E-HRM Practices for Organizational Sustainability: Evidence from Selected Textile Firms in Bangladesh

Md. Sadiqur Rahman[1] and Md. Sajjad Hosain[2*]

[1]*Department of Fashion Design & Technology, Uttara University, Dhaka, Bangladesh.*
[2]*Business School, Sichuan University, Sichuan, China.*

Authors' contributions

This work was carried out in collaboration between both authors. Author MSR designed the study and wrote literature review. Author MSH collected primary & secondary data and performed statistical analysis. Both the authors approved the final draft.

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ABSTRACT

The study aims to ascertain the relationships between five E-HRM practices (independent variables): e-recruitment & selection, electronic & virtual training, e-performance management, e-compensation & benefit, HRIS & e-communication and the single dependent variable: organizational sustainability (OS) measured through profit and market growth. The authors utilized both primary data and secondary information for this empirical study. Primary data were collected through a detailed structured survey questionnaire from a valid sample size of 387 respondents while secondary information were collected from the company annual reports of 2015 to 2019 (last 5 years). Pearson's correlation coefficient and regression analysis were utilized (using SPSS 24) to test the hypothesized relationships. After analyzing the data, it was revealed that all the E-HRM practices had significant positive associations (with p-values more than 0.5) with the dependent variable, OS. The authors expect this study to be proven useful for the academicians in further investigating the associations between the elements of E-HRM and sustainability. It is also anticipated that the outcomes will aid the decision-makers in reducing operational costs and increase profit by adopting environment-friendly policies to gain sustainable development. Furthermore, it might be also helpful for the HR practitioners having the intention of exploring new windows of this recent issue from a developing country perspective.

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Corresponding author: E-mail: sajjad_hosain@yahoo.com;

1. INTRODUCTION

The practice of electronic human resource management (E-HRM) is the transformation of the system & technology supported by the human resource (HR) base at the organizations. In course of time, human resources management (HRM) becomes an important and key element to run organizations in Bangladesh irrespective of the nature and the size of businesses. The key emphasis of E-HRM has adopted executive practices in the field of manpower handling, sourcing database management, human resources planning & recruitment control, employee support activities and so many other issues related to HRM. Therefore, E-HRM is visibly grounded as well as established on diversely rooted expectations and constructive circumstances of functional HR process, such as reduction of training and development costs, speeding up HR planning, improving manpower quality & efficiency, maintaining employee e-database and having a stronger strategic partnering function for HRM activities within organizations and stakeholders.

With the development of an era of technology, the world has become a global village on continuous innovation to make the working life easier, faster and competent [1]. At present, HRM departments are no longer doing file or paperwork, rather with the invention and advancement of IT, the HRM jobs have become sound, efficient, faster and cost-saving. In this regard, Human Resource Information System (HRIS) has been already accepted as the key tool in Electronic Human Resource Management (E-HRM). However, E-HRM is a comparatively new idea for a least developed country like Bangladesh. The concept of E-HRM (also known as paperless or green HRM) typically includes using less possible paperwork at all HRM functions like recruitment & selection, training, performance review, etc. to create a sustainable, environmentally friendly and competitive advantage through employee engagement [2]. Organizations are shifting the traditional HRM tools and techniques to strategic HRM through a significant contribution of Information Technology (IT) and HRIS to achieve competitive goals. Bondarouk et al. [3] and Rodriguez & Ventura [4] claimed that E-HRM had been interchangeably connected with HRIS, virtual HRM and web & internet-based HRM.

In Bangladesh, a few large companies have started to implement electronic HRM in the last few years [5]. The majority of the firms are still failing to realize the benefits of paperless HRM and have taken no or a very little initiative to implement such an environment. The initiation and implementation of E-HRM in Bangladesh can be considered as innovative since it is still in its infancy. However, in this age of competition, businesses are relentlessly trying to reduce costs and gain competitiveness over the rivals [6]. E-HRM can be an effective tool in this regard for achieving such objectives. It is also environmentally friendly which, in turn, helps the management to meet some social and environmental obligations. Therefore, this systematic study will be hopefully of help for managers, researchers and academicians who have different aims of investigating E-HRM practices and it's an obvious necessity in today's highly competitive corporate world and the natural environment which is particularly in danger.

