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The Impact of Human Capital on Business Performance: Moderating Role of Environmental Dynamism and Competitiveness

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Accumulation of human capital is considered an important factor in strategic human resource management worldwide. However, majority of evidence is presented through the studies conducted in the West. This study has attempted to explore the impact of human capital on business performance in the financial sector of Pakistan. Data was collected from bank managers on structured questionnaires using simple random sampling technique. Results suggest that human capital has a positive relationship with business performance. Service innovation mediated the positive link. Furthermore, environmental dynamism and competitiveness moderated the link between human capital and business performance. Results are in line with resourced based theory which suggests that accumulation of human capital increases employee innovation that further results in increased performance. Results of this study are important for policy-makers in financial sector who need to improve human capital in order to enhance service innovation as well performance of banks. Limitations and future recommendations are also presented.

Keywords: Human capital; Environment; Business performance; Banking sector; Pakistan

1. INTRODUCTION

Business performance indicates the ability of a particular business to generate and sustain profits. Profitability means differently to different stakeholders depending on their respective interests; for investors it means more dividends, for suppliers it means more volume, for employees it means more bonus & rewards, for owners it means increase in equity, for creditors it means liquidity.

A firm would only be profitable either in short or long run, if it is able to devise appropriate strategies at the right time keeping in view the environment it operates in; strategies pertaining to its resources (human capital etc.), strategies to cater to the shift in needs of its customers (innovation in dynamic & competitive environment). This study proposes that the performance of financial institution i.e. banks under different environment conditions largely depends on its human capital and its ability to deliver innovative services.

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Business of a firm or institution depends on quality and quantity of its constituents. The main constituents of an organization are its employees considered in terms of their knowledge, skills and attitudes i.e. human capital (Coff, 2002). Despite automation, the ability of the humans to innovate the role of human capital cannot be eliminated. Human capital has the ability to analyse the environment and respond with ways that may not exist hitherto leading to innovation. Human capital can also be explained in terms of experience, education and training acquired by humans in the organizations. This acquisition of human capital is not without cost; thus, it pays off in terms of increased performance and also becomes a source of competitive advantage.

The Resource based theory (RBT; Barney, 1986) provides an explanatory framework for the relationship between human capital and business performance. This theory suggests that valuable human capital acquired by employees and organizations may generate competitive advantage for firms so that those resources are not easily obtainable by competitors thus leading to organizational performance for longer periods (Peteraf, 1993).

Service innovation is vital to survive in a competitive and dynamic environment. Moreover, business, among other factors, depends upon demand generation; and the creation of demand in a competitive and dynamic environment requires innovation. The question then is, what kind of environment fosters innovation? The key to success in a competitive environment is differentiation which can be achieved through innovation.

Pakistan has banks in public sector as well as in private sector. The quality of services offered by the private banks is much better than what is offered by the ones in public sector. This is due to service innovation of the private banks.

The objective is to investigate whether the business performance of the firms operating in a competitive ad dynamic environment, depends on human capital or service innovation advantage. The study is focused on the banking sector of Pakistan.

2. LITERATURE REVIEW

2.1. Business Performance

Business performance relates to the performance of certain coordinated activities through utilization of company resources to ensure successful execution of business strategy for the fulfilment of organizational goal. Business strategy has an impact upon the level of relationship strength between particular policies and firm performance (Zahra & Covin, 1993). The strategy-making processes and styles of firms, engaged in entrepreneurial activities, are known as Entrepreneurial Orientation (EO). EO usually consists of five dimensions namely pro-activeness, risk-taking, innovation, competitive aggressiveness and autonomy. Lumpkin and Dess (2001) take into account only two Dimensions of entrepreneurial orientation; pro-activeness and competitive aggressiveness.

Performance of a firm is also influenced by the prevailing culture as confirmed by Sorensen (2002) in his article titled “The Strength of Corporate Culture and the Reliability of Firm Performance” that the Performance reliability of strong culture depends on the environmental context. The reliability persists in stable environment but, in case of volatile environment, the reliability diminishes (2002). Skaggs and Youndt

(2004) suggests that Service organization's strategic positioning strongly relates to human capital and interaction exists between them which influences organizational performance. But when it comes to firm's economic level of performance, it is affected by the dynamics like firm specific experience, management like institutional ownership, governance of R&D and market resource deployment i.e. by sending positive signals to consumers as suggested by Kor and Mahoney (2005) through study of technology based Entrepreneurial firms. When it comes to performance in manufacturing industries, innovation has positive impact if the integration of innovation within organizational structures, processes, products and services in a firm; is considered indispensable (Gunday, Ulusoy, Kilic, & Alpkan, 2011).

