

## Association between Electronic Human Resource Management Usage and Organizational Citizenship Behavior

Mohammad Shariful Islam<sup>1</sup>

Md. Ali Akkas<sup>2</sup>

### Abstract

*Technology is the master key for the growth and development of an organization. It fuels employees to become highly effective in their roles and shapes a sustainable organization. Organizational citizenship behavior (OCB) is a highly regulated employee role behavior. While a few previous research claimed the association between traditional human resources management practices but the present research attempts to investigate the relationship between electronic human resources management (e-HRM) usage and OCB. To fulfill the research interest, the primary data were collected through a structured questionnaire and non-probabilistic judgmental sampling techniques were applied to determine the sample size. There were 22 pharmaceuticals and 120 targeted respondents. The structural equation model approach was used to determine the extent of the relationship. The study revealed that there is a significant positive relationship between e-HRM like e-training, e-performance appraisal with OCB, and a negligible relationship with e-selection. The finding of the study will be a strong tool for managers and leaders. In the end, the future directions and implications are articulated.*

**Keywords:** e-HRM, Organization Citizenship Behavior, Pharmaceuticals, Bangladesh

### 1. Introduction

The common phenomenon in firms is that employees perform whatever is assigned to them. Doing anything beyond may not come through a general arrangement but rather warrants a special set of things. This special thing stimulates the work of people, changes their total behavior and turns them from machines to citizens. Notably, the behavior navigates their action, and the action demands innovation, efficiency, and doing beyond. In this line of thought, the human resources management (HRM) research identified OCB as an influential social and psychological aspect of employee work behavior. It highly impacts overall performance if employees feel happy with accomplishing their role, explore a high extent of affective commitment, and maintain a strong relationship. Empirically tested that OCB is impacted by employee role which is transferable from one to another. That means if the work system is perfect the work behavior is almost perfect (Harwiki 2016). For this reason, research attested that inculcating OCB requires the systemic work standard and state of art procedures (Valeau and Paillé 2019) our research model

includes a perceived organizational support (POS). Similarly, other research recognized the role of HRM and advocated the formulation of the best strategy to maximize employee satisfaction from doing the work(Bolino, Turnley, and Averett, 2003). The HRM theorists attested that innovation

<sup>1</sup> Assistant Professor, Bangladesh Army International University of Science and Technology, Cumilla

<sup>2</sup> Professor, Department of Management, University of Dhaka



and progressive HRM practices can build the block of OCB and the total performance of the firms. They further argued that progressive HRM facilitates a congenial work environment that inspires the discretionary behaviors of employees (Kizilos, Cummings, and Cummings, 2013). For this reason, the usage of e-HRM emerged in the last decades that claimed sustainability and state of art solutions for employee work (Stone and Dulebohn, 2013; Marler and Fisher, 2013)

The e-HRM is a technology-based integrated, automated, and strategic HRM function that transformed paper-based operational-administrative HRM functions in the areas of recruitment, training, performance appraisal, compensation, and handling grievances (DeCenzo and Robbins 2013; Parry 2011; Lengnick-Hall and Moritz 2003). It promotes new features in the association of HRM and information technology (IT) on one footing that diversified the functional process of HRM (Masum et al. 2020). Previous scholars claimed in a different context that the influx of technology explored an innovative way to enhance employee efficiency, performed the job effectively, and allowed creative ideas of work that boost the wheel profit (Bondarouk and Brewster 2016; Johnson and Stone 2018). Similar research opined that the e-HRM lessens the manual work burden, raises efficacy, reduces paperwork, and cooperative attitude toward colleagues, and optimizes the cost (Bissola and Imperatori 2014; Fındıklı and Bayarçelik, 2015). As previous studies attested the advantage of the work system to enhance OCB, the researcher in the study attempted to explore whether the relationship between e-HRM and OCB is significant in the pharmaceutical setting in Bangladesh. The pharmaceutical sector has a total market size of \$2.6 billion (Jalil, Ullah, and Islam 2017) and has an annual growth rate of 11.1% (Islam, Rahman, and Al-Mahmood 2018). The export earnings are \$103.46 million (FY 2018) and local companies hold 90% market share and local demands meet 98% (Jalil, Ullah, and Islam 2017). The opinion arises to check the association due to the behavioral differences between the employees and the business houses. From the managerial context if the relationship strongly exists OCB practices would more gain advantages. Moreover, this practice will enhance holistic performance. Besides, the outcome of the study will come with a new thought of knowledge, practices among the industry executives, and develop relevant policies. Thus, the research attempted to measure the relationship. The objectives of the study are *to examine the relationship between e-HRM (e-selection, e-training, e-performance appraisal) and OCB, and to predict the extent of influence between the two constructs.*

## 2. Literature Review

### 2.1 Organizational Citizenship Behavior (OCB)

OCB delineates the role of employees to act beyond routine things. It may not always directly connect to the task but add value to the total performance. Previously it was defined in the sense of employee ability, the satisfaction that drives him to do best from better. The inception of the terminology is considered in the context of a motivational basis (Katz 1964). Later on, author Organ (1988) recognized OCB as the good soldier's syndrome. According to him the soldier (employees) can make something extra in the task that drives the overall performance.

Modifying the Organ's foundational view, the five components of OCB are discussed later. According to Podsakoff et al. (1990), the components are altruism-a kind of arbitrary behavior of employees that influences colleagues, and fellows to resolve the relevant job task or difficulties. *Conscientiousness*-a form of employee role behaviors beyond the least expected in the field of attendance, compliance with firms' rules and procedures, taking breaks and others, sportsmanship denotes the inclination to accept irregular or abnormal things without objection like avert complaining, petty dissatisfactions, avoiding small matters rather absorb. *Courtesy* states that arbitrary behavior on the employee side obstructs possible occurrences of work-related problems. *Civic virtue* is a type of behavior when employees are accountably involved as well as care for the future of the firm. Successor researchers termed OCB in extended meaning a source of star performers (Kelley and Caplan 1993; Bolino, Turnley, and Averett, 2003).

## 2.2 HRM and e-HRM

HRM entails the sum-total process of people acquisition (selection), training and development, managing performance, compensation, grievance management, employee assistance, and facilitating services in a firm. Moreover, it aids the utilization of people capital at work, mounting required skills and task motivation to achieve task performance commitment from employees and for the organization (DeCenzo and Robbins 2013). In other words, it is a non-e-HRM equipped with labor- intensive, manual paper works, back-ended, administrative support services, and maintenance of staff (DeCenzo & Robbins 2013; Marler & Parry 2016). Conversely, electronic HRM ( e-HRM) is a techno-savvy process where the employee's usage ICT enabled software to perform HRM tasks. Scholars like Bissola and Imperatori (2014) and Iqbal, Ahmad, and Allen (2019) opined that the e-HRM is like new leaves in the old tree that fully rely on integrated processes instead of conventional pen and paper and warrants ICT to perform.

