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Relational Coordination Among Service Providers:
Impact of HPWS on Functional and Unit-Level Banking Performance

Muhammad Siddique, Liverpool Hope University, UK*
Mohammad Raijul Islam, Manchester Metropolitan University Business School, Manchester Metropolitan University, UK
https://orcid.org/0000-0002-5392-9759

ABSTRACT

This paper seeks to identify a potential mechanism over which HPWS influences performance. Using relational coordination theory, this paper assesses communication and relational ties of relational coordination as a potential link over which HPWS can affect unit-level performance in banks which are characterized as highly uncertain, interdependent, as well as time-bound. Primary data were collected from bank officers about the strength of HPWS and relational coordination among employees. Results indicate that HPWS was significantly associated with bank performance outcomes, including branch levels of deposits, loans, and net profit. Results also indicate that RC significantly mediated the linkages between HPWS and unit-level performance outcomes. These results suggest new insights for top management and HR leaders in the banking industry regarding the design of HPWS.

KEYWORDS

Banking Sector, HPWS, Interdependence, Organizational Performance, Relational Coordination

INTRODUCTION

Numerous studies have recognized the significance of human resource practices in improving firm performance (Boon, Den Hartog, & Lepak, 2019; Russell et al., 2018; Combs et al., 2006; Jewell, Jewell, & Kaufman, 2022). Despite a considerable amount of studies that have been published, one of the most significant current discussions on HPWS--performance is to study the process of how HPWS is linked with performance (Bowen & Ostroff, 2004; Lee, Pak, Kim, & Li, 2019).

Previous studies have tended to focus on the direct relationship between HR systems and performance rather than how HPWS is linked with performance. Some studies have investigated the linkages between HPWs and performance in a systematic way. Although some research has been conducted on HPWS-performance, the mechanism by which HPWS is associated with performance outcomes has not been established (Murphy, Torres, Ingram, & Hutchinson, 2018; Meuer, 2017; Wang, Zhang, & Wan, 2022).

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However, Wei and Lau (2010) suggest that these studies have been unsuccessful to provide an adequate explanation for the linking mechanism over which HPWS influences performance. Therefore, in addition to the importance of considering the influence of HPWS on performance, there is a greater urge to explore the mechanism over which HPWS influences performance outcomes. A search of the literature revealed few studies which used a multi-level approach to assess the influence of HPWS on performance as well as the mechanism of how HPWS influences performance at various levels (Nien-Chi & Lin, 2019; Kundi, Sardar, & Badar, 2022).

In literature, the term coordination is widely used to recognize a process of how job activities are properly regulated and managed in organizations (Fu, Bosak, Flood, & Ma, 2019). Theorists (Tushman &Nadler, 1978) have treated coordination as an information processing test. In recent years, coordination has been perceived as a relational process that encompasses combined perceptions of the job along with work conditions (Crowston & Kammerer, 1998). It is based on that "coordination is the management of task interdependence" (p. 90). In this manner, relational coordination is usually inferred as coordination between employees learned by relationships in performing interdependent work (Gittell, 2001). Gittell (2000) pointed out that organizations performing in conditions of uncertainty, reciprocal interdependence, and time constraints will be most productive when there is a high degree of relational coordination among employees. Collectively, communication and relational networks are assumed to contribute to a system of a firm's social capital that is expected to strengthen performance (Leana &Van Buren, 1999; Havens, Gittell, & Vasey, 2018).

Building on the findings by Gittell et al. (2010) in the healthcare of the United States, the current study intends to further seek the mechanism through which HPWS promotes relational coordination, and consequently influences unit-level performance. The current study does so in a distinct context - the banking sector in the developing country of Pakistan. This study theorizes that relational coordination, which develops through frequent; high-quality communication ties backed by relationship ties of shared knowledge, goals, and mutual respect, facilitates firms to better accomplish their desired performance (Romanow, Rai, & Keil, 2018). Through this research, we hope to add to the existing HPWS and performance literature, explaining how relational coordination help to illustrate the process by which HPWS impacts organizational performance.

Despite the agreement, still researchers are critical of the mechanism by which HR practices influence performance (Sun, Xing, Yin, & Yang, 2018; Gerhart, 2012). Recent studies (e.g. Graham, Zheng, Gracey, & Plater, 2020) have pointed to establishing a better theoretical description of HPWS-performance linkages, thus shifting focus on the mechanism linking HPWS to performance.

