

High Performance Work Systems and Organizational Performance: A Case of Banking Sector of Pakistan

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Abstract

This study is aimed to assess the role of high performance work systems (HPWS) and its influence on organizational performance. The existing body of research on HRM suggests that well devised HPWS can build up organizational performance. The present research has been organised in the banking sector of Pakistan. A quantitative approach was adopted to draw the perceptions of managers and officer cadre employees regarding the degree of HPWS and organizational performance. A proportionate sampling was used to select initial participants from 340 sample branches. The results of this study show that HPWS was significantly associated with branch level performance indicators including unit level deposits, performing advances, and branch net profit margin. The findings of this study complement those of previous studies and have raised important questions about the nature of HPWS. These findings have significant implications for the understanding of how HPWS influence unit level performance. Being an important contributor, HRM function shall engage both managerial and officer cadre employees in the composition of HPWS and designing schemes for attaining high level of performance.

Keywords: High performance work systems, resource based view, AMO framework, and Organizational performance.

Introduction

The effects of HRM on organizational performance have become a main research subject in the field. Most of the research in the HRM-performance literature is arranged around various research approaches. Researchers have mostly considered systems and strategic approach on

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HRM as the two major perspectives in the field of HRM and performance relationship. Research in systems approach has mainly focused on the overall set of HR practices and their effects on organizational performance (Becker and Huselid, 1998; Boxall and Macky, 2007). Strategic approach is based on the notion that HR practices must be aligned horizontally towards organizational goals and must complement each other to accomplish organization's strategy (Wright and Snell, 1991). Together these two perspectives provide base to explore how HR practices and their effect on employee characteristics can lead to desired performance at organizational level (Bowen and Ostroff, 2004).

Traditionally, researchers have concentrated on the effects of individual HR practices on employee performance outcomes such as turnover (Griffeth *et al.*, 2000) and task performance (Lock and Latham, 1990). Research in this area has advanced to a more macro-level focus on the systems approach for understanding the effects of HRM on performance (Huselid, 1995; Delery and Doty, 1996; Wright, 1998; Lepak *et al.* 2006). Despite immense evidence presented, many researchers (e.g. Guest, 1997; Fleetwood and Hesketh, 2006; Gerhart, 2012) are still critical of the HRM and performance relationship. These researchers highlighted the need to develop theoretical explanations about the linkages between HRM and performance.

Researchers have suggested several types of outcomes such as financial, human resource, organizational, and market outcomes which might apply to research relating to HRM (Dyer and Reeves, 1995). These authors have suggested that an accurate understanding of the relationships between HRM practices and these outcomes is crucial to draw logical inferences with regard to HRM and performance relationship (Ostroff and Bowen, 2000). Furthermore, majority of the research has been carried out in manufacturing context, mostly in developed countries, overlooking the substantial presence of service sector firms (Boselie *et al.*, 2001). There are limited number of studies being carried out to explore the link between HRM practices and organizational performance in developing countries like Pakistan.

In view of the above issues, this study has taken up an employee perspective to acquaint their actual experiences with the high performance work systems and its effects on unit level performance. Specifically, the main question of this research is:

- To what extent the use of HPWS can influence organizational performance at the branch level?

High Performance Work Systems and its influence on Performance

A distinctive feature of HRM literature is an emphasis on HR systems, rather than specific individual HR practices as an operative of organizational performance. However, there is a lack of agreement among researchers regarding the nature of HR systems, what HR practices comprise these HR systems, and how these systems operate to influence organizational performance (Lepak *et al.*, 2006). In general, previous studies have reported different terminologies for the very identical processes of HR systems. They have been labelled as 'high-commitment' (Wood and De Menezes, 1998; McClean and Collins, 2011), 'high-involvement' (Lawler, 1986; Guthrie, 2001), and 'high-performance work systems' (Appelbaum *et al.*, 2000; Huselid, 1995; Delaney and Huselid, 1996; Way, 2002).

