a full framework considering the mediating impact of employee competence and positive affect stemming from training may aid understanding. Compensation elements may affect the customer outcomes as per the existing literature. Batt (2002) found that incentive schemes exert strong positive impact on sales growth. It also leads to service recovery performance (Babakus, Yavas, Karatepe and Avci, 2003). However, Liao and Chuang (2004) did not found any significant impact of incentive schemes on service performance.

Employment security was found to be one of the important factors differentiating high accident rate companies from low accident rate companies in the both Smith Cohen, Cleveland (1978) and Zohar (1980a) studies, reported that turnover was greater and workgroup stability was lower in plants with higher work injury rates. Similarly, Zohar's (1980a) review of the literature revealed that a more stable workforce with a greater number of older employees is characteristic of low accident rate companies. Employment security should result in fewer occupational injuries in that it encourages a long-term perspective. It is in their best interest to protect their safety. What typically seems to happen when management is not committed for the long-term is that employees are seen as dispensable and short-term profits override any concern with safety (Jackall, 1988). Similarly, Sells (1994), in his discussion of the asbestos industry claims that much of the threat to worker safety inherent to the asbestos industry was due to the short-term perspective that plagued management.

How responsible individuals feel for accidents they have previously been involved in. The use of this employee screening device in a milk processing and delivery company over the course of four years resulted in a significant reduction in the accident rate and decreased expenditures on worker compensation claims (Jones & Weubker, 1988). Similar results were respond in a trucking finnwhich had also implemented the screening inventory (Jones, 1991), suggesting that using such a device in the hiring process may effectively help reduce accidents at work. According to Pfeffer (1998a), training is one of the most important distinguishing attributes of a high performance work system. The reason being that the foundation of the commitment-oriented organization is the workforce, and training directly benefits employees and organizations. By extension, improving an organization's safety performance, like improving economic performance, should also be achieved by way of increased training. A study by Tannenbaum, Mathieu, Salas, Cannon-Bowers (1991) provides some insight into the broad effects of training on performance, and has several implications for safety training. Furthermore, training alone is not sufficient to achieve optimal performance. Rather, employers must also ensure that employees are empowered to use the knowledge they obtain (Parker, Wall &Jackson, 1997). Organizations need to provide opportunities for employees to use new skills following training (Parker et al., 1997), while also not punishing employees for doing so (Hamper, 1991 ).

There are a number of benefits that can be derived from organizing employees into teams. First, an employee's peers tend to be more effective at controlling his or her behavior than is someone else from higher up in the organization. Second, teams have the added benefit of making all employees feel more responsible for the success of the organization. Third teams remove layers of the hierarchy which, in effectives more control to those individuals who are closest to and best understand the situation. Fourth, teams allow employees to pool ideas resulting in more creative solutions (Pfeffer, 1998a). Each of these benefits and their role in promoting workplace safety will be discussed in turn.

Status distinctions in organizations remain the norm, and create unwanted barriers between people that harm motivation (Pfeffer, l998a; see also, Hamper, 1991). In a high-performance work system, each employee from the shop floor to top management should feel that they can contribute to diverse aspects of the organization. However, when select employees have special privileges such as the use of executive dining rooms, reserved parking or greater access to information, the message being conveyed is that these organizational members are more important than members not given the same advantages. One way of achieving a reduction in status distinctions is through management- by-walking-around (MBWA). MBWA encourages management to be less office-bound, and spend at least a part of each day walking around and

 

talking with the people whom they supervise (Peters &Waterman, 1982). Ln the safety context, not only would management be able to better see some of the hazards experienced by their subordinates, but as they learn more about the daily safety problems encountered, they will be in a better position to engage in preventive efforts. In addition, employees who interact with their managers more frequently may be more prepared to trust their managers and may be more able to see that management does in fact hold occupational safety as a priority. The problems of mutual distrust identified by Clarke (1999) might be reduced.

Fitz-Enz (1997) suggests that information is one of the organization's most valuable resources. By providing employees with information, the organization enables them to have a better understanding of the operation and its goals which in effect should increase overall organizational functioning (Pfeffer. l998). Similarly, it would not be possible to work safely without full information about all aspects of one's job in panicle as well as the organization more generally. In fact Ontario's occupational health and safety legislation is based on this very assumption given that a worker cannot exercise his or her right to refuse unsafe work without full information about the safety of that work.