In addition, existing research findings are based on managerial perspectives, neglecting employees' perspectives. Recent studies have suggested examining the effects from employees' perspectives as employee experiences of the HRM practices are essential in understanding the relationship between HRM and performance (Bing, Guimei, Xiaolang, & Lassleben, 2020; Liao et al., 2009). Also, researchers have suggested that there is a need to adopt a multi-level approach to analyze the impact of HRM on performance outcomes along with the process that determines the relationship at the individual, functional, and unit levels (Wright & Ulrich, 2017; Ostroff and Bowen, 2000).

The contributions of this study include the use of the theory of relational coordination as the theoretical foundation along with employees' perspectives so that linkages in the HPWS and performance can be recognized more certainly. This approach includes multi-level forms of theorizing in which it seeks to associate the phenomena across the various level of analysis. This approach suggests that high-performance work systems can positively influence organizational performance by strengthening relationships between employees who perform secluded functions in settings characterized by high levels of interdependence, uncertainty, and time constraints.

Moreover, the specific research design involves the inclusion of managerial and bank officers performing in-branch work considered as the focal work processes in a single large bank operating in all parts of the country. Finally, the selection of Pakistan as the research context provides new insights from a developing country context into the existing literature.

HPWS and Performance

In recent years, the resource-based view and AMO model presented theoretical underpinning in explaining the HPWS-performance link (Ogbonnaya & Valizade, 2018). The RBV proposes that the growing acknowledgment of a firm's internal assets as a point of competitive advantage earned validity for the assertion that employees are critically essential to organizational success and firms build up their advantage through obtaining, developing, and effectively utilizing these resources to achieve desired results (Barney, 1991). The AMO framework suggests that firms can achieve various benefits when they support an HRM system in which workers have appropriate levels of abilities and skills, an adequate stimulus for motivation, and adequate opportunities for participation in decisions (Methot, Milwani, & Rothman, 2017; Methot, Rosado, & Allen, 2018).

Secondly, there is a developing view that intends the relationships between employees as an essential causal process through which HPWS affects performance (Malhotra & Singh, 2016). For instance, researchers have suggested that well-established employment relationships and norms of mutual effort facilitate the development of social networks (Collins &Smith, 2006). These researchers have pointed out that HPWS affects organizational performance through its influence on the social networks of employees (Leana &Van Buren, 1999). HRM systems are also expected to impact performance through their influence on the firm's internal social structure (Evans & Davis, 2005). In addition, HR practices such as selection, compensation, and training can be designed to develop norms of reciprocity by promoting the selection and retention of competent people. The development of such reciprocity norms increases cooperation in complex situations and results in greater organizational flexibility (Tsai & Ghoshal, 1998). Similarly, HR practices such as training and development, information sharing, and selectivity in staffing build shared perceptions among employees regarding other employees, tasks, and the organization promoting cooperation and better decision-making (Han, Bartol, & Kim, 2015). These specific changes in the internal social structure enhance efficiency and flexibility (Evan & Davis, 2005).

Relational Coordination Linking HPWS and Performance

Considerable advancement has been accomplished toward determining the high-performance work practices that encourage the development of employer-employee relationships. More specifically, HR practices can be designed to undermine or support relational coordination among employees, which is a mutually reinforcing process of "communicating and relating for task integration" (Gittell, 2002, p 20). The HR practices that support relational coordination include selection for teamwork, training for teamwork, shared accountability, shared rewards, shared meetings, and the use of boundary spanner roles (Gittell, Seidner & Wimbush, 2010). These HR practices work by connecting across silos to enhance coordination in various functions that are engaged in an interdependent work process.

Hypothesis 1: HPWS is positively associated with relational coordination among employees in different functions.

Relational coordination theory further suggests that, given the link between high-quality relationships and information processing capacity, relational coordination will result in higher performance outcomes along both efficiency and quality dimensions (Gittell, 2000). For example, relational coordination brings more consistency in communication which enables employees to reduce the number of errors and time wasted in searching for misplaced information. In this way, relational coordination sets up a firm's resources to be employed most effectively, resulting in higher performance outcomes.

Previous research has also shown how coordination among employees from various functions enabled workers to coordinate their work and perform better (Collins & Clark, 2003). The HPWS

are expected to encourage or at least have the potential to encourage relational coordination at various functions.

Hypothesis 2: Relational coordination mediates HPWS and unit-level performance.