## 2.3 The e-HRM and Its Usage

The e-HRM came into scholarly discussion while e-movement take place around the globe in the year 1990. Consequently, researchers at that time revisited the meaning of e-HRM. In that contemporary research, scholars adopt the terms human resource information system (Parry and Tyson 2008); Cloud HRM (Gardner, Lepak, and Bartol 2003);electronic-HRM (Ruël and Bondarouk 2014); digital HRM(Stone et al. 2015); computer-based HRM(Huselid, Jackson, and Schuler 1997); web-based HRM (Lengnick-Hall and Moritz 2003); HRM by ICT (Yusliza and Ramayah 2012); HRM portals(Marler 2009); virtual HRM and HRIT(Lepak and Snell 1998).

The uses of e-HRM have been revealed in some research in the last decade. For instance, Arefin and Islam (2019)the effectiveness with which training is transferred primarily depends on the motivation to transfer. There is extant research from recent years on the motivation to transfer training in different industries and in this sector. However, little is known about the motivation to transfer training in the banking industry of Bangladesh. Thus, this study attempts to identify the factors that influence the motivation to transfer training in the banking sector of Bangladesh. A sample of 275 employees who obtained training from banks was surveyed using a structured

questionnaire. Data were analysed using the structural equation modelling (SEM) identified the usage of HRIS in the pharmaceutical industry to boost a firm's performance. While studies on factors of e-HRM usage revealed that social influence, performance attributes, expected effort, facilitating condition, individual attitude to the technology, owner support, compatibility, internal IT setup, cost nature, and competitive pressure (Quaosar 2018; Masum et al. 2020; Alam et al. 2016) this study plans to explore the determinants impact on HRIS adoption in a developing country. A research model was developed after studying the existing literature, and a questionnaire was developed accordingly to collect data through a purposive sampling method. Materials and Methods: To assess adoption of human resource information system, this study applied the Unified Theory of Acceptance and Use of Technology (UTAUT). Studies claimed a remarkable lifting of e-HRM in different sectors of Bangladesh like banks, hospitals, and RMGs (Masum, Bhuiyan, and Kabir, 2013; Chowdhury, Sarker, and Afroze, 2012). Similarly, in other local organizations and service sector setting the research recognized the explorations of e-HRM like HR planning, training, salary and budgets, compensation and OTs (Bhuiyan and Rahman, 2014; Akkas, 2017; Hosain, 2017). Additionally, the e-HRM practices in Bangladesh also claimed in a comparative situation between public-private firms (Islam 2016); increased usage in India (Nivlouei 2014; Pandey and Kumar 2017); scanty usage in Thailand (Choochote and Chochiang 2015) the study reveals that the hotel business has applied the use of the e-HRM varying in job recruitment (15 percent; variation of usage in the context of Sri Lanka (Pratheepan and Anthonypillai 2012). Based on the above analysis in different settings, it can be claimed that e-HRM usage is somewhat seen.

## 2.4 Relationship between e-HRM Usage and OCB and Hypothesis Development

In the Bangladesh context, the studies on the relationship between e-HRM and OCB were not reported. However, little research on non-e-HRM is evident. To explore further, south Asian, developed and developing countries contexts were searched and revealed a mixed result. The summary of the relationship is depicted in table 1.

**Table1: Summary of relationship between e-HRM usage and OCB**

Author	Key findings	Tools, Industry, Country	Gap (theoretical, contextual, tools)
Renee Baptiste (2008)	The study revealed that high performance HRM like real life training, employee participation, communication, and strategic compensation influence employees to excel in their OCB).	Regression Government sector; North England	e-HRM usage like e-selection, e-training, e-performance, PLS-SEM; pharmaceuticals, Bangladesh

Nuralina et al. (2020)	The research claimed that transformational, relational (e-HRM) stimulates employee outcome (OCB) and this association enhances HRM service quality.	PLS-AMOS; Government offices; Indonesia	e-HRM usage. pharmaceuticals, Bangladesh
Fajar and Soeling (2017)	The research evident that HRM Practices positively effect employee organizational citizenship behavior	Regression; ICT company; Indonesia	e-HRM usage. pharmaceuticals, Bangladesh
Khashman and Al-Ryalat (2015)	The analysis shed light on the relationship between that e-recruitment, e-selection, e-training, e-performance appraisal, e-communications, e-compensation, and operational performance (time, cost, flexibility)	Regression; Telecommunication; Jordan	e-HRM usage. pharmaceuticals, Bangladesh
Ahmed (2016)	The study investigates the HRM practices and OCB and found a significant relationship between constructs.	Regression; Bank; Sudan	e-HRM usage; PLS-SEM; Pharmaceuticals, Bangladesh
Iqbal, Ahmad, and Allen (2019)	Impersonal trust intervenes the association between technologies enabled HRM (relational HRM) and perceived employee productivity (OCB).	PLS-SEM; Banks; Pakistan	e-HRM usage; pharmaceuticals, Bangladesh
Choo and Nasurdin (2014)	This enquiry showed that training, performance appraisal and information sharing (HRM practices) exerted positive and significant effects on service-oriented citizenship behavior in service industry.	Regression; Hotels; Malaysia	e-HRM usage; PLS-SEM; Pharmaceuticals; Bangladesh
Valeau and Paillé (2019)	The analysis claimed the positive association between progressive HRM practice with OCB	PLS-AMOS, Therapist, Canada	e-HRM usage; PLS-SEM; Pharmaceuticals; Bangladesh
Hosain (2017)	The examination revealed a positive linkage between e-selection, e-learning, e-performance management, e-compensation & benefit, HRIS & e-communication, e-personal profile ( e-HRM usage) with financial performance.	Regression; Service sector; Bangladesh	e-HRM usage; PLS-SEM; Pharmaceuticals; Bangladesh

## 2.5 The E-Selection and OCB

The relationship between selection and OCB is somewhat evident. For example, Begum, Zehou, and Sarker, (2014) had enquired about the association and revealed a positive association. In a similar domain, Chang et al. (2016) discovered the association between two constructs in the context of primary school teachers. Research on a firm's performance attested to the association

between HRM and OCB. Moreover, the technology-focused research found a relationship between web-based HRM and employee innovative role 'OCB' (Fındıklı and Bayarçelik 2015). In a similar line, Nuralina et al. (2020) explored the e-HRM and employee performance 'OCB'. Conversely, some research revealed that e-HRM is not highly associated with employee tasks but with a firm's performance (Hosain 2017). Similar research claimed that the association between the public and private sectors is differed due to the nature of employment and the process (Geus et al. 2020) research often does not take specific public sector characteristics or concepts into account. Based on the available evidence, the authors develop a framework of antecedents, outcomes, mediators, and moderators of OCB. Three areas for future research are recommended: (1. Based on the above review we can propose the following hypothesis.