Readymade garment (RMG) and textile are two major successful manufacturing sectors with greater contribution to the national economy of Bangladesh. RMG is the main source of export for the last 25 years; and this sector employs more than 3 billion people in Bangladesh of whom 90% are poor and underprivileged women [7]. This sector has become important in terms of generating employment, foreign exchange earnings and contribution to gross domestic product (GDP) [7]. This industry started its journey in the late 1970s, expanded heavily in the 1980s and boomed in the 1990s [8,9]. The quick expansion of RMG was possible because of less complicated technology (easy to transfer), cheap pieces of machineries, a large number of unemployed poor female workers and comparatively affordable labor cost [9]. However, poor working conditions and work practices (like irregular pay) in the factories and a lack of social compliance are serious concerns and these often lead to frequent labor unrest because of the severe lack of proper HRM practices [8].

As a manufacturing sector, the textile industry in Bangladesh is still lacking proper HRM practices due to several reasons such as unwillingness of the owners to invest on such practices, concentration on production modernization rather

than considering employee aspects, the devotion of efforts & time on foreign buyers & factories rather than internal employees aspects like job satisfaction, motivation etc. [10]. As a result, much improvement is needed in this area regarding HRM and E-HRM practices. Moreover, there is a substantial gap of research in this area concentrating especially on this giant contributing sector (textile) of Bangladesh economy. Textile is an industry where lots of processes are carried out from raw material/fibers to finished garments. For this, the firms particularly require the employees to have technical skills. For textile, there are a little bit differences in the scope and approach in HRM concept because here people think and expect differently. In this industry, the job environment is different as compared to other industries.

The major aim of this study is to identify the relationships between five E-HRM practices and organizational sustainability. This is one of the initial attempts made to discover such a relationship in the textile sector. The study puts forward the following research question:

RQ: What is the overall association between the selective E-HRM practices and organizational sustainability?

2. LITERATURE REVIEW, RESEARCH HYPOTHESES AND THEORETICAL FRAMEWORK

2.1 E-HRM: Concept and Definitions

In the present knowledge-based economy, the performance of HRM is undoubtedly related to organizational success [11]. Recently, traditional HRM has been shifted its attention on the strategic management of organizations through a significant contribution in strategic workforce analysis and knowledge sharing to achieve the organizational goal [12]. This shift is moderately attributed to HRM technologies such as E-HRM and HRIS. Some researchers now claim that E-HRM has been interchangeably coined with Intranet-based HRM, virtual HRM, web-based HRM and HRIS [11]. Typically, E-HRM is defined as an integrated information system that comprises some applications of HR supply and demand forecast, HR planning, staffing information, recruitment & selection, information on training & development, pay increase, compensation forecast, promotion-related information, employee relations, and so on [13].

Due to its ease of speedy access to information related to employees, E-HRM can improve the strategic decision making process; and therefore it is considered as a strategic partner of the firms [4].

The practice of E-HRM adhered to transform the system & technology supported by the HR base at the organizations. In course of time, E-HRM becomes an essential and key element to run organizations irrespective of the nature and size of businesses. In recent years of global transformation and infusion of cutting edge technology in business organizations, corporations in Bangladesh have shown a tremendous growth and change in adopting newer technology to cater their businesses and support business partnering activities. In the last few decades, these changes have required a huge demand for efficient, competent, knowledgeable, energetic and enthusiastic HR personnel to ensure stronger strategic function for HRM assumptions within the organizations. As a result, HRM departments are no longer doing manual tasks; rather the invention of computer-based information systems as well as the advancement of electronic tools have made the jobs sound and more efficient to manage the activities [13]. The utilization of E-HRM as well as its underlying technology, as a pathway to execute strategies, guidelines, practices as well as regulations pertaining to managing HR is ought to integrate an impact on how HRM functions operating in the long run across the organizations in Bangladesh that excelled with technology [14].

The key emphasis of E-HRM has adopted organizational practices in the field of manpower handling, sourcing database management, HR planning, recruitment control and employee supports activities. So, E-HRM is visibly grounded as well as established on diversely rooted expectations and constructive circumstances of functional HRM process such as reduction of training & development costs, speeding up HR planning, improving manpower quality & efficiency, maintaining e-database of employees and having a stronger strategic partnering function for HRM activities within organizations and stakeholders. The utilization of E-HRM as well as its underlying technology as a pathway to execute strategies, guidelines, practices and regulations pertaining to managing HR, is ought to integrate an impact on how HRM roles and functions operate within the

organizations to strengthen and partner in the long run.

