Ability Mediation Effects in the Relationships between Human Resource Practices and Service Quality

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Abstract

In this study, the relationships between Human Resource Practices (HRPs), firm performance (service quality), and the mediation effects of employees' abilities were examined. To assess the relationships between variables, before evaluating the fitted structural model, the measurement model was defined to verify that the measurement variables used to reflect the unobserved constructs do so in a reliable manner. The Structural Equation Modelling (SEM) was utilized to test the fitness of the model and to provide evidence of discriminate validity through chi-square difference tests. Data were collected from a sample of 179 branches of two banks in Tehran, Iran. Analysis with the bootstrapping method showed that employees' abilities mediated the relationship between performance appraisal and service quality. Furthermore, the result of this article showed training practices had an indirect significant relationship with service quality through employees' abilities. Overall, the findings of the current study provided insights into the role of HRPs and employees' abilities in firm performance. Furthermore, it becomes important for organizations to build strategic practices in terms of training, career development, participation, and performance appraisal.

Keywords

Ability, Firm performance, Human resource practices, Service quality.

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Introduction

As it is presumed that human capital can provide competitive advantage (Chuang *et al.*, 2013), and a firm's people are integral to its success (Wright & Kehoe, 2008), the importance of human capital has become more evident. By the same token, organizations search for developing sources of competitive advantage, and researchers have focused on firms' human resources (Wright *et al.*, 2001).

The importance of human resources as a fundamental channel towards their competitiveness (Moreira, 2008) on the one hand, and the strategic importance of their contribution to the effectiveness of business firms (Huang, 2000) on the other hand, have motivated the current research efforts to show how HRPs are linked to firm performance (Takeuchi, 2003; Ferguson, 2006; Andersen *et al.,* 2007; Fey *et al.*, 2009; Gulsoy, 2013).

In view of the fact that organizations create mission statements and highlight core values, HRPs play critical roles in inculcating these values (Hassan, 2007; Mostafa & Gould-Williams, 2014). It is estimated that, through these values, every organization can achieve individual and organizational goals. Human resource practices are the faithful "mechanisms aimed at the acquisition, development, and motivation of human capital. In other words, HR practices refer to how human resources are managed" (Ngo *et al.*, 2008, p. 74). Employees' skills and HR practices are significantly linked with a firm's performance (Bhattacharya *et al.*, 2005; Cooke *et al.*, 2014), Therefore, one may conclude that human resources can certainly be an organizational source of competitive advantage (Park *et al.*, 2003).

In the literature it can be observed that researchers have investigated the effects of HRP on employees' behaviour outcome variables comprehensively (Rogg *et al.*, 2001; Baran *et al.*, 2002; Buck & Watson, 2002; Guest *et al.*, 2004; Hair *et al.*, 2006; Hassan, 2007; Chew & Chan, 2008; Luna-Arocas & Camps, 2008; Zhang *et al.*, 2008; Jabbour *et al.*, 2013). Furthermore, there are studies that have illustrated the effects of employees' behaviour outcome variables on firm performance (Podsakoff & MacKenzie, 1994; Podsakoff *et al.*, 1997; Bachrach *et al.*, 2001; Koys, 2001; Yoon & Suh, 2003; Bhattacharya *et al.*, 2005; Puig *et al.*, 2008; Podsakoff *et al.*, 2009;

Yoon, 2009; Jiang *et al*., 2012). Therefore, there exists the gap whereby both groups of variables, namely the HRPs, employees' behaviour outcome variables and firm performance, are incorporated in a mutual model inclusive of interfaces and interactions, which will be the focus of this present research.

The examination of employees' abilities as the mediating variables through which human resource practices affect firm performance is still scarce. It is realized that previous studies of human resource practices have focused on investigating the overall linkages between HRPs and performance. In addition, the utility of human resource practices research is limited without explicating the processes that occur within the relationship between HRPs and firm performance with mediating variables. Therefore, this study intended to answer the following research questions:

1. Do employees' abilities mediate the relationship between the human resource practices and service quality?
2. Is there any linear relationship between human resource practices and service quality?
3. Is there any linear relationship between human resource practices and employees' abilities?
4. Is there any linear relationship between employees' abilities and service quality?