***Hypothesis 1: E-Selection has a positive relationship with OCB***

## **2.6 E-Training and OCB**

Training plays a pretty much important place in OCB. It outflows the aggregate effective functioning of the firms. The argument in favor of the relationship is revealed in empirical research. Ahmad (2011) advocated the persistence of the association between training and OCB. The study suggested that the OCB can be leveraged through training initiatives. Notably, the OCB in a trained employee is higher than that of non-trained employees. Further assessed in research that training can directly influence OCB (Memon et al. 2017). Stressing on the technology some empirical studies raised that e-training programs can boost employee work spirit, tendency to cooperate with the fellows, and willingness to work beyond if they are skilled (Khoualdi and Al-Ahmadi 2016; Kamal, Aghbari, and Atteia 2016). A similar vein of research attested that the cognitive-behavioral changes are the result of training transfer. Particularly if employees provide a techno-friendly training environment may increase their learning level, share, exchange ideas and participate in the firm's knowledge sharing process (Geus et al. 2020). After analyzing the above, it is revealed that the relationship between the constructs somewhat exists. Thus, we may develop the following hypothesis:

***Hypothesis 2: E-Training has a positive relationship with OCB***

## **2.7 E-Performance Appraisal and OCB**

Performance appraisal is one of the unitary processes of making HRM more meaningful. It is highly important to create the credibility of the system to motivate employees. The research of Zheng, Zhang, and Li (2012) discovered that OCB becomes more strong in presence of performance appraisal. Though Ahmed (2016) found the relationship is some what complex. Therefore, Poursafar et al. (2014) explore the need for performance evaluation to inculcate the OCB. Putting the technology-oriented functions the research Al-Raisi (2011) and Rondeau (2018) asserted the need for e-performance appraisal to prevail in a positive climate in innovative job behavior, thinking the feeling of engagement. In this viewpoint, Khashman and Al-Ryalat (2015) explored the impact of e-performance lead to the firm's performance through employee performance. However, the assessment should be mutually understandable and communicated between the parties involved. After evaluating the above connection in the research, we can design the following hypothesis:



***Hypothesis 3: E-Performance appraisal has a positive relationship with OCB***

## **2.8 Underlying Theory and Conceptual Framework of the Study**

The extent of employee role to achieve firms' objectives should be super-ordinately matched. It is neither the employee himself who can make the best nor the firm itself. This is the relationship of exchange between the two sides of the field. The social exchange theory synthesized the association between these two teams in the firm's playground. According to Homans (1961), the transactional attitude congenially persists if the employer can satisfy the employee's needs, the employee will automatically perform better. Later on, Blau (2017) dig deeper and opined that when employees feel motivated, esteemed, and caring, they can foster attributes and true behavior of work accomplishment. The e-HRM has grounded in institutional theory, a technology acceptance model (TAM), and a *unified theory of acceptance and use of technology* (UTAUT). The institutional theory examined the outcome of innovation adoption in the management system (Barringer and Milkovich 1998; Abrahamson and Fairchild 1999). The TAM model and UTAUT underscored the factor of adopting the e-system (Venkatesh and Davis 2000). Based on the assumption of the theories the framework of the research is designed. The framework depicted e-HRM-OCB as a new and emerging field of knowledge in research.

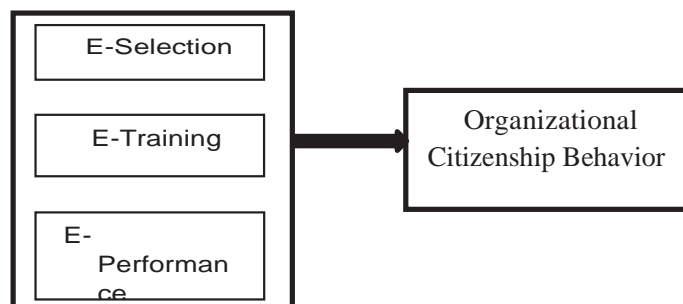


Figure: The conceptual framework of the research (2021)

## **3 Research Methodology**

### ***3.1 Research Design***

The research is two-way relational in nature. It reflected a bridge between the constructs. To that, the researcher developed a hypothetical association between the constructs. Data were obtained from the selected respondents of the organizations. The items of constructs were developed according to the previous research in a different setting. Structural equation modeling was employed to measure the path relationship among the constructs.

### ***3.2 Measurement Scale***

The constructs are measured by adapting the items from the previous research scale in this field. The e-HRM called e-selection, e-training, and e-performance appraisal are independent variables (IV) and the OCB is the dependent variable in the study. The scale was adapted from previous studies. Accordingly, the e-selection is explained by five items (Lang et al. 2011); e-training is explained by five items (Chen 2010); the e-performance appraisal is explained by five items (Al-Raisi 2011). The dependent variables (DV) OCB are explained by six items (Podsakoff et al. 1990). According to Podsakoff et al. (1990), the OCB consists of five dimensions such as courtesy, altruism, sportsmanship, civic virtue and conscientiousness. In line with this, we have adapted six items to measure the OCB like 1\*item for courtesy, 1\* for altruism, 1\* items for sportsmanship, 1\* for civic virtue, and 2\* for conscientiousness. The items of all constructs were measured using a 7-point Likert scale i.e. from strongly disagree to strongly agree.

### ***3.3 Sampling Frame and Unit***

The target population is the managerial employees of pharmaceutical companies in Bangladesh. There are about 862 pharmaceuticals in Bangladesh in the category of Allopathic (278), Unani (266), Ayurvedic (207), Homeopathic (79), and Herbal (32) (Jalil, Ullah, and Islam 2017). The exact number of employees in this sector is not available in relevant sources. Every single e-HRM using firm is the respondent. The e-HRM employed firms are meant that at least implemented the e-HRM system like selection, training, and performance appraisal. An effectively furnished questionnaire warrants required knowledge of the technology, and market conditions of business. In this research, the multiple respondents from single organizations were considered to overcome single respondent bias (Hong and Kim 2002). The unit of response was managerial employees. Thus, we have collected the responses from more than one department head, and HR managers who have been working for at least three years in pharmaceuticals.

### ***3.4 Sampling Technique and Sample Size***

The purposive sampling (JPS) technique was employed to select the respondents. A total of 22 allopathic pharmaceuticals were approached to participate in the study. According to Malhotra, and Dash (2015), this method can be applied when the population is not listed and recorded. The frame can be developed with many reliable sources such as published directories, geographical lists, association data, membership data, and every other type of formal printed or electronic database. The sample of the survey can be obtained from that population. Moreover, this sampling method provides relevant results where the researcher looks for data that are found to be fit and capable to provide adequate information (Sekaran and Bougie 2016). There are few more justification for using the sampling techniques like minimum cost and easy access, dependable result, and wider acceptability to predict the association (Cooper, and Schindler 2011; Hulland, Baumgartner, and Smith, 2017).

The sample size was the organizational representative of the targeted pharmaceutical companies. To fix the sample size, there should be the lowest possible but statistically feasible sample size (Sekaran and Bougie 2016). The sample size should be 10 times higher than the

number of variables of the study. Accordingly, the lowest sample size of this study will be 40 ( $4 \times 10$ ). To use PLS-SEM, it is suggested to set a sample of a minimum 10 times higher than several relational paths (Hair, Ringle, and Sarstedt 2011) SEM is equivalent to carrying out covariance-based SEM (CB-SEM). In this study, there will be three paths. Thus, this study requires a minimum  $(3 \times 10) = 30$  sample respondents. Initially, the researchers distributed 120 questionnaires, among them 105 were returned and 96 questionnaires were found best suitable to use. Therefore, the current study finalized a total of 96 sample respondents. The response rate of 80% was considered complete because prior scholars suggested an acceptable rate of 29% in the context of Bangladesh (Rubel and Kee 2015). In this regard, the respondents have been selected from the company's local office in Dhaka divisions and Cumilla city.

