THE SCOPE OF E-HRM AND ITS EFFECTIVENESS

Siam M.R.A., Alhaderi S.M. [*]

Abstract: Purpose - The motive of this study is to discover the scope and potency of electronic Human Resource Management in the organizations. As per the digitization of our current corporate culture, we have come across e-HRM for quite a sometime which is relatively not very new or very old concept. It is being used amongst the organizations very generously and is very popular in the west world. We want to find out if this applies in the Malaysian corporate culture as well. For the sake of discovering the potency and scope of electronic Human Resource Management, data was collected from various technology companies in Malaysia. This study will contribute into HRM literature and determines the potency of e-HRM and its usage.

Keywords: E-HRM determining factors, E-HRM use, HRM potency

Introduction

As the technology has evolved, we have come across many functions going online. We came across the idea of smart work and gave it priority over the traditional concept of hard work. e-HRM is also a function that we came across after the evolution of technology (Marler and Boudreau, 2017; Seddighi and Yoon 2018). Earlier the HR functions were only delivered by the HR professionals but now we have been seeing the line-managers in many organizations who perform these tasks. e-HRM is the composition of technology with the Human Resource Management functions and allowing it to be done remotely or digitally. The center of attention of this study is e-HRM and its potency & usage. According to (Ruël et al., 2004, p. 281), "e-HRM can be characterized as a method for actualizing HR systems, approaches and practices in the firms through the conscious and coordinated help of web technology based mediums so as to consent to the HR needs of the firms."

Earlier there have been many researches done on the implementations of the e-HRM and its usage. We have also relevant studies regarding the efficiency of e-HRM in the organizations. For example, if a company decides to have an e-HRM policy rather than the traditional way, it will help them save their transaction cost of HR and it will allow them to minimize their expenses for HR functions. Furthermore, it will also be useful as it will be reducing the time being spend on

[*] Dr. **Mohammed R. A. Siam.,** Visiting Senior Lecturer, School of Business Management Universiti Utara Malaysia, Malaysia; Dr. **Sami Mohammed Alhaderi**, Assistant Professor, College of Business, Taibah University, Saudi Arabia.

✉ Corresponding author: r.a.siam@uum.edu.my

✉ salhaderi@taibahu.edu.sa

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the HR functions and it will be more rational (Williams et al., 2015; Taguchi and Li 2018).

However, we do not have sufficient researches if it is effective for the corporations or not. This study will allow in contributing towards the potency of the e-HRM in the organizations in Malaysia. It will help the policy makers to identify the usefulness of e-HRM.

The focal point of the researcher in this study was to determine the potency of e-HRM on HRM and its usage. As we don't have enough evidences on the potency of e-HRM, the contribution of this study will be towards this specific area. The objective of the researcher in this study has been to discover the potency and usage of the e-HRM in the technological companies of Malaysia. With the advancement of technology, we were introduced to the new concept of e-HRM and according to many surveys and researches it has proved to be efficient. But we do not have many researches to prove its potency as well.

The limitations of this study were that this research is only limited towards Malaysian demographics. Furthermore, the amount of data is never adequate. As, the research was based in technology companies however, it did not cater all the technological companies of Malaysia. In future, more industries should be catered wo we can find more significance towards this study and in order to compare the findings with some other region it can replicated in other regions to find if there is any significance available.

Literature Review

Electronic Human Resource Management Determining factors

The determining factors of e-HRM are performance expectancy, effort expectancy, and peer pressure. Performance expectancy can be described as "how much client is expecting that the utilization of this framework will support him/her to accomplish gains in their job performance." Effort expectancy is the second concept in determining the e-HRM. It can be described as "the degree to which ease is interlinked with the utilization of the framework."

Peer pressure can be defined as "how much one perceives it important to use the new framework because others are doing." (Venkatesh et al., 2003, p. 450-477)

The literature available on e-HRM has shown that utilization of e-HRM depends on the utilization of technology as a base element and the acceptance model of technology as well. For example, the study of Marler and Boudreau (2017) depended on the user acceptance model and examined the effects of dependent variables (i.e. perceived advantage, facilitating conditions, and easiness of utilization) on the value establishment of HRM. Their research discovered that if the usage of HRM system are lined with the system's proposed motive and its facilitation condition, then it can be progressively related to e-HRM system.