The contingent nature of compensation is even more important for organizations (Pfeffer, 1998a. 1998c). By explicitly choosing which behaviors are to be rewarded, the organization signals unambiguously the behaviors it values. Furthermore, employees are motivated to contribute more to the organization when their own interests are in line with those of the organization. The level of importance management places on occupational safety directly affects how motivated employees are to perform their job safely (Hofinann et al., 1995). For instance, in reviewing the literature, Cohen (1977) found strong management commitment to safety is a defining characteristic of successful occupational safety programs. Similarly, in a study comparing high and low accident rate companies, the management of low accident rate companies was more strongly committed and more actively involved with work-related safety than was the case for those companies with higher accident rates (Smith et al., 1978). Griffiths (1985) attributes the exceptional safety record of his company almost entirely too strong management commitment to occupational safety.

Despite job quality not being included as a component in any of the major conceptualizations of a high performance work system (e.g., Fitz-Enz, 1997; Pfeffer, 1998a), high quality work should be a critical component of a high performance system for two major reasons. In the front instance, a high quality job, one that is more fulfilling and effective" (Parker &Wall, 1998, p.ix), will ensure that employees maintain their focus and attention. Second, and again referring to Wheatley's (1997) comment that , you can't direct people into perfection; you can only engage them enough so that they want to do perfect work"(p. 25), a high quality job will engage people emotionally. Overall, a well-designed job will ensure that employees are engaged mentally, intellectually and emotionally, and optimally equipped to work safely.

High performance work systems are described by empowerment, incentives on work, development of staff and skill development (Batt, 2002). Batt (2002) investigated that "… links within service contexts … HPWS were generally linked to higher sales growth, an effect which was partially mediated by lower employee turnover. In addition, Batt's research confirmed her theory that the above effect was stronger for smaller, lower-value-added market segments, whereas for highvalue- added, bigger customer segments the HPWS seemed the price of market entry". In another study, Batt and Moynihan (2006) obtained a mediation model where discretion, employee training and rewards associated with higher service quality, which further exert significant impact on higher revenue.

From the literature, following two hypotheses are derived:

- Hypothesis 1: High performance work systems put positive impact on workplace safety.
- Hypothesis 2: High performance work systems positively influenced the organizational performance.

## RESEARCH DESIGN

This study is cross-sectional in nature. Structured survey questionnaire to 150 employees working in emergency service providing company. After multiple responses, 112 complete questionnaire were returned with 84% response rate. Before collecting the data from respondents, researchers took written permission from the HR manager to conduct the study within the organization. A cover letter accompanied the research questionnaires explaining the purpose and nature of the research and elucidating that participation was voluntary, anonymous. The instrument was use for this study is valid and reliable, all the variable use in this study has evaluate via different items or question related to that variable, question related to employee security based on Kuhnert & Vance, 1992, Selective Hiring, Training, Contingent Compensation, Job Quality, Measurement, Information Sharing, Reduced Status Distinctions, Teams and Decentralized Decision-making from Barroll (1999) and Transformational Leadership from Bass and Avolio (1995). All responses were on a 5-point Likert-type scale ranging from strongly disagree' (1) to 'strongly agree' (5). A higher score reflected the perception that the organization had more extensively adopted the ten human resource practices. Stepwise regression analyses were conducted by using SPSS 20.

## ANALYSIS AND INTERPRETATIONS

Table # 1 indicated the demographic profile of the study participants.

**Table # 01: Demographic Profile**

| Demographic Variable | | Frequency | Percentage |
|---|---|---|---|
| **Designation** | Lead Fire Rescuer | 12 | 12.0 |
| | Emergency Medical Technician | 23 | 23.0 |
| | DERT Rescuer | 13 | 13.0 |
| | Fire Rescuer | 20 | 20.0 |
| | Rescuer Driver | 13 | 13.0 |
| | Others | 19 | 19.0 |
| **Age** | 21 - 25 | 28 | 28.0 |
| | 26 - 30 | 55 | 55.0 |
| | Above 30 | 17 | 17.0 |
| **Job Nature** | Permanent | 84 | 84.0 |
| | Contract | 16 | 16.0 |
| **Job Timings** | Morning Shift | 51 | 51.0 |
| | Evening Shift | 33 | 33.0 |
| | Night Shift | 16 | 16.0 |

Descriptive statistics including mean, standard deviation, reliability coefficient, factor loading, and multicollineraity statistics are shown in table # 02. Results indicated that factor loading range against each variable and results suggested that there is issue regarding the factor loading. The study variables have a maximum variance-inflation factor less than 2; hence, multicollinearity was not a severe problem that would preclude interpretation of the regression analyses (Neter and other 1983). Tolerance and variance inflation factors (VIF) further conducted to analyze multicollineraity. Table # 2 reported no collinearity exists among

the study variables because tolerance value is less than 0.1 and VIF value is far below than 10 (Gliem, 2005).

