



Study of The Interactions of Human Resource Performance and Electronic Human Resource Management in Small Companies

Hanif Ibrahim*

Department of Human Resources, Faculty of Humanities Sciences, University of Lahore, Lahore, Pakistan

Received: 07 January 2021

Accepted: 17 February 2021

Published: 01 March 2021

Abstract

The Ultimate objective of the current study is to explore the impact of e-HRM (i. e., operational e-HRM, relational eHRM, and transformational e-HRM) on workforce-performance in a rural area of Pakistan. Most of the studies on the issue of e-HRM and its impact on workforce performance are carried out on the sample of developed countries and in rare cases, the researchers have formally documented the impact of e-HRM on workforce performance in developing countries. Therefore, the current study has focused on developing region such as Pakistan to fulfill the neglected area. Three hypotheses were proposed to analyze the relationship of e-HRM components on Workforce performance. Data is collected by using questionnaire and SPSS version 20 was used as a statistical tool. Findings of the study revealed that there is a significant positive relation between operational e-HRM and Workforce Performance. However, there is an insignificant relationship between Relational e-HRM and Transformational e-HRM with Workforce performance. Therefore, the current study found that Operational e-HRM is compatible for rural Industries in Khushab as compared to Relational e-HRM and Transformational e-HRM. Hence, this study contributed to the body of knowledge by covering the developing area of the globe. The current study is more important for practitioners for implementation of e-HRM practices. Furthermore, it is also valuable for three industries (Habib Jute Mills Ltd, Pak Kuwait Textiles Ltd, Sally Textile Mills Ltd) of Khushab.

Keywords: Electronic Human Resource Management; Workforce Performance; Rural Industries.

How to cite the article:

H. Ibrahim, Study of The Interactions of Human Resource Performance and Electronic Human Resource Management in Small Companies, J. Hum. Ins. 2021; 5(1): 024-032, DOI: 10.22034/jhi.2021.122571.

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1. Introduction

Electronic Human Resource Management (e-HRM) is an HR function which deals with the use of electronic information systems and processes to give online real-time HRM Solutions ((Roman, 2017 p. 116). More broadly EHRM is a system which allows both the management and the first line employees to access all related information through company website of portals. (Lengnick-Hall &

Moritz, 2003). E-HRM emerged as a spate subject of study in the early 1990s. However, now e-HRM technology has been an impressive subject in the light of rapid technical progress in this global networking era (Saleh & Saleh, 2016). Its significance is increasing within the organizations and most of its adherents acknowledged its advantages (Bondarouk, Ruel & van der Heijden, 2009). For instance, different researchers (Al-kasasbeh, Halim & Omar, 2016; Al Shobaki, Naser,

* Corresponding Author Email: h.ibrahim225@gmail.com

Amuna & El Talla, 2017; Al-Hmouze, 2016; Bharti, 2015; Geetha, 2017; Hamidianpour, Esmaeilpour & Firoozi, 2016; Panos & Bellou, 2016; Piabuo, Piendiah, Njamnshi & Tieguhong, 2017; Rawash, Mustafa & Al-Refai, 2017; Roman, 2017) carried out e-HRM research and documented its importance.

In a postmodern business era of business, human resources management has emerged as a key success factor for any organization. During last few decades along with other management strategies such as total quality management, supply chain management, the human resource management also has undergone many changes and facing as many challenges in managing workforce such as the attraction of work employees, retention of employees, technological and communication problems (Kamal and Kumar, 2013). HRM is a function of optimizing firm performance through employee performance. HRM consist of different sub functions related to the workforce, such as recruitment, selection, compensation, training, performance appraisal and communication (Al-Kurdi, 2010). However, in all these functions, HRM facing problems relating to the long distance. It is quite difficult to handle workforce in the selection of any process on the workplace, to grade the performance of employees, to train the workforce and most important communication problem with their workforce. However, these specific types of problems and issues are not well documented in previous studies. In rare cases, previous studies are giving the solution of these problems.