Conceptual Model of the Study

This research assumes that HPWS designed to promote relational coordination will bring improvements in performance outcomes. The study's conceptual model is presented in Figure 1. The study proposes that HPWS positively promotes relational coordination among employees operating in various functions at the functional and branch level. To examine the mechanism, it is further suggested that HPWS influences RC at the unit level, and mediates the effects of HPWS on unit-level performance, indicating relational linkages over HPWS. The suggested hypotheses are tested with a large data set gathered from managerial, and office cadre employees working in operations, cash, and credit departments across 340 bank branches.

Approaches to Bank Performance

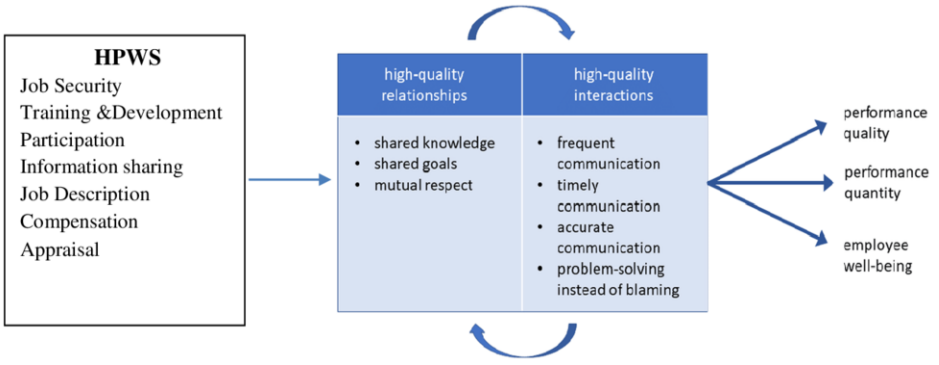
Many studies have illustrated the multidimensional nature of organizational performance (Boxall, 2012). A vast majority of studies have relied on market, financial, and accounting measures of performance in part because such measures were openly available through corporate databases. In the banking sector and elsewhere, the most notable approach to measuring what has been accomplished is the use of key performance indicators (KPIs), typically related to economic and financial performance outcomes such as firm profitability or productivity results (Boxall, 2012).

In addition to being multi-dimensional, performance in the banking sector is measured at multiple levels ranging from small units to specialized departments. A bank branch is a common unit for performance measurement. Previous studies have adopted four approaches to measuring performance at unit levels. These comprise econometric models, integrated systems, non-parametric techniques, and ratios. Ratio analysis has been widely used by regulators and bank management (Lau & Sholihin, 2005). It serves as a tool to analyze a bank's financial information and provide valuable insight into several aspects of the bank's operations including liquidity, quality of assets, risk management, capital adequacy, profitability, and liquidity functions (Paradi et al., 2011).

METHODS

In this study, a survey research design was with a predictive approach to ascertain the effects of HPWS on performance outcomes (Wright et al., 2005). Firstly, a survey was conducted in 218 bank

Figure 1. Linkages between HPWS, Relational Coordination, and Performance



branches to branch managers, and officers in bank branches about HPWS and relational coordination (See Table 1a). In the second step, branch-level performance outcomes in terms of liquidity, capital adequacy, and profitability were obtained subsequently from branches, regional, and head offices after the completion of the financial year.

Measurement of Variables

- **HPWS:** The field of HRM is lacking consensus among researchers about the HRM practices that comprise HPWS (Lepak et al., 2006). In this research, prominent studies were selected that have mainly focused on HPWS-performance as a major point in deciding practices to cover in HPWS. Selective recruitment is considered irrelevant to the study setting and is therefore excluded from the study. The criteria of relevance to each employee groupset for the inclusion of practices resulted in the selection of seven HRM practices as an HPWS. The seven selected HR practices were assessed with previously developed and validated scales on a 5-point Likert scale. Job security, training, role clarity, and employee participation were measured through the scale of Delery and Doty (1996). The approach of Zacharatos et al. (2005) was adopted to measure Information sharing and compensation. Some items from Delery and Doty (1996); Scott and James, (1992); and Singh, (2003) were used to measure performance appraisal.
- **HPWS Unitary Index:** This study follows an additive approach for aggregating high-performance work practices into an index. An additive approach assumes that the influence of high-performance work practices on a particular objective is distinct and that using more of these high-performance work practices should result in expanded levels of particular objectives. On the other hand, the interactive approach assumes that the eventual impact of high-performance work practices depends on the presence of other practices. Researchers have argued that the effects of an interactive approach may be positive or negative (e.g. Delery, 1998; Becker *et al*., 1997). Delery (1998) suggested that interactive effects may be considered as substitutes when these practices have an identical effect on the outcome or synergistic when together these practices result in a considerably different impact than the sum of individual impacts. An additive approach has been recommended and widely used in research, while it is consistent with one of the main principles of strategic human resource management that the effects of practices are better understood by testing the system of high-performance work practices (Huselid, 1995; Ostroff and Bowen, 2000; Lepak *et al*., 2006).