#### ***4.6 Questionnaire Development and Data Collection.***

The questionnaire consists of two segments. Part one consists of the demographic profile of the respondents and part two consists of the key questions of research interest. The statements were assessed using a 7-point Likert scale i.e. from strongly disagree to strongly agree. The primary data were collected through a hybrid method such as a google form, and physical contact (Lee, Che-Ha, and Syed Alwi 2021). It happened due to COVID 19 outbreak and lockdown situations. The period of data collection was from July 2020 to December 2020.

#### ***4.7 Reliability and Validity***

The present research has employed reliability and validity measurement through composite reliability (CR) and Cronbach's Alpha average variance extracted (AVE) followed the parameters of previous research (Chin, 2010). Besides the discriminant validity was measured using the Fornell-Larcker criterion suggested in similar research (Hair, Ringle, and Sarstedt, 2011) SEM is equivalent to carrying out covariance-based SEM (CB-SEM). The questionnaire was pretested by the expert of the university professor and the HR professionals of the pharmaceutical industry. The cross-sectional survey was conducted to record data in a single time.

#### ***4.8 Data Analysis Technique***

To analyze data, two software were used such as statistical package for social sciences (SPSS) and SMART-PLS. The former one was used to get the data ready for descriptive analysis. The latter one was executed to determine the confirmatory factor analysis (CFA), composite reliability, validity of items; discriminant validity for constructs; and also, the hypothesis test to get the result (Hair, Ringle, and Sarstedt, 2013).

### **5 Analysis of Data**

#### ***5.1 Demographic Profile***

The demographic profile of the respondents is shown in table 2. In the profile, there are three age groups where the maximum respondent is in the age group of 36-45 (47%). We have considered the manager or the head of the department role. In the data setup the maximum number of respondents is male (70%). It may happen due to the higher number of males working as the

departmental heads. The service experience of the respondents is highest in the 3-10 years group (52.08%). As we have designed the sample to accept the respondent not less than three years.

*Table 2: Demographic profile of the Respondent*

Categories	Level	Frequency	Percent	Valid %	Cumulative %
Age	25-35	42	43.75	43.75	
	36-45	45	46.88	46.88	90.63
	46-50	9	9.38	9.38	100
	Total	96	100	100	100
Gender	Male	67	69.79	69.79	
	Female	29	30.21	30.21	100
	Total	96	100	100	100
Experience (in years)	3-10	50	52	52.08	
	11-20	35	36	36.46	88.54
	20 Plus	11	11	11.46	100
	Total	96	100	100.00	100

## 5.2 Output of the Measurement Model

The measurement model of PLS algorithm showed in the following figure.

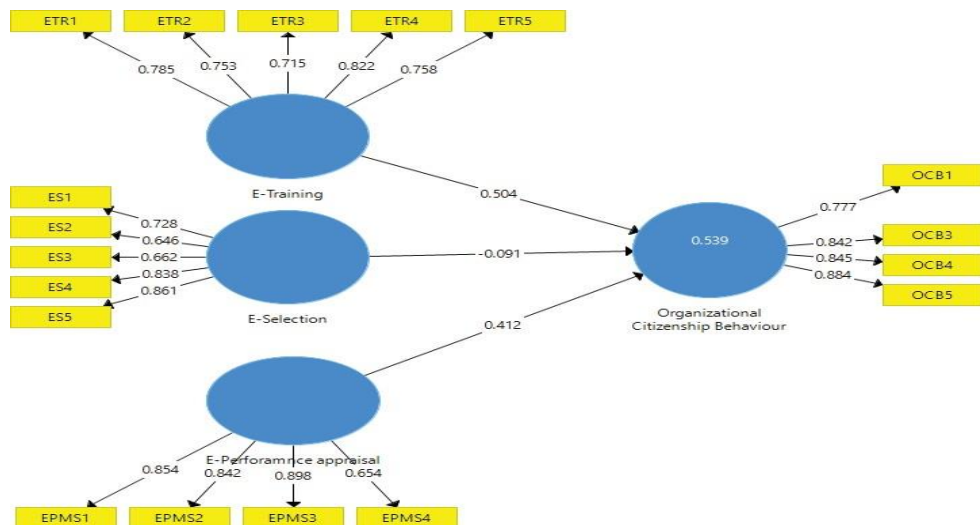


Figure 1: Measurement model

In the measurement model, the confirmatory factor analysis was executed to test scale reliability and validity. In table 3 convergent validity is computed based on average variance extracted (AVE) and composite reliability (CR). The accepted loading indicators of each construct are higher than .60 (Chin 2010). Some indicators have been omitted due to a poor loading score (less than .60). The omitted items are OCB 2[0.507], OCB6[0.581], E-PMS5[0.530]. The obtained value of AVE and CR is found to be significant to accept as the result is in the range of 0.5 to 0.7 respectively (Chin 2010). According to the obtained values, this can be confirmed that The proposed model has attained the convergent validity.

*Table 3: Summary of measurement model*

Variable	Items	Loading Score	CR	AVE	Cronbach's Alpha	
OCB	OCB1	0.777	<b>0.9</b>	<b>0.7</b>	<b>0.86</b>	
	OCB3	0.842				
	OCB4	0.845				
	OCB5	0.884				
E-Performance appraisal (E-PA)	EPMS1	0.854	<b>0.89</b>	<b>0.67</b>	<b>0.83</b>	
	EPMS2	0.842				
	EPMS3	0.898				
	EPMS4	0.654				
E-Selection	ES1	0.728	<b>0.87</b>	<b>0.57</b>	<b>0.83</b>	
	ES2	0.646				
	ES3	0.662				
	ES4	0.838				
	ES5	0.861				
E-Training	ETR1	0.785	<b>0.88</b>	<b>0.59</b>	<b>0.83</b>	
	ETR2	0.753				
	ETR3	0.715				
	ETR4	0.822				
	ETR5	0.758				

**Table 4: Output of Discriminant Validity**

Variables	E-PA	E-Selection	E-Training	OCB
E-PA	<b>0.82</b>			
E-Selection	0.33	<b>0.75</b>		
E-Training	0.45	0.62	<b>0.77</b>	
OCB	0.61	0.35	0.63	<b>0.84</b>

N.B The diagonal showed in bold explained the square root of the AVE

The discriminant validity computed in table 4. The calculation followed the Fornell-Larcker criteria suggested by previous research (Hair, Ringle, and Sarstedt, 2013). According to the criteria, the square root of AVE should be greater than the relations of latent variables of each off-diagonal. So, they successfully qualified the criteria.

