



## **Moderating effect of motivation in the relationship of intellectual capital and business performance: an evidence on Pakistan textile sector**

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### **Abstract**

This paper presents a research finding on the relationship between human capital and business performance. The objectives of the study were to examine the relationship between human capital and business performance, especially in the listed textile firms in Pakistan Stock Exchange (PSE). Further, the study determined the contribution of human capital on business performance. The paper examines the most important aspect of human capital that influenced business performance. Data has been collected from the randomly selected 237 senior managers of listed textile firms. Based on data collection, SPSS software 25 was used to obtain the descriptive statistics. To test the reliability and validity measure for the model constructs structural equation model was used. Based on collected data SPSS 25 was used to obtain descriptive analysis. Structure Equation Model (SEM) method was used to examine the reliability and validity measure for the model constructs and Smart PLS 3.2 was used to assess both measurement and structural model. By applying the Structural Equation Model (SEM), the study finds that human capital has significant impact on the business performance. Whereas motivation being moderator diminishes relationship between human capital and business performance. The findings of the study advocated that textile firms should emphasize more on human capital to uphold their business performance. The study contributes to the existing literature of human capital practices where there has been a lack of research works in the context of Pakistan. The use of a single industry study design limits its generalizability for other industries. Testing other industries will provide help to mitigate the issue of generalizing conclusions on other industries. In addition, the research results might also be helped to both the academics and practitioners to understand the human capital components. Moreover, the data also suggested that a similar set of HC indicators could be developed for other industries. Similarly, research might be considered as initiative study which: 1) highlights the effect of HC on 'BP) in the listed textile firms in Pakistan through using PLS method in the management field.

**Key words:** intellectual capital, motivation, business performance, textile industry of Pakistan.

### **1.0 Introduction**

In the contemporary environment, recent challenges such as globalization, knowledge based economy and technology evolution have promoted my countries and organization for seek the new to maintain the competitive advantage. Accordingly, the prevailing sense is that the success of the organization is largely depends on the people along with the higher level of individual competences. In this sense, people becomes the valuable assets and could be recognized within the framework of human capital (HC). Broadly, the concept of HC is semantically the mix of human and capital. With the economic perspective, HC is considered a factor of production which is used to create goods or services

which are not themselves significantly consumed in the production process (Kwon, 2009). Similarly, along with meaning of HC with the economic perspective, the human is considered an object to take charge of all economic activities such as production, consumption, and transaction. With the establishment of these concept, it could be recognized that HC is considered a one of production elements which could generate added value through inputting it (Sharabati, Naji, & Bontis, 2010).

However, the method to create the HC could be recognized in the following two types. The first is to use the human as a labor force in the classical economic perspective. This meaning depicts that economic added value is generated through the input of labor force as other production factor such as financial capital, machinery, land and labor force. Until the monumental economic development of 1950, most of the economist had supported the importance of such quantitative labor force to create product. The other is based on assumption that the investment on the physical capital may show the same effectiveness with that HC on education and training (Little, 2003). Considering that the assumption concept as a premise, HC expansively includes the meaning of human as a creator who frame knowledge, skills, competency, and experience that is originated through the continuously connection between self and environment. Among those concepts of the HC, it tends to be recognized that latter is more important than the former (Beach, 2009).

Therefore, Allah has created the human in the best of forms (Surah At-Tin - 95:4) that shows to the human as like the nobles and best creation of the Almighty. In this sense, through the human being's physical construction or human potentially or human soul and mind, we discover a profound glimpse of HIS wisdom. When a human is being used his knowledge and skill to upgrade the workforce of an organization, business or economy is known as human resource. Nonetheless each human is not a resource. Therefore, humans should need to convert into the resource. Hence, without human resource, it is entirely relatively difficult to handle all other physical resources. Hence, development of any organization is wholly depends on the ability of its human control all other resources (B. Dhar, Rahouma, Masruki, & Absar, 2017; B. K. Dhar & Mohammed, 2015).