Following the regular process adopted by the HPWS literature, this study aggregated various measures of individual HR practices into a unitary index that measures HPWS (Lepak *et al*., 2006; Way, 2002). The basic assumption of the aggregated approach is based on the concept that accumulating several HR practices into an index can enhance performance either by using methods to utilize high-performance work practices in HPWS more widely and effectively or by expanding the number of HR practices in the high-performance work systems (Youndt *et al*., 1996).

- **Relational Coordination:** The study adopted already validated Gittell's (2001) survey of seven items scale having four dimensions of communication and three dimensions of relational ties among employees regarding branch working at the unit level. A similar procedure was followed for RC unitary index at individual, function, and unit levels.
- **Performance Measures:** Branch-level key performance indicators and financial information were obtained in terms of deposits, growth in advances and deposits, liquidity ratios such as advances to deposits, and profitability of the branches from 218 sampled branches. These measures were adopted for relevance to analyze efficiency, liquidity, capital adequacy, and branch profitability (Paradi et al., 2011).

Data Collection Procedure

The study was administered in a bank having a nationwide branch network. To establish a reasonable sampling frame, officer cadre employees including managers working in cash, operations, and credit departments of the bank branch were included in the sample frame. The jobs of these employees are mostly stable and common across all designated branches of the bank. These jobs are subject to the regulations of the central bank issued from time to time to regulate smooth banking operations. Therefore, employees in these officer cadres have a certain level of exposure to practices included in HPWS.

Keeping in view the large size geography of the country, in the first phase, it was decided to classify the country into main regions comprising Punjab province, federal capital Islamabad and Khyber. In the second phase, using random sampling, 45% of branches were selected from regions. The use of proportionate sampling resulted in a sample of 340 out of 755 bank branches in these three regions. Table 1a provides details about sample branches.

In total, 3450 questionnaires were personally administered in 340 branches. Approximately, 2275 responses were received, of which 1560 were valuable. Performance measures were obtained and matched with corresponding data of HPWS and relational coordination after the realization of the financial year. This criterion resulted in matched data for HPWS, relational coordination, and branch performance measures for 120 branches.

Data Analysis

The present study used various methods of analysis to examine the relationship between the extent of HPWS, the degree of relational coordination, and performance outcomes at the functional and unit level. Multiple statistical techniques were used with the help of a statistical package for social sciences (SPSS). Descriptive statistics such as frequencies, measures of central tendency, and cross-tabulations were used to explore the properties of the HPWS and the degree of relational coordination data. Factor analysis was conducted using principal component analysis with the varimax rotation method for HPWS and relational coordination surveys. Factor analysis resulted in the identification of the dimensions underlying the extent of HPWS and the degree of relational coordination. Reliability analysis was conducted using Cronbach alpha coefficient and inter-rater correlation coefficients (ICC 1 and ICC 2) to establish the internal consistency of the items for each scale. In addition to reliability, interrater agreement (IRA) was computed to determine the validity of the extent of HPWS and the degree of relational coordination as a unit-level construct.

Factor analysis using the varimax rotation method was conducted for HPWS and relational coordination. Factor loading of the items indicated the presence of strong loadings of all variables providing support for the unitary index approach. Cronbach alpha coefficients for HPWS accounted for 0.89 and the relational coordination scale was 0.85 suggesting internal consistency (See Table 1).

- **Interrater Agreement (IRA):** It refers to the absolute agreement in scores provided by multiple judges for one or two items (LeBreton et al., 2003; Bliese, 2000; James et al., 1993). Measures of IRA are used to determine whether scores provided by judges are identical in terms of their absolute value. According to LeBreton et al. (2003), the concepts of interrater reliability and interrater agreement both aim to answer questions related to whether assessments provided by one judge are identical to assessments provided by one or more other judges. IRA asserts the absolute agreement between judges and is generally indexed by some measure of within-group assessment dispersion. On the other hand, IRR focuses attention on the relative consistency between judges and is usually indexed by some form of correlation coefficient. Both IRA and IRR are considered reasonable approaches to estimating similarity between judges (LeBreton and Senter, 2008). These approaches are devised to answer distinct research questions.

