

The Structure of Human Capital Management Practices in the Higher Education System of Pakistan

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Abstract. This study attempts to explore the structure of human capital management (HCM) practices in the higher education system of Pakistan. The study does not consider the respondents to be conceptually aware of the concept of HCM, yet the prevailing practice within the HRM system might reflect a transition towards HCM. We collected our data using a self-administered online questionnaire from 299 employees in the University of Pakistan. The data thus collected were analyzed using an exploratory factor analysis first and then a confirmatory factor analysis to further validate the structure highlighted in the data in the exploratory factor analysis. We found that there does exist a structure that can be related to HCM in the universities of Pakistan. Five components, as such, were highlighted in our analysis though we had initially added seven to the original survey. The component of talent was merged into knowledge and the component of retention was merged into supporting activities. This suggested the relevant correlations between these pairs. Thus, the structure suggests that Pakistani Higher Institutes (HIs) look for talent within education and knowledge rather than any separable aspect of human capital. Moreover, we found the retention is embedded into supporting activities. The study implicitly finds and claims that the mindset towards the implication of HCM is developing and performance evaluation and reward system are being considered as important trends in HIs of Pakistan. The study mainly focused on all the universities of Pakistan. It might be possible that the situation is different in the private and public sector HIs.

Key words: Human Capital Management; Higher Education Institutions of Pakistan

1 Introduction

Human capital management (HCM) is relatively a different way to view human resource management that considers the workforce of an organization as important as the strategic assets in which long-term and large investment is not only desirable but also profitable (Schultz, 1961). The investment takes place in enhancing the knowledge base, skill level, and other capabilities and competencies of the employees and thus is a source of strategic value and competitive

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advantage (Soukiazis and Antunes, 2012). Though, the overall concept of human capital management is not fully conceptualized, it is often used to refer to attraction, development and retention of workforce capabilities through consistent investment which yields monetary returns (Afiouni, 2013) that embeds education, skills and innovation of human resource (Kogut and Zander, 1992). Human capital management also makes use of the entrepreneurship, knowledge of science and technology in addition to the attitudes, values and beliefs of employees (Wright et al., 2001, 1994).

Investment in higher education sector in any country has a key role to play in the development of human capital which then is reflected in the overall development of a country realized in terms of a holistic betterment in economic, political, social and technological enhancement (Altbach, 1991; Fagerlind and Saha, 1989; Haji Ahmad, 2011; Ismail and Abdullah, 2011; Saha, 1991). It goes without saying that a country depends heavily on its seats of higher learning to develop a nation with knowledge, skills, dexterity, professionalism and above all creativity through academic excellence in research (Altbach, 1991; Bazir and Ahmad, 2014; Ismail and Abdullah, 2011; Murat, 2013).

The economists view universities as a long-term investment which is very profitable especially in supplying trained manpower in various fields (Bazir and Ahmad, 2014; Ismail, 2009). But at the same time these seats of learning enjoy the privilege of having the best talent of the country who are the most educated and the learned class of a country. So, it becomes equally important to learn how the concepts of human capital management are applied in such elite houses of learning. This is why the government of Pakistan has been seriously working on the improvement of higher education since 2000 through its organ of Higher Education Commission (HEC).

By virtue of this, we propose this study to look into the structure of human capital management in universities of Pakistan. Though in this study, we do not consider the respondent to be aware of the concept of HCM, universities in Pakistan pursue a certain human resource management practices which can shed some light towards exploring HCM as well; in turn, this particular structure supports the process of producing and developing the human capital-workforce capabilities. On top of that, public as well as private universities, regardless of their respective cluster follow guidelines from HEC for the purpose of developing human capitals for various areas of expertise. Nonetheless, there might be some individualistic aspects in every university that may not be inspired by HEC policies. Therefore, this research aims to investigate the general structure of human capital management practices in the public sector universities of Pakistan.

A similar study has been carried out in Malaysia by AL KINDI (2017), who in his research examining the roles of universities in nation development revealed that government officers, university administrators and lecturers agreed that HCM-related activities conducted in Malaysian public universities can have immense impact on the overall economy. Thus, an understanding of the structure of human capital management is important in any economy (Boadway and Keen, 2003). In Pakistan, however, there is no study that reveals the structure of human capital development in the universities. There is sufficient literature that makes us bear in mind that this study carries importance since universities are the hubs of economic development (Ismail, 2009; Kirby-Harris, 2003) and thus embark on this research so that the efforts of universities in development excellence is measured and important conclusions drawn. This will not only be instrumental for self-assessment of universities but also for HEC in developing future universities guidelines. Though the study itself will not offer any insight into the economic side of the HCM, it brings out the foundational element.