Therefore, in this competitive world, without perfect HC implementation, an integrated part of intellectual capital (IC), it would be considered highly difficult for any organization to handle all other physical resources (Akintoye & Segun, 2015; Gröjer & Johanson, 1998). In this regards, technology chances day by day as a result, human (homo sapience or Ashrafi Makhluqat) needs to be motivated sufficient to adopt the better business performance (BP).

With seeking the significance of HC to improve the performance. Hence, along with the lack of evolution of HC in Pakistan, although in recent years HC has become an interesting subject among Pakistan researcher's previous studies conducted in Pakistan are also limited which have mainly focused more on the pharmaceutical sector (Amin *et al.*, 2014), banking sector (Aslam, Makki, Nawaz, & Latif, 2014) and SMEs (Ullah, Aziz, & Yousaf, 2015) etc. Whereas, there are not many studies have been done on the textile sector of Pakistan despite the significant contribution of the industry towards the economy of Pakistan. Therefore, the present study is intended to fill this gap to a significant extent in the textile sector of Pakistan. Since these firms are considered as one of the most important knowledge-intensive organization and a great source of IC (Barkat & Beh, 2017).

As the textile sector controls the economy, the aim of this study is to focus on the moderating effect of motivation between HC and BP among the listed Pakistan Stock Exchange (PSE), the largest Stock Exchange of Pakistan. The remaining portion of current research is planned as follows: section 2 defined the relevant literature on HC and its dimension, motivation, BP and analysis of gap; section 3 has focused on the methodology; section 4 has indicated the analysis of data, section 5 has shown emphasized on the theoretical and practical implications, and at last section 6 presented the conclusion that includes the future research directions.

### 1.1 Overview of Textile Industry in Pakistan

The society welfare depends on the profitability and growth of the industry (Diaz Hermelo, 2007). Performance of firms plays a vital role in the nation's economic gain (Gupta, Guha, & Krishnaswami, 2013) and the employment of country (Arrighetti & Lasagni, 2013; Diaz Hermelo, 2007). Textile is a significant sector in the export and employment generation subsequently affecting the living standards of society (Ahmad, Ahmed, & Shabbir, 2015). Pakistan currently ranks as the 4<sup>th</sup> largest producer of cotton in the world and third largest yarn production in Asia after the china and India. Also contributes 5% to global spinning capacity, adding in 60 percent of national export, 40 percent of the labour force, 40% of banking credit and 8.5 percent GDP in Pakistan (by Prof. Dr. Noor Ahmed Memon, 2017). Also, textile sector has been the primary driver of the economy for the last 50 years regarding foreign currency earnings and jobs creation (Ahmed, 2010).

All listed firms in Pakistan stock exchange (PSE) are 582 and consist 35 sectors. Out of 582 firms, 155 are related to the textile sector and is the most significant manufacturing industry in Pakistan. Such has three segments, and their market capitalisation share is as under below table.1.1

Table 1.1 market capitalization share of textile industry

Industry name	Market capitalisation
Composite industry	227,623,714,284
Spinning	227,623,714,284
Weaving	32,191,382,059

Source: Pakistan Stock Exchange (PSE) 2016-17

Also, latest report of state bank of Pakistan, (2015), the efficiency of Pakistan textile sector is not stable. Profit before Taxation decreased with 43.19 percent that is Rs.11.83 billion lesser than that of previous year. Profit after taxation decreased to Rs.10.16 billion in 2015 from Rs.22.72 billion in 2014 showing a decline of 55.27 percent over the year. The other key performance indicator also discouraging in current year concerning profitability and efficiency.

Moreover, Tariq Saud chairman of All Pakistan textiles mills Association ( APTMA) explored that financial of the textile industry is heavily under pressure only 30% of the company performing well other 70% companies showing discolour and negative results (Nawaiwaqt, 2016). The financials of textiles are even worst, and exports show a declined trend over the last two years. Therefore, in Punjab Economic Institute a report prepared by Abbasi (2012); the number of textile mills increased from 353 in 2000-2001 to 477 in 2012-13 but declined to 423 by 2015-16. Also, number of working and spindle hours worked, and cloth yarn output has remained relatively static or not increased significantly during last 8- 10 years.