Similarly, E-HRM uses web-based and data archiving technology to make available HRM functions more meaningful, systematic, result-oriented as well as cost-effective towards the organizations. From this foundation, E-HRM has lengthened to hold close the liberation of practically every functional HRM guiding principles. They access these roles characteristically with intranet or further web technology guides and tools.

2.2 Organizational Sustainability (OS): Concept and Definitions

Colbert & Kurucz [15] identified the colloquial definition of sustainability as being to keep the business going, while another frequently used term in this context refers to the "future proofing" of organizations. Boudreau & Ramstad [16] termed sustainability as to achieving success today without compromising the future needs. Sustainable growth encompasses a business model that creates value consistent with the long-term preservation and enhancement of financial, environmental and social capital.

According to the Chartered Institute of Personnel and Development (CIPD) [17], the essence of sustainability in an organizational context is "the principle of enhancing the societal, environmental and economic systems within which a business operates". This introduces the concept of a three-way focus for organizations striving for sustainability. This is reflected also by Colbert & Kurucz [15], who stated that sustainability implies a simultaneous focus on economic, social and environmental performance. This notion may of course relate to the growth of so-called "Triple bottom line accounting".

Perhaps organizational sustainability is more related to overall corporate culture rather than specific policies and procedures. Eccles et al. [18] noted that the organizations are developing sustainability policies, aiming at developing an underlying "culture of sustainability", through policies highlighting the importance of the environmental and social as well as financial performance. Those policies seek to develop a culture of sustainability by articulating the values and beliefs that underpin an organization's objectives. The CIPD [17] also emphasized the importance of organizational culture in seeking to

understand organizational sustainability, referring to "the creation of meaningful values that shape strategic decision-making and building a culture that reinforces desirable actions and behaviors".

2.3 Increasing Focus on Organizational Sustainability

Organizations are increasingly adopting a sustainable approach to their activities. But the question arises whether it is for purely business reasons (i.e., profit) or for other social/ethical issues. As argued by Eccles et al. [18] research evidences suggest that organizations are not adopting sustainability policies purely for public relations reasons, but rather that they reflect "substantive changes in business processes". However, if it is accepted that even under whatever "new capitalist" system evolves profitability will be key, the question can still be asked as to what evidence is there that sustainability can be profitable?

Eccles et al. [18] found that highly sustainable companies significantly outperform their counterparts over the long-term, both in terms of the stock market and accounting performance. Nidumolu et al. [19], in a cover story of the Harvard Business Review claimed that by equating sustainability with innovation today, enterprises can lay the groundwork that will put them in the lead when the recession ends and indeed that there is no alternative to sustainable development. Ballinger [20], while announcing the launch of a Business Sustainability Research project by the CIPD, identified the reasons for the drive for a more sustainable approach to business as including:

- the pressures of globalization
- corporate scandals (financial and other)
- the global economic crisis
- calls for greater security of business by all internal and external stakeholders

It is perhaps significant that globalization is at the top of this particular list. Kielstra [21] supported this by arguing that the most powerful case for adopting a responsible and sustainable approach to business would appear to be the emergence of globalization, which has considerably changed the roles and relationships of business, governments and other key stakeholders. Even organizations that do not operate globally, including public sector organizations, have relationships with organizations or suppliers that

are working internationally. Alternatively, they may be involved in global recruitment.

2.4 E-HRM and Organizational Sustainability

A great deal of research works had been conducted in the field of contribution of IT into HRM. In the early 1960s, personnel management was early to be used for office automation in payroll, benefit administration and maintaining employee records [22]. Growth in strategically focused HRM later produced demands for information and communication developments in HRIS [23]. Since then, the use of HRIS was confined mainly to administrative purposes focusing on the growing sophistication of IT. In this context, studies kept their focus mostly on qualities of IT, necessary for the use of its users by HRM departments [24,25]. A quantitative study conducted by Ball [22] with 115 organizations using HRIS revealed that the organization size is a clear determinant of, first, whether it is using HRIS at all, and second, whether it adopts certain modules (e.g. core personnel administration) over others such as training and competence management. More recent studies regarding the implementation of E-HRM have made a shift towards addressing the dynamic nature of implementation and using such concepts as innovation, implementation, learning and change management [25].