The main purpose of high-commitment oriented HR systems is to improve efficiency over better focus on rules, regulations, and strict control to manage employee behaviour (Wood and de Menezes, 1998). Rather than relying on scopes including rules, regulations, and control to reduce expenditure and enhance efficiency, generally high-commitment HR systems generate circumstances that inspire individuals to establish with the objectives of the firm and to apply endeavour to accomplish it (Whitener, 2001). The main focus in commitment-oriented HR systems is on developing committed workforce who can be trustworthy in terms of using wisdom and accomplish assigned responsibilities in relation to set targets. High-involvement approach of HR systems mainly focuses on the use of particular HR practices that precisely affect the nature and capacity of the jobs employees perform. In this approach of HR systems, Lawler (1986) using a less restrictive interpretation of high-commitment management, pointed that providing employees a discretion to comprehend their role, it will enhance employees' involvement in the organization.

The term high-performance work systems (HPWS) have received greater attention in the HRM literature (Lepak *et al.*, 2006). HPWS approach is broader in scope as it has the potential to improve the knowledge, skills and abilities (KSA) of the firm's actual and promising employees, develop their motivation, lessen avoiding responsibility, and promoting reservation of quality employees (Huselid, 1995). HPWS focus attention on the likely competitive advantages that may be achieved by employees over HR practices that recognise employees with respect, devote in their development, and promote trust in management and commitment toward accomplishing organizational goals. The essential feature in all the discussion of high-commitment, high-

involvement, and high-performing management is the comparison with a control type of organization (Wood, 1999).

Despite little agreement as to what constitutes a high performance work system, the systematic reviews of HRM studies suggests that HRM practices are consistently associated with organizational performance (Boselie *et al.*, 2005). Most of the research on HRM systems indicates that human resource practices or systems influence performance through its effect on people in organizations (Ostroff and Bowen, 2000). Explaining the processes through which HRM systems influence performance, researchers have pointed that high performance work practices function through its impact on (a) enhancing employees' skills, knowledge, and abilities, (b) motivating employees to exert their effort, and (c) providing them opportunities to perform their work (Combs *et al.*, 2006). Previous studies have shown that employees with better skills, knowledge and high motivation will be unable to employ talent properly in absence of appropriate organizational structure that provides them with opportunities and scope to express their talent in the performance of their jobs (Huselid, 1995; Combs *et al.*, 2006). The required scope and opportunities to use their discretionary talent and time can be strengthened by HRM practices such as employee participation schemes, sharing information, self-managed work teams, and employee security (Pfeffer, 1998). In general, HRM systems enhance organizational performance by improving the knowledge, skills, and abilities of employees, empowering them to use their efforts for organizational goals, and providing motivation to exert more efforts to perform their jobs. These consequently decrease employee turnover and enhance organizational performance (Becker *et al.*, 1997).

Branch level Performance

A considerable amount of literature has been published on bank performance. Previous studies on bank performance have mostly focused on the overall efficiency of banks at the industry level (Berger and Humphrey, 1997). In general, four different types of performance approaches have been adopted in the evaluation of bank branch performance. These include ratios; econometric models; non-parametric techniques; and integrated systems. In ratio analysis, ratios related to bank's operations and profitability is seen as preferential and this attracts further deposits and borrowers. Ratio analysis has been the widely used method to assess unit level performance (e.g. Cyree *et al.*, 2000; Lau and Sholihin, 2005; Milis and Mercken, 2004). Economic models on the other hand are basically related to statistical distributions and/or certain mathematical techniques that comply with certain parameters such as

regression, correlations and factor analysis to accomplish best solutions. In non-parametric techniques, data envelopment analysis has been used by various researchers in the context of measuring the efficiency of bank branches (Dekker and Post, 2001; Paradi and Schaffnit, 2004; Camanho and Dyson, 2005). Data envelopment analysis allows identifying a benchmarking group and desire to classify each decision making unit (DMU) in comparison to other DMUs.

To date researchers have paid greater attention to financial measures such as bank's total deposits, loans and advances, and net profit after taxes for the measurement of branch performance (Lau and Sholihin, 2005; Paradi *et al.*, 2011). Several studies have used non-financial measures such as customer loyalty and satisfaction with the services (Schneider and Bowen, 1985; Golany and Storbeck, 1999) and quality of services (Soteriou and Stavrinides, 2000) provided by the bank in their evaluation of bank branch performance (Bartel, 2004). Overall, financial ratios have been mostly adopted for the reason of its capability to assess bank's management efficiency, liquidity, profitability and bank's capital adequacy (Paradi *et al.*, 2011).