E-HRM Use

Electronic Human Resource Management (e-HRM) can be described as "is the integration or collaboration of all HR frameworks and activities utilizing the online

advancements and web based technologies. Basically, when HR utilizes the Internet or related advancements and technology to aid their activities, frameworks, processes, at that point it turns into an e-HRM. According to Wahyudi and Park (2014), it is hard to identify the usefulness of an entity if we don't know its affiliation with the motive that framework serves. Now there have been many researches on e-HRM, however, there has not been identified once if it is effective or not. On the contrary, there are other tools that can define the potency of HRM in terms of turnover arte, financial measures, employee's satisfaction, absent rates, and commitment.

HRM Potency

HRM potency alludes to the degree where the results are created by the HR exercises, for example, gaining from the training. The impact alludes to the strategic or business significance or worth which is derived from the HR activities for instance, higher sales. HR measurement focuses on the business goals. E-HRM is effective and is widely being used throughout the organizations. It is assumed to be credential towards the potency of HRM but there is no scientific proof of it and the knowledge till date remains scarce. However, it seems to provide better quality assessment of the applications of HR and it allows to have more vision and clarity amongst the employees. If perceived quality of an e-HRM application is going to intensify or raise, it will simultaneously result in the raise of HRM effectiveness (Wahyudi et al., 2014; Topleva, 2018).

Study Model

UTAUT (Unified Theory of Acceptance & Use of Technology) model has been adopted in this study to determine and demonstrate the user behavior for e-HRM system's usage. The actual use of e-HRM framework and HRM potency were juxtaposed and the analysis were taken one step further by doing so. Afterwards, a course of predictive analysis was conducted with SEM (Structural Equation Modeling). It showed that the determining factors of e-HRM had a progressive impact on the objective and actual usage of the framework both. Additionally, the actual usage of e-HRM has a progressive impact/influence on HRM potency as shown in the figure 1 below. According to the past literatures, it has been hypothesized that "the workers' expectation to utilize e-HRM is controlled by the elements of performance expectancy, effort expectancy, and peer pressure, all of which first impact the aim to utilize and after that impact the real use of an IT framework" (Strohmeier and Kabst, 2014; Yamaguchi, 2018).
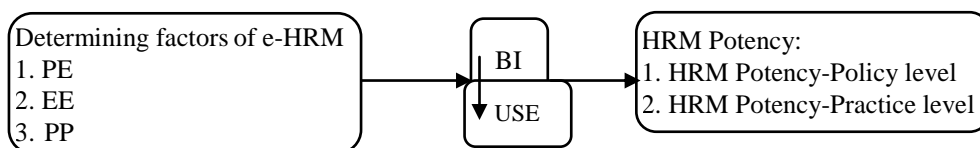

Figure 1. Conceptual Diagram

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H1. Behavioral impulsion intercedes the association in the midst of performance expectancy and the consumption of electronic Human Resource Management.
H2. Behavioral impulsion intercedes the association in the midst of effort expectancy and the consumption of electronic Human Resource Management.
H3. Behavioral impulsion intercedes the association in the midst of peer pressure and the consumption of electronic Human Resource Management.
H4. The usage of electronic Human Resource Management is progressively affiliated to the potency of HRM at the policy level.
H5. The usage of electronic Human Resource Management is progressively affiliated to the potency of HRM at the practice level.
Fig. 2 depicts a pictographic portrayal of the hypotheses stated above.

Methodology

This study is based on quantitative research and it was applied on various technology companies across Malaysia. The data collection procedure was conducted through questionnaires which were given to technology companies across Malaysia. The responses were given through Google docs and their information was kept confidential. Technological companies are always in search of making work smarter and spending more time on searching how to make work more efficient and smarter. E-HRM framework is mentioned to be efficient but to understand if it effective or not, the survey was done. The population contained 2000 potential consumers of e-HRM framework (i.e. Oracle HR) in the companies. The sampling technique used in this study was random sampling technique and the data was collected from 550 employees. Out of which 65% were male and the rest were female staff. The education level was 70% at graduation level and the remaining were at diploma level. The sample size was sufficient enough for the circumstances that were applied for this model as it should be 10 X greater than the number of forecasters (Barclay et al., 1995). 3% of the respondents had less than one-year experience whereas, 70% were working for more than 6 years and the rest were between 1-6 years.