Firm performance (service quality)

In this study, according to Morison's model (1996), service quality is considered to be a measure of firm performance. However, one might observe firm performance from three different points of view: 1. qualitative and quantitative of goods and services; 2. time performance; and 3. financial performance (Locke & Latham, 1990). Among these performances, service quality is considered a critical measure of firm performance (Karatepe *et al*., 2005; Yaghoubi *et al*., 2011; Enayati *et al*., 2013). Service quality refers to customers' perceptions of service quality as an indicator of firm performance. The construct of service quality refers to: a) reliability; b) responsiveness; c) assurance and d) empathy.

Human resource practices

Investigators have considered diverse practices as HRP, for example Boselie, Dietz, and Boon (2005) recognized 26 human resource practices. These HRs consist of:

1. training and development;
2. performance management;
3. communication and information sharing;
4. recruitment and selection;
5. good wages (high or above market pay);
6. contingency pay and rewards;
7. direct participation (empowerment, suggestion schemes);
8. team work and collaboration;
9. job design (job rotation, job enrichment);
10. internal promotion;
11. benefits packages;
12. financial participation (employee stock, employee shares);
13. autonomy (decentralized decision-making);
14. symbolic egalitarianism;
15. formal procedures (grievances);
16. employment security;
17. human resource planning (career development/succession planning);
18. job analysis;
19. diversity and equal opportunity;
20. attitude survey;
21. family friendly policies and work-life balance;
22. indirect participation (unions);
23. socialistic induction and social activities;
24. social responsibility;
25. employee exit management (downsizing) and
26. professional effectiveness of the human resource department.

Following Snell (2002) and Delery and Doty (1996), Zhang, Wan and Jia (2008) have illustrated the extent to which a measure of HRP relates to directing and monitoring employee performance from the viewpoint of a control-based approach. These authors have further distinguished the extent to which HRP facilitate the internal

development of employees, in parts such as training and career development, from the viewpoint of a resource-based approach. However, their work has been criticized, for example, "Both approaches are obviously too narrow and cannot satisfy the needs of modern firms in today's hyper-competitive environment" (Zhang *et al.*, 2008, p. 129).

Guest's Model

MacDuffie (1995) presents one potential basis for linking between human resource practices and performance. He illustrates that, there must exist three conditions in order for human resource practices to be able to contribute to an improvement of performance. For the first condition, employees need to have suitable knowledge and skills. The second condition needs them to be motivated to apply this skill and knowledge through discretionary effort. Finally, "the firm's business or production strategy can only be achieved when employees contribute such discretionary effort" (MacDuffie, 1995, p.199). He believes that, these conditions should be met for HRP to contribute to performance. Following MacDuffie (1995), Guest (1997) concludes that expectancy theory is a theory about the link between motivation and performance, as high performance depends on necessary skills and abilities and high motivation, for example "careful selection", "high investment in training", "employee involvement", and "job design" play important roles in this area. With this view from expectancy theory, Guest presents a conceptual model that today is still applicable in the area of human resource research.

This model links the practices, strategy, and outcome of human resource management with performance, employee behaviours and financial organizational outcome. According to this model, HRP have a fundamental link with employee behaviours such as organizational citizenship and involvement (Fig. 1). Guest (1997) links these behaviours with firm performance (service quality, productivity, customer satisfaction) and social results (conflicts, turnover, and absenteeism). As a result, these kinds of performances are presumed to influence "financial performance" (Guest, 1997). According to this theory, the following hypothesis can be formulated in the study:

❖ Employees' abilities have a mediation role in the relationship between HRP (training, selection, career development, performance appraisal, participation practices) and firm performance.
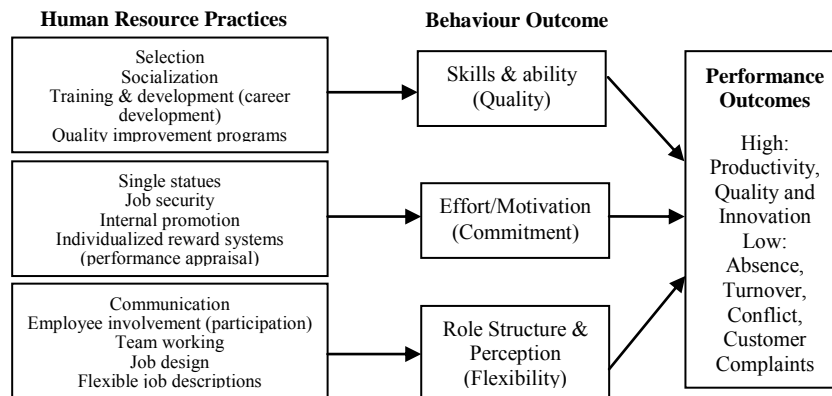
Human Resource Practices   **Behaviour Outcome**