Theoretical Perspectives on HPWS--Performance link

The AMO Framework:

One of the accepted theoretical bases for the link between HRM and organizational performance is the ability, motivation and opportunity (AMO) framework provided by Appelbaum *et al.* (2000). According to the AMO framework, the foremost feature of an effective HPWS is to organize the work processes in such a manner that employees have a real opportunity to provide discretionary effort. Employees can only contribute to the performance of the firm when they are provided authority, responsibility and opportunity to make decisions and solve problems (Batt, 2002). In view of the AMO model, organization's efforts on providing opportunities and encouraging employees to take advantage of initiative, creativity, and job specific knowledge in the best interest of the firm can only be effective when employees possess the appropriate level of knowledge and skills. The AMO model also suggests that organizations can motivate their employees to use their affectionate knowledge, creativity, keen interest, and imagination through the use of several types of motivation. In general, the AMO model assume that organizations can generate numerous types of financial benefits when they support an HPWS in which employees have the adequate level of skills and abilities, incentives, and sufficient opportunity for participation in decisions. For instance, an efficient HPWS may reduce cost in several ways through efficient cost management, by reducing interruptions of the

production process, and enabling employees to process information more efficiently can be more helpful in maintaining the approximate level of production capacity that may lead to more economic gains for the firm.

Resource Based View:

RBV has been widely used to describe the effects of HRM on firm performance. RBV approach advocates that organizations should pay more attention to its resources for sources of competitive advantage. As per RBV, a firm resource must be endowed with four attributes in order to be considering a source of sustained competitive advantage. These include: (a) valuable; (b) rare; (c) imperfectly imitable; and (d) non-substitutable (Barney, 1991). Resource based view has been described as a major contributing theory that establishes the relationship between HPWS and organizational performance for the reasons that organisation's human capital is comprised of employees' skills, knowledge, and abilities. HPWS can play a key role in strengthening the knowledge, skills and motivation of employees. It can help in bringing out the desired behaviour which is essential for the higher performance of the firm (Wright *et al.*, 2001). Results of published studies describing the role of the RBV in strategic management research have initiated legitimacy to human resource's assertion that people are the most valuable and strategically vital resources to organization success (Wright *et al.*, 2001).

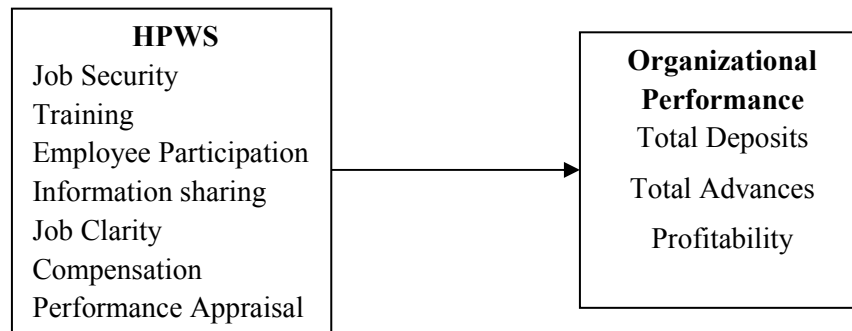
Based on theoretical perspectives of AMO framework and resource based view (RBV), this study proposes that the use of HPWS designed to foster the abilities, motivation, and opportunities of employees positively influence branch performance outcomes measured in terms of financial measures including the level of deposits to staff, growth in deposits, growth in advances, profit to staff, advances to deposits, and growth in profit.

Hence, the main research questions in this study focus on addressing the effects of HPWS on branch level performance. The proposed hypotheses of this study are:

H1: The extent of HPWS is positively related to branch level of deposits to staff.

H2: The extent of HPWS is positively related to branch advances to deposits.

H3: The extent of HPWS is positively related to branch profit to staff.

Conceptual Model*Figure1: Conceptual Framework*

The main features of this study include employees' perspective to explain the impact of HPWS on performance outcomes. The perceptions of employees about the firm's HR policies, practices, and procedures are important for the reasons that employees are the ones who observe the daily routines and interact directly with the ultimate customer of the services. This study is conducted in the service sector of a developing country Pakistan with multiple sources of information that can help to test the validation of research findings in different context and settings (Delery and Doty, 1996; Legare, 1998).