Items that measure the e-HRM determining factors (i.e. EE, PE, and PP) have been adopted from a questionnaire that was earlier used by another researcher (Strohmeier and Kabst, 2014; Donkor, 2018) in the UTAUT model. The questionnaire that was originally designed had to determine the conditions of e-HRM. Likert scale was designed on 7 points which started from completely disagree, moderately disagree, slightly disagree, neutral, slightly agree, moderately agree, and ended at completely agree.

There were three items in the questionnaire that were based upon performance expectancy, effort expectancy had three items in the questionnaire as well and so were peer pressure and behavioral impulsion. Furthermore, respondents also had to evaluate their actual usage of the e-HRM framework. Moving on to e-HRM, there were five items used in the questionnaire for this variable. The items to determine the e-HRM potency were taken from various studies (Obeidat, 2016; Haseeb et al.,

2018). The items that have been used for e-HRM potency at policy level were 7 in total whereas, 8 items were used to assess the potency of e-HRM at practice level.
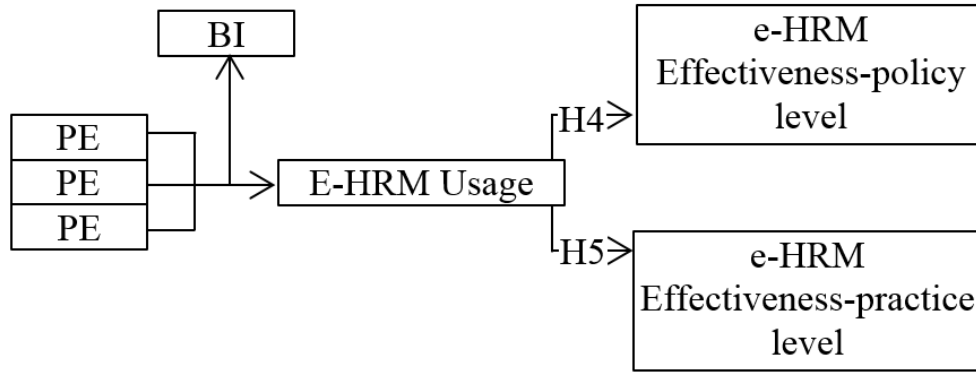

Figure 2. Conceptual Diagram

Study Results

In this study, the descriptive analysis of the data and the bivariate correlations that exist in the midst of the variables have been depicted in the Table I. Mean values and standard deviation values are indexed in the table as well and a full picture of correlation matrix is demonstrated. The results for mean for perceived e-HRM usage is more than the halfway and in the midst of the extremes of the scale (M=4.10, SD=0.98). Whereas, the scattering that mean is surrounded by defines the variance in the usage of e-HRM framework is substantial.

SEM analysis: The technique used to analytically testify the hypothesis was the SEM approach using Partial least square (PLS) which is statistical tool. There were two processes in this study. First one was measurement of the external model and secondly measurement of the internal model. It is commonly two-steps process in PLS. In the first level of action, authentication of the scale and authentication of the measurement model is required to be performed and afterwards the genuineness and reliability of the constructs will be assessed as well (Salem et al., 2018). Secondly, the measurement of the SEM defines the association in the midst of the variables. And then to examine the interceding effects a bootstrapping method is introduced to test the contingent effects with 5000 subsamples (Henseler et al., 2015).

Table 1. Correlation matrix of study variables

S.no	Var	Mean	St.D	1	2	3	4	5	6	7	8	9
1.	GD	1.27	0.435	1								
2.	Age	2.54	0.673	-0.08	1							

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3.	AQ	3.03	0.415	0.034	-0.016	1					
4.	CE	3.79	1.17	-0.01	0.582**	-0.13	1				
5.	PE	5.05	1.17	-0.09	-0.046	0.07	0.08	1			
6.	EE	5.46	1.165	-0.2*	0.023	-0.09	0.09	0.73	1		
7.	PP	5.09	1.15	-0.14	0.098	0.06	0.15	0.75	0.75	1	
8.	BI	5.43	1.309	-0.198*	0.037	0.21*	0.10	0.58	0.56	0.5	1
9.	USE	5.30	1.312	-0.085	0.033	0.121	0.153	0.684	0.618	0.56	0.66	1