2.2. Human Capital

The term human capital, as defined by Adam Smith, refers to the "acquired and useful abilities of all the inhabitants and member of the society" (Spenglar, 1977). It has also been referred to as reserves of knowledge, habits, social, and personality attributes, including creativity, embodied in the ability to perform labour so as to produce economic value (Becker & Mincer, 2006).

Firms are often faced with deadlock due to non-cooperation among different operating units. It is argued that people trained in human resource management would enjoy the capacity to work through such situations to the advantage of the organization. (Coff, 2002).

Customer service satisfaction is strongly influenced by service provider's customer orientation (Susskind, Kacmar, & Borchgrevink, 2003), which would depend on employee's service performance which is in turn influenced by the factors like individuals' conscientiousness, extraversion; and store level factors such as service climate and employee involvement etc. as explained by Liao and Chuang(2004). This again supports the importance of human capital for the sustainability and growth of a firm.

2.3. Human Capital & Business Performance in the Context of Pakistan

The intellectual capital can be subdivided into human capital, relational capital and structural capital. Hussain, Bhuiyan, and Bakar (2014) suggest that the performance of banks in Pakistan is positively correlated with intellectual capital. The study also confirms that human capital has direct impact upon relational and structural capitals which in turn influence business performance.

Innovation is indeed a product of human mind that comes from out of box thinking, so it can be deduced that human capital influences innovation in an organization. Khan et al. (2014) focussed on Pakistan Telecom sector and found out that Human capital is the most important subset of intellectual capital. They also found out that innovative capabilities, especially in a knowledge intensive organization are key to success. Jamal and Saif (2011), who focussed on knowledge intensive industry in Peshawar (Pakistan), found out a positive relationship between human capital and organizational performance. So, in order to achieve competitive advantage, the management focus should be on Human Resource Development. This is supported by Channar, Talreja, and Bai (2015) who suggest that development of human capital like acquisition of knowledge, skills and expertise results in employee's satisfaction

ultimately leading to effective organizational performance. All this amply suggests that Human Resource Development is a vital area of focus for managers looking to improve organizational performance.

Crook, Todd, Combs, Woehr, and Ketchen (2011) conducted a meta-analysis on the relationship between human capital and business performance. They found strong positive association between the two. Although they found positive association between human capital and business performance, they also suggested to look into other contingencies which may strengthen or weaken the relationship between human capital and business performance (p.453).

2.4. Service Innovation

The nature of firm usually varies from conservative to entrepreneurial when it comes to innovation. The innovations in conservative and entrepreneurial firms differ in the context of rate with which they are exercised (Aas & Pedersen, 2010). Miller and Friesen (1982) who studied 52 Canadian firms find out that, in a conservative firm, reluctance regarding innovation holds true in response to serious challenges, whereas in an entrepreneurial firm, innovation is pursued aggressively unless decision-makers are warned to slow down.

The understanding of innovation phenomenon itself can be done through empirical methods or econometric estimations. Cohen and Levin (1989) argue that, in the face of changing industry environment, innovation in product or service would help achieve competitive advantage. Friar (1995) explains that the success in a competitive environment depends not only on product innovation but also on market differentiation.

Roth, Chase, and Voss (1997) explain that the good service quality yields similar dividends in the markets of the US and the UK. Gopalakrishnan, Bierly, and Kessler (1999) find out that process innovation has greater effectiveness as compared to the product innovation due to its inherent origin, costly-systemic and complex nature. Den Hertog (2000) finds out that services act as non-technological factors creating the innovation processes; new service concepts, client interface and service delivery through the role of “Knowledge Intensive Business Services” (KIBs). Damanpour and Gopalakrishnan (2001) find out that “the product and process innovations are adopted by high performance banks more evenly than by low performance banks”. They further state that there exists a positive relationship between product and process innovation. Blazevic and Lievens (2004) explain, by studying the Belgian banking industry, that innovative communication i.e., management support, harmonious cross functional interfaces, organizational diversity and participative decision-making, influences the process of project learning given quality planning. Lessons learned through innovation raise the cost and competitive position of a financial institution. However, it is worth-noticing that the adoption of innovation is also influenced by the surrounding environmental conditions. Jansen, Van Den Bosch, and Volberda (2006) show that centralization influences exploratory innovation negatively while formalization has a positive influence upon exploitative innovation. Connectedness appears to be the antecedent of innovation. The study successfully explains how the ambidextrous organizations coordinate the development of exploratory and exploitative innovations across organizational units and at the same time respond to multiple environment conditions.