| Selection
Socialization
Training & development (career development)
Quality improvement programs | → | Skills & ability
(Quality) |

| Single statues
Job security
Internal promotion
Individualized reward systems
(performance appraisal) | → | Effort/Motivation
(Commitment) |

| Communication
Employee involvement (participation)
Team working
Job design
Flexible job descriptions | → | Role Structure &
Perception
(Flexibility) |

Performance Outcomes

High: Productivity, Quality and Innovation
Low: Absence, Turnover, Conflict, Customer Complaints

Fig. 1. Linking HRP and Performance Outcome (Guest, 1997)

Materials and Methods

Sampling Procedure: The sample of the study was selected through multi-stage sampling. A thorough review of published researches and recommended samples sizes agree on a sufficient sample size of 120 and above to test multiple covariance hypotheses in a measurement model of interacting variables. SEM analysis with a sample less than 100 may be flawed and may encounter technical problems unless a simple model is evaluated (Kline, 2005). The population of the study included 302 branches of two banks in Tehran. In the first step of SEM analysis of simple random sampling, 115 public bank branches and 83 private branches were chosen. Managers or assistant managers of the branches were participants in this study. In branches with more than two non-managerial employees, two of them were selected through simple random sampling. Finally, the data of 179 branches was acceptable for analysis.

Data analysis

To assess direct and indirect relationships among variables, a two-step procedure using the structural equation modelling (SEM) and confirmatory factor analyses was followed (Anderson & Gerbing,

1988; Shek & Yu, 2014). SEM was utilized to test the fitness of the model and provide evidence of discriminate validity through chi-square difference tests (Bentler & Bonett, 1980; Hosseini & Hosseini, 2013; Jackson & Allemand, 2014).

Interrater agreement: Interrater Reliability (IRR) and Interrater Agreement (IRA) indices are often used to justify aggregating data used in composition models (LeBreton & Senter, 2008). The Average Deviation (AD) index has been proposed by Burke, Finkelstein, and Dusig (1999) as a measure of IRA. The AD index may be estimated around the mean (AD_M) for a group of judges:

$$AD_{M(j)} = \frac{1}{k}\sum_{k=1}^{k}\left|X_{jk} - \overline{X}_J\right|$$

X = an observed score, typically measured on an interval scale of measurement.

J = the number of items ranging from j=1 to J.

K = the number of raters or judges ranging from k=1 to K.

X_{jk} is the k_{th} judge's rating on the j_{th} item.

$\overline{X}_J$ is the item mean taken over judges.

(* in this study k=3 and j=33)

Burke and Dunlap (2002) suggest high agreement is obtained when the $AD_M(j)$ values for 5-point scales are less than 0.8. Furthermore, for more than one group of response, before estimating $AD_M(j)$, one should confirm that the homogeneity of variance assumption is not violated in these groups (LeBreton *et al.*, 2005).

Evaluation of Variance Assumption: The study takes the bank branches as the unit of analysis, rather than bankers. Then survey items were reworded to reflect the unit-level of analysis by changing the focus of items to the branch. Before aggregating the data to the branch level, it was necessary to show evidence supporting the aggregation. Therefore, the researcher had particular interest in the level of consensus among managers and employees regarding HR practices and ability. These interrelationships at the level of a bank branch would qualify the branch level as the unit of analysis and will necessarily call for aggregating data.

Since, managers, assistants and non-managerial employees provided replies to the HR practices and employees' ability variables items, the homogeneity of variance among these groups should be discussed as the requirement of conducting the analyses. Separate independent-samples t-tests for groups of non-managerial employees and managerial responses were run to test the homogeneity of variance (Table 1). The homogeneity of variance option gives us the Levene's test for homogeneity of variances, which tests whether the variance in scores is the same for each of the groups or not (Pallant, 2007).