Ruel et al. [26] highlighted a situation that is fairly well covered like the changing nature of the employment relationship. In their view, a move towards E-HRM can provide the tools to support such development and the rapid growth in IT and its unlimited possibilities for HRM have been led to a new academic era, especially focused on the integration of these areas. Adding or creating a value or improving the performance of the organization leads to organizational effectiveness. The value can be created by "the people" of an organization being the most important resource which should be properly managed in terms of attraction, recruitment, retention and development for organization growth. All the researchers indeed agreed that HRM should add value to the organization. One such contribution can be done with the increase in operational efficiency (OE). There are many channels through which HRM can contribute towards OE. HRM has to consider both the external and internal environments in which an organization operates. It has to plan out its strategies keeping in mind the desired outcomes

for external and internal stakeholders. OE can be measured in terms of internal stakeholders (all the employees) and external stakeholders (owners/investors, customers, external partner organizations and members of the society). With the inclusion of multiple stakeholders, HRM is recognizing a wide range of challenges.

Organizations are focusing on developing effective and flexible HRM systems which can easily adapt to dynamic changes occurring in the external environment without going into a state of mismanagement and confusion. Today, HRM requires assimilating with different facets of business to achieve OE as a strategic partner [27,28]. HRM departments need to focus on talent management through HRIS. By attracting the best labor, developing the strategies for retaining, training and development can lead the organizations towards OE. HRM linked with OE can play a major role in developing strategies. It cannot be denied that HRM plays a critical role regarding decisions related to recruitment, selection, development and organization of human capital. These factors play a major role in accessing OE for firms. HRM needs to expand and improve its functions, develop and implement new skills and competencies to sustain. HRM experts and professionals need to grab all opportunities towards OE and thus, moving the firms towards OS.

To meet the global business challenges, organizations need to attain a sustainable model in which they can operate. "Sustainability" refers to a firm's ability to withstand the unpredictable challenges of the social, environmental and economic factors with time. In other terms, we can define sustainability as a firm's capability to seek its goals in terms of stakeholders in the long run by incorporating economic, environmental and social perspectives with its business strategies. It is a hot topic at present and the future concept of the organizations. As sustainability is a new concept for 21st century business, researchers and HRM professionals are trying to ascertain the role of HRM in achieving sustainable organizations. Referring to the nature of the unpredictable dynamic external environment, it is necessary for organizations to develop a sustainable model for the future. It can be considered as the last stage in HRM (E-HRM) evolution. A multidimensional model is required to achieve high performance by addressing multiple external and internal environmental stakeholders and moving HRM to central organizational sustainability. In modern era, E-

HRM competencies have been recognized for incorporating sustainability at different organizational levels.

Organizations need to develop E-HRM strategies consisting of core policies and practices with a strong framework for sustainable HRM. Sustainability has to start from different levels starting from individual, departmental, organizational and at last reaching the sustainable society. To be a predominant element of organizational sustainability, E-HRM needs to be in parallel alignment with the organization's mission, goals, formulation and development of strategies related to human capital. E-HRM needs to be in integration with top management to embed the changes in the corporate strategies related to change management, talent management, training & development, leadership development and employees' engagement by keeping them updated with business process with new strategies and developing business ethics as new grounds to gain competitive edge. With such practices, E-HRM can work to move towards a sustainable environment for a firm by achieving a balance between economic, social and environmental integrity. Sustainability is a fresh topic in the HRM area which still needs more empirical studies to recognize and access the worth of HRM towards sustainable organizations. The sustainability of a firm in a competitive environment has forced the organizations to speedily develop unique competencies. For this, corporations need to shift from physical technology to information technology for effective and efficient E-HRM functions.

2.5 Research Hypotheses

In this study, the authors selected five E-HRM practices as independent variables and a single dependent variable, organizational sustainability (steady increase in profit and market growth). Based on the previous literature and discussions, the following research hypotheses were developed by the authors:

H_1: E-recruitment & selection has a significant positive relationship with OS.
H_2: Electronic & virtual training has a significant positive relationship with OS.
H_3: E-performance management has a significant positive relationship with OS.
H_4: E-compensation & benefit has a significant positive relationship with OS.
H_5: HRIS & e-communication has a significant positive relationship with OS.