However, because of significant contribution in national economy. So there is need of time conduct an empirical study in a current knowledge base economy. Because this sector has a major contribution in GDP and export. And also can achieve a competitive advantage. Looking at the fact that intellectual capital plays an important in the performance of firms. Government of Pakistan also decided to shift the industry based economy to knowledge base economy. Because the knowledge base economy refers an economic system which based on generation and utilisation of resources which significantly contribute in economic growth and wealth creation. Growth is not depending on more investment of physical assets but driven by productivity which could be derive by HC. The study will explore the role of these constructs and discover the gaps so that the performance could be improved.

## 2.0 LITERATURE REVIEW

### 2.1 Human Capital

Theory of Human Capital (HC) was introduced by Becker in 1964. Becker observed that existence of high levels of HC influences the higher quality of business behavior. HC theory has remains a powerful influence in the current knowledge based economy (Attanasio, Cattan, Fitzsimons, Meghir, & Rubio-Codina, 2015; Gillies, 2014). However, this theory explains that knowledge created the greater cognitive skills to the individuals, thus compelling their efficiency and productivity possible to develop the activities (Becker, 1962).

In this regards, there exists substitutable outcome between financial and human capital which validate the anticipation of Penrose (1959) (Chandler & Hanks, 1998). For getting complete benefit of HC, top management should to be conscious about the current organization human resources to highlight the operative utilization of collective wisdom (Ngari & Kagiri, 2013). In line with this, for dynamic development, organization should desire to establish an inimitable resource through embedding their HC (Alvarez & Busenitz, 2001; Bowman & Swart, 2007). As the IC is a critical force that drives economic growth (Huang & Hsueh, 2007), provides help organizations to establish and maintain their competitive advantage (MacDougall & Hurst, 2005), and creates wealth (Sharabati, 2013). Since long time economists recognized that HC is an important part of the wealth of nations (Cabrita & Bontis, 2008). There is significant association between HC efficiency and business performance (Maditinos, Chatzoudes, Tsairidis, & Theriou, 2011). Additionally it is also found that HC has a significant effect on economic performance (Hashemy, Yousefi, Soodi, & Omidi, 2016).

Furthermore, it also found that HC affects business performance as a function of structural capital and relational capital levels (Kamukama, Ahiauzu, & Ntayi, 2010). Therefore, HC is one of the most important parts of IC in an organization (Hajiha & Hasanloo, 2012). It is found in another study, HC significantly influences the other three dimensions of structural capital which consists of relational capital, process capital and innovational capital (Khalique, Bontis, Abdul Nassir bin Shaari, & Hassan Md. Isa, 2015). Similarly, it was further explained that HC has important effect on structural capital and relational capital and consequently influences BP (Ahmadi, Jalilian, Salamzadeh, Saeidpour, & Daraei, 2012). Human capital appeared as the most important component of IC in influencing BP of pharmaceutical companies (Khalique, Shaari, & Isa, 2011). In another study, it is found that HC is more efficient than other two capitals (structural and physical) in terms of value creation efficiency (Ahangar, 2011). Hence, HC is the most valuable component of intellectual capital; companies with greater human capital efficiency tend to have better financial performance (Rahman & Ahmed, 2012). Certain types of human capital indicators showed a positive and statistically significant relationship with firm performance (Seleim, Ashour, & Bontis, 2007). Human capital models show a significant positive dependency between ratios of the intellectual capital components and value added (Naidenova & Oskolkova, 2011).

Human capital is the most significant component of intellectual capital which can properly promote entrepreneurial activity (Mačerinskienė & Aleknavičiūtė, 2011). The greatest objectives of human capital are to educate employees and maximize the intangible capabilities of knowledge, skills, and experience to create company value and increase performance (Hsiung & Wang, 2012). There is a positive relationship between human capital and knowledge creation (Ning et al., 2011). Human capital has an effect on organizational innovation (AL-DUJAILI, 2012). There is a significant relationship between the HC management and organizational innovation (Ghorbani, Mofaredi, & Bashiryan, 2012). There is direct relationship between HC variables and productivity (Town, 2014). Moreover, other study shows the significant relationship between HC and new product development performance (Ahmadi et al., 2012). Learning at an individual level enhances human capital, that group learning increases social capital, and that organizational learning enhances structural capital (Amiri, Majid, & Omrani, 2010).