2 Literature Review

The importance of Human Capital Management was first recognized by [Schultz \(1961\)](#). However so far, the management of HC is not well recognized ([Krueger and Lindahl, 2001](#)). Though [Schultz \(1961\)](#) emphasized on investment in human capital (HC), the definition has now included knowledge, skills, attributes besides competencies of HR (OECD 2001, g.18). HC is source of competitive advantage ([Soukiazis and Antunes, 2012](#)). The exact concept of HC has not yet been fully conceptualized ([Unger et al., 2011](#)). Therefore, some claim that the two terms HRM and HCM can be used interchangeably ([Afiouni, 2013](#)). Though there is a debate as to whether HRM and HCM are the same, there are some fundamental aspects in which the two differ. The first landmark in this differentiation is the mindset towards human ability as the important asset rather than just a borrowed effort.

2.1 Shift in the Mindset

A nation's progression and abundance are not measured by the quantity of natural resources but the quality of creative human resources that smooth the society development efforts in various areas of life ([SHAH, 2016](#)). This requires developing a holistic approach towards human resource ([Lombardi and Laurano, 2013](#)), policies supporting education, intellectual and human development needs ([Ismail and Abdullah, 2011](#)) and a strategic importance to workforce ([Lombardi and Laurano, 2013](#)). In fact, this requires a gradual yet great change in the mindset about the contribution to human resource as capital ([Lawler, 2008](#)) through proactive partnership with stakeholders ([Lombardi and Laurano, 2013](#)).

Today's organizations are facing greater uncertainty that requires them to make smarter decision especially in talent management ([Lombardi and Laurano, 2013](#)). The organic growth of organization results in pressures that make them go for planning simply beyond HRM as human become the central force for competitive advantage ([Lombardi and Laurano, 2013](#)). and values creation ([Afiouni, 2013](#)). Organizational strategy must be aligned with HCM objectives relating to talent, knowledge and other HCM priorities to boost performance ([Lombardi and Laurano, 2013](#)).

2.2 Knowledge Enhancement

Education is an important measure of human capital development ([Judson, 2002](#); [Soukiazis and Antunes, 2012](#); [Wolff, 2000](#)). Changes in work organization may lead to knowledge improvement ([Collins and Smith, 2006](#)). Wright et al. (2001) identify knowledge stocks (The human capital pool) and knowledge flows (Workers' behavior resulting from a firm's HRM system) as parts of an HR system. [Østergaard et al. \(2011\)](#) consider knowledge as important driver of HC development. Innovation and creativity improve HC and are themselves outcomes of effective HCM ([De Winne and Sels, 2010](#); [Hong et al., 2013](#)).

The allocation of courses should follow a strategy ([Lombardi and Laurano, 2013](#)) and plan to develop human capital ([Ismail and Abdullah, 2011](#)) and their capabilities for better career ([Lombardi and Laurano, 2013](#)). Improvements in public speaking ([Ismail and Abdullah, 2011](#)) with emphasis on critical thinking in activities, encouraged study and facilitate education improvements ([Ismail and Abdullah, 2011](#); [Soukiazis and Antunes, 2012](#)) in short creating a learning organization ([Lombardi and Laurano, 2013](#)). Following that employees need to apply their

newly gained education towards improving organization (Ismail and Abdullah, 2011). The resulting performance needs to be embedded in improved quality as well job-filling satisfactorily (Lombardi and Laurano, 2013).

2.3 Retention

One of the fundamental tenets of HCM is to retain its human capital if the organization wants to utilize its value to the maximum. The concept of retention differs from HRM as it focuses on the retention of talent and abilities rather than humans. There are several important suggestions that make this possible. The sources of retention are a shift in behavior (Isaac et al., 2009; Santos-Rodrigues et al., 2010) that may come from several unexpected sources. Some of them include provision of proper office space (some degree of privacy), ensuring technical ease, lifting administrative burden (Lombardi and Laurano, 2013). However, the most important and direct source of retention comes from motivation of employees (Santos-Rodrigues et al., 2010). This encourages employees to deploy their knowledge to attain organizational goals (Isaac et al., 2009; Santos-Rodrigues et al., 2010). However, this engagement should be viewed as a business initiative at the strategic level rather than merely a HR initiative (Lombardi and Laurano, 2013).