Method***Sample:***

The banks in the study are among the largest banks in Pakistan. A nationwide branch network and agency relationship with banks worldwide, the banks operates in all major cities and business centres across the main regions and provinces of Pakistan (State bank of Pakistan, 2012).

Information about the extent of HPWS was obtained from managers and officers working in operations, credit and cash functions at the branch level. Employees operating at unit level are mainly engaged in the acceptance of high performance HR practices. The use of multiple sources for HPWS provides vindication for the critique over dependence on sole source such as Chief Executive Officer or senior HRM manager (Wall and Wood, 2005). To address these concerns, in this research study a large sample of 340 branches were selected through a two-step stratified proportionate random sample using the following procedure. Keeping in view the distinct geographical location of the bank, it was not feasible to reach all employees in these branches. Therefore, it was

decided to include bank branches from central Punjab, federal areas Islamabad, and Khyber Pakhtunkhwa for the survey.

Table 1 presents the information about the number of branches included in the study. On the basis of 45% proportionate sampling, a sample of 340 branches was drawn from a total of 755 branches in Punjab, Islamabad, and KPK. These branches were surveyed during August to October 2012. HPWS surveys were administered to all employees falling in four categories of managers, officers in operations, credit and cash functions. Completed surveys were received from 218 branches with a response rate of 38% in central Punjab, 85% in federal areas Islamabad including Azad Kashmir, and 89% in the regions of KPK areas. Overall response rate for the HPWS survey was 64%.

Table 1 Sampling of the Bank Branches

Areas	Conventional Banking	Islamic Banking	Total
Branches in Region	540	215	755
Surveyed Branches	243	97	340
Received HPWS	132	86	218
HPWS and Performance	81	39	120

The survey was administered in English language to managers and employees in 340 branches. Overall 3500 questionnaires were distributed among employees in 340 sample branches. Respondents were asked to respond voluntarily and were given substantial time to complete the survey. In total, 2280 questionnaires were returned, of which only 1563 questionnaires were usable. The remaining was discarded due to large extent of missing information. Data gathered from less than four employees including manager were discarded and not included in further analysis. In this way, usable HPWS data were obtained from 218 branches, making a response rate of 64%.

Following the completion of HPWS survey, branch performance measures were collected six month following the survey. All branches (218) were contacted again through regional offices and in some cases main branches to obtain key performance indicators about the branches. In order to have the matched performance indicators for all branches, identical measures of performance were sorted for each branch. Overall, 120 branches provided performance data that matched the performance criteria of common key performance indicators.

Measures

High Performance Work Systems:

This study focus on seven important and most relevant high performance work practices to different group of employees which may influence performance. These practices includes: 1) job security, 2) extensive training, 3) employee participation, 4) job description as role clarity, 5) information sharing, 6) performance based compensation, and 7) performance appraisal. These practices were measured with the already well-established scales used in the HR research. Responses were measured on a 5-point Likert scale ranging from strongly disagree (1) to strongly agree (5). This study follows an additive approach for aggregating high performance work practices into an index (Guest, 1999; Lepak *et al.*, 2006). In the first instance, subscale scores were calculated by averaging across all items of the same HR practice (e.g., job security). An average across the seven individual practices was used to create an index of HPWS for each respondent.

Branch Performance Measures:

Based on the approaches used in measuring the performance of the banks at the branch level, in this study bank branches are evaluated in terms of capital adequacy, efficiency, liquidity, and profitability. More specifically, these branches are assessed on the basis of how well the branches are able to generate profits from their best utilization of assets, capital and work force. The performances of these branches are measured in terms of total deposits, loans and advances, and branch profitability. Overall, these financial measures have been adopted for the reason of its capability to assess bank management efficiency, liquidity, profitability and bank's capital adequacy (Paradi *et al.*, 2011). The bank's regional offices and in some cases main branches provided branch level of deposits, advances and profit for the year 2010, 2011 and 2012.

Control Variables:

Several control variables were included in the analyses to eliminate alternative explanations of the findings. At the branch level of analysis, the study controlled for age, qualification, experience, gender, department, and length of service in bank branch. These variables were considered important for the reason that they might influence the perceptions of employees about the level of HPWS and in turn influence firm performance (Wood, 1999; Chang, 2005; Boselie *et al.*, 2005).