Table 1. Reliability Analysis

Survey Items	Items	Alpha
JS	4	.62
T&D	4	.74
Emp. Participation	4	.82
JD	3	.84
Info Sharing	3	.71
Compensation	3	.61
Perf. Appraisal	5	.86
HPWS	26	.89
RC	7	.85

Table 1a. Branches

	Punjab	Capital	KP	Total
Branches	355	185	215	755
Data collected from Branches	160	83	97	340
HPWS & RC data	61	71	86	218
% of Branches	38	85	89	--
HPWS-Performance data	35	46	39	120

Table 1b. Scale Items

Job Security My job is secure as long as I perform well. Management tries to avoid dismissing employees. I have a job in the bank for as long as I want it. Management would make a genuine effort to keep my job even under adverse financial conditions.
Extensive Training Bank provides me with an appropriate level of job training. Employees in my job will normally go through training programs every few years. New employees are provided with formal training programs to learn job-related skills. Training programs have provided me with opportunities to grow in the bank.
Employee Participation Management involves me in decisions related to overall branch functions. Branch management encourages me to participate in decisions about my department. My manager asks me for suggestions on how to improve our branch functions. Branch management keeps open communication with me in this department.
Job Description The duties of my job are clearly defined. My job has an up-to-date job description. I have a job description that accurately describes the duties I perform.
Information Sharing I have enough information to perform my job well. It is easy for me to communicate my thoughts to other colleagues in the branch. I am given enough information to understand my role in this department.
Performance Based Compensation My salary package is mainly based on seniority. Part of my compensation is based on the bank's financial performance. My pay is higher than what competitors offer.
Performance Appraisal My performance appraisal is based on objective quantifiable results. I have a clear understanding of the objectives and standards of the performance appraisal system. My Performance appraisal is focused on growth and personal development. Branch management provides me with feedback on the quality of my performance. Decisions such as promotions pay increases and training are linked with my performance appraisal.

Using James et al. (1984) indices, IRA was computed for all dimension scores. The value of $r_{wg(j)}$ of HPWS managerial staff was 0.93, officers in operations were 0.91, credit was 0.92 and cash was 0.89 (see Table 2). IRA values for relational coordination were in a range of 0.87 to 0.91 exceeding the recommended level of 0.70 for managers and officers in all functions.

- **Interrater Reliability:** Interrater reliability was computed to assess HPWS and RC as branch-level constructs (LeBreton et al., 2003). In this study, ICC (1) exceeded the suggested values (0.05--0.3) and ICC (2) was also above the approved value (0.70). These values provide confirmation and rationale considering HPWS and RC are branch-level constructs (see Table 3).

Correlation analysis between the seven individual HR practices shows a positive correlation among individual HR practices. Also, there was a significant positive correlation among the seven dimensions of relational coordination (See Table 3a and 3b).

RESULTS AND DISCUSSION

- **HPWS and Relational Coordination:** Results from hierarchical regressions are shown in Table 4. Hypothesis 1 is about the impact of HPWS on the strength of relational coordination between different functions. As indicated in Table 4, after controlling for gender, qualification, age, experience, and length of service in a branch, data showed strong support for the HPWS-RC linkages among employees in different functions. Officers in credit function showed a positive link with relational coordination with a coefficient (β=0.57). The addition of HPWS in the model explained a significant variance of 20% in the strength of the relational coordination model ($\Delta F = 52.38$, $p < 0.001$). Overall, Model 2 explained a 23% variance in the strength of relational coordination ($F = 9.82$, $p < 0.001$). The estimated coefficient of HPWS on the strength of RC for officers in operations function was also significant with β=0.49. Together Model 2 explained a 16% variation in relational coordination ($\Delta F = 63.47$, $p < 0.001$).