Table 1. Test of Homogeneity of Variances

Variables	Homogeneity of Variances	Levene's Test for Equality of Variances	
		F	**Sig.**
Selection	Equal variances assumed	0.015	0.903
Training	Equal variances assumed	2.285	0.131
Career Development	Equal variances assumed	1.978	0.160
Performance Appraisal	Equal variances assumed	0.359	0.549
Participation	Equal variances assumed	1.585	0.209
Ability	Equal variances assumed	0.137	0.712

Checking the significance value for Levene's Statistics demonstrates that these values are larger than 0.05; therefore, the assumption of homogeneity has been met (Pallant, 2007). The results show that, it is justifiable to aggregate data to the subgroup level (calculate aggregate scores for the managerial and non-managerial employees for each branch). Furthermore, the result supports aggregating the data to the branch level, where, the condition of $AD_M(j)$ values ≤ 0.8 (LeBreton & Senter, 2008). The estimation of $AD_M(j)$ for the questionnaire items was the second step to determine if the requirements are met. In Table 2, in order to facilitate interpretation, only the mean $AD_M(j)$ values are reported. For all groups, the $AD_M(j) < 0.8$, suggesting a strong agreement. Thus, based on $AD_M(j)$ estimates, it is justified in aggregating these data to the team level. Such an agreement reveals the strong agreement that exists among the judges within each team. Therefore, it is safe to aggregate climate data to the team level.
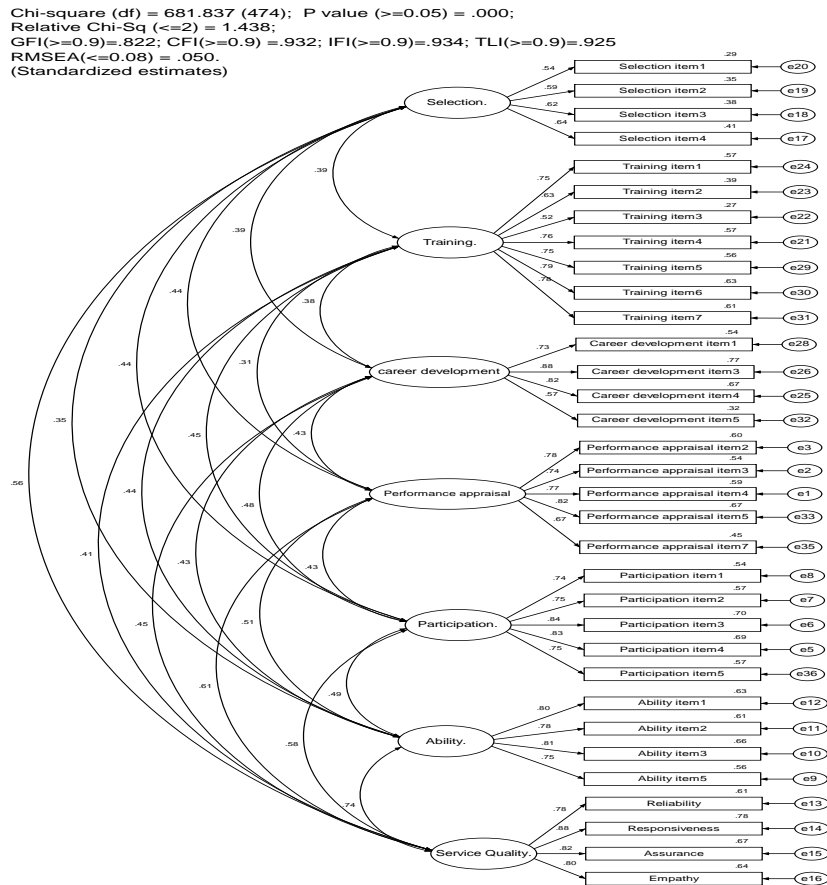
Evaluation of the measurement model

Figure 2 shows the estimated measurement model. Furthermore, Table 2 shows the measurement statistics for the measurement model. From the measurement model, it is realized that all of the factor loadings are more than 0.5, and the magnitudes of the correlation coefficients between constructs are less than 0.90. Furthermore, at least three fit indices are acceptable.