*Table 5: Summary of Path Model*

Paths	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics ( O/STDEV )	P Values	Decision
E-PA -> OCB	0.41	0.41	0.08	4.95	0.00	Supported
E-Selection -> OCB	0.09	0.06	0.1	0.9	0.37	Not supported
E-Training -> OCB	0.5	0.49	0.11	4.57	0.00	Supported
Note: *p< 0.05, **P< 0.01 (based on one-tailed test with 1000 bootstrapping); Confidence interval bias corrected at 97.5%						

The three-dimensional e-HRM usages are exogenous variables and OCB is treated as an endogenous variable. The table has evidence that the e-HRM indicators like E-Selection ( $\beta = 0.09$ ,  $p < 0.05$ ), have no significant impact on the OCB. On the other hand, the relation between the e-HRM indicators with OCB like e-PA-OCB ( $\beta = 0.41$ ,  $p < 0.05$ ); e-Training-OCB ( $\beta = 0.50$ ,  $p < 0.05$ ), shows a significant relationship. Moreover, the relationship between the latent variable shows a positive correlation between e-training with OCB and e-PA with OCB. There is an insignificant relationship between e-selection and OCB. The collinearity statistics called variance inflation factor (VIF) is fall in the acceptable range of 1.47-3.00. The R2 value of OCB is resulted in .54 which is at a ‘substantial level’ and accepted to strengthen the analysis(Hair et al. 2014)

## 5 Discussion

The current study has examined the association between e-HRM usage and OCB. The outcome of the analysis shows a positive association between the two dimensions of e-HRM usage, namely e-training and e-performance appraisal with OCB. The statistical tools and values befitted some important contributions. Relevantly, the result of the study has supported the findings of previous studies in traditional HRM and e-HRM settings. This result of the association infuses a new branch of academic thoughts like ‘technological innovation at the workplace’ for the users and all stakeholders. Likewise, e-training has become a fundamental demand to move forward and adapt to industry web 4.0. The outbreak of COVID 19 has steered the wheel of the digitalization engine enormously. Many organizations become compelled to accept the changes that could otherwise take a long time. Remarkably, the usage of e-training is one of the champions. Indeed, it drives the employee to become more engaged with obtaining the firm’s objective of working from home.

This is a revolution of exploring OCB in the form of the e-platform. Similarly, the association between e-performance appraisal with OCB has evident. No firm in the world can survive if the employees are not properly evaluated and rewarded. The relationship shows significance because the technology-based system is open, fair and two ways between the leader (appraiser) and subordinates (appraisee). Using e-performance appraisal is a wonderful way of exchanging feedback, sharing the areas of improvement, talent management and succession planning which is not revealed in the conventional annual paper-based appraisal process. Thus, the process keeps the employee motivated and owning attitude to obtain individual and firms' goals. However, the significant relationship between e-selection and OCB was not evident. It is probably due to the nature of the role engagement and industry work process. Theoretically, an employee becomes effort- oriented, and achievement-focused once he is in the role (Marler and Parry 2016). And the role is assigned after selection and placement. Essentially, OCB is a post-selection behavior that develops once an employee is involved in the work process. So before joining with the firm's role nature it may be complex to be a part of OCB.

## **6 Conclusion and Future Directions**

The prime attempt of this research is to investigate the extent of association between e-HRM usage and OCB in the pharmaceuticals setting of Bangladesh. People are the distinguished resources in an emerging economy. Despite managing the complex task of 'people' around the globe it has no second option. For the sustainable future of every business and non-business firm, the work system warrants state - of =the= art technology, patronized facilities, and readily available support. The current study has firmly enquired about research problems and come up with significant findings. The relationship between e-HRM and OCB has been established in this research. The OCB increases if the e-HRM usage increases and reverse. One is undone in absence of another. This is more fueled by the dint of technology-digital explorations. Previous authors claimed the dearth of employee skills, and the absence of a techno-friendly environment system in the pharmaceutical industry and advocated the best IT adoption for capitalizing on the talent of the people.

The present investigation concentrated on a few e-HRM, and OCB based on a few selective dimensions. The e-HRM is emerging gradually in many other sectors. Business professionals have become more concerned about adopting technology due to COVID 19 outbreak. The future research can be explored by adopting a few more dimensions of e-HRM like e-compensation, e-leadership, e-payroll and industry settings like the service and trading sector. Besides, the size of the sample can also be bigger. Moreover, the research techniques like ranking of e-HRM functions, perceived OCB, direct and indirect effects, the longitudinal study can also be initiated in the future.

## **7 Implications of the Research**

### **7.1 Implications from a Knowledge Point of View**

The present research generated some unique contributions in the context of academic knowledge and theories. Firstly, the hypothetical relationship between the dimension of e-HRM and OCB has



been affirmed by the analysis except for e-selections. Besides the relation between latent variables is established. Secondly, the conventional non-e-HRM usage is superseded in this study and e-HRM has been underscored. This could add new literature to the academic fields. Thirdly, the research on e-HRM-OCB in the Bangladesh context and pharmaceuticals context is absolutely a new window for academic researchers and scholars. Fourthly, the methodology and research techniques may open the broader scope to think further. For example, the structural equation model showed both the observed and unobserved paths relationship that may strengthen the acceptability of results.

## 7.2 Implications from a Managerial Point of View

The outcome of this paper produces multiple implications for the managers though it is conducted on pharmaceuticals. The relationship may open the eyes of the leaders to allow the employee a fair system and environment to work in, a sense of freedom and respect with belongingness to foster OCB. If an employee can be equipped with innovation at work the output will be sustainable for a long time. Thus, the key stimulator of the paper is the stress on the professional managers who can construct a strong foundation of facilitating technology for their employees at work. More specifically, the traditional training system can be substituted through an e-system where the employee will be able to enrich their learning from the desk, the external training can connect them through the web, and the training materials may be delivered to them through a portable drive and their e-learning module maybe 24\*7 available to motivate their learning, etc. Similarly, a traditional performance appraisal system can be replaced by an e-system to make exchangeable, understandable, two-way feedback oriented, open and trustworthy process. After the adoption of this system, the OCB will be mounting at the top level. The professional practitioner in this field may consult the new process and its benefits. The ICT experts may develop a refined or customized module for smoother functioning based on the nature of the industry work process and SOPs.

## References:

- Abrahamson, Eric, and Gregory Fairchild. 1999. "Management Fashion: Lifecycles, Triggers, and Collective Learning Processes." *Administrative Science Quarterly* 44 (4): 708–40. <https://doi.org/10.2307/2667053>.
- Ahmad, Ashfaq. 2011. "Study of Work Environment and Employees' Performance in Pakistan." *African Journal of Business Management* 5 (December): 13227–232.
- Ahmed, Nazar Omer Abdallah. 2016. "Impact of Human Resource Management Practices on Organizational Citizenship Behavior: An Empirical Investigation from Banking Sector of Sudan." *International Review of Management and Marketing* 6 (4): 964–73.
- Akkas, M.A. 2017. "Digital HRM Practice in Bangladesh-Problems and Prospects." In *The 5th Stamford International and National Conference Proceedings*. Bangkok: Stamford International University. [https://conference.stamford.edu/pdf/Final\\_Conference\\_Proceeding\\_STIU\\_2017.pdf](https://conference.stamford.edu/pdf/Final_Conference_Proceeding_STIU_2017.pdf).