2.4 Compensation

HCM needs to be viewed as a financial activity with investment perspective in employees that return profits to organization. Thus, data should be compiled and analyzed in a cost-benefit sense. Lombardi and Laurano (2013) have reported that a divide between the HR data and financial data has created inaccuracies and inefficiencies. The performance of employees can then be aligned with their compensation plans. Again, the concept of compensation in HCM focuses on the reward for ability and talent rather than physical effort only.

2.5 Supporting System

When it comes to performance of employees associated facilities play important roles in organization's achievements. In case of universities it is important that employees are equipped with every possible supporting tools and equipment that match their capabilities. Some of these include library facilities, internet access, counselling services, online resources, transport facilities, Lecture halls, photocopying (Ismail and Abdullah, 2011). Supportive initiatives have important implications of HCM development (Lombardi and Laurano, 2013).

2.6 Performance Appraisal

HCM is all about value creation and development of competitive advantage through human capital. This value-creation ability needs to be induced through organizational ingenuities which are developed through improved coordination and idea sharing (Ukko et al., 2007; Wilson and Western, 2000), public speaking, performance in teams, research skills and creative thinking (Ismail and Abdullah, 2011). However, this Data development of human capital competencies should be data-oriented (Lombardi and Laurano, 2013). Further, organizations need to develop innovative control measures rather than standardized appraisal methods (Kearns, 2005; Lombardi and Laurano, 2013; Nalbantian et al., 2003).

3 Methodology

3.1 Participants

The study was exploratory in nature with an aim to find out the structure of HCM practices in higher education institutes of Pakistan, using factor analysis. The population consisted of all the employees of the universities of Pakistan. The data were quantitative and a 5-point Likert scale was used to collect the data. In order to collect the data, a questionnaire was developed using google forms (available: <http://goo.gl/forms/DF2uip0CKS>) and was sent through emails (available on university's websites) to over 1000 respondents. 299 university employees responded to the questionnaire.

3.2 Instrument

The questionnaire consisted of two sections: (1) the demographics and (2) the scaled questions. The demographic section contained: name, department, organization, cadre (faculty or admin), gender, nature of job whether permanent or contract and education. The second section was divided into several sections with at least 4 questions about different aspects including: the mindset for HCM, talent management, knowledge management, retention, performance appraisal, compensation and supporting practices- each highlighting HCM practices through questions of Likert scale. The section so developed was extracted from relevant literature review. The five-point scale consisted of the options: strongly disagree (1); somewhat disagree (2); neutral/ no idea (3); somewhat agree (4) strongly agree (5).

3.3 Procedure

The first step in the analysis of the data was to explore the overall structure as proposed in the literature review. Subsequently, in order to ascertain the reliability and internal consistency of the sample we ran Cronbach's Alpha using SPSS v25. So, at first, in order to highlight the structure of HCM in the higher education institutes of Pakistan we ran the exploratory factor analysis (EFA) in SPSS v25 for data reduction and structure exploration. Then to test the validity of the structure as explored in the EFA, confirmatory factor analysis was run in AMOS v24. The dimensions highlighted would help indicate the underlying structure of HCM. KMO and Bartlett's Test of Sphericity was used to find out the adequacy of sample for factor analysis.

4 Results and Discussion

4.1 Sample Adequacy

The KMO statistic measures how adequate the sample is in order to run factor analysis for each variable individually and also in total (Dziuban and Shirkey, 1974; Kaiser, 1970). The statistic varies between 0 and 1 getting adequate as it gets higher. It is acceptable over 0.6 to indicate that the sample is adequate; however, the significance level should be less than 0.05 so as to conduct factor analysis. The measure also provides guidelines for the determination of the value of the statistics. For any value greater than 0.90, the value is marvelous, in the 0.80's, it is meritorious, in the 0.70's it is middling, in the 0.60's it is mediocre, in the 0.50's it is miserable and below this it is unacceptable. In our case the KMO measure is 0.877 which is meritorious and

the significance is 0.00; thus, our sample is very adequate to run factor analysis. The summary of KMO is given in table 4.1 below:

Table 4.1: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.877
Bartlett's Test of Sphericity Approx. Chi-Square	10059.879
Df	630
Sig.	.000

4.2 Exploratory Factor Analysis

The first step in analyzing the structure in the overall dataset about the HCM practices in the Pakistani Higher education institutes was to run an exploratory factor analysis in SPSS v25. Our analysis returned 5 components using principal component analysis as the default data reduction technique in SPSS with varimax rotation. The five components included the mindset about HCM, compensation and performance appraisal. Besides, two components that reduced two of the proposed factors in each. These included knowledge and talent as well as supporting activities and retention. Table 2 gives the results of the exploratory factor analysis.