Table 2. Scales' internal consistencies

Construct	AVE	CR	Cronbach's α
PE	0.842	0.943	0.907
EE	0.702	0.903	0.856
PP	0.662	0.887	0.843
BI	0.888	0.961	0.936
USE	0.630	0.894	0.848

Assessing the Structural Model

In order to check and confirm the intrinsic coherence, items factor loadings were analyzed on the basis of their receptive latent variables. The standard outer loadings are mentioned to be greater than 0.7 according to many researchers, (Henseler et al., 2015). The loadings in this study were greater than 0.7 except for one (I.e. PE9) hence it was eliminated from the study. After discarding it, the reliabilities were assessed and their composite reliability was calculated as well and also the Cronbach's α. The standardized reading for CR is 0.9 whereas 0.8 for Cronbach's α and 0.7 for AVE (Hair et al., 2014).

Hence, these calculations demonstrated that the outer model of this study is intrinsically coherent and reliable as well. (Table 2). Further, the discriminant validity was also evaluated. To gauge it, each variable was examined and the analysis suggested that the loading of each barometer was above than all of its cross loadings. However, there is another way to evaluate the discriminant validity which was proposed by (Hair et al., 2014) and it consisted of verification of AVE of each latent variable ought to be more prominent than the original latent variable's highest squared correlation with any other latent variable. Moreover, the diagonal values have crossed the inter-construct correlations and the test for discriminant validity has been accepted which means that there is no sign of multi-collinearity's existence. The analysis can be seen in the tables below.

Once the measurement model was estimated and validated, the hypotheses were examined by estimation of the structural model. First step was to evaluate the predictive values of the endogenous constructs using the R^2 value. Furthermore, values of 0.67, 0.33, and 0.19 are considered to be substantial, moderate and weak in the PLS models (Hair et al., 2014). However, in this study the R^2 value exceeded the standardized moderate value as per recommendation of Chine. Also, the effect size (i.e. f^2), was measured and it showed an unexplainable rise in the R^2

as compared to the fraction of variance of the endogenous latent variable which was unexpected as well. F2 values if 0.02, 0.15, and 0.35 are considered to be small, medium and large effects respectively. Whereas, in this study the f2 values demonstrated huge effects for the e-HRM use and its potency at both policy and practice level. However, it showed medium effects for the behavioral impulsion and weak effects for the remaining relationships. (Table 3).

Table 3. f 2 values

Path	f 2 values
BI→USE	0.212
EE→BI	0.003
EE→USE	0.002
PE→USE	0.21
SI→BI	0.14
SI→USE	0.002

The forthcoming effects: To examine the hypothesis (H4 and H5), forthcoming effects were measured and the outcomes drawn from the result have been given in the table IV. It shows us that the two hypothesis were supported, where e-HRM usage is progressively corresponded to the e-HRM potency at the policy level and also it has substantial effects on HRM discreteness. Furthermore, it is also progressively associated with e-HRM potency at the practice level and has substantial effects on HR responsiveness.

The interceding effects: Here H1, H2, and H3 represented interceding effects and to examine it, a bootstrapping method was introduced. This method has been suggested by Hayes (2017), and with it they estimated standard errors and 95% biased-corrected confidence intervals (CI) for contingent effects (Greenland et al., 2016). Finally, the 95 % CI of the contingent effect of the independent variable on the dependent variable via intercession must not have zero. Partial intercession will be accepted if the mentioned consequences are met, however, there exists a significant forthcoming impact of the independent variable on the dependent variable.

Therefore, to ratify an intercession affiliation, the forthcoming effect among the mediator and as well as the dependent and independent variables are tested. Hence, the results depict that Behavioral Impulsion has substantial and a forthcoming effect on Performance Expectancy and Peer Pressure whereas, a non-substantial but a forthcoming effect on Effort Expectancy. Additionally, the forthcoming effect of the interceder on the dependent variable (USE) has proved to be substantial (p-=0.189, t=4.274***). Finally, the forthcoming effect in the midst of PE and USE has resulted to be substantial, whereas the forthcoming effect in the midst of EE and USE, and SI and USE has proven to be non-substantial. It leads to the analysis that the partial intercession can be discovered for BI on the PE-USE relationship, but no intercession for BI on the EE-USE affiliation does not exist. Also, full intercession has been observed for BI on the SI-USE affiliation if the rest of

requirements of intercessions are met. And Table IV will show the results for this analysis. The bootstrapping technique can be seen in Table V.