Table 2. Interrater Agreement for HPWS and RC

Department	rwgj-HPWS	rwgj-RC
Managers	0.85	0.83
Operations officers	0.81	0.79
Credit officers	0.83	0.79
Cash officers	0.80	0.76

Table 3. Intra-Class Correlations

Department	ICC1	ICC2	ICC1	ICC2
	HPWS		RC	
Managers	0.26	0.90	0.46	0.85
Operation	0.26	0.90	0.45	0.85
Credit officers	0.23	0.89	0.42	0.83
Cash officers	0.18	0.85	0.40	0.82

Table 3a. Inter-correlation of HR practices

HR Practices	1	2	3	4	5	6	7
Employment Security	-						
Training	.680**	-					
Employee Participation	.529**	.740**	-				
Job Description	.725**	.644**	.839**	-			
Information Sharing	.602**	.441**	.538**	.614**	-		
Contingent compensation	.517**	.793**	.716**	.760**	.468**	-	
Performance Appraisal	.590**	.688**	.689**	.603**	.667**	.702**	-

**. Significant at the 0.01 level.

Table 3b. Inter-correlation of Relational Coordination Dimensions

Relational Coordination	1	2	3	4	5	6	7
Frequent	-						
Timely	.573**	-					
Accurate	.515**	.614**	-				
Problem-solving	.417**	.706**	.508**	-			
Shared Goals	.398**	.692**	.691**	.718**	-		
Shared Knowledge	.371**	.769**	.584**	.629**	.686**	-	
Mutual Respect	.360**	.423**	.443**	.448**	.420**	.511**	-

**. Significant at the 0.01 level.

Table 4. Regression-HPWS and Relational Coordination at the Functional Level

	Manager		Operations		Credit		Cash	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
Age	-.32	-.28	-.16	-.70	-.02	.17	-.28	-.20
Qualification	.126	.16	.02	.6	.26	.20	.11	.10
Experience	-.04	-.10	-.03	-.10	-.14	-.23	-.04	-.15
Service Length	.03	.01	.10	.8	.01	-.4	.31	.30*
HPWS	--	.37***	--	.49***	--	.57***	--	.36***
R	.26	.41	.09	.40	.16	.48	.24	.36
Adjusted R^2	.044	.137	.01	.150	.001	.207	.027	.097
F	2.66*	5.77***	.55	11.12***	1.03	9.82**	1.84	3.73***
ΔF	--	19.91***	--	63.47***	--	52.38***	--	12.46***

The regression model showed 16% of the overall variance in the strength of relational coordination in the operations function ($F = 11.12$, $p < 0.001$). The results of hierarchical regression also showed a significant coefficient estimate ($\beta = 0.36$) for officers in the cash function. The addition of HPWS in the model explained only 7% more variation in the strength of relational coordination ($\Delta F = 12.5$, $p < 0.001$). In general, Model 2 was for 13% of the variance in relational coordination for cash

Table 4a. Impact of HPWS on Relational Coordination

Model Summary				
Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**
1	.431[a]	.185	.179	.59895
ANOVA				
Model	**Sum of Squares**	**df**	**F**	**Sig.**
Regression	71.756	7	28.575	.000[a]
Residual	315.332	879		
Total	387.088	886		
Coefficients				
	Unstandardized Coefficients B	**Std. Error**	**t**	**Sig.**
(Constant)	1.893	.156	12.100	.000
Age 20 to 40 years	-.102	.078	-1.310	.191
Qualification MBA	.100	.052	1.926	.054
Experience 10 years	-.107	.069	-1.557	.120
Gender Male	.050	.045	1.108	.268
Department Manager	.186	.051	3.662	.000
Years in this branch	.066	.047	1.413	.158
HPWS	.465	.038	12.087	.000

officers (F = 3.73). These results indicate that HPWS is positively linked to relational coordination in different functions (H1 supported).

- **HPWS, RC, and unit level Performance:** Hypothesis 2 is associated with the mediating role of relation coordination, proposed as a mechanism over which HPWS affects performance outcomes, and was analyzed through mediation techniques proposed by Baron and Kenny (1986). Tables 5 and 6 show results regarding Hypothesis 2.

The first regression model presents the results of linkages between HPWS and relational coordination. HPWS indicated a significant link with relational coordination with a coefficient (β = 0.45). Results showed a significant relationship between HPWS and branch deposits/staff performance (β =45.39). In Model 3, results suggested a significant relationship between relational coordination and deposits/staff performance having β=17.18 at a 5% level. For mediation, comparing M2 and M4 revealed that the status of mediation did not qualify convincingly. A further study of the Sobel test also failed to confirm the lack of mediation ($z = -0.088$, $p > 0.10$).