4.3 Reliability Statistics

The overall reliability of the data was tested using the Cronbach's alpha for each of the 5 dimensions retained in the exploratory factor analysis. The summary of all reliability and the variance is given in table 4.2. Thus, no issues with the reliability of the data were found.

4.4 CFA Results

The overall model fit indexes were very good (CMIN/DF=2.671; DFI=.902; TLI=.908; CFI=.922; RMSEA=.57; PCLOSE=0.54). Therefore, the overall model was a good fit.

5 Discussion

We came to some important discovery in our analysis of the data collected to highlight the structure of HCM practices in the HIs of Pakistan. Firstly, we discovered that there is some structure in which these practices are followed. As such, 5 factors were highlighted that could be distinguished from one another on the basis of their internal consistency and correlations. There is some evidence of a mindset change in the HIs about the way the higher education system in Pakistan about a transition towards HCM from HRM (Afiouni, 2013; Tanzharikova, 2012). We generalize this since the tone of our questions directed us towards this conclusion.

Secondly, there is an important merger in the perception about knowledge and talent as the two constructs fall within one component in the CFA. Thus, we can argue that the distinction between knowledge and talent as two separable aspects of human capital is vanishing (Collins and Smith, 2006; De Winne and Sels, 2010; Ismail and Abdullah, 2011). This is since in the EFA- which

Table 4.2: Results of the Exploratory Factor Analysis

	Component						Communalities
	1	2	3	5	6		
Know_4	0.943						0.786
Know_5	0.943						0.828
Know_2	0.942						0.783
Know_1	0.929						0.774
Know_3	0.920						0.488
Know_6	0.913						0.537
Tal_3	0.932						0.864
Tal_4	0.932						0.817
Tal_5	0.845						0.812
Tal_6	0.826						0.724
Tal_2	0.694						0.866
Tal_1	0.658						0.839
Ret_2		0.905					0.913
Ret_4		0.892					0.868
Ret_3		0.865					0.799
Ret_5		0.834					0.915
Ret_1		0.831					0.874
Sup_4		0.866					0.917
Sup_2		0.847					0.805
Sup_5		0.839					0.897
Sup_3		0.786					0.920
Per_2			0.939				0.889
Per_3			0.924				0.889
Per_1			0.923				0.879
Per_4			0.912				0.895
Per_6			0.824				0.852
Per_5			0.809				0.896
Com_2				0.917			0.892
Com_3				0.914			0.869
Com_4				0.877			0.720
Com_1				0.776			0.729
Mnd2					0.900		0.677
Mnd_1					0.875		0.887
Mnd3					0.874		0.899
Mnd4					0.865		0.841

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 6 iterations.

is a correlation-based analysis- the two constructs must be highly correlated to be included in one component. Thus, it is quite possible that the higher education system in Pakistan views talent only as a part of an employee's knowledge rather than as a dissociative feature of one's abilities. Similar conclusions have also been drawn in other researches (Lombardi and Laurano, 2013). This situation may also arise out of the policy guidelines floated by HEC to HIs that look for degrees and a set number of publications to make faculty appointment. Similar results have

Table 4.3: Summary of Data Reliability

Dimension	Cronbach's Alpha	Variance Accounted For	
		Total (Eigenvalue)	% of Variance
1	.975	19.161	33.224
2	.756	11.773	19.481
3	.787	08.297	15.322
4	.879	04.367	09.331
5	.791	01.86	03.524
Total	.849		80.882%