Table 2. Measurement Properties of the Second Model

Factors	Composite Reliabilities	$AD_M(j)$	r^2						
			1	2	3	4	5	6	7
1. Selection	0.69	0.4874	0.67*						
2. Training	0.87	0.5014	0.15	0.87					
3. Career development	0.84	0.5775	0.15	0.14	0.81				
4.Performance appraisal	0.87	0.5557	0.19	0.10	0.18	0.87			
5. Participation	0.88	0.5352	0.20	0.20	0.24	0.18	0.86		
6. Ability	0.86	0.3890	0.12	0.20	0.18	0.26	0.24	0.88	
7. Service Quality	0.89	0.6204	0.31	0.16	0.20	0.37	0.34	0.55	0.94

* Cronbach's Alpha values

Chi-square (df) = 681.837 (474); P value (>=0.05) = .000;
Relative Chi-Sq (<=2) = 1.438;
GFI(>=0.9)=.822; CFI(>=0.9) =.932; IFI(>=0.9)=.934; TLI(>=0.9)=.925
RMSEA(<=0.08) = .050.
(Standardized estimates)

Fig. 2. Measurement Model

Structural model

Figure 3 demonstrates a path analysis process with latent constructs to investigate the mediation, direct and indirect structural relationship between variables. This model assesses the relationship between HRPs, ability and service quality. The model hypothesizes that human resource practices will be related to firm service quality, directly and indirectly, being mediated by ability.
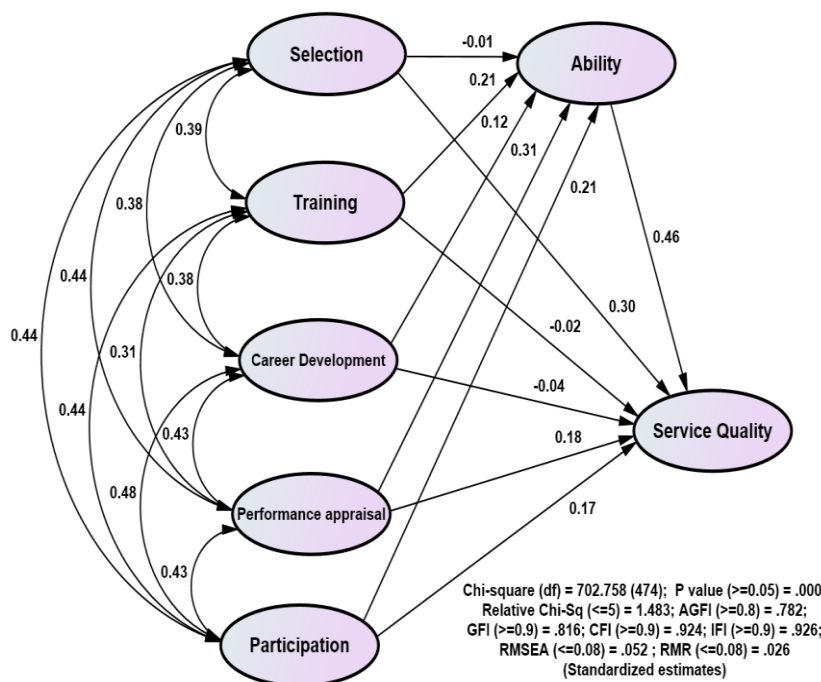

Fig. 3. Estimated Path Coefficients

To modify the model, direct or indirect effects with low regression weights, such as direct effect of selection on ability (-0.01), were deleted and the model was run again (Fig. 4).

The hypothesized research model was tested using Maximum Likelihood estimation. The regression weights of the Structural Model are presented in Table 3.