- Alam, Md Golam Rabiul, Abdul Kadar Muhammad Masum, Loo-See Beh, and Choong Seon Hong. 2016. "Critical Factors Influencing Decision to Adopt Human Resource Information System (HRIS) in Hospitals." *PLOS ONE* 11 (8): e0160366. <https://doi.org/10.1371/journal.pone.0160366>.
- Al-Raisi, Abdulaziz. 2011. "E-Performance Assessment System in Governmental Organizations in the United Arab Emirates." *Doctoral Dissertation, Coventry University*. <https://curve.coventry.ac.uk/open/items/037d44df-9c0f-478b-aa99-ced82ec23a0d/1/>.
- Arefin, Md. Shamsul, and Nazrul Islam. 2019. "A Study on the Motivation to Transfer Training in the Banking Industry of Bangladesh." *South Asian Journal of Human Resources Management* 6 (1): 45–72. <https://doi.org/10.1177/2322093718803210>.
- Baki, Birdoğan, and Kemal Çakar. 2005. "Determining the ERP Package-selecting Criteria: The Case of Turkish Manufacturing Companies." *Business Process Management Journal* 11 (1): 75–86. <https://doi.org/10.1108/14637150510578746>.
- Barringer, Melissa W., and George T. Milkovich. 1998. "A Theoretical Exploration of the Adoption and Design of Flexible Benefit Plans: A Case of Human Resource Innovation." *Academy of Management Review* 23 (2): 305–24. <https://doi.org/10.5465/amr.1998.533228>.
- Begum, S, S Zehou, and MAH. Sarker,. 2014. "Investigating the Relationship between Recruitment & Selection Practice and OCB Dimensions of Commercial Banks in China." *International Journal of Academic Research in Management* 3 (2): 146–54.
- Bhuiyan, Mohammad Rakib Uddin, and Rashedur Rahman. 2014. "Application of Human Resource Information System in the Firms of Bangladesh and Its Strategic Importance." *World Review of Business Research* 4 (3): 95–105.
- Bissola, Rita, and Barbara Imperatori. 2014. "The Unexpected Side of Relational E-HRM : Developing Trust in the HR Department." Edited by Dr Emma Parry and Professor Stefan Strohmeier. *Employee Relations* 36 (4): 376–97. <https://doi.org/10.1108/ER-07-2013-0078>.
- Blau, Peter. 2017. *Exchange and Power in Social Life*. Routledge. <https://doi.org/10.4324/9780203792643>.
- Bolino, Mark C., William H. Turnley, and Todd Averett. 2003. "Going the Extra Mile: Cultivating and Managing Employee Citizenship Behavior [and Executive Commentary]." *The Academy of Management Executive (1993-2005)* 17 (3): 60–73.
- Bondarouk, Tanya, and Chris Brewster. 2016. "Conceptualising the Future of HRM and Technology Research." *The International Journal of Human Resource Management* 27 (21): 2652–71. <https://doi.org/10.1080/09585192.2016.1232296>.
- Chang, Kirk, Bang Nguyen, Kuo-Tai Cheng, Chien-Chih Kuo, and Iling Lee. 2016. "HR Practice, Organisational Commitment & Citizenship Behaviour: A Study of Primary School

- Teachers in Taiwan.” *Employee Relations* 38 (6): 907–26. <https://doi.org/10.1108/ER-12-2015-0218>.
- Chen, Hsiu-Ju. 2010. “Linking Employees’ e-Learning System Use to Their Overall Job Outcomes: An Empirical Study Based on the IS Success Model.” *Computers & Education* 55 (4): 1628–39. <https://doi.org/10.1016/j.compedu.2010.07.005>.
- Choo, Ling Suan, and A. M. Nasurdin. 2014. “Do Human Resource Management Practices Affect Employees’ Service-Oriented Organizational Citizenship Behavior? Evidence from the Malaysian Hotel Industry.” *World Applied Sciences Journal* 31 (January): 253–66. <https://doi.org/10.5829/idosi.wasj.2014.31.02.32>.
- Choochote, Kitimapon, and Kitsiri Chochiang. 2015. “Electronic Human Resource Management (e-HRM) of Hotel Business in Phuket.” *International Journal of Advanced Computer Science and Applications (IJACSA)* 6 (4). <https://doi.org/10.14569/IJACSA.2015.060410>.
- Chowdhury, GH., Sarker, M.A.R, and Afroze, R. 2012. “Recent Unrest in the RMG Sector of Bangladesh: Is This an Outcome of Poor Labour Practices?” *International Journal of Business and Management / CCSE* 7 (3): 206–18. <https://doi.org/10.5539/ijbm.v7n3p206>.
- Cooper, D.R, and P.S Schindler. 2011. *Business Research Methods*. 11th ed. New York: McGraw-Hill,.
- DeCenzo, David A., and Stephen P. Robbins. 2013. *Human Resource Management*. 11th ed. New Delhi: Prentice-Hall of India Pvt. Ltd.
- Fajar, Ananda Putra, and P. D. Soeling. 2017. “The Effect of HRM Practices on Employee Organizational Citizenship Behavior in ICT Companies.” In . <https://doi.org/10.2991/ICASPGS-ICBAP-17.2017.11>.
- Fındıklı, Mine Afacan, and Ebru beyza Bayarçelik. 2015. “Exploring the Outcomes of Electronic Human Resource Management (E-HRM)?” *Procedia - Social and Behavioral Sciences*, 11th International Strategic Management Conference, 207 (October): 424–31. <https://doi.org/10.1016/j.sbspro.2015.10.112>.
- Gardner, Sharyn D, David P Lepak, and Kathryn M Bartol. 2003. “Virtual HR: The Impact of Information Technology on the Human Resource Professional.” *Journal of Vocational Behavior*, Special Issue on Technology and Careers, 63 (2): 159–79. [https://doi.org/10.1016/S0001-8791\(03\)00039-3](https://doi.org/10.1016/S0001-8791(03)00039-3).
- Geus, Christa J. C. de, Alex Ingrams, Lars Tummers, and Sanjay K. Pandey. 2020. “Organizational Citizenship Behavior in the Public Sector: A Systematic Literature Review and Future Research Agenda.” *Public Administration Review* 80 (2): 259–70. <https://doi.org/10.1111/puar.13141>.
- Hair, J. F, C.M. Ringle, and M. Sarstedt,. 2013. “Partial Least Squares Structural Equation Modeling: Rigorous Applications, Better Results and Higher Acceptance.” *Long Range Planning* 46 (1–2): 1–12.