Regression analysis of HPWS to increase in deposits performance showed a significant positive association with growth in deposits. A coefficient of 16.38 indicated that a unit increase in HPWS would bring an increase of 16.38% percent per financial period. Further analysis that was conducted to explore the impact of RC on growth in deposits also showed a significant relationship between relational coordination and growth in branch deposits (β=5.91). The coefficient of HPWS receded significantly in Model 4 when RC was included in the regression model (β =11.25). The regression

Table 5. Regression Analysis--Mediation at the unit level

	RC	Deposits/Staff			Deposits growth			Advances growth		
	M1	M2	M3	M4	M2	M3	M4	M2	M3	M4
Qualification	-.03	-2.1	-3.7	-2.1	-2.8	-2.9	-2.5	.96	2.9	1.8
Function	-.03	4.8	6.6	4.8	-2.3	-1.8	-2.2	-.6	-1.25	.02
Length of service	.02	1.1	1.5	1.2	4.5	4.3	4.2	2.18	.89	1.18
HPWS	.45***	45.3***	--	45.70***	16.3***	--	11.2*	-20.5***	--	-35.2***
RC	--	--	17.17*	-.71	--	15.91***	11.51**	--	19.38***	33.19***
R	.44	.26	.19	.26	.18	.18	.18	.16	.16	.24
Adjusted R^2	.17	.05	.02	.05	.02	.02	.02	.01	.01	.04
F	28.2***	8.2***	4.0***	7.1**	3.7***	3.9***	4.2***	2.7**	2.7**	6.3***
ΔF	185.***	33.7***	5.3*	16.8***	16.2***	17.4***	11.9***	12.0***	12.2***	21.5***
Sobel test	--	--	--	-0.08	--	--	2.7**	--	--	5.1***

Table 6. Regression Analysis--Mediation

	Advances/Deposits			Profit/Staff			Profitability growth		
	M2	M3	M4	M2	M3	M4	M2	M3	M4
Qualification	.06	.07	.06	-.21	-.28	-.23	7.07	5.89	7.87
Function	.04	.03	.04	.05	.09	.04	4.89	7.50	5.37
Length of service	-.06	-.06	-.06	.38*	.41*	.40*	2.22	1.74	1.25
HPWS	-.30***	--	-.38***	1.13***	--	1.50***	74.20***	--	60.27***
RC	--	.04	.19**	--	-.23	-.82**	--	54.83***	31.24*
R	.17	.08	.19	.20	.14	.22	.18	.15	.19
Adjusted R^2	.02	.004	.027	.031	.011	.040	.025	.015	.029
F	3.57***	.85	4.06***	5.05***	2.43*	5.62***	4.30***	2.90**	4.30***
ΔF	19.31***	.36	13.36***	18.88***	.87	14.17***	25.27***	15.55***	14.80***
Sobel test	--	--	0.03**	--	--	0.12**	--	--	6.85*

coefficients in Model 4 also suggest that RC partially mediated HPWS and growth in deposits. Sobel's test also supported mediation ($z = 2.70$, $p < 0.01$).

To assess whether relational coordination mediates, a comparison of Models 2 and 4 showed that the HPWS regression coefficient recede significantly ($\beta = -35.29$, $p < 0.001$) suggesting that the relational coordination partially mediated HPWS and advances. Sobel's test also showed support ($z = 5.12$) confirming mediation.

Regression analysis also indicated a significant positive relationship between the degree of relational coordination and growth in deposits ($\beta = 15.91$, $p < 0.001$). Control variables were entered in the first regression model M1 (column 4). When relational coordination was added to the equation (column 5, Model 2), the model explained an additional 2% ($\Delta F = 17.44$, $p < 0.001$) variance into growth in deposits beyond the restricted Model 1 of control variables. Overall, Model 2 explained 3% of the variance in sample branches' growth in deposits ($F = 3.92$, $p < 0.001$). Each dummy variable

for the control variables was insignificant suggesting no effect on the relationship between the degree of relational coordination and growth in deposits.

Analysis of HPWS and advances/deposits showed that HPWS is positively linked with the liquidity of the branch. (Table 6). Comparing Models 2 and 4 showed that the HPWS coefficient reduced significantly indicating support for partial mediation between HPWS and advances to deposits. Sobel's test also verified the relationship ($z = 0.03$).

A comparison of Models 2 and 4 suggested that HPWS and RC are linked with profit/staff. To assess mediation, comparing both models suggested that the coefficient of HPWS and growth in branch profit was lesser and receded. Further, the Sobel test also confirmed the mediation effect ($z = 6.85$) in mediating the relationship between HPWS and profitability. These findings presented support for the view that RC mediates HPWS and profit. Together, results indicated that RC mediated HPWS and unit-level performance in terms of deposits, advances and profit, and liquidity measures.