Furthermore, and empirical evidence commends that HC has a positive influence on BP ((Adekunle Suraj & Bontis, 2012; Cabrita & Bontis, 2008; Jardon & Susana, 2012; Khalique et al.,

2015; Sharabati, 2013; Sharabati et al., 2010). In contrast, several other studies shows that, there is an option to research on the influence of human capital on the business performance among listed textile firms opposite (Wang & Chen, 2013; Yaseen, Dajani, & Hasan, 2016). The following hypothesis tries to find out the fact regarding this issue:

**H1a: There is a significant association between HC and BP in listed textile firms in Pakistan.**

## **2.2 Dimensions of Human Capital**

Human capital (HC) includes individual's attributes as experience, formal education, knowledge and expertise (Gilbert, Von Ah, & Broome, 2017; Pena, 2004; Tumwine, Nasiima, & Kamukama, 2014) which ensures the success of business (Honig, 2001; Pena, 2004) and provides broader range of opportunities (Davidsson & Honig, 2003; Gimeno, Folta, Cooper, & Woo, 1997). In addition, Grantham, Nichols, and Schonberner (1997) and Stewart (1997) further emphasized on importance of analytical thinking, experiment and systems integration. According to them, for strengthening knowledge and utilizing of IC, organization should be focused on developing the skill of the employees. From side to side learning and education, experience and expertise and innovation and creation of employees provide help to the HC vintages the best results of BP (Bontis, 1998; Cabrita and Bontis, 2008; Sharabati et al, 2010).

### **2.2.1 Learning and Education**

Advanced level of education has a positive correlation with the performance (Cooper, Gimeno-Gascon, & Woo, 1994; Felício, Couto, & Caiado, 2014; Gimeno et al., 1997), formal education did not seems to be regulatory aspect of achievement during the business process or in terms of improvement of activities. Consequently, it is necessary to justify the following hypothesis:

**H1b: Learning and education has significant association with BP on listed textile firms in Pakistan.**

### **2.2.2 Experience and Expertise**

Experience of work, management and entrepreneurial are related to the activities of organization (Dimov & Shepherd, 2005; Felício et al., 2014). Based on the research of Davidsson and Honig (2003), management of knowledge become inaccessible among the people through the work experience. On the contrary, Cohen and Levinthal (1990) further stated that growth of new knowledge depends on explicit knowledge and implicit knowledge. Hence, the current study needs to test the following hypothesis:

**H1c: Experience and expertise has significant association with business performance on listed textile firms in Pakistan**

### **2.2.3 Innovation and Creation**

According to Sharabati et al. (2010) and Karimi (2014), innovation is a type of process through which the new idea is put into practice. It also provides help to links the world of ideas to the world of human affairs. For this, the most typically used measures of innovative activities contain: R&D innovation counts, expenditures, and patent counts (Neely and Ali, 1998). On the other hand, creativity also has the capability to think about a new idea or their aptitude to rethink an old idea. Moreover Innovation and creativity could also be stated in organization for the better performance (Roberts, 2007; Yates-Mercer & Bawden, 2002). Therefore, the following hypothesis is raised:

**H1d: Innovation and creation has significant association with business performance on listed textile firms in Pakistan**

## 2.3 Motivation

As there are many options to develop the human of the organization according to the concept of human resource management (HRM), motivation plays vital part in the performance. According to Dobre (2013) and Zhu, So, and Hudson (2017), motivation and performance of employees are played vital tools for the achievement of an organization for the long run. (Pinder, 2014) emphasizes motivational use for increasing organizational behavior. Jambulingam, Kathuria, and Doucette (2005) and Youngdahl and Kellogg (1997) have focused on the motivational practice on social capital. However, the study proposes to be use the motivation as a moderator and to justify the use of motivation between HC and BP through using the underlying hypothesis:

**H3: Motivation has significant moderating association between human capital and organizational performance.**

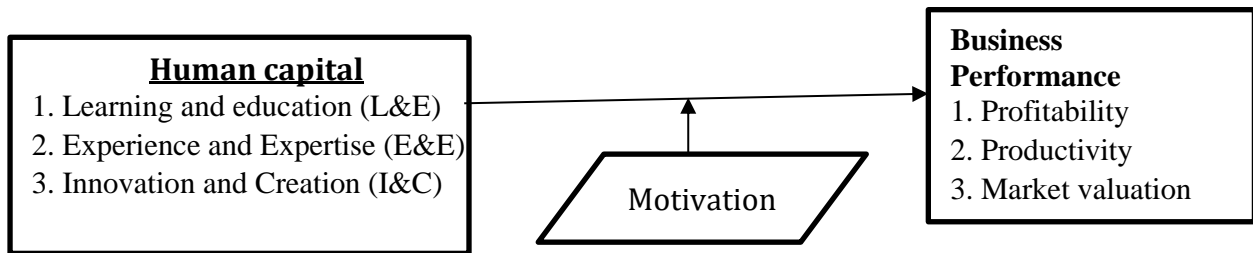
## 2.4 Business Performance

Performance is one of the subjects being discussed mostly in the management literature. As, performance measures are very important to draw about the road map. As, it is not possible to control the things which could not be measured. Researches regarding BP measures might be encountered in both academic works and practices (Venkatraman & Ramanujam, 1986). Business performance (BP) is a significant component of experimental researches regarding the business policies. It is considered difficult and multidimensional concept (Dess & Robinson Jr, 1984). Performance measurement and evaluation that provides an opportunity to analyze and to see level of success of an activity of a person, or institution according to certain criteria's (Dess & Robinson Jr, 1984). Although BP focuses on economic aspects, it is difficult to receive accurate measure in the researchers conducted. The first difficulty is encountered in work units of businesses which operates in many sectors. Second, it is encountered in businesses which operate in private fields. Because, such both types of businesses, it is difficult to reach to data or business owners are sensitive to share the data concerning their business (Dess & Robinson Jr, 1984).

BP could be measured objectively or subjectively which is based on objective and non-objective. Whereas, objective measures could be achieved through the quantitative data, subjective measures could be obtained through the perceptual questions according business expectations (Yıldız, Baştürk, & Boz, 2014). In the previous researches, the researchers evaluated the objective and subjective measures for the performance. Thus based on these, several studies measure the business performance based on the subjective data and used several measures for the business performance. Thus, according to research of (Cabrita & Bontis, 2008; Dhar, Mutalib, & Sobhani, 2017; Ngari & Kagiri, 2013; Sharabati et al., 2010) productivity, profitability and market valuation are three major indicators of business performance. Based on Karimi (2014) and Dhar et al. (2017) productivity denotes the association between input and output where through training and remuneration, input could be measured and through profit per employee, output could be measured.

Moreover, output could be measured in two ways; based on actual goods and services produced and through considering people relative to key business performance. Profitability arises when revenue exceeds over the costs. It could be measured using sales growth and profit growth. Sales growth is the increase in sales over a specific period and profit growth is a combination of profitability and growth (Dhar et al., 2017; Karimi, 2014). Market valuation indicates that when market value exceeds its book value. It is the ratio of the total market capitalization which is the average share price time's number of outstanding common shares to book value of net assets (Dhar et al., 2017; Karimi, 2014).

Based on literature, there is a scope of research to evaluate the moderating effect of motivation between human capital and business performance. The following Fig. 1 indicates the research model based on the gap of literature:



### 3.0 Methodology

This study is correlational in nature, employed questionnaire survey, and cross-sectional data to examine the research framework and hypotheses developed. This technique is considered to be a practical approach in providing data which are used to establish a basis for wider generalization (Zikmund, 2003). The survey was conducted in mid-2018 and it consists of multiple scale items for each of the factors. The population of this study was based on all of the 153 listed textile firms in Pakistan Stock Exchange. Targeted survey respondents included the Chief Executive Officer, Managing Director, General Managers, Owner, Managers or Assistant Manager. A total of 550 questionnaires were distributed through surface postal mail. This endeavor yielded a final sample size of 237 respondents from 77 textile firms and a resultant individual response rate of 43% representing 51% of all textile firms which is sufficient (Krejcie & Morgan, 1970). The questionnaire was comprising of demographic and 5-point Likert-type scale (1 = strongly disagree to 5 = strongly agree) to collect the responses from the respondents to each mode of the hypotheses.