2.6 Theoretical Framework

The authors developed the following theoretical framework based on the discussions and assumed hypotheses (Fig. 1):
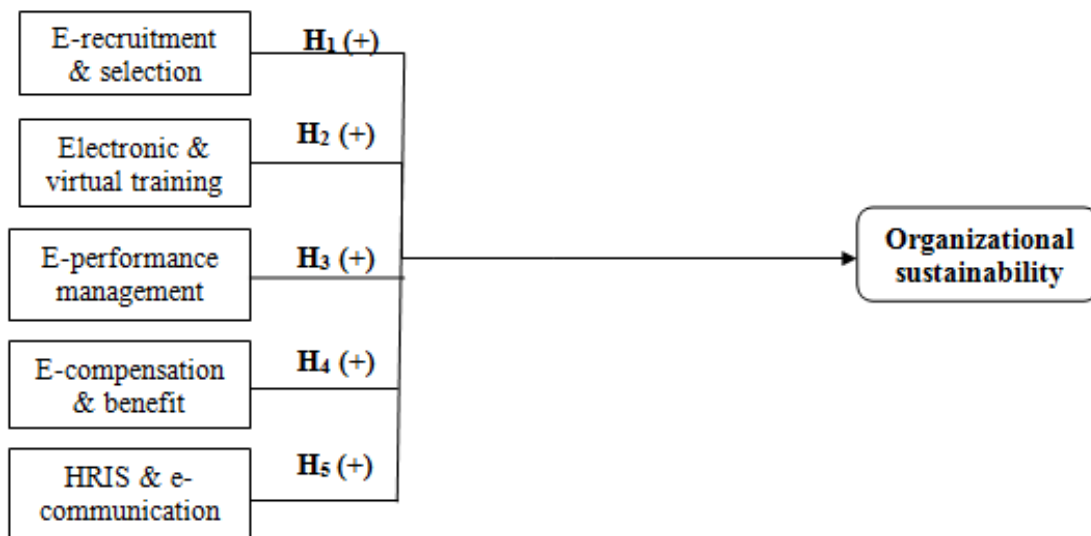
Fig. 1. Theoretical framework
Source: Authors' elaboration

3. RESEARCH METHOD AND METHODOLOGY

3.1 Research Approach: Deductive or Inductive

It is necessary to relate to the research with the literature and the theoretical framework as it concerns about how to design a research project. Generally, the deductive approach is used when we try to develop a theory or hypothesis (or hypotheses) and design research strategy to test those hypothesis (or hypotheses). On the contrary, if we collect data and develop a theory as a result of data analysis, we need to use the inductive approach [29]. Creswell [30] argued that whether the research should be based on deductive or inductive approach depends mainly on the emphasis of the research and the nature of the research topic. If there are a number of literature and theoretical frameworks available in the academia about the topic, the deductive approach will be the option. On the contrary, if there is no or very little existing literature found about the topic, it may work well with inductive approach that can generalize a theory by analyzing data.

After considering the research topic and the nature of the present study, the authors decided to take the deductive approach for this study as there are a number of hypotheses to be tested.

3.2 Research Design and Data Collection Method

The study was conducted adopting the quantitative method. The major difference between quantitative and qualitative methods is that quantitative methods depend on acquiring data that is mostly numerical in nature and can be statistically interpreted, while qualitative methods focus on gathering data in a non-numeric way (e. g. case study), which is concerned with in-depth study of human phenomena so that individuals' nature and the meanings can be understood [31]. Regarding the present study, the authors followed the quantitative method. The authors utilized both the primary data and secondary information in this case.

Primary data were collected through a detailed structured survey questionnaire from the respondents. In addition, secondary information was also collected from the company annual reports for the last five years (2015 to 2019).

3.3 Sampling Design and Survey Instrument

The study primarily intended to be conducted on a sample size of 400 respondents working on different job levels of five textile firms. Convenience sampling method was used to choose the respondents. The reason for choosing this sampling method was to select the respondents according to the knowledge of E-HRM and organizational sustainability. Although 390 survey instruments were returned (with a response rate of 97.5%), 387 samples were taken as valid after deducting 3 due to incompleteness and improper filling.