Results

The relationship between the extent of HPWS and performance measures were investigated through regression analysis with controlled variables including age, qualification, experience in the banking sector, gender, function, and length of service in branch. Table 2 reports the means, SD, and correlations for the high performance work systems.

Table 2 Descriptive and Inter-correlation of HR practices for Conventional banking

HR	M	SD	N	1	2	3	4	5	6	7
ES	3.49	.734	645	-						
T	3.86	.708	645	.428**	-					
EP	3.30	.836	645	.362**	.331**	-				
JD	3.59	.876	645	.304**	.347**	.446**	-			
IS	3.69	.695	645	.332**	.376**	.454**	.535**	-		
CC	3.12	.809	645	.300**	.297**	.328**	.266**	.300**	-	
PA	3.43	.833	645	.306**	.389**	.503**	.473**	.472**	.394**	-

** . Correlation is significant at the 0.01 level (2-tailed).

Table 3 presents the summary statistics for the regression analysis of HPWS with branch performance measures including level of deposits to staff; advances to deposits; and profit to staff. Regression results indicated that the extent of HPWS was significantly associated with various measures of branch level performance. Results indicated significant positive association between the extent of HPWS and level of deposits to staff ($\beta = 45.38$, $p < 0.001$). The magnitude of significant relationship of 45.38 suggests that for a branch at the mean level of deposits to staff, a one point change in HPWS would correspond to an increase of more than forty five hundred thousand Pak rupees per accounting period in deposits to staff performance.

Table 3 Regression results testing the relationships between HPWS and Branch Performance

Variables	Level of deposits to staff	Advances to Deposits	Profit to Staff
	Model	Model	Model
Age	-13.47	.03	-.44
Qualification	-2.18	.06	-.21
Experience	15.70*	-.03	.32
Gender	-19.35***	.02	-.40*
Function	4.97	.04	.05
Service	1.09	-.06	.38*
HPWS	45.38***	-.30***	1.13***
R	.25	.17	.20
R ²	.061	.030	.040

Adjusted R ²	.054	.02	.031
ΔR^2	.04	.02	.02
F	8.22***	3.57***	5.05***
ΔF	33.78***	19.31***	18.88***

N = 887, Total branches = 120

*P < .05; ** p < .01; *** p < .001

The regression coefficients showed that the extent of HPWS was significantly associated with advances to deposits considered as the liquidity of the branch. The coefficient on high performance work systems ($\beta = -0.30$, $p < 0.001$) suggests that at the mean level of advances to deposits for a branch, a one unit change in the extent of HPWS would correspond to decrease the risk of being short of liquidity by a proportion of 1 to 0.3 ratio. The regression coefficient ($\beta = 1.13$, $p < 0.001$) indicated significant positive association between the extent of HPWS and profit to staff.

Overall, the results from hierarchical regression provided strong support for hypotheses 1, 2, and 3 indicating that HPWS is positively related to branch level of deposits to staff; liquidity and profit to staff.

Discussion

The goal of this study was to use an extensive sample using employee perspective to examine the extent to which HPWS influence organizational performance in the context of Pakistani banking sector. The results of this study suggest that HPWS positively influence organizational performance at the unit level. The results presented sufficient endorsement for the assertion that the extent of HPWS is positively related to branch level performance outcomes. The results of this study indicated full support for the hypotheses, as the overall extent of HPWS achieved higher level of deposits to staff performance ($\beta = 45.38$, $p < 0.01$), better advances to deposit performance ($\beta = -0.30$, $p < 0.001$), and higher profit to staff ($\beta = 1.13$, $p < 0.001$) per accounting period at the branch level.

The present study also indicated three important findings regarding the extent of HPWS and performance relationship. First, the seven high performance practices collected a single underlying construct as a HPWS. This provides acknowledgment to the earlier findings of other high performance work systems at the firm level (e.g. Wood, 1999; Becker and Huselid, 1998; Zacharatos *et al.*, 2005). Second, the findings of this study characterize earlier studies showing that HPWS at the organizational level are linked with firm performance. Third, in this

study the extent of HPWS was significantly related to an increase in the level of deposits to staff, reduced level of advances to deposits, and increase in profit to staff per accounting period performance at the unit level, identifying a considerable predictor of organizational performance. Overall, the findings in this study suggest that the use of HPWS account for a significant fraction of variance in the HPWS and performance relationship at the branch level, although HPWS did not show significant influence with growth in branch advances. Despite the variation in the performance outcomes, the results of this study are in consistence with the findings of previous research (e.g. Huselid, 1995; Guthrie *et al.*, 2009; Liao *et al.*, 2009; McClean and Collins, 2011).