Table 4. Test of forthcoming effects

Forthcoming Effect	p-value	t-value
PE→BI	0.483	10.771***
EE→BI	0.064	1.012
SI→BI	0.208	3.801***
BI→USE	0.285	6.885***
PE→USE	0.251	5.974***
EE→USE	-0.013	0.318
SI→USE	0.049	1.157
Notes: n=121.*p<0.0.05;**p<0.01;***p<0.001		

Table 5. Results of mediating effects

H	CI	Beta	t-value	95% Confidence Low	IH
H1	PE-BI-USE	0.136	5.161***	0.092	0.193
H2	EE-BI-USE	0.018	1.021	-0.019	0.53
H3	SI-BI-USE	0.011	3.100**	0.024	0.101
Notes: n¼121. **p>0.01; ***p>0.001					

Conclusion

This research suggests that electronic Human Resource Management is progressively related to Human Resource Management potency. Also, behavioral impulsion has proved to serve as an interceding channel amongst the electronic Human Resource Management determining factors i.e. performance expectancy, peer pressure and electronic Human Resource Management use. Furthermore, the hypothesis has been supported but along with some limitations. First of all, the study was based on cross-sectional data which signifies that there was causality in determining because the data was collected at a single point in time. Second, there was generalizability in the findings of the data. The data collection in this study was limited towards single industry, therefore we don't know the outcome for other industries. However, it shows a positive response towards electronic Human Resource Management usage and Human Resource Management potency, showing support towards the hypothesis.

Moreover, the study has suggested that electronic Human Resource Management usage will progressively and substantially effect HRM potency at both policy and practice levels. Also, it shows that e-HRM plays a crucial function in strengthening the HRM framework by improvising the clarity and enhancing the stability of HR messages. It will also create agreement of all the employees on the principals HR practices which will be executed in the organization. The finding of the study has also approved the argument that HR managers use e-HRM to validate the HR purpose by developing it into more professional which will add into its visibility.

In this study the researcher also discovered that behavioral impulsion partially intercedes the affiliation/link in the midst of performance expectancy and e-HRM use and completely intercedes the link in the midst of peer pressure and e-HRM usage. It depicts that performance expectancy and peer pressure have contingent influence on e-HRM usage through the behavioral impulsion to use e-HRM. This study provides various managerial implications as well. It suggests that in order to achieve the strong and quality HRM framework, you need to influence the utilization of electronic Human Resource Management framework. So, the employees should be provided with the electronic Human Resource Management framework where they can easily view the HRM activities which will generate effective Human Resource Management framework.

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ZAKRES E-HRM I JEGO EFEKTYWNOŚĆ

Streszczenie: Celem tego badania jest wskazanie zakresu i potencjału elektronicznego zarządzania zasobami ludzkimi w organizacjach. Jeśli chodzi o cyfryzację naszej obecnej kultury korporacyjnej, e-HRM był opisywany już od dość dawna. Jest on bardzo często używany wśród organizacji i jest bardzo popularny w świecie zachodnim. Autorzy poszukują czy takie podejście, dotyczy także kultury korporacyjnej Malezji. W celu wskazania siły i zakresu elektronicznego zarządzania zasobami ludzkimi, zostały zebrane dane od różnych firm technologicznych w Malezji. Badanie to przyczyni się do opracowania literatury dotyczącej zarządzania zasobami ludzkimi i określi siłę e-HRM oraz jego wykorzystanie.

Słowa kluczowe: czynniki determinujące E-HRM, wykorzystanie E-HRM, siła działania HRM.

H-HRM 的范围及其有效性

摘要：目的 – 本研究的动机是发现组织中电子人力资源管理的范围和潜力。根据我们当前企业文化的数字化，我们已经遇到了 e-HRM 很长一段时间，这个概念相对来说不是很新或很老。它非常慷慨地在组织中使用，并且在西方世界非常流行。我们想知道这是否也适用于马来西亚的企业文化。为了发现电子人力资源管理的效力和范围，数据来自马来西亚的各种技术公司。该研究将有助于人力资源管理文献，并确定电子人力资源管理及其使用的效力。

关键词：E-HRM 决定因素，E-HRM 使用，HRM 效能。