- Hair, Joe F., Christian M. Ringle, and Marko Sarstedt. 2011. "PLS-SEM: Indeed a Silver Bullet." *Journal of Marketing Theory and Practice* 19 (2): 139–52. <https://doi.org/10.2753/MTP1069-6679190202>.
- Hair, Joe, Marko Sarstedt, Lucas Hopkins, and Volker G. Kuppelwieser. 2014. "Partial Least Squares Structural Equation Modeling (PLS-SEM): An Emerging Tool in Business Research." *European Business Review* 26 (2): 106–21. <https://doi.org/10.1108/EBR-10-2013-0128>.
- Harwiki, Wiwiek. 2016. "The Impact of Servant Leadership on Organization Culture, Organizational Commitment, Organizational Citizenship Behaviour (OCB) and Employee Performance in Women Cooperatives." *Procedia - Social and Behavioral Sciences*, 3rd Global Conference on Business and Social Sciences (GCBSS-2016) on "Contemporary Issues in Management and Social Sciences Research", Kuala Lumpur, Malaysia, 219 (May): 283–90. <https://doi.org/10.1016/j.sbspro.2016.04.032>.
- Homans, George. 1961. *Social Behavior: Its Elementary Forms*. Newyork: Harcourt Brace Jovanovich. <https://doi.org/10.2307/2574301>.
- Hong, Kyung-Kwon, and Young-Gul Kim. 2002. "The Critical Success Factors for ERP Implementation: An Organizational Fit Perspective." *Information & Management* 40 (1): 25–40. [https://doi.org/10.1016/S0378-7206\(01\)00134-3](https://doi.org/10.1016/S0378-7206(01)00134-3).
- Hosain, Md. 2017. "The Impact Of E-HRM On Organizational Performance: Evidence From Selective Service Sectors Of Bangladesh." *International Journal of Human Resources Management* 6 (April): 1–14.
- Hulland, J, H. Baumgartner, and K. M Smith,. 2017. "Marketing Survey Research Best Practices: Evidence and Recommendations from a Review of JAMS Articles." *Journal of the Academy of Marketing Science* 46: 1–17.
- Huselid, Mark A., Susan E. Jackson, and Randall S. Schuler. 1997. "Technical and Strategic Human Resources Management Effectiveness as Determinants of Firm Performance." *Academy of Management Journal* 40 (1): 171–88. <https://doi.org/10.5465/257025>.
- Iqbal, Naveed, Mansoor Ahmad, and Matthew M.C. Allen. 2019. "Unveiling the Relationship between E-HRM, Impersonal Trust and Employee Productivity." *Management Research Review* 42 (7): 879–99. <https://doi.org/10.1108/MRR-02-2018-0094>.
- Islam, Mohammad. 2016. "Evaluating the Practices of Electronic Human Resources Management (E-HRM) As a Key Tool of Technology Driven Human Resources Management Function in Organizations-A Comparative Study in Public Sector and Private Sector Enterprises of Bangladesh." *SSRN Electronic Journal*, January. <https://doi.org/10.2139/ssrn.2958055>.
- Islam, Sharmin, Aminur Rahman, and Abu Kholdun Al-Mahmood. 2018. "Bangladesh Pharmaceutical Industry: Perspective and the Prospects." *Bangladesh Journal of Medical Science* 17 (September): 519. <https://doi.org/10.3329/bjms.v17i4.38306>.

- Jalil, Altaf, Shariat Ullah, and Thoufiqul Islam. 2017. *Analysis of Skill Levels In The Pharmaceutical Sector Of Bangladesh*. Online. Dhaka: National Skills Development Council Secretariat (NSDCS).
- Johnson, Richard, and Dianna Stone. 2018. "The Advantages and Unintended Consequences of EHRM." In .
- Kamal, Khlood Bou, Mohamed Al Aghbari, and Mohamed Atteia. 2016. "E-Training & Employees' Performance a Practical Study on the Ministry of Education in the Kingdom of Bahrain." *Journal of Resources Development and Management* 18 (0): 1–8.
- Katz, Daniel. 1964. "The Motivational Basis of Organizational Behavior." *Behavioral Science* 9 (2): 131–46. <https://doi.org/10.1002/bs.3830090206>.
- Kelley, Robert, and Janet Caplan. 1993. "How Bell Labs Creates Star Performers." *Harvard Business Review*, July 1, 1993. <https://hbr.org/1993/07/how-bell-labs-creates-star-performers>.
- Khashman, Aysar, and Dr Al-Ryalat. 2015. "The Impact of Electronic Human Resource Management (E-HRM) Practices on Business Performance in Jordanian Telecommunications Sector: The Employees Perspective." *Journal of Management Research* 7 (March): 115. <https://doi.org/10.5296/jmr.v7i3.7462>.
- Khoualdi, Kamel, and Muaz Al-Ahmadi. 2016. "E-Training Technologies Application and Their Impact on Performance Development Case Study on the Ministry of Culture and Information Staff in Saudi Arabia." In *2016 3rd International Conference on Computing for Sustainable Global Development (INDIACom)*, 1390–96.
- Kizilos, Mark A., Chailin Cummings, and Thomas G. Cummings. 2013. "How High-Involvement Work Processes Increase Organization Performance: The Role of Organizational Citizenship Behavior." *The Journal of Applied Behavioral Science* 49 (4): 413–36. <https://doi.org/10.1177/0021886313479998>.
- Lang, Stefan, Sven Laumer, Christian Maier, and Andreas Eckhardt. 2011. "Drivers, Challenges and Consequences of E-Recruiting: A Literature Review." In *Proceedings of the 49th SIGMIS Annual Conference on Computer Personnel Research*, 26–35. SIGMIS-CPR '11. New York, NY, USA: Association for Computing Machinery. <https://doi.org/10.1145/1982143.1982152>.
- Laudon, K.C, and J.P Laudon. 2011. *Essentials of Management Information System*. 10th ed. USA: Pearson Publications,.
- Lee, Corrinne Mei Jyin, Norbani Che-Ha, and Sharifah Faridah Syed Alwi. 2021. "Service Customer Orientation and Social Sustainability: The Case of Small Medium Enterprises." *Journal of Business Research* 122 (January): 751–60. <https://doi.org/10.1016/j.jbusres.2019.12.048>.
- Lengnick-Hall, Mark L., and Steve Moritz. 2003. "The Impact of E-HR on the Human Resource Management Function." *Journal of Labor Research* 24 (3): 365–79. <https://doi.org/10.1007/s12122-003-1001-6>.