Total effect: The results are tailored for reporting the direct, indirect and total effects of HRPs and employees' abilities on service quality in the model (Table 4).
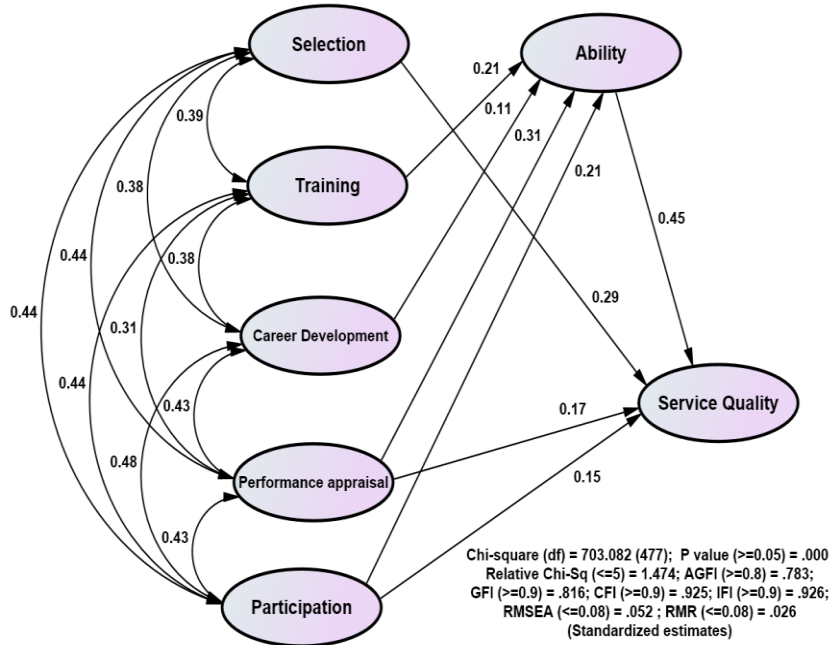
Fig. 4. Modified Model

Table 3. Regression Weights in the Models

DV		IV	Structural Model
Ability	<---	Participation	0.21*
Ability	<---	Performance appraisal	0.31**
Ability	<---	Career Development	0.11
Ability	<---	Training.	0.21*
Service Quality	<---	Ability	0.45***
Service Quality	<---	Participation	0.15*
Service Quality	<---	Performance appraisal	0.17*
Service Quality	<---	Selection	0.29**

Notes: *P < 0.05; **P < 0.01, ***P < 0.001

Table 4. Direct, Indirect and Total Effects of Latent Exogenous Variables on Service Quality

Exogenous Variables	Direct Effect (DE)	Indirect Effect (IE)	Total Effect (TE)
Selection	0.29	0	0.29
Training	0	0.45 × .21 = 0.1	0.1
Performance appraisal	0.19	0.45 ×.31 =0.14	0.19 +0 .14 =0.33
Career development	0	0.45×.11 =0.05	0.05
Participation	0.17	0.45 × .21 = 0.1	0.17 +0 .1 =0.27

Finally:

Table 5 demonstrates the proportion of variance explained by ability as a mediator variable in the relationship between five HRPs and service quality. Subsequently, managers must be acquainted with these important roles.

Table 5. Proportion of Variance by Mediator

Exogenous Variables	Indirect Effect (IE)/ Total Effect (TE)	Proportion of indirect effect (%)
Selection	0	0
Training	1	100
Performance appraisal	0.4	46
Career development	1	100
Participation	.39	39

- ❖ The proportion of variance explained by ability in the effect of training practices on service quality is at 100%.
- ❖ The proportion of variance explained by ability in the effect of performance appraisal practices on service quality is at 46%.
- ❖ The proportion of variance explained by ability in the effect of career development practices on service quality is at 100%.
- ❖ The proportion of variance explained by ability in the effect of participation practices on service quality is at 39%.

Bootstrapping method

Bootstrapping is one of several resampling strategies for assessing indirect effects (Preacher *et al.*, 2007; Shahanaghi *et al.*, 2012). The bootstrapping method is an alternative to the Baron and Kenny (1986) approach for testing the statistical significance of indirect effects that has been developed by Shrout and Bolger (2002) based on bootstrap resampling methods. In bootstrapping, the sample "is conceptualized as a pseudo-population that represents the broader population from which the sample was derived, and the sampling distribution of any statistic can be generated by calculating the statistic of interest in multiple resamples of the data set" (Preacher *et al.*, 2007, p. 190). Therefore, bootstrapping provides a reasonable method of obtaining confidence limits for specific indirect effects (Preacher & Hayes, 2008) and it is an estimation of the magnitude of the indirect effect to test its statistical significance (Mallinckrodt *et al.*, 2006).

Furthermore, the results for the significance of the indirect effects

in: Table 6 by using the bootstrap procedure based on 1,000 samples (typically at least 1,000 but some authors such as Hayes, Preacher, and Myers (2009) recommended at least 5,000) to derive a 95% confidence bias-corrected confidence interval for the mediating effect of HRPs on service quality through employees' abilities, show training, participation and performance appraisal practices have significant indirect effect on the service quality through employees' abilities. The bootstrapped estimate of the mediated effect is statistically significant for the effect of training, participation and performance appraisal on service quality (95% confidence interval).