E-HRM emerged to be a vital source to overcome all these problems relating to the workforce. It is showing a positive impact on the workforce of any organization (Al-kasasbeh, Halim & Omar, 2016). Owing to revolution within the information technology (IT), the face of the organizational contemporary workplace has changed and systems have been made much more effective by introducing new techniques (Kamal & Kumar, 2013). Due to the sudden growth of the electronic management revolution, it becomes an essential element to build an efficient as well as the effective relationship with human resource and its role in human resource is becoming vital for enhancing organizational performance. (Rawash et al., 2017). Now, most of the companies across the globe have digitized all their HR practices such as recruitment, training, selection, compensation management, performance management, attendance management, leave, time management and another

operative as well as strategic functions by the adoption of different integrated software applications (Geetha, 2017). E-HRM has significant positive influence on the operational performance of an organization (Khashman & Al-Ryalat, 2015) and it also increases the performance of in regard to the overall profitability of an organization by increasing the performance of workforce (Rawash et al., 2017).

Recently, the process of e-HRM practices has been studied increasingly by many Scientists, however, most of the studies are conducted within the region of United States (US) and Europe, and there are only a few studies are conducted in other environment as compared to developed countries (Rawash, Mustafa & Al-Refai, 2017). The author further described that there is a difference in developed and developing countries management practices. Hence, the result can vary in the context of developing countries. Khashman & Al-Ryalat (2015) also have the same opinion that, most of the studies on "E-HRM" implementation being based on cases in Europe as well as United States of America (USA). Therefore, most of the researchers neglected developing countries. Hence, this study will fulfill this neglected area by focusing a developing region of the world such as Pakistan.

E-HRM has been separated into three main categories, namely, operational e-HRM, relational e-HRM and transformational e-HRM (Parry & Tyson, 2011; Ruël, Bondarouk & Looise, 2004). These three categories are also the goals of e-HRM (Panos & Bellou, 2016), having a relationship with a workforce of an organization. Therefore, the ultimate objective of the current study is to explore the impact of e-HRM (i. e., operational, relational, and transformational) on workforce-performance in Pakistan. To achieve this main objective, this research study has following sub-objectives;

- 1) To find the impact of e-operational activities on workforce-performance.
- 2) To find the impact of e-relational activities on workforce-performance.
- 3) To find the impact of e-transformational activities on workforce-performance.

Hence, this research study has contributed to the body of knowledge by focusing on the neglected area of developing countries, as mentioned by literature (i. e., Rawash, Mustafa & Al-Refai, 2017; Khashman & Al-Ryalat, 2015). Further, this study highlighted the importance of e-HRM practices on workforce-performance (figure 1).

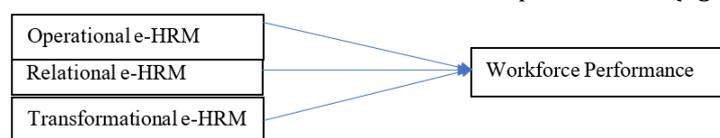


Figure 1. Types of e-HRM

2.. Literature Review

2.1 Electronic Human Resource Management (E-HRM)

E-HRM is not only included the implementation of one stage of HRM, but it also consists of the implementation of whole HRM even in different ways (Ruël, Bondarouk, & Looise, 2004). It offers one of the holistic approaches to resolving the HRM issues and it can handle with precision a massive amount of data from multiple sources in real time by aligning with organization's strategic choices (Bondarouk et al., 2009; Bondarouk & Ruël, 2009; Gardner, Lepak & Bartol, 2003; Parry, 2011). Hence, Strohmeier (2007, p. 20) conceptualized e-HRM as "the (planning, implementation and) application of information technology for both networking and supporting at least two individual or collective actors in their shared performing of HR activities."

E-HRM is like an umbrella, which covering all the possible integration mechanisms as well as contents between the

HRM and the information technologies to create value for employees as well as management of the organization (Bondarouk & Ruël, 2009). Because of multiple functioning mechanisms of e-HRM, it is divided into three categories, namely, operational, relational, and transformational (Parry & Tyson, 2011).