Implications

These findings have important implications for HPWS and performance research in several ways. Previous studies in HRM research placed huge insistence on the content of an HRM system and how it was associated with organizational performance (Combs *et al.*, 2006). In consistence with a number of recent studies (Guest *et al.*, 2003; Katou and Budhwar, 2009; Gittell *et al.*, 2010), this study extend HPWS and performance literature by examining the perspectives of managers and employees with regards to the extent of HPWS and how it relates to organizational performance.

It also has implications for the conceptualization of these variables. Despite the fact that certain HR practices such as selective recruitment, training, employee compensation, and performance appraisal have been extensively comprised in human resource management studies, while other HR practices have not been focused in most of the studies conducted in both service and manufacturing contexts. However, in this study all HRM practices included in the HPWS indicated significant association with performance outcomes at unit levels within the bank branches studied. These findings highlights that what comprises an effective HPWS may not necessarily be identical in terms of specific HR practices across different contexts. Therefore, it can be assumed that the definition of high performance work systems may persist to progress as new HR practices are refined and focused by researchers. Additionally, the findings of this study also endorse the analysis of Combs *et al.* (2006) suggesting that some practices are more or less pertinent to accomplish performance in service and manufacturing contexts and further research may foster from following this consideration when composing high performance work systems. Particularly, managers and HR function can have an essential input into the design of HPWS to make sure processes are suited to help people

accomplish their own objectives and set up effective achievement of the firm strategy.

Conclusion

This present study was designed to determine the effects of HPWS on organizational performance in the banking sector of Pakistan. Based on the AMO framework, this study focused on the potential of HPWS to influence employees' abilities, motivation and opportunities to express their efficiency in job performance. The sampling frame comprises managers and all officer cadre employees working in operations, credit and cash functions of the bank branch. The results of the study showed that the extent of HPWS was significantly related to various measures of branch level performance. This study has made far-reaching implications for managers, bank management and HR professionals by providing insights into the process underlying the HPWS and performance relationships. The empirical evidence has presented support for the crucial role of important stakeholders in the design of HPWS and plans for accomplishing organizational performance.

References

- Appelbaum, E., Bailey, T., Berg, P. and Kalleberg, A. L. (2000) *Manufacturing advantage: Why high-performance work systems pay off*. Washington, D. C.: Economic Policy Institute.
- Barney, J.B. (1991) 'Firm resources and sustained competitive advantage', *Journal of Management*, 17(1), pp. 99–120.
- Bartel, A. P. (2004) 'Human resource management and organizational performance: Evidence from retail banking', *Industrial and Labor Relations Review*, 57(2), pp. 181–203.
- Batt, R. (2002) 'Managing customer services: Human resource practices, quit rates, and sales growth', *Academy of Management Journal*, 45(3), pp. 587–597.
- Becker, B.E. and Huselid, M.A. (1998) 'High performance work systems and firm performance: A synthesis of research and managerial implications', *Research in Personnel and Human Resources Management*, 16, pp. 53–101.
- Becker, B.E., Huselid, M.A., Pickus, P.S. and Spratt, M.F. (1997) 'HR as a source of shareholder value: Research and recommendations', *Human Resource Management*, 36(1), pp. 39–47.
- Berger, A.N. and Humphrey, D.B. (1997) 'Efficiency of financial institutions: international survey and directions for future research', *European Journal of Operational Research*, 98(2), pp. 175–212.
- Boselie, P., Dietz, G. and Boon, C. (2005) 'Commonalities and Contradictions in HRM and Performance Research', *Human Resource Management Journal*, 15(3), pp. 67–94.
- Boselie, P., Paauwe, J. and Jansen, P. (2001) 'Human resource management and performance: Lessons from the Netherlands', *International Journal of Human Resource Management*, 12(7), pp. 1107–1125.
- Bowen, D. E. and Ostroff, C. (2004) 'Understanding HRM-firm performance linkages: The role of the strength of the HRM system', *Academy of Management Review*, 29(2), pp. 203–212.
- Boxall, P. and Macky, K. (2009) 'Research and theory on high-performance work systems: progressing the high-involvement stream', *Human Resource Management Journal*, 19(1), pp. 1–21.
- Camanho, A.S. and Dyson, R.G. (2005) 'Cost efficiency measurement with price uncertainty: a DEA application to bank branch assessments', *European Journal of Operational Research*, 161, pp. 432–446.
- Chang, E. (2005) 'Employees' overall perception of HRM effectiveness', *Human Relations*, 58(4), pp. 523–544.
- Combs, J., Yongmei, L., 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(3), pp. 501–528.
- Cyree, K.B., Wansley, J.W. and Boehm, T.P. (2000) 'Determinants of Bank Growth Choice', *Journal of Banking and Finance*, 24(5), pp. 709–734.