**Table # 02: Descriptive Statistics**

| Variable | Mean | Std. Dev. | Reliability | FL | Tolerance | VIF |
|---|---|---|---|---|---|---|
| **WPS** | 3.90 | .57 | .89 | 0.65 – 0.77 | 0.34 | 2.74 |
| **ES** | 3.44 | .58 | .66 | 0.42 – 0.72 | 0.64 | 2.43 |
| **SH** | 3.60 | .68 | .62 | 0.59 – 0.80 | 0.25 | 3.66 |
| **TR** | 3.29 | .74 | .61 | 0.61 – 0.68 | 0.39 | 2.54 |
| **TDDM** | 3.27 | .61 | .64 | 0.73 – 0.86 | 0.40 | 2.22 |
| **RSD** | 3.34 | .54 | .68 | 0.54 – 0.70 | 0.31 | 3.44 |
| **IS** | 3.34 | .51 | .71 | 0.68 – 0.74 | 0.38 | 2.51 |
| **CC** | 3.13 | .64 | .79 | 0.63 – 0.69 | 0.26 | 2.48 |
| **TL** | 3.45 | .79 | .64 | 0.76 – 0.85 | 0.28 | 3.81 |
| **JQ** | 3.18 | .63 | .73 | 0.53 – 0.69 | 0.33 | 2.39 |
| **MR** | 3.20 | .88 | .74 | 0.66 – 0.84 | 0.41 | 2.61 |
| **PER** | 3.89 | .82 | .79 | 0.68 – 0.80 | 0.28 | 3.38 |

*WPS = Work place safety, ES = Employment Security, SH = Selective Hiring, Tr = Training, TDDM = Team & Decentralized Decision-Making, IS=Information Sharing RSD = Reduced Status Distinctions, CC = Contingent Compensation, TL = Transformational Leadership, JQ = Job Quality and Mr = Measurements, PER – Performance, FL, Factor loading, VIF = Variance Inflation Factor*

Table # 03 indicated the correlation statistics among study variables. The relationship of all constructs are significantly and positive with each other except the relationship of RSD and ES, CC and SH, CC and TR. Since the relationship values among the variables is no more than 0.60 so there is no problem of multi-collienarity.

**Table # 03: Correlation Statistics**

| | WPS | ES | SH | TR | TDDM | RSD | IS | CC | TL | JQ | MR | PER |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **WPS** | 1.0 | | | | | | | | | | | |
| **ES** | .50* | | | | | | | | | | | |
| **SH** | .37* | .46* | | | | | | | | | | |
| **Tr** | .35* | .41* | .67* | | | | | | | | | |
| **TDDM** | .40* | .51* | .54* | .61* | | | | | | | | |
| **RSD** | .39* | .05 | .38* | .22** | .38* | | | | | | | |
| **IS** | .50* | .37* | .35* | .41* | .54* | .29* | | | | | | |
| **CC** | .36* | .47* | .14 | .09 | .29* | .26** | .40* | | | | | |
| **TL** | .48* | .31* | .35* | .43* | .58* | .40* | .57* | .31* | | | | |
| **JQ** | .49* | .56* | .27** | .25** | .51* | .28** | .51* | .49* | .46* | | | |
| **Mr** | .48* | .56* | .25** | .27** | .52* | .35* | .43* | .52* | .54* | .60* | | |
| **PER** | 37* | .35* | .50* | .58* | .38* | 54* | 40* | .36* | .41* | .43* | .51* | 1.00 |

** Significant at 0.001 Level*
*** Significant at 0.01 Level*

Table # 04 showed that all independent variables (ES, SH, TR, TDDM, RSD, IS, CC, TL, JQ, MR) were regressed on workplace safety. Only three variables named (IS, ES and RSD) are entered in the model. The overall variance explained by three independent variables is 43%. The results also reveals that IS explained 26% variance in the dependent variable whereas ES accounted for 12% and RSD explain 8% variance in the model. The results also displayed that IS, ES and RSD put positive and significant impact on workplace safety. ES put relatively stronger impact on the dependent variable (b=0.38, p = 0.001, t = 4.73) followed by IS (b=0.32,

p = 0.001, t = 3.28) and RSD (b=0.30, p = 0.001, t = 3.67) whereas other practices of HPWP are not statistically significant. So, the study hypothesis is partially supported.