The workforce is one of the key parts of every organization. It has significant contribution in the success of the organization through knowledge, unique ideas, judgment and collaboration (Al-kasasbeh et al., 2016). However, eHRM has an impact on workforce performance. As workforce of an organization anticipates changes, but not machines

(Breu et. al., 2002) and employees show a positive attitude towards changes, novel ideas, new methods etc. (ALFaouri, Al-Nsoor & AL-Kasasbeh, 2014), that is why they adopt e-HRM practices which influence their performance. Therefore, e-HRM has an impact on workforce through different ways such as operational, relational and transformational process.

2.2. Operational e-HRM

Operational e-HRM (OEHRM) basically refers to the different administrative features of e-HRM which reflect the efficiency of different HR practices (Panos & Bellou, 2016). These automated HR practices are simpler, which confirms better implementation of processes by using less resource and this simplification feature is one of the vital benefits of this process (Marler, 2009; Martin & Reddington, 2010; Olivas-Lujan, Ramirez & Zapata-

Cantu, 2007; Parry, 2011; Strohmeier, 2007). Therefore, operational e-HRM only consist of different administrative activities having simple and efficient HR practices in very fewer resources.

2.2.1.1 Impact of Operational e-HRM on Workforce Performance

According to Ruël (2012), e-HRM practices helps in creating value for any organization by conveying all information of employees at one place and it was not possible in past without technology. People paid more intention towards the heavy burden of administration, feel the need for better administration system and then come up with automated computerized transaction processing system (Lepak & Snell 1998). This automated computerized system (i. e., operational e-HRM) reduces the cost and increase the efficiency of administration which impacts positively on the workforce. The way to deliver information from administration to workforce cuts down the paper cost, improve delivery and updating speed more effectively (Lengnick-Hall & Moritz, 2003). Proper and in time delivery of information from administration to workforce improves the performance of workforce.

Better implementation of HR processes through e-HRM (Parry, 2011) effect positively on workforce performance. Selection of any process such as decision-making process and timely feedback from administration enables the workforce to perform well. E-HRM by the installation of systems to provide quick reply of staff queries and by quick feedback of their performance enables the HRM department in handling the workforce Al-Ibraheem & Ruel, 2009; Torres Coronas & Arias-Oliva, 2009) which make workforce enough capable to improve performance. Therefore, there is a positive link between operational e-HRM and workforce performance. Hence, from above discussion, it is concluded that;

H1: *There is a significant relationship between Operational e-HRM and Workforce Performance.*

2.3. Relational e-HRM

Relational e-HRM (REHRM) is defined as the use of electronic technology to strengthen the interdepartmental connection, communication, and coordination (Parry & Tyson, 2011). Most importantly, this process enhances the accuracy of the data, speed of the data and it provides the easiness in sharing the information among the differences which make HR processes become simple as compared to the old methods of HRM (Gardner, Lepak & Bartol, 2003; Lepak & Snell, 1998; Voermans & Van Veldhoven, 2007).

Relational e-HRM process also harmonizes HR activities (Strohmeier, 2007). Hence, relational e-HRM is a process which ensures optimization of workflow between employees, management, and HR department.

2.3.1 Impact of Relational e-HRM on Workforce Performance

The employee perspective of Relational e-HRM with provide organization and employees to create sustainable long term relation (Bissola & Imperatori, 2014) and it is one of the good management systems which open relationship opportunity between management and employees of the organization (Marler, 2009). Increases the communication between HRM and workfare, build the confidence among workforce which automatically improves the performance. By relational e-HRM, the workforce can communicate their ideas and problems with management of the organization, which impact significantly on their performance.

Specifically, relational e-HRM process moves beyond traditional HR activities, supportive to employees personal and work life, collaborating support as well as transparency from HR department (Bissola & Imperatori, 2014). HRM support to the personal needs encourages employees, in the result, increase in overall performance of workforce. According to Cropanzano, Prehar & Chen (2002), formalized HRM practices and rules have been proven to sustain the trust among employees. Therefore, development of trust in the workforce and supportive intention of relational eHRM impact significantly on workforce performance. Hence, it is concluded that;

H2: *There is significant relationship between Relational e-HRM and Workforce Performance*

2.4. Transformational e-HRM

Transformational e-HRM (TEHRM) is fundamentally based on the assumption, that use of IT cuts time and effort required for different administrative tasks, generally facilitating a focus on more strategic as well as value-adding tasks and plans (Ruël et al., 2004). According to the views of different researchers (e.g. Lengnick-Hall & Moritz, 2003; Panayotopoulou, Vakola & Galanaki, 2007; Ruël, Bondarouk & Van der Velde, 2007) transformational is one of the e-HRM processes which facilitate and underpin the strategic role within HR department. Hence, transformational eHRM can be further described as, IT process which reduces the time as well as efforts to handle administrative tasks and focus on strategic and value-adding tasks.