Different innovation activities and types are used in different organizations. Oke (2007) studied the innovation activities and types in the services sector of the UK to determine their impact on business performance. It was suggested by them that the product innovation is more popular in telecommunication and financial institution while service innovation is more significant in retail and transportation sector. In the wake of global warming and the growing concern of community and government regarding Greenhouse Gases, many players in the energy sector are willing to adopt innovation in an attempt to reduce Greenhouse Effect. A study by Agarwal and Selen (2011) suggests that new processes are considered as strategic innovation by firms despite the energy inefficiency of process innovation in the sector.

Different facets of innovation are likely to influence business performance given external environmental conditions. Dynamic environment requires radical innovation while stable environment requires less radical innovation (Perez-Luno, Gopala Krishnan, & Cabrera, 2014).

2.5. Environment Dynamism & Competitiveness

Environment dynamism reflects the volatility of the market conditions i.e. changes in supply & demand, changes in technology etc. while competitiveness of environment has a lot to do with industry fragmentation which leads to rivalry fuelled by the need to not only survive the competition but also to eliminate, isolate and render the competitors ineffective. Therefore, organizations form strategies like cost leadership, differentiation or diversification to keep up with the environmental changes and the competition. The relationship between environmental scanning activities and organizational strategies exists due to competition, but the difference between strategy and environment scanning link is due to differing dominant environment requirement prevalent in each industry (Hambrick, 1982). Miller and Friesen(1982) explain that strategy-making activity in successful firms is characterized by changes in amount of analysis and innovation which is due to increase in environmental dynamism, hostility and heterogeneity, most of these relationships have been found to be stronger in successful than in unsuccessful firms.

2.6. Theoretical Framework

Based on above literature, following hypotheses are formulated:

H1. Human capital (HC) in the banking industry of Pakistan is positively related to firm performance (FP)

H2. Human capital (HC) in the banking industry of Pakistan is positively related to service innovation (FP)

H_3: Service innovation is positively related to business performance

H_4: Service innovation mediates the relationship between human capital and business performance

H_5: Environment competitiveness positively moderates the relationship between human capital and business performance such that higher level of EC will strengthen the relationship between HC and BP.

H_6: Environment dynamism positively moderates the relationship between human capital and business performance such that higher level of ED will strengthen the relationship between HC and BP.

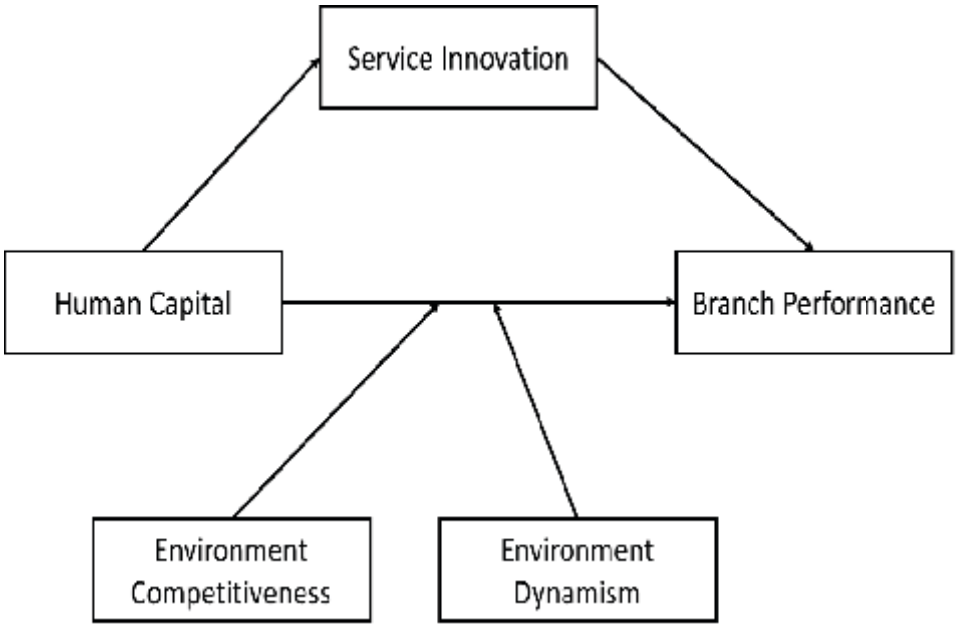

Figure 1. *Conceptual Framework*

EC = Environment Competitiveness
ED = Environment Dynamism
HC = Human Capital
BP = Business Performance
SIA = Service Innovation Advantage