**Table # 04: Regression Analysis for Workplace Safety**

| | Dependent Variable: Workplace Safety | | | |
|---|---|---|---|---|
| | R Square | F-Value | B | t-value |
| **Information Sharing** | .25 | 33.856 | .279 | 3.280 |
| **Employment Security** | .37 | 28.887 | .386 | 4.731 |
| **Reduced Status Distinctions** | .45 | 26.236 | .291 | 3.673 |

Table # 05 showed that all independent variables (ES, SH, TR, TDDM, RSD, IS, CC, TL, JQ, MR) were regressed on organizational performance. Only five variables named (TL, JQ, Training, TDDM and IS) were entered in the model. The results reveals that transformational leadership explained 39% variance, job quality 38%, training 25%, team and decentralized decision making 21% and information sharing explained 20% variance respectively. The results also revealed that transformational leadership explained relatively stronger impact on organizational performance (b=0.48, p = 0.001, t = 9.74) followed by job quality (b=0.46, p = 0.001, t = 9.23), training (b=0.41, p = 0.001, t = 6.49), team and decentralized decision making (b=0.36, p = 0.001, t = 5.28) and information sharing (b=0.29, p = 0.001, t = 5.53).

**Table # 05: Regression Analysis for Organizational Performance**

| | Dependent Variable: Organizational Performance | | | |
|---|---|---|---|---|
| | **R Square** | **F-Value** | **B** | **t-value** |
| **Transformational Leadership** | 0.39 | 84.68* | 0.48* | 9.74 |
| **Job Quality** | 0.38 | 96.27* | 0.46* | 9.23 |
| **Training** | 0.25 | 34.22* | 0.41* | 6.49 |
| **Team & Decentralized Decision Making** | 0.21 | 41.82* | 0.36* | 5.28 |
| **Information sharing** | 0.20 | 39.21* | 0.29* | 5.53 |

## DISCUSSION AND CONCLUSION

Regarding the results of this study that embraces this thesis asa number of significant contributions to the current literature. They extend our understanding of high performance work systems and their relationship with workplace safety. It also contributes to our understanding of the factors that may or may not affect the relationship between high performance work systems and workplace safety. This study advance to our understanding of the importance of the practices of human resource management related to the high performance work system and workplace safety.

The high performance work system described in this thesis, through comprising the use of selective hiring and transformational leadership, the provision of quality work, employment security and training, reduced status distinctions, self-managed teams, information sharing, contingent compensation and measurement of variables critical for success. This supports earlier findings that high performance work practices impact varied aspects of organizational performance. It also extends our understanding of how best to manage for workplace safety. While the results of this study do not allow us to make causal inferences, there does appear to a strong relationship between high commitment of management practices and occupational safety at the organizational level. The current study results also further our understanding of the role of safety climate in such a system. It is well established in the literature that safety climate is related to outcomes such as safety knowledge, safety motivation, safety compliance and safety initiative as well as actual injury rates (Barling, Loughlin et al., 2001; Hofmann & Stetzer, 1996; Neal et al., 2000; Zohar, 2000). What is less well understood are the

organizational factors that create positive perceptions of safety climate? This study provides strong evidence that high performance work systems are related to perceptions of positive safety climate. Again, given the cross-sectional nature of the data, it is not possible to conclude that high commitment work practices positively impact safety climate, however, this preliminary research furnishes us with some insight into this relationship and provides a starting point for future research in this area These studies also contribute to our understanding of the manner in which the high performance work practices considered are interrelated It was found that the ten human resource practices were reflective of a single underlying construe namely, the high performance work system.

High commitment management practices have been the focus of increasing attention ever since Walton's seminal 1985 article describing the benefits to an organization of the commitment versus control-oriented approach to managing human resources. In his article, Walton argued that the employees would respond best to being treated as an invaluable organizational resource. Since then, a number of others have expounded on this idea, most distinctly Jeffrey Pfeffer (see, for instance, Pfeffer 1997, 1998a, 1998d). Pfeffer's work makes the distinct contribution of providing readers with a set of practices for managing the workforce which he argues increase worker trust in management and commitment to the organization and that encourage people to take control over their work smarter and more responsibly. The outcome of such a high performance work system, he claims, is improved employee performance and organizational profitability-what Pfeffer calls,achieving profits through people" (Pfeffer, 1998a, p. 121).