2.4.1. Impact of Transformational e-HRM on Workforce Performance

Transformational e-HRM practices such as web-communities as well as knowledge management systems aim to transform Human Resource (HR) function through improving strategic orientation towards HRM (Shrivastava & Shaw, 2003). According to Ruël et al., (2004), through Transformational e-HRM, it is quite possible to produce a change-ready workforce through a combined set of different web-based tools that empower the workforce to develop a line of the company's strategic choices. Therefore, there is a link between transformational e-HRM and workforce performance.

However, the main target area of transformational e-HRM is an organization (Sharma, 2016). It is not implemented directly for the employees, but it is designed only for HR department (Bissola & Imperatori, 2014). The author further described that transformational HR activities have an impact on the whole organizations, however, transformational e-practices appear too distant from employee activities. As, according to Ruël et al., (2004), it generally focusses on more strategic aspects. Furthermore, according to Nivlouei (2014), transformational e-HRM is the third category of e-HRM which deals with strategic activities only. Therefore, most of the studies are showing that transformational eHRM has a relationship with strategic activities and do not have less concern with the workforce. Hence, it is concluded that;

H3: *There is a significant relationship between Transformational e-HRM and Workforce Performance*

3. Methodology

This study adopted a causal research design to check the impact of e-HRM practices on workforce performance.

3.1 Sample and Procedures

Data was collected from different sources. The population of the current study consists of three industries in the area of Khushab, Pakistan (Pak Kuwait Textiles LTD, Habib Jute Mills LTD, Sally Textile Mills LTD). Comrey & Lee in (1992) proposed a sample in a sequence for inferential research. Sample size less than 50 respondents will consider being a weaker sample; a sample of 100 respondents will be weak; 200 will be sufficient; a sample size of 300 will be calculated as good; 500 sample sizes considered being very good whereas one thousand (1000) will be outstanding.

Therefore, 300 sample size were selected and questionnaires were distributed among the employees of Pak Kuwait Textiles Ltd, Habib Jute Mills Ltd and Sally Textile Mills Ltd in Khushab,

Pakistan via mail. The questionnaires were filled by HR admin's, production and general operation workers of selected industries. The response rate was 57%, as total 170 responses were received. We have used cluster sampling and divided the population into three clusters of 100 employees each. The response rate of Habib Jute Mills Ltd was highest at 67 % percent while Sally Textile Mills Ltd with a response rate of 48 % was at lowest According to Sekaran (2003), 30% response rate is enough for mail questionnaire.

3.2 Measurement

Four-part of questionnaire contains 21 questions and 5-point Likert scale strongly agrees to strongly disagree were used. Questions were modified and adopted from different sources. Dependent variable items were adopted from F.Davis (1998) and independent variable items adopted from Yorick Bakker [2010].

SPSS software Version 20 was used to analyze the data. Validity was confirmed by using factor analysis and reliability through Cronbach's alpha, showing the results (.970 = α) obtained during the pilot study. Similarly, Pearson correlation and multiple regressions were applied to found the relationship between the independent variable (e-HRM) and the dependent variable (workforce performance). Secondary data gather from Internet, books, government publications, unpublished research work, and journals.

4. Research Analysis and Findings

4.1 Factor analysis

KMO value and Bartlett test were analyzed while factoring analysis. Both KMO and Bartlett test were acceptable because KMO was found $>.7$ and the significant value was also less than 0.05. The actual value of KMO during analysis was 0.824 and the significant value was 0.00. The items (TEHRM 3, 5, OEHRM 3 and REHR 6) and with factor loading less than 0.5 were dropped from the analysis.