- Dekker, D. and Post, T. (2001) 'A quasi-concave DEA model with an application for bank branch performance evaluation', *European Journal of Operational Research*, 132, pp. 296-311.
- Delaney, J. T. and Huselid, M. A. (1996) 'The impact of human resource management practices on perceptions of organizational performance', *Academy of Management Journal*, 39(4), pp. 49-969.
- Delery, J. E. and Doty, D. H. (1996) 'Modes of theorizing in strategic human resource management: Tests of universalistic, contingency, and configurational performance predictions', *Academy of Management Journal*, 39(4), pp. 802-835.
- Dyer, L. and Reeves, T. (1995) 'Human resource strategies and firm performance: What do we know and where do we need to go?', *International Journal of Human Resource Management*, 6(3), pp. 656-670.
- Fleetwood, S. and Hesketh, A. (2006) 'HRM-Performance research: under-theorized and lacking explanatory power', *International Journal of Human Resource Management*, 17 (12). pp. 1977-1993.
- Gerhart, B. (2012) 'Research on human resources and effectiveness: some methodological challenges', In: Guest, D., Paauwe, J., and Wright, P. *HRM and Performance: Achievements and challenges*. Hoboken: Wiley, Hoboken. pp. 108-133.
- Gittell, H. J., Seidner, R. and Wimbush, J. (2010) 'A relational model of how high performance work systems work', *Organization Science*, 21(2), pp. 490-506.
- Golany, B. and Storbeck, J.E. (1999) 'A data envelopment analysis of the operational efficiency of bank branches', *Interfaces*, 29(3), pp. 14-26.
- Griffeth, R.W., Hom, P.W. and Gaertner, S. (2000) 'A Meta-analysis of Antecedents and Correlates of Employee Turnover, Update, Moderator Tests, and Research Implications for the Next Millennium,' *Journal of Management*, 26(3), pp. 463- 488.
- Guest, D. (1997) 'Human Resource Management and Performance: A Review and Research Agenda', *International Journal of Human Resource Management*, 8(3), pp. 263-76.
- Guest, D., Michie, J., Conway, N. and Sheehan, M. (2003) 'Human resource management and corporate performance in the UK', *British Journal of Industrial Relations*, 41(2), pp. 291-314.
- Guest, D.E. (1999) 'Human Resource Management-The Workers Verdict', *Human Resource Management Journal*, 9(3), pp. 5-25.
- Guthrie, J. (2001) 'High-involvement work practices, turnover and productivity: evidence from New Zealand', *Academy of Management Journal*, 44(1), pp. 180-190.
- Guthrie, J. P., Flood, P. C., Liu, W. and MacCurtain, S. (2009) 'High performance work systems in Ireland: human resource and organizational outcomes', *The International Journal of Human Resource Management*, 20(1), pp. 112-125.