Many researchers have tested the proposition that commitment-oriented or high performance work system practices are associated with greater firm performance and profitability (see, for instance. Arthur, 1992, 1994; Hoque, 1999; Huselid, 1995; MacDuffie, 1995, Ichniowski et al. 1997), and support has been found for this non-traditional model for managing human resources. To date, however, the studies being reported have focused on employee-related performance measures including sales per employee, employee flexibility and turnover which are argued to be precursors of organizational performance and profitability more generally. This thesis makes a significant contribution to the literature by focusing instead on another critical individual and organizational outcome-worker safety. Cohen (1977) and his colleagues (see, as well, Smith et al. 1978) provided preliminary evidence that workers managed under a commitment-oriented approach would work more safely than those managed under a control-oriented system. They found that information sharing, training, employment security, selective hiring and a strong commitment on the part of management to safety issues were the hallmarks of low accident-rate plants. Cohen and his colleagues were remarkably ahead of their time for what they described was basically a high performance work system in which worker safety was the performance outcome.

Future research should look to overcome some of the limitations inherent to the current work. Now that evidence exists for a relationship between high performance work practices and workplace safety, as well as the roles of trust in management and safety climate, it is necessary to conduct longitudinal research that will provide us with insight into the causal relationships. Furthermore, future studies should refrain from depending solely on self-report measures of the variables of interest. As well, further refinements to the measures of high performance work practices employed in the current studies are desirable. Also of interest, would be a further examination of other variables that may play a pan in workplace safety, both positive and negative. A replication of the current work in which control-oriented practices were also measured would allow us to make a direct comparison between the commitment-oriented and

control-oriented practices and their impact on workplace safety. As well, future research should re-examine the role of organizational commitment in mediating the relationship between high performance work practices and workplace safety. While affective commitment was not found to mediate the relationship between high performance work systems and workplace safety in the current study, it was found to mediate the relationship between some high performance work practices and performance outcomes in other studies (Parker et al, 2001, Gardner et al., 2000). Given these mixed findings, it is not wise at this stage to eliminate it as a possible mediating mechanism and future research should focus on resolving the role of this variable. The roles of job satisfaction and perceptions of organizational justice are further constructs that may be examined as mediators in the high performance work system-performance link.

To the realm of safety management, this study provides much needed confirmation of the paramount role organizational rather than individual factors play in worker safety and this remains the most substantial contribution of this work. The findings from this thesis suggest we need to take a much broader look at how we are currently managing occupational safety if we have any intention of ensuring workers have the basic right to return home safely to their families at the end of the workday.

## References

Alter, S. (2002). The Work System Method for Understanding Information Systems and Information Systems Research. Communications of the Association for Information Systems 9(9), Sept., pp. 90–104,

Alter, S. (2003). 18 Reasons Why IT-Reliant Work Systems Should Replace 'The IT Artifact' as the Core Subject Matter of the IS Field. Communications of the Association for Information Systems, 12(23), Oct., pp. 365-394,

Alter, S. (2006). The Work System Method: Connecting People, Processes, and IT for Business Results. Larkspur, CA: Work System Press.

Appelbaum, Eileen and Batt, Rosemary. (1993). High Performance Work Systems: American Models of Workplace Transformation. Washington, D. C.: Economic Policy Institute.

Ashforth, Blake E. and Humphrey, Ronald H. (1995). Emotion in the Workplace: A Reappraisal. Human Relations, 48(2), 97- 125.

Bateman, Thomas S. and Snell, Scott A. (1996). Management: Building Competitive Advantage.3rd Edit. Chicago: Irwin.

Becker, Brian and Gerhart, Barry. (1996). The Impact of Human Resource Management on Organizational Performance: Progress and Prospects. Academy of Management Journal, 39(4), 779-801.

Becker, Brian E.; Huselid, Mark A.; and Ulrich, Dave. (2001). The HR Scorecard: Linking People, Strategy, and Performance. Boston: Harvard Business School.

Becker, Brian E.; Huselid, Mark A.; Pickus, Peter S. and Spratt, Michael F. (1997). HR as a Source of Shareholder Value: Research and Recommendations. Human Resource Management, 36(1), Spring, 39-47.

Bostrom, R. P. and J. S. Heinen, (1977). MIS Problems and Failures: A Socio-Technical Perspective. PART II: The Application of Socio-Technical Theory. MIS Quarterly, 1(4), December, pp. 11–28.

Checkland, P. (1999). Systems Thinking, Systems Practice (Includes a 30-year retrospective), Chichester, UK: John Wiley & Sons.