Table 6. Indirect Effect of HRPs on Firm Performance Through Employees' Abilities

	Point Estimate	SE	Bootstrapping BC Percentile 95% CI	
			Lower	Upper
Selection	0	0	0	0
Training	0.1*	0.043	0.026	0.199
Performance appraisal	0.14**	0.059	0.041	0.278
Career development	0.05	0.045	-0.052	0.132
Participation	0.1*	0.049	0.016	0.205

BC – Bias Corrected, *P < 0.05

Discussion

As argued by Guest (1997), employees' abilities provide a critical link between a firm's HRPs and its level of customer service, and employees' abilities will have a positive impact on a firm's level of service quality. Researchers have empirically investigated and described the relationships between human resource practices and firm performance in different contexts. (e.g., Budhwar & Khatri, 2001; Guerrero & Didier, 2004; Challis *et al.*, 2005; Chen, 2005; Gautam & Davis, 2007; Ngo *et al.*, 2008; Zhu *et al.*, 2008).

Since "managers' primary worry has always been [the] efficiency of their companies, this mission needs the creation of structures and management systems that support the initiative and creativity of human resources" (Guerrero & Didier, 2004, p. 1409). In total quality management, HRPs theoretically best shape an excellence culture to support employee commitments towards quality (Bou & Beltran, 2005). In addition, HR practices influence a firm's capability to generate product innovations (Beugelsdijk, 2008). Employees' skills, behaviours, and HR practices are significantly linked to a firm's

performance (Bhattacharya *et al.*, 2005). From the theoretical perspective, one of the most significant current discussions in human resource development is the HRPs utilized in organizations. This study tries to find and discuss the causal relationship between selected practices from these components, employees' abilities and service quality.

Due to various reasons, including the existence of powerful competitive forces, an increasing worldwide economy and a relative reduction in the availability of educated and skilled employees, there are pressures placed on organizations to achieve, maintain, and sustain a competitive advantage over competitors (Ferguson, 2006). However, these rapid changes are having serious effects on human resource practices. On the grounds of these challenges, one of the most significant current discussions is mainly directed towards the relationship between HR practices and firm performance, which is the major focus of the current study and contributes to its significance. Since there are studies that have found considerably positive relationships between HRP and firm performance, (Huselid, 1995; Gelade & Ivery, 2003; Guerrero & Didier, 2004; Andersen *et al.*, 2007), as previously noted, the primary purpose of this study was to identify the effects of human resource practices on firm performance and to investigate the mediation effects of employees' abilities in this relationship.

From the practical perspective, based on the available body of research literature, activities directed towards establishing the relationship between HRPs and firm performance in countries such as Iran are extremely rare. Therefore, the present study is urgently required in research areas because its findings hopefully solve problems in the HRPs of organizations. This study aims to diagnose the banking sector's human resource practices and performance. The result of this study provides insights and expands inferences for managerial practices aimed at best performance; consequently, developing the HRPs. In general, the study's result should benefit the management of the banking sector in Iran. In addition, the results of HRPs, employees' behaviour outcome variables and firm performance for each Iranian private and public bank can be used for comparison purposes.

Conclusion

In summary, the findings of this study suggest that HRPs play a critical role in enhancing employees' abilities and service quality. However, one should consider the fact that, some organizations adopt HRPs while others reject them. For example, according to the economic approach, organizations adopt human resource practices that are economically beneficial to them, or based on alignment approach views, adopting these practices depends on whether HRPs are aligned with strategic objectives or not (Subramony, 2006).

The findings of this study, on the relationship between human resource practices, employees' abilities and firm performance, can be supported by the human capital theory. Higher levels of human capital might be led by training, performance appraisal and participation practices to increase higher service quality. As Guest (1997) advises, having high levels of abilities is the reason to accept better-performing behaviours for better quality performance and productivity. On the other hand, the basic assumption of the expectancy theory is based on why people choose a particular action or behaviour. Then, human capital theory and expectancy theory can be theories on the link between ability and performance. Since high performance depends on necessary skills and abilities, as well as a high level of motivation, high investment in training, performance appraisal, career development and employee involvement play important roles in this area. Therefore, under such good practices, a benign cycle will be formed, which promotes the employees' behaviour outcome variables to improve firm performance in terms of service quality.

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