3. RESEARCH METHODOLOGY

3.1. Measurement Scale and Data Collection

As mentioned earlier, the focus of this study is on banking sector of Pakistan. To investigate the hypotheses referred to in the previous section, a survey was conducted using, primarily, an adapted questionnaire.

Human capital was measured through scale developed by Subramaniam and Youndt (2005) who consider human capital in terms of skills, knowledge and expertise possessed by employees in particular organization. Service innovation was measured through five-item scale developed by Den Hertog (2000). Service innovation advantage was measured using five items, namely the characteristics and features of service organization, new ways of communicating, delivering and execution of transactions all in comparison to industry average. Employees were asked to rate their banks' service innovation relative to industry averages on 5-point Likert scale ranging from 1 (well below) to 5 (well-above). Business performance was measured by asking the respondents about the sales, profits and market share of the company in relation to industry average in order to capture the aspect of relative advantage a firm has with regards to business performance and service innovation advantage.

Two measures of business environment in terms of environmental dynamism and competitiveness were measured using five and four item scales respectively developed by Jansen et al. (2006). These measures were anchored through the use of 5-point Likert scale ranging from 1 (strongly disagree), 3 (neutral), to 5 (Strongly agree). Demographics like gender, age, and job role were also asked.

The data has been analysed using SPSS. To test the hypotheses, Process Macro for Mediated Moderation has been applied.

4. RESULTS AND ANALYSIS

4.1. Sample Demographics

Data was collected from banking sector employees. Questionnaire containing study items and a cover letter was sent to the head offices of banks situated in Hyderabad and Karachi using authors' personal linkages. A total of 200 questionnaires were sent to different banks using convenience and snowball sampling techniques. Due to time limitations, a total of 156questionnaires were received, out of them total usable questionnaires were 149. Out of these employees, there were 108 males and 41 were female respondents. Total of 75 respondents were lower level employees such as bank tellers, 54 were managerial staff such as operational and bank managers and 20 were senior level managers such as regional managers. Majority of employees fell into the age bracket of 35-45 (53), followed by 25-34 (32).

4.2. Reliability of Scales

The reliability of questions has been tested using Cronbach Alpha, and the results obtained are summarized in the table 1.

Table 1

Reliability Statistics

Variable	Cronbach Alpha
Human Capital (HC)	0.703
Service Innovation Advantage (SIA)	0.752
Environment Competitiveness (EC)	0.802
Environment Dynamism (ED)	0.865
Business Performance (BP)	0.501

In order to see reliability of the scales, measure of Cronbach Alpha was applied. It is revealed that Cronbach alpha values for all scales are greater than 0.7 thus showing that scales have excellent reliability(Hair, Black, Babin, & Anderson, 2010) of equal or more than 0.7 renders the test reliable but some theorists also suggest that even if Cronbach Alpha is 0.6-0.5 it is acceptable for testing the reliability of a construct.

4.3. Descriptive Statistics

Table 2

Correlation

	Mean	SD	HC	EC	BPP	SIA	ED
HC	3.7506	.76416	1				
EC	2.8210	.79367	-.163*	1			
BPP	3.9946	.80133	.426**	.083	1		
SIA	3.9962	.81339	.571**	-.003	.622**	1	
ED	3.6953	.95056	.487**	.029	.562**	.529**	1

Note: HC = Human Capital; EC = Environmental competetiveness; BPP = Business performance; SIA = Service innvoation advantage; ED = Environmental dyanamism.

*Correlation is significant at the 0.05 level (2-tailed).

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

Table 2 displays means and correlations among variables. It is evident that respondents ranked service innovation highest of all the variables followed by business performance. All scores of means are above 3 thus suggesting that respondents agreed to the statements. Score on environmental competitiveness is slightly lower than 3.