#### 3.1 Instrumentations

##### 3.1.1 General Approach of Questionnaire

The current study is based on primary data and for the data collection will be used the self-administered structured questionnaire. The main reason for selection of the structured questionnaire is that it helps the respondents to give response in an easy way and also provides help to the researcher to accumulate and summarize the responses more efficiently (Corbetta, 2003; William, 2006). A survey will be adopted as the most appropriate method of data collection and previous research supports the reliability and validity of the self-report measures (Brush & Vanderwerf, 1992). Questionnaire has been divided into six sections: respondents' information, use of human capital (learning and education), (experience and expertise), and (innovation and creation), motivation, and business performance. For the current study, independent variables are established from the study of Sharabati et al. (2010) along with their key 3 dimensions (L&E, E&E, and I&C) and adapted all 30 items.

##### 3.1 List of Questions for Human Capital

###### Questions

###### How do you feel about the statement on your company?

###### Learning and education

1. The competence of company's employees as a whole is equal to the most ideal level (matching with their work requirements and responsibilities).
2. The company gets the most out of its employees when they cooperate with one another in team tasks.
3. The company's employees undergo continuous program every year.
4. The company's employees continuously learn from others (college and outsiders).
5. The ratio of educated personnel is on average compared with industry (number of PhD, Master and Bachelor Degree compared with what should be).
6. The company devotes a lot of time and effort to update and develop employees' knowledge and skills.
7. The company's market share has been continually improving over the past few years.

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8. Employees' learning and education affect company's productivity.
  9. Employees' learning and education affect company's profitability.
  10. Employees' learning and education affect company's market value (stock value).

**Experience and Education**

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1. The company's employees are experts in their respective areas.
  2. The company's employees consistently perform at their best.
  3. The company's employees generally give it their all, which makes this company different from Others in the industry.
  4. The company's employees have worked for many years in the firm (employee turnover is very Low).
  5. The company prides itself on being efficient.
  6. The staffs are highly professional.
  7. The company has the lowest cost per transaction of any in the industry.
  8. Employees' experience and expertise affect company's productivity
  9. Employees' experience and expertise affect company's profitability.
  10. Employees' experience and expertise affect company's market value (stock value).

**Innovation and Creation**

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1. The company's employees are considered creative and bright compared with other companies in the industry
  2. The company's employees are keen to voice their opinions in group discussions.
  3. The company's employees usually come up with new ideas.
  4. Large numbers of new products are launched compared with competitors.
  5. The company's employees are continuously encouraged to bring new knowledge and ideas to the business and share their knowledge with their colleagues
  6. The company's employees are satisfied with their company's innovation policies and Programs.
  7. The company's employees are highly motivated and committed to sharing new great ideas within the company, as it should be.
  8. Employees' innovation and creation affect company's productivity.
  9. Employees' innovation and creation affect company's profitability.
  10. Employees' innovation and creation affect company's market value (stock value).

Discussing further, motivation is a moderating variable that could measure from the 3 items which are adapted from the study of (Dhar et al., 2017).

*3.2 List of Questions for Motivation*

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1. Our employees are motivated to build relationships with key customers
  2. Our employees believe it is important to work hard at building relationships with key customers
  3. Building close relationships with key customers is important
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Moving further, in the current study dependent variable is the BP of the listed textile firms. BP is defined by profitability, productivity, and market valuation. These subsets of the dependent variable will be measured by 10 items which were already tested with the explanatory value of 0.517 in the study of (Sharabati et al., 2010).