- Lepak, David P., and Scott A. Snell. 1998. "Virtual HR: Strategic Human Resource Management in the 21st Century." *Human Resource Management Review*, Special Issue: Strategic Human Resource Management Research, 8 (3): 215–34. [https://doi.org/10.1016/S1053-4822\(98\)90003-1](https://doi.org/10.1016/S1053-4822(98)90003-1).
- Malhotra, N., and S Dash. 2015. *Marketing Research: An Applied Orientation*. 7th ed. Delhi: Pearson India.
- Marler, Janet H. 2009. "Making Human Resources Strategic by Going to the Net: Reality or Myth?" *The International Journal of Human Resource Management* 20 (3): 515–27. <https://doi.org/10.1080/09585190802707276>.
- Marler, Janet H., and Sandra L. Fisher. 2013. "An Evidence-Based Review of e-HRM and Strategic Human Resource Management." *Human Resource Management Review*, Emerging Issues in Theory and Research on Electronic Human Resource Management (eHRM), 23 (1): 18–36. <https://doi.org/10.1016/j.hrmr.2012.06.002>.
- Marler, Janet H., and Emma Parry. 2016. "Human Resource Management, Strategic Involvement and e-HRM Technology." *The International Journal of Human Resource Management* 27 (19): 2233–53. <https://doi.org/10.1080/09585192.2015.1091980>.
- Masum, A.K.M, Faruk Bhuiyan, and Mohammad Rokibul Kabir. 2013. "HRIS Practices in Universities: An Exploratory Study on the Private Universities in Bangladesh," 6.
- Masum, AKM, Abdullah Mohammad Ahsanul Mamun, Mohammad Shariful Islam, and Loo-See Beh. 2020. "The Impact of EHRM Practice on Organizational Performance: Investigating the Effect of Job Satisfaction of HRM Professionals." *Journal of Computer Science* 16 (7): 983–1000. <https://doi.org/10.3844/jcssp.2020.983.1000>.
- Memon, Mumtaz Ali, Rohani Sallaeh, Mohamed Noor Rosli Baharom, Shahrina Md Nordin, and Hiram Ting. 2017. "The Relationship between Training Satisfaction, Organisational Citizenship Behaviour, and Turnover Intention: A PLS-SEM Approach." *Journal of Organizational Effectiveness: People and Performance* 4 (3): 267–90. <https://doi.org/10.1108/JOEPP-03-2017-0025>.
- Nivlouei, Fahimeh Babaei. 2014. "Electronic Human Resource Management System: The Main Element in Capacitating Globalization Paradigm" 5 (2): 13.
- Nuralina, N., Jubair SITUMORANG, Muhammad AKOB, Cici Aryansi QUILIM, and Aryati ARFAH. 2020. "Influence of E-HRM and Human Resources Service Quality on Employee Performance." *The Journal of Asian Finance, Economics, and Business* 7 (g): 391–99. <https://doi.org/10.13106/JAFEB.2020.VOL7.NO10.391>.
- Organ, D.W. 1988. *Organizational Citizenship Behavior: The Good Soldier Syndrome*. Lexington, MA: Lexington.
- Pandey, Anoop, and S. Kumar. 2017. "A Study on E-HRM Practices in Hotel Industry in New Delhi." *Vindhya International Journal of Management & Research* 3 (1). /paper/A-Study-on-E-HRM-Practices-in-Hotel-Industry-in-New-Pandey/35776f481fe27e5af276a3eccdc4366ea3f3a797.



- Parry, Emma. 2011. "An Examination of E-HRM as a Means to Increase the Value of the HR Function." *The International Journal of Human Resource Management* 22 (5): 1146–62. <https://doi.org/10.1080/09585192.2011.556791>.
- Parry, Emma, and Shaun Tyson. 2008. "An Analysis of the Use and Success of Online Recruitment Methods in the UK." *Human Resource Management Journal* 18 (3): 257–74. <https://doi.org/10.1111/j.1748-8583.2008.00070.x>.
- Podsakoff, Philip M., Scott B. MacKenzie, Robert H. Moorman, and Richard Fetter. 1990. "Transformational Leader Behaviors and Their Effects on Followers' Trust in Leader, Satisfaction, and Organizational Citizenship Behaviors." *The Leadership Quarterly* 1 (2): 107–42. [https://doi.org/10.1016/1048-9843\(90\)90009-7](https://doi.org/10.1016/1048-9843(90)90009-7).
- Poursafar, A., S. Rajaeepour, S. A. Seyadat, and H. Oreizi. 2014. "Developmental Performance Appraisal and Organizational Citizenship Behavior: Testing a Mediation Model." *Undefined*. <https://www.semanticscholar.org/paper/Developmental-performance-appraisal-and-citizenship-Poursafar-Rajaeepour/12d70410787540242ab6e55bc041a2d4f3fd8556>.
- Pratheepan, S., and Antonarulrajah Anthonypillai. 2012. *Application of Electronic Human Resource Management (e-HRM) Practices and Its Effectiveness in Selected Private Banks in Sri Lanka: An Exploration*.
- Quaosar, G. M. 2018. "Adoption of Human Resource Information Systems in Developing Countries: An Empirical Study." *International Business Research* 11 (4): p133. <https://doi.org/10.5539/ibr.v11n4p133>.
- Renee Baptiste, Nicole. 2008. "Tightening the Link between Employee Wellbeing at Work and Performance: A New Dimension for HRM." *Management Decision* 46 (2): 284–309. <https://doi.org/10.1108/00251740810854168>.
- Rondeau, Kent V. 2018. "E-Performance and Reward Management." In *E-HRM*, edited by Mohan Thite, 1st ed., 196–213. Routledge. <https://doi.org/10.4324/9781315172729-12>.
- Rubel, Mohammad Rabiul Basher, and Daisy Mui Hung Kee. 2015. "High Commitment Compensation Practices and Employee Turnover Intention: Mediating Role of Job Satisfaction." *Mediterranean Journal of Social Sciences* 6 (6 S4): 321.
- Ruël, Huub, and Tanya Bondarouk. 2014. "E-HRM Research and Practice: Facing the Challenges Ahead." In *Handbook of Strategic E-Business Management*, edited by Francisco J. Martínez-López, 633–53. Progress in IS. Berlin, Heidelberg: Springer. [https://doi.org/10.1007/978-3-642-39747-9\\_26](https://doi.org/10.1007/978-3-642-39747-9_26).
- Sekaran, Uma, and Roger Bougie. 2016. *Research Methods For Business: A Skill Building Approach, 7th Edition* / Wiley. USA: Wiley. <https://www.wiley.com/en-ba/+Methods+For+Business%3A+A+Skill+Building+Approach%2C+7th+Edition-p-9781119266846>.

- Stone, Dianna, and James Dulebohn. 2013. "Emerging Issues in Theory and Research on Electronic Human Resource Management (EHRM)." *Human Resource Management Review* 23 (March): 1–5. <https://doi.org/10.1016/j.hrmr.2012.06.001>.
- Stone, Dianna L., Diana L. Deadrick, Kimberly M. Lukaszewski, and Richard Johnson. 2015. "The Influence of Technology on the Future of Human Resource Management." *Human Resource Management Review*, Human Resource Management: Past, Present and Future - Volume 2, 25 (2): 216–31. <https://doi.org/10.1016/j.hrmr.2015.01.002>.
- Valeau, Patrick J., and Pascal Paillé. 2019. "The Management of Professional Employees: Linking Progressive HRM Practices, Cognitive Orientations and Organizational Citizenship Behavior." *The International Journal of Human Resource Management* 30 (19): 2705–31. <https://doi.org/10.1080/09585192.2017.1332671>.
- Venkatesh, Viswanath, and Fred Davis. 2000. "A Theoretical Extension of the Technology Acceptance Model: Four Longitudinal Field Studies." *Management Science* 46 (February): 186–204. <https://doi.org/10.1287/mnsc.46.2.186.11926>.
- Yusliza, My, and T. Ramayah. 2012. "Determinants of Attitude Towards E-HRM: An Empirical Study Among HR Professionals." *Procedia - Social and Behavioral Sciences*, International Conference on Asia Pacific Business Innovation and Technology Management, 57 (October): 312–19. <https://doi.org/10.1016/j.sbspro.2012.09.1191>.
- Zheng, Wei, Mian Zhang, and Hai Li. 2012. "Performance Appraisal Process and Organizational Citizenship Behavior." Edited by Linda C. Isenhour, Dianna L. Stone, and Donald Lien. *Journal of Managerial Psychology* 27 (7): 732–52. <https://doi.org/10.1108/02683941211259548>.