Collis, David J. and Montgomery, Cynthia A. (1995). Competing on Resources: Strategy in the 1990s," Harvard Business Review, 73(4), July-August, 118-128.

Gant, Jon; Ichniowski, Casey; and Shaw, Kathryn. (2002). Social Capital and Organizational Change in High-Involvement and Traditional Work Organizations. Journal of Economics and Management Strategy, 11(2), Summer, 289-328. 21

Hill, C., R. Yates, C. Jones, and S. L. Kogan, (2006). Beyond predictable workflows: Enhancing productivity in artful business processes. IBM Systems Journal, 45(4), pp. 663–682.

Huselid, Mark A. (1995). The Impact of Human Resource Management Practices on Turnover, Productivity, and Corporate Financial Performance. Academy of Management Journal, 48(3), 635-672.

Ichniowski, Casey and Shaw, Kathryn. (2003). Beyond Incentive Pay: Insiders' Estimates of the Value of Complementary Human Resource Management Practices, Journal of Economic Perspectives, 17(1), Winter, 155-180.

Ichniowski, Casey; Shaw, Kathryn; and Prennushi, Giovanna. (1997). The Effects of Human Resource Management Practices on Productivity: A Study of Steel Finishing Lines. American Economic Review, 87(3), June, 291-313.

Ishaq, M.I., Munazer, N., Hussain, M.M.N., Asim, A.I., & Cheema, L.J. (2012). Assessment of lmx as mediator in procedural justice–organizational citizenship behavior relationship. New Educational Review, 202.

Kling, Jeffrey. (1995). High Performance Work Systems and Firm Performance. Monthly Labor Review, 118(May), 29-36.

Lawler, Edward E. (1992). The Ultimate Advantage: Creating the High Involvement Organization. San Francisco: Jossey-Bass.

Lawler, Edward E.; Mohrman, Susan A.; and Ledford, Gerald E. (1995). Creating High Performance Organizations: Practices and Results of Employee Involvement and Total Quality Management in Fortune 1000 Companies. San Francisco: Jossey-Bass.

Lazear, Edward P. (1995). Personnel Economics. Cambridge, MA: MIT Press. Leibenstein, Harvey. 1976. Beyond Economic Man: A New Foundation for Microeconomics. Cambridge, MA: Harvard University Press.

MacDuffie, J.P. (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.

MacDuffie, John Paul. (1995). Human Resource Bundles and Manufacturing Performance: Organizational Logic and Flexible Production Systems in the World Auto Industry. Industrial and Labor Relations, 48(2), January, 197-221.

Markus, M.L. and J.Y. Mao (2004). Participation in Development and Implementation – Updating an Old, Tired Concept for Today's IS Contexts. Journal of the Association for Information Systems, Dec., pp. 514–544.

Milgrom, Paul and Roberts, John. (1992). Economics, Organization and Management. Englewood Cliffs, NJ: Prentice Hall.

Neuman, W.L. (2003). Social Research Methods. Qualitative and Quantitative Approaches. Fifth Edition. Boston: Allyn and Bacon. Pp. 1-19.

Pelley, Scott (2008). Is Enough Done To Stop Explosive Dust?.60 Minutes

Petersson, J. (2008). Work system principles: towards a justified design theory on the grounds of socio-instrumental pragmatism. in Proceedings of the 3rd International Conference on the Pragmatic Web, ACM International Conference Proceeding Series; Vol. 363, pp. 69–76.

Petrie, D.E. (2004). Understanding the Impact of Technological Discontinuities on Information Systems Management: The Case of Business-to-Business Electronic Commerce, Ph.D. Thesis, Claremont Graduate University.

Pfeffer, Jeffrey. (1998). The Human Equation: Building Profits by Putting People First. Boston: Harvard Business School Press.

Ramiller, N. (2002). Animating the Concept of Business Process in the Core Course in Information Systems. Journal of Informatics Education and Research," 3(2), pp. 53-71.

Retallick, Phillip (May 2008). Corporate Commitment, Local Dedication Pave the Way to Success. Occupational Health & Safety.

Sumner, M. and T. Ryan (1994). The Impact of CASE: Can it achieve critical success factors? Journal of Systems Management, 45(6), p. 16, 6 pages.

Tomer, John F. (1987). Organizational Capital: The Path to Higher Productivity and Well-being. New York: Praeger.

Tomer, John F. (1999). The Human Firm: A Socio-Economic Analysis of its Behavior and Potential in a New Economic Age. New York: Routledge.

 