### 3.3 List of Question for Business Performance

#### How can you feel about the statement of your company?

Construct	Items
<b>Profitability</b>	Sales growth
	Profit growth
<b>Productivity</b>	Employee productivity
	Process (transaction) productivity
	Success rate in new product launches
	Industry leadership
<b>Market valuation</b>	Future outlook
	Overall response to competition
	Overall business performance and success
	Company market valuation ( stock value)

## 4.0 Findings

### 4.1 Measurement model

Construct reliability, Individual item-wise reliability, discriminant and convergent validity of all measurement items need to be examined. By using individual item-wise reliability and internal consistency of scale, reliability measures were examined. Individual item reliability need to be measured in terms of standards loading of individual item into its original variable. Cronbach's alpha loading values of each item should be at least equal to or higher than 0.7. Average variance extracted value of 0.50 or higher indicates that the construct explains more than half of the variance of its indicators (JF Hair, Hult, Ringle, & Sarstedt, 2014). Convergent validity was evaluated by examining the composite reliability and the average variance extracted (JF Hair et al., 2014). Composite reliability values between 0.70 and 0.90 can be regarded as satisfactory (Joe Hair, Hollingsworth, Randolph, & Chong, 2017; JF Hair et al., 2014; Yaseen et al., 2016).

Table 4.1 Reliability and convergent validity

<i>Construct</i>	<i>Cronbach's Alpha</i>	<i>Composite Reliability (CR)</i>	<i>Average Variance Extracted (AVE)</i>	<i>R<sup>2</sup></i>
<i>Human Capital</i>	0.985	0.986	0.731	
<i>Learning and Education</i>	0.85	0.932	0.685	
<i>Experience and Expertise</i>	0.92	0.943	0.753	
<i>Motivation</i>	0.83	0.945	0.904	
<i>Business Performance</i>	<b>0.985</b>	<b>0.945</b>	<b>0.865</b>	<b>0.925</b>

Table 3.1 demonstrations that reliability and convergent validity. The data indicates that measures are vigorous in terms of their internal consistency reliability. Cronbach's alpha, for all factor loadings, are greater than 0.7 and more significant. Composite reliability (CR) of all constructs was above 0.8, the average variance extracted (AVE) for every measurement exceeded 0.50 and R2 is more than 0.5.

Table 4.2 Discriminant validity

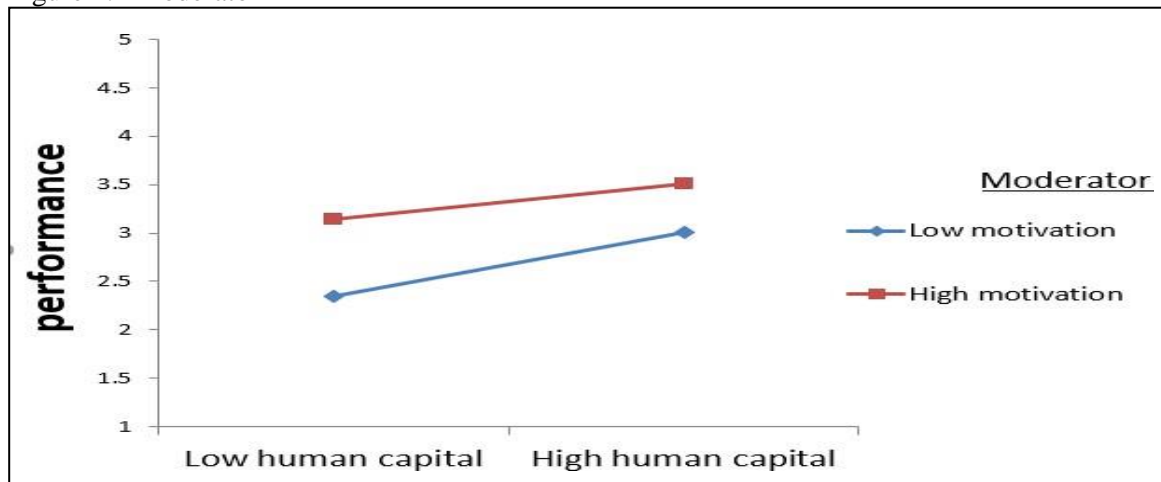
Constructs	HC	E&E	I&C	L&E	M	BP
Human capital (IC)	0.759					
Experience and Expertise (E&E)	0.844	<b>0.870</b>				
Innovation and creation (I&C)	0.868	0.981	<b>0.845</b>			
Learning and Education (L&E)	0.796	0.922	0.964	<b>0.910</b>		
Motivation (M)	0.882	0.934	0.963	0.875	<b>0.835</b>	
Organizational Performance (OP)	<b>0.887</b>	<b>0.738</b>	<b>0.756</b>	<b>0.660</b>	<b>0.798</b>	0.951

Table 4.2 demonstrates the correlation matrix of model constructs. Moreover, it demonstrates square roots of average variance extracted. For stipulating that, square roots of average variance extracted are more than correlation between construct and other constructs, discriminant validity was measured. (Smith et al, 2012; Yaseen et al, 2016).