4.2 Descriptive and Correlation analysis.

The results in table 1 show that the mean value of all variable is approximately equal to 4, which indicates that all respondents have shown a great deal of agreement with our construct. To check the reliability, we have computed Cronbach's alpha values for each of the given variables. All the Cronbach's alpha values are greater than 0.80 which is showing that there is no reliability issue.

Correlation analysis shows there is a relationship between dependent and independent variables. It means any change in one variable is strongly correlated with the change in another variable. The result demonstrates that Operational eHRM variable has Pearson's was equal to 0.820 Relational e-HRM was equal to 0.668 and Transformational e-HRM was 0.694. These values are almost near to 1. Because of this reason, there is a strong significant relationship between workforce performance and e-HRM components.

Table 1. Descriptive and Correlation analysis

	Mean	Cronbach's alpha	TERM	OEHRM	REHRM	WFP
TEHRM	4.03	0.85	1			
OEHRM	4.12	0.89	0.780	1		
REHRM	4.32	0.92	0.757	0.676	1	
WFP	4.05	0.84	0.694	0.820	0.668	1

4.3 Regression analysis

To examine the impact of three variables of Electronic HRM (Operational e-HRM, Relational e-HRM, and Transformational e-HRM) on workforce performance regression analysis was carried out by using SPSS. DurbinWatson test was used to check the error of independence. For Durbin Watson test, a value between 0 to 4 was analyzed. For Durbin Watson test, if the value is nearer to 0, it indicates a strong positive relation; however, if the value is nearer to 4, it indicates strong negative relation (Field, 2013). During the analysis, it was found that Durbin Watson value is 1.958, which is almost near to 2. It means, that there is no correlation between

errors. The value of capital R value was .816, which indicates that how close multiple independent variables (IV) with the dependent variable (DV). Table 4 is showing the equation relating to Multiple Regression. This equation is explaining the variability of the significant portion of workforce performance from the variability of e-HRM and also explains whether the overall test is a good fit or not. The Table 2 shown the significant level which is $.000 < 0.05$ and $f(3,166) = 122.253$. Therefore, a relationship between e-HRM (DV) and workforce performance (IV) is significant as well as the good fit of data confirmed.

Table 2. Multiple Regression analysis for e-HRM and Workforce Performance

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	60.586	3	20.195	122.253	.000 ^a
Residual	27.422	166	0.165		
Total	88.009	169			

a. Predictors: (Constant), Transformational, Operational, Relational

4.4 Estimate the model Regression coefficient.

The regression coefficient is shown in Table 3. In this model, unstandardized coefficient indicating the effect of independent variable on the dependent variable, while the other remaining variables become constant. Standardized coefficient also describes the same; however, it described standard deviation. In the current study, three hypotheses were examined.

According to the table, 5 Independent variable (IV) of operational e-HRM has $b=.656$, which means every unit change in an independent variable (IV) of operational e-HRM improves workforce performance for the $b=.656$ unit. While $t=9.144$ and the significant level is equal to 0.000 , which is <0.05 . Therefore, regression coefficient is significant on 95% confidence level, hence there is a significant relationship between operational e-HRM and worker performance. Another independent variable is relational e-HRM, results found $t=1.677$ and $b=.117$ and level of significance is 0.095 , which is greater than 0.05 , it means that there is an insignificant relationship between relational e-HRM and the workforce performance, hence H2 hypothesis is rejected. On the other hand, in the case of transformational e-HRM, Regression coefficient $b=.104$, $t=1.383$ and level of significance is 0.169 which is >0.05 . Hence there is an insignificant relationship between transformational e-HRM and workforce performance. The value of R-square is 0.65 which indicates a good model fit.