A test of Pearson's correlations was also applied. Results in Table 2 suggest that human capital is negatively related to environmental competitiveness whereas it has very strong correlation with service innovation ($r=0.571$, $p<0.01$). However, service innovation has the strongest correlation with business performance ($r=0.622$, $p<0.01$).There is also strong correlation between environmental dynamism and business performance.

4.4. Regression Analysis

In order to test hypotheses, linear regression was applied using SPSS software. Firstly, linear regression between human capital and business performance was run, then mediation and moderation analyses were conducted using Hayes (2013).

4.5. Impact of HC on BP

Table 3

Regression

	Dependent Variable: Business Performance					
	B	R^2	t	Sig.	F	Sig
Human Capital	.431***	0.186	5.807	.000	33.718	

Firstly, simple linear regression was carried out through SPSS to know the relationship between human capital and business performance. Results suggest positive relationship, $b= 0.450$, $t(5.807)$, $p<0.01$. The path explained significant variance as $R^2 = 0.186$, $F(1, 147) = 33.7$, $p<0.01$.

4.6. Mediation Analysis

Mediation of Service innovation between human capital and firm performance is to be analyzed in this section

In order to see mediation effects, this study has used Hayes process macro. Firstly, the relationship between human capital and service innovation is checked. As basic assumptions of mediation model under Baron and Kenny (1986) approach are that independent variable should predict dependent variable (Step 1), then independent variable should predict mediator variable (Step 2), then independent and mediator variables, both combined, should predict dependent variable. Series of regression models produced through process macro indicate that human capital predicts service innovation, the mediator and firm performance as well. Indirect effect of independent variable on the dependent variable is insignificant. Therefore, it suggests mediation.

Results suggest that human capital positively relates to firm performance in the absence of mediator, b = 0.443, p<0.01, thus H1 is accepted. In the second step, relationship between human capital and service innovation is also significant, b=0.61, p<0.01 Thus H2 is also accepted. Step 3 of analysis revealed that mediator service innovation was also positively related to business performance, b=0.39, p< 0.01, thus H3 is accepted. Step 4 of analysis reveals that impact of human capital on business performance, when mediator service innovation is entered, becomes insignificant showing mediation, b = 0.209, p=0.102. Thus, H4 is also accepted.

Table 4

Mediation Analysis

			Consequent							
			M (SI)					Y (BP)		
Antecedent		β	SE	P			β	SE	P	
X (HC)	a1	0.6056	0.0896	0.000	a2	c'	0.2091	0.084	0.102	
M (EE)		–	–	–		b1	0.391	0.0646	0.000	
Constant	iM1	1.4238	0.3430	0.000	iM2	i2	1.7633	0.2840	0.000	
			R^2 = 0.2903					R^2 = 0.5880		
			F = 45.6747, p = 0.000					F = 38.5814, p = 0.000		

4.7. Moderating Role of Environmental Dynamism

To know whether environmental dynamism moderated positive relationship between human capital and business performance, moderation analysis was carried out using Hayes Macro using model 1 for each moderator separately. Table reveals that interaction term between human capital and of environmental dynamism is significant as zero does not lie between lower and upper bounds of confidence interval. Thus, it shows that ED moderated the relationship between human capital and business performance. Simple slope analysis also suggests that human capital has stronger relationship with business performance when there is higher level of environmental dynamism rather than the low.

Table 5

Moderation

	Coeff	Se	T	P	LLCI	ULCI	
Constant	3.1208	.8842	3.5293	.0006	1.3731	4.8685	
HC	.4078	.2604	-1.5660	.1195	-.9226	.1069	
ED	.0805	.2385	.3377	.7361	-.3908	.5519	
HC X ED	.1357	.0648	2.0934	.0381	.0076	.2638	
Conditional Effects of the Focal Predictor at Values of the Moderator(s):							
	ED	Effect	Se	T	P	LLCI	ULCI
Low	3.2857	.0380	.0883	.4306	.6674	-.1365	.2126
Medium	4.1429	.1543	.0841	1.8363	.0684	-.0118	.3205
High	4.7143	.2319	.1000	2.3184	.0218	.0342	.4296
Total R^2							.4117
ΔR^2							..0178