This research analyzed the promising role of RC among employees through which HPWS influences performance in service settings. The findings from this study indicated several links between HPWS and relational coordination at a functional level. Results show that officers in managerial functions perceived a relatively lower degree of relational coordination as compared to officers in operations and credit functions. It is interesting to note that HPWS predicted higher strength of relational coordination among employees in the credit function but not in the other two functions.

Since this is a pioneer study to test the theory of RC in the banking industry, the study has shown support for the hypothesis that HPWS supports the strength of relational coordination and in turn, affects organizational performance. The findings that emerged from mediation analysis suggest that HPWS influences most of the organizational performance outcomes through relational coordination among employees. These results are essential for advancing an understanding of how HPWS affect performance via the mediation of relational coordination, as well as highlighting the importance of incorporating employees' perspective.

IMPLICATIONS

One of the main implications of the findings for this research includes divergence between managerial and employee perspectives. Being key stakeholders, employees should participate in the design and implementation of HPWS and relational coordination. The findings of this research also have lessons for employees. Similarly, managers have a focus on administering effective leadership to their employees to support and create greater coordination and who actively involve employees in the use of HPWS may accomplish significantly superior results than those who fail to recognize the impact of HPWS on employees and do not acknowledge the implications of employee relations. Finally, for HR professionals this research highlights that the impact of HPWS on performance outcomes can be accounted for by implementing the process of relational coordination. This points out that for the HRM function to accomplish a vital impact, HR professionals will require to work jointly and improve coordination with their associates who are in charge of administering the main operations of organizations. Given the fact that managers perform an essential role in the adequate use of HPWS, this highlights the need for close coordination between HR professionals and managers in organizations (Bechky, 2006; Thompson, 1967).

LIMITATIONS AND FUTURE RESEARCH DIRECTIONS

This study is limited by the use of a cross-sectional design. Consistent with previous studies (e.g. Datta et al. 2005; Gittell, et al. 2010) using multiple sources of data for HPWS and RC, this study used the criteria of matching HPWS, RC, and performance data for corresponding branches which resulted in thinning of data. Despite having valid measures for HPWS and the strength of RC, this study suffers from constraints relating to the content and design of various performance outcomes.

In the future, the study must use longitudinal research designs to explain the process of how HPWS influences performance. Secondly, it is essential to also examine qualitative research models such as case studies over time that can be notably helpful in identifying variables and developing a theoretical understanding of the process involved.

CONCLUSION

The context of this research is the service sector where the significance of human resource management is relatively higher than the manufacturing context mainly for the services such as simultaneous production and use of services and greater involvement of customers (Bowen & Schneider, 1988). To provide quality services, organizations need to implement high-performance work systems that ensure that employees have the essential skills and motivation to satisfy customer needs (Liao et al., 2009).

The findings of this study indicated that the linkages between HPWS and unit-level performance were mediated by relational coordination among employees. These results indicate that there was a relational process through which the strength of relational coordination was related to HPWS and its impact on performance outcomes. Results are also in line with those of other studies such as Gittell et al., (2010), and provide greater support for the conceptual premise that relational coordination mediates the HPWS-performance link.

This study presents important implications for branch operations management who are aiming for accomplishing the bank's business goals and financial performance. The findings that emerged from this study recommend that when the managerial cadre provides a well-designed and coordinated approach to HPWS and those involved in HR roles are entrusted to collaborate with branch managers and officers in each function to settle the social context for effective human resource management, managers and officers are likely to accomplish or surpass financial performance. To achieve these desired outcomes, both managers and officers working in branch functions are required to focus on their HR, managerial, and support roles to make sure that these functions are well-coordinated and furnished essential resources to practicing HPWS effectively to develop and strengthen relational coordination.

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Muhammad Siddique has a Ph.D. in high-performance work systems and organizational performance in the banking sector, from Newcastle University, UK. Currently, he is working as a Lecturer in Human Resource Management at Liverpool Hope University, UK. Before this Siddique worked at Newcastle University UK and headed Master's and Ph.D. programs in Management and was Chief Editor of Business and Economics Review at the Institute of Management Sciences, Pakistan. Siddique has been the first to test the theory of relational coordination in the financial sector and also the first to provide insights from the developing country context. Siddique has scholarly international papers authorships, and conference presentations on HPWS, HR practices, relational coordination, and performance.

Mohammad Raijul Islam is an Associate Lecturer at the Manchester Metropolitan University. His primary research area covers-HRM, Business Innovation, Strategy, Financial Management, Entrepreneurship.