#### 4.2 The structural model

Research model was analyzed using Partial Least Square structural equation modeling (Smart PLS 3.2) tool which assesses psychometric properties of measurement model. Moreover, it evaluates parameters of structural model. Smart PLS develops component-based approach to structural equation model by using bootstrapping method. Moreover, Smart PLS path model entails of two essentials: Inner model (measurement model) and outer model (structural model) (Ringle et. al, 2015; Yaseen et. al, 2016).

Figure 4.1 Moderator



The dimensions of human capital on business performance where it shows there are significant effect between learning & education and experience & expertise on business performance. However, innovation & creation shows opposite effect. Fig. 5 emphasis on moderating effect, based on (Dawson and Richter, 2006) where it illustrates that motivation diminishes the positive relationship between human capital and performance.

Table 4.3 *Results of Hypotheses*

<i>Path</i>	<i><math>\beta</math></i>	<i>T-stat.</i>	<i>Level of Sig.</i>	<i>Result</i>
<i>Human Capital → BP</i>	0.260	4.101	0.000	<b>Accepted</b>
<i>Learning and Education → BP</i>	0.486	3.960	0.000	<b>Accepted</b>
<i>Experience and Expertise. → BP</i>	0.356	2.580	0.010	<b>Accepted</b>
<i>Innovation and Creation → BP</i>	0.066	0.562	0.574	<b>Rejected</b>
<i>Human Capital → Motivation → BP</i>	<b>-0.082</b>	<b>1.977</b>	<b>0.049</b>	<b>Accepted</b>

Table 4.3 shows human capital with business performance have found statistical significant effect with path coefficients  $\beta=0.260$ . Results of the purposed hypotheses summarized in Table 4.3 and it shows that all path coefficients ( $\beta$ ) are statistically significant and positive ( $p < 0.05$ ) expect the relationship between learning and education, experience and education and business performance. However, innovation and creation has insignificant association with BP. From analysis, it is clear that, there is moderate indirect relationship ( $\beta = -0.082$ ) among human capital, motivation and business performance.

## 5.0 DISCUSSION AND CONCLUSION

This study explored the moderating effect of motivation between human capital and business performance of listed textile firms in Pakistan. The research findings specified motivation, being a moderator, diminishes positive relationship between human capital and business performance. In spite of the significance of this research, it grips some confines. First, this research is based on the listed textile firms which doesn't reflects the overall scenario of other sectors. Moreover, the current study results might not be generalized to developed countries as it is based on developing country. Second, this study uses motivation as moderator whereas few other research used environmental turbulence (Cao and Dowlatshahi 2005; Turner, 2011) as moderator. Third, inadequate response rate. These limitations lead to further research. Furthermore, there is a need to analyze data of other organizations over a longer period in order to clearly test the assumptions of the human capital method. Therefore, more research could be done on other industries as well as other sectors (banking, pharmaceutical industries, oil industry etc.). Besides, more moderating effect could be used, and comparative studies could be done among industries and countries.

Recommendations for textile sector of Pakistan: In the light of research results, the following recommendations could be suggested. The current management system at the textile sector ought to be seriously re-evaluated. They must be managed by policies, systems and programs not by the individuals. Moreover, regularly, conducting the human capital screening to re-evaluate the organization's human capital accumulation by using indices and metrics. Consequently, creating human capital programs to identify gaps in training needs. The elements of human capital need to be integrated with the present recruitment, promotion, reward and recognition and performance management criteria. Employees' profiles: Making human capital index to evaluate each employee through employees' test profile.

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