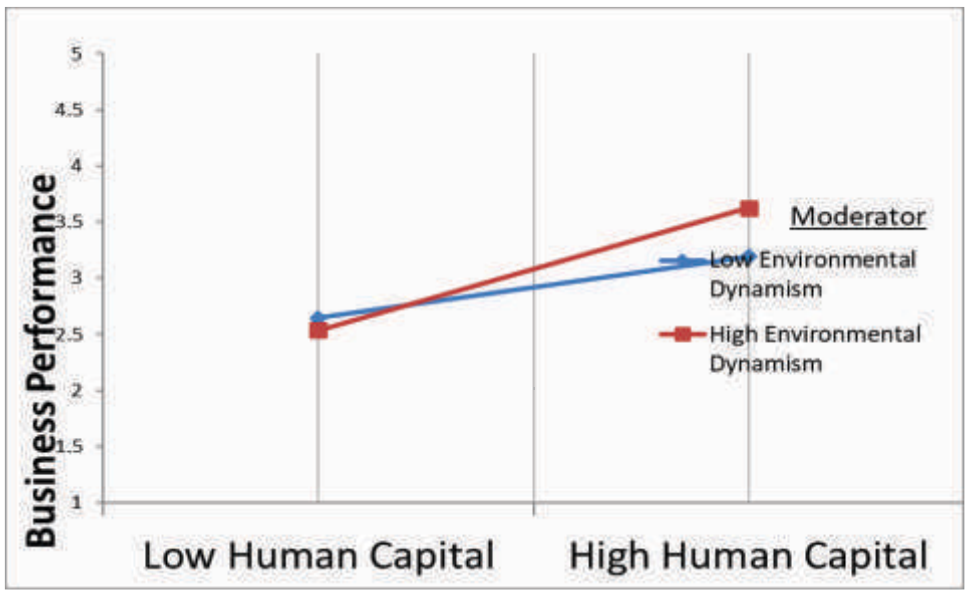

Figure 2. Moderation Graph: ED

Environmental competitiveness strengthens the positive relationship between human capital and business performance.

5. DISCUSSION AND CONCLUSION

This study tested the role of human capital in business performance. Service innovation was tested as mediator and environmental dynamism and competitiveness were used as moderators. This study has found that human capital, considered in terms of valuable resources, generates service innovation which further leads to performance of banking sector in Pakistan. Such relationship between human capital and banks performance is stronger in higher levels of environmental competitiveness and dynamism.

Findings of this study are in line with resources based theory (Barney, 1986) which posits that valuable human capital pays off by increasing firms' competitiveness and sustainable competitive advantage in which firms receive higher levels of profits by delivering superior services for longer periods (Crook, Todd, Combs, Woehr, & Ketchen, 2011).

First hypothesis of this study was related to relationship between human capital and business performance in Pakistani banking industry. This finding is in line with the findings of Luneborg and Nielsen (2003) who found that human capital, acquired through customer focused technology, increases banks' performance. Secondly, service innovation was tested as a mediator. It was found that human capital fosters service innovation which further leads to increased firm performance. This finding is again in line with literature and theory.

Prajogo and Oke (2016) collected data from various service firms of Australia. They found positive association between human capital and business performance. Different forms of environment such as competitiveness and dynamism have also differential moderating effects. Our study has collected data from banking sector only and has found similar results. However, unlike Prajogo and Oke (2016), this study has found that environmental competiveness also strengthens the positive association between human capital and business performance in Pakistani banking sector. One justification to this finding may be the fact that banking sector in Pakistan is presently facing greater levels of competitiveness as after the advent of private sector, banking employees need varied skills and motivation to enhance bank profits. As a recent study of Islamic banks found out that enhancements in human capital increased banks' performance in pre- and post-crisis situations as Islamic banks are facing tough competition worldwide (Nawaz, 2017).

Relevant literature, for example (Chen, Tsou, & Huang,2009) suggest that service providers typically provide services in the standard fashion i.e. lack of innovation. This study suggests that human capital can be employed to obtain service innovation advantage. The study also identifies that SI can be used to catalyse the relationship between human capital and business performance.

The paper also indicates that the Pakistani Banking sector so far has not been able to use the human capital to its advantage. Therefore, the banks need to emphasize upon training and development of its workforce.

This study has important implications for practitioners and researchers as well. Policy makers of banking industry need to increase investment in the human capital by imparting different trainings and providing them opportunities to learn and excel in their careers. These capacities, developed through acquisition of knowledge, skills and attitudes, will certainly play an important role in sustainable competitive advantage for banks.

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