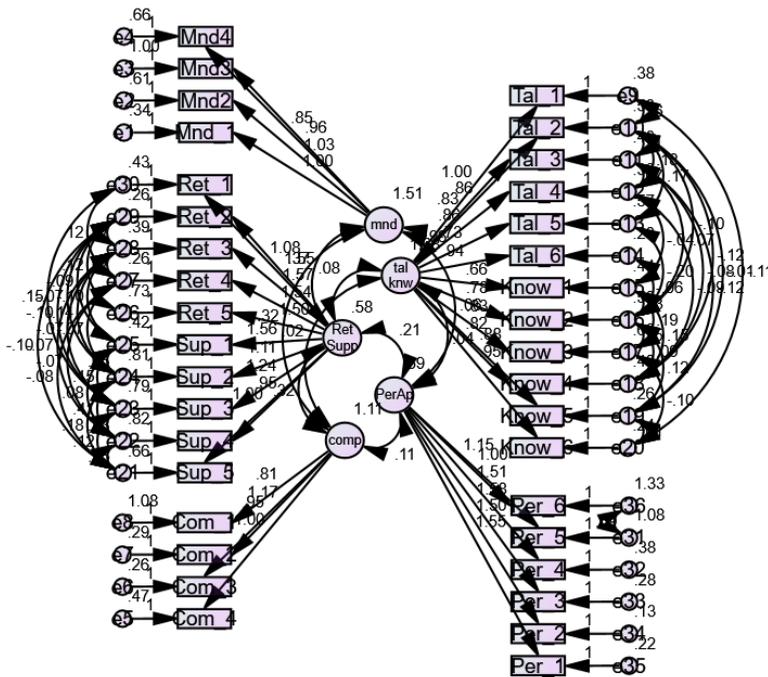


Figure 1: Results of the Confirmatory Factor Analysis

also been reported in other studies (Santos-Rodrigues et al., 2010; Unger et al., 2011).

Thirdly, interestingly the two components as proposed of supporting system and retention in the literature, we find that the two are also merged in the EFA as well as the CFA as inseparable factor. Thus, we can conclude that in HIs in Pakistan, employees tend to retain in institutes more that offer greater supporting activities (Fagerlind and Saha, 1989). Thus, the two go side by side. This might also be true the other way around, the greater the retention rate in an institute, the better the supporting system in them. It can be suggested that in order to retain the

employees the HIs in Pakistan need to develop good supporting systems.

Finally, there are other stand-alone component in the overall HCM endeavors of the higher education system in Pakistan including the change in the mindset, performance appraisal and compensation. As far as the shift in mindset, we can make no decision if this is a deliberate and conscientious one. However, there is sufficient justification in the literature that suggests that this change is taking place (Altbach, 1991; Ismail and Abdullah, 2011). It might be the HEC's policies that result in such change of it is a planned strategical move towards improved human resource capabilities as far the philosophy of HCM is concerned (Afiouni, 2013). Our study also highlights that the roles of compensation and improved performance appraisal are also important elements in the better human capital management of employees in the HIs of Pakistan (Hong et al., 2013; Tanzharikova, 2012).

6 Conclusion, limitation and Recommendations

Human capital management is relatively a new concept in the field of business management that considers the workforce of an organization as important as strategic assets in which long-term and large investment is not only desirable but also profitable (Schultz, 1961). The investment takes place in enhancing the knowledge base, skill level, and other capabilities and competencies of the employees and thus is a source of strategic value and competitive advantage (Soukiazis and Antunes, 2012). Though the overall concepts of human capital management are not fully conceptualized, they are most often used to refer to attraction, development and retention of human resources through consistent investment which yields monetary returns (Afiouni, 2013).

The purpose of this study was to highlight what the inherent structure of HCM practices was in the higher education institutes of Pakistan. There is growing interest in the shift of managerial and top-level strategic efforts towards a change in the mindset in how the human resource is viewed and developed. This has given rise to a greater understanding and acceptance for what some call the human capital management as an enhanced view of human resource management (Tanzharikova, 2012). We attempted to find out the probable underlying structure of Human Capital Management through some aspects of HRM in the higher education system of Pakistan. Our results indicated that there does exist a structure that can tell us of the HCM practices in Pakistan.

There is a focus on knowledge and talent-based development of human capital in the HIs of Pakistan. The HIs are providing supporting activities to retain the employees and the tenants of better compensation and performance appraisal are being embraced. Overall mindset towards HCM is changing though we cannot infer through this study that this change is deliberate or otherwise. However, the change is evident and observable at least through overall structure highlighted in this study.

The study was conducted using different constructs from the practices of HCM that might resemble with HRM practices and thus may seem matching HRM rather than HCM. However, the focus in HCM is on investment rather than simple management and arrangements. Future research may be directed on how to make universities in Pakistan realize the importance of HCM and the development of a strong structure relating to it.

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