Table 3. Hypothesized Results

Hypothesized Results		Estimates	t-Value	Sig
WFP	OEHRM	0.656	9.144	0.000
WFP	REHRM	0.117	1.677	0.095
WFP	TEHRM	0.104	1.383	0.169
R-square		0.65		

Dependent Variable: Workforce Performance

5. Discussion of Findings

Findings of this paper reveal some interesting facts and issues regarding electronic human resource in

Khushab (one of the district of Punjab state in Pakistan). Despite the fact, almost 30 years ago Schuler & Jackson (1987) stressed the significance of HRM as one of the “strategic partners” to achieve organizational goals, however current study reveals the fact that HRM role is restricted to the administration (operational e-HRM) only, especially in Khushab. The finding of this research study indicates that operational e-HRM (administration) has a significant positive relationship with workforce performance. The increase in operational e-HRM practices will improve workforce performance. Both have a direct relationship with each other. The current study is also in line with Panos & Bellou (2016), that e-HRM is restricted to operational e-HRM (administrative). As workforce relationship with relational eHRM and transformational e-HRM is not significant. The current study indicates that transformational e-HRM has an insignificant relationship with workforce performance. It shows that transformational e-HRM do not have an impact on workforce performance. This finding is validating the conclusion of Panayotopoulou et al. (2007), that adoption of e-HRM based on to improve the communication (relational e-HRM) among employees of the concerned organization and HR department but not for strategic improvement (transformational e-HRM). On the hand, the current study indicates that relational e-HRM has no impact on workforce performance, which is against the findings of Panayotopoulou et al. (2007). As, the purpose of e-HRM adoption is to improve the communication (relational e-HRM) among the workforce and HR department of an organization (Panayotopoulou et al., 2007).

It is quite possible that employees (workforce) of an organization may resist adopting e-HRM practices, because of the belief, that it is not possible to cover human part of HRM through technology (Voermans & Van Veldhoven, 2007). According to the study of Panos & Bellou (2016), several participants revealed the fact, that they adopt e-HRM practices because of some other reasons that were beyond their choice and they believed that, these practices will not yield good results. It means that workforce does not want to adopt e-HRM practices, that is why relational e-HRM and transformational e-HRM has no impact on workforce performance in the current

study. In the context of Khushab, surprisingly, it seems Relational and Transformational has an insignificant impact on worker performance in rural industries within Khushab, a district of Punjab state, Pakistan. It is due to the fact that the rural area workers are not having a better knowledge about functions of e-HRM.

By summing up the discussion, based on the findings, it seems that workforce of three industries (Habib Jute Mills Ltd, Pak Kuwait Textiles Ltd, Sally Textile Mills Ltd) in the area of khushab, Pakistan is compatible with HRM, however incompatible with e-HRM. Because of the fact, a workforce of these three industries is not well aware of the technology used. They are habitual of old HRM practices and do not know how to use new e-HRM system. This is also the reason to believe that e-HRM will not bring good outcomes. Further, e-HRM is compatible for administrative (operational e-HRM) use only rather than communicational (relational e-HRM) or strategic (transformational e-HRM). Therefore, e-HRM outcomes are better for administrative perspective, however, still, it is needed to work on other two aspects, such as relational and transformational. Thus, in this competitive world, organizations are needed to go beyond just enabling themselves to time and cost reduction (Marler, 2009; Schalk et al., 2013). As, according to Miles & Snow (1978), the transformation of HR department into strategic partner can facilitate organization in innovative, entrepreneurial activities and opportunity oriented. Organizations should ensure that adoption of e-HRM system will welcome by their HR department (Schalk et al., 2013). Additionally, a priori IT knowledge, IT training both before as well as after the e-HRM implementation with a trial-experimental usage of an e-HRM software package is highly recommended (Fisher & Howell, 2004).

6. Conclusion

The prime objective of current study was to investigate the impact of Electronic Human Resource Management (eHRM) on workforce performance. As statistical results indicate that, there is a significant positive relationship between e-HRM and worker performance. Operational e-HRM significant and high correlated impact on worker performance. However, Relational e-HRM and Transformational e-HRM has not a significant relationship with workforce performance. Surprisingly, it is found, Relational and Transformational have no positive and significant impact on worker performance in rural industries within Khushab district, Pakistan. It does not mean that Relational and Transformational e-HRM not important part in executing new information technology (This has already been demonstrated in previous studies on this topic) because of rural

area; workers are not having better knowledge about the functions of e-HRM.

Furthermore, factor analysis and Pearson correlation is showing a strong correlation of e-HRM with worker performance in rural industries within Khushab. Hence, today implementation of e-HRM in term of its types is one of the most important strategic tools for the achieving benchmark performance in highly competitive market.

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