- Huselid, M. A. (1995) 'The impact of human resource management practices on turnover, productivity, and corporate financial performance', *Academy of Management Journal*, 38(3), pp. 635-672.
- Katou, A. A. and Budhwar, P. S. (2009) 'Causal relationship between HRM policies and organisational performance: Evidence from the Greek manufacturing sector', *European Management Journal*, 28(1), pp. 25-39.
- Lau, C.M. and Sholihin, M. (2005) 'Financial and nonfinancial measures: How do they affect job satisfaction?', *The British Accounting Review*, 37(4), pp. 389-413.
- Lawler, E. (1986) *High-Involvement Management*. San Francisco, CA: Jossey-Bass.
- Legare, T.L. (1998) 'The human side of mergers and acquisitions', *Human Resource Planning*, 21(1), pp. 32-41.
- Lepak, D. P., Liao, H., Chung, Y. and Harden, E. (2006) 'A conceptual review of human resource management systems in strategic human resource management research', *Research in Personnel and Human Resource Management*, 25, pp. 217-271.
- Liao, H., Toya, K., Lepak, D. P. and Hong, Y. (2009) 'Do they see eye to eye? Management and employee perspectives of high-performance work systems and influence processes on service quality', *Journal of Applied Psychology*, 94(2), pp. 371-391.
- Locke, E. A. and Latham, G. P. (1990) *A theory of goal-setting and task performance*. Upper Saddle River, NJ: Prentice Hall.
- McClellan, E. J. and Collins, J.C. (2011) 'High Commitment HR Practices, Employee Effort, And Firm Performance: Investigating the effects of HR practices across employee groups within professional services firms', *Human Resource Management*, 50(3), pp. 341-363.
- Milis K. and Mercken R. (2004) 'The use of the balanced scorecard for the evaluation of information and communication technology projects', *International Journal of Project Management*, 22, pp. 87-97.
- Ostroff, C. and Bowen, D.E. (2000) 'Moving HR to a higher level: HR practices and organizational effectiveness. In Klein KJ, Kozlowski SWJ (eds). *Multilevel theory, research, and methods in organizations: foundations, extensions, and new direction*. San Francisco, CA: Jossey-Bass; pp. 211-67.
- Paradi, J.C. and Schaffnit, C. (2004) 'Commercial Branch Performance Evaluation and Results Communication in a Canadian Bank—a DEA Application', *European Journal of Operational Research*, 156(3), pp. 719-735.
- Paradi, J.C., Yang, Z. and Zhu, H. (2011) 'Assessing Bank and Bank Branch Performance Modelling Considerations and Approaches' in *Handbook on Data Envelopment Analysis International Series in Operations Research and Management Science*, 164, pp 315-361.
- Pfeffer, J. (1998) *The Human Equation: Building Profits By Putting People First*. Boston: Harvard Business School Press.

- Schneider, B. and Bowen, D.E. (1985) 'Employee and customer perceptions of service in banks: replication and extension', *Journal of Applied Psychology*, 70(3), pp. 423–33.
- Soteriou, A.C. and Stavrinides, Y. (2000) 'An internal customer service quality data envelopment analysis model for bank branches', *International Journal of Bank Marketing*, 18(5), pp. 246–252.
- State Bank of Pakistan.(2012) *Banking Statistics of Pakistan*. Karachi: SBP press.
- Wall, T. and Wood, S. (2005) 'The romance of human resource management and business performance, and the case for big science', *Human Relations*, 58(4), pp. 429-462.
- Way, S. A. (2002) 'High performance work systems and intermediate indicators of firm performance within the US small business sector', *Journal of Management*, 28(6), pp. 765–785.
- Whitener, E. M. (2001) 'Do high commitment human resource practices affect employee commitment? A cross-level analysis using hierarchical linear modelling', *Journal of Management*, 27(5), pp. 515–535.
- Wood, S. (1999) 'Human resource management and performance', *International Journal of Management Reviews*, 1(4), pp. 367-413.
- Wood, S. and De Menezes.,L. (1998) 'High Commitment Management in the UK: Evidence from the Workplace Industrial Relations Survey, and Employers' Manpower and Skills Practices Survey', *Human Relations*, 51(4), pp. 485-515.
- Wright, P. M. (1998) 'Introduction: Strategic human resource management research in the 21st century' *Human Resource Management Review*, 8, pp. 187-191.
- Wright, P. M. and Snell, S. A. (1991) 'Toward an integrative view of strategic human resource management', *Human Resource Management Review*, 1(3), pp. 203–225.
- Wright, P.M., Dunford, B.B. and Snell, S.A. (2001) 'Human Resources and the Resource-based View of the Firm', *Journal of Management*, 27(6), pp. 701–721.
- Zacharatos, A., Barling, J. and Iverson, R. D. (2005) 'High-performance work systems and occupational safety', *Journal of Applied Psychology*, 90(1), pp. 77-93.