Survey strategy is a popular and common strategy in business and management research which includes questionnaires and personal interviews that are created for the specific investigation related to the research objectives [32]. A questionnaire is a printed list of items used to collect factual information, beliefs or attitudes about an issue, a product or service [33] and the items that are included in the questionnaire can be open or closed; or a combination of both [34].

3.4 Demographic Profile of the Respondents

All the respondents in this study were supervisors, mid-level and top-level managers of five textile companies. Therefore, it was expected that they have adequate knowledge about E-HRM practices and organizational sustainability (steady profit and growth). The demographic profile of the respondents based on the organizations under survey is highlighted in Table 1.

The respondents are directly involved in different management and decision-making levels (from top to bottom) and have sufficient knowledge regarding the application of E-HRM practices and its contribution to the steady profitability which is the primary concern of this study.

3.5 Questionnaire Design

The questionnaire was checked properly to determine whether it was understandable to everyone and if there was any improvement required. The survey questionnaire had 25 items altogether. A 7-point Likert scale was used to measure E-HRM practices and organizational sustainability where 7 was regarded as strongly

Table 1. Demographic profile of the respondents

Name of the organization	Number of respondents (Supervisor and mid-level managers)	Number of respondents (Top-level managers)	Total respondents (N)
UHM Limited	46	23	69
Libas Textiles Limited	53	27	80
Echotex Limited	38	33	71
Square Textiles Limited	35	57	92
Viyellatex Limited	26	49	75
Gender	322	65	N=387

Source: Demographic components on the questionnaire

Table 2. Distribution of items according to the variables

Variables	Number of items
E-recruitment & selection	4
Electronic & virtual training	4
E-performance management	4
E-compensation & benefit	4
HRIS & e-communication	4
Organizational sustainability (Profit/growth)	5
Total no. of items	25

Source: Survey instrument

disagree and 1 was regarded as strongly agree. The categorical distribution of the items on the questionnaire has been highlighted on Table 2.

Cronbach's coefficient was used to investigate the inter-item consistency and reliability [35]. Cronbach alpha for e-recruitment & selection was 0.7321, for electronic & virtual training was 0.7233, for e-performance management was 0.7101, for e-compensation & benefit was 0.7344, for HRIS & e-communication was 0.7546; and for organizational sustainability, it was 0.8931. Therefore, all the Cronbach's alpha values were above 0.60 cutoff values as suggested by Nunnally & Berstein [36]. Therefore, it is evident that each instrument's internal reliability and validity were satisfactory.

4. FINDINGS AND ANALYSIS

4.1 Demographic Representation

The Table 3 represents the demographic presentation of the respondents who participated in the study.

Table 3 indicates that the largest part of the respondents was male and majority of them had the job experience of 6 to 10 years. More than three-thirds of the respondents had good experience regarding E-HRM.

4.2 Pearson's Correlation Coefficient for Selected Independent Variables and Organizational Sustainability

To examine the direction (positive or negative) and the strength (strong or weak) of the relationship between each independent and dependent variables, Pearson's correlation coefficient was applied. The results have been highlighted in Table 4 and Figs. 2, 3, 4 and 5.

The co-relational values of the relationships have been depicted with the help of three different diagrams (bar diagram, single line diagram and scatter plot) on the following figures (3, 4 and 5).

From the tables and figures, we can observe that all the independent variables have significant positive relationships with organizational sustainability (steady profit/growth). The impact is the strongest in case of e-recruitment & selection while the positive impact is least strong regarding HRIS & e-communication. Therefore, it can be concluded that the selected E-HRM practices have significant positive relationships with organizational sustainability, that is, the application of electronic E-HRM is conductive for the organizational sustainability and growth. Therefore, all the hypotheses had been accepted.

Table 3. Demographic representation of the participants (in absolute number, N= 387)

Sex	322 (M)	65 (F)	387 (Total)		
Length of service (Year)	17 (<2)	43 (2-5)	208 (6-10)	119 (10>)	387 (Total)
Knowledge of E-HRM	0 (Not at all)	28 (Little)	306 (Good)	53 (Excellent)	387 (Total)

Source: Demographic components on the questionnaire

**Table 4. Pearson's correlation between selected E-HRM practices and OS**

Independent variables	Dependent variable
E-recruitment & selection	0.66
Electronic & virtual training	0.57
E-performance management	0.61
E-compensation & benefit	0.52
HRIS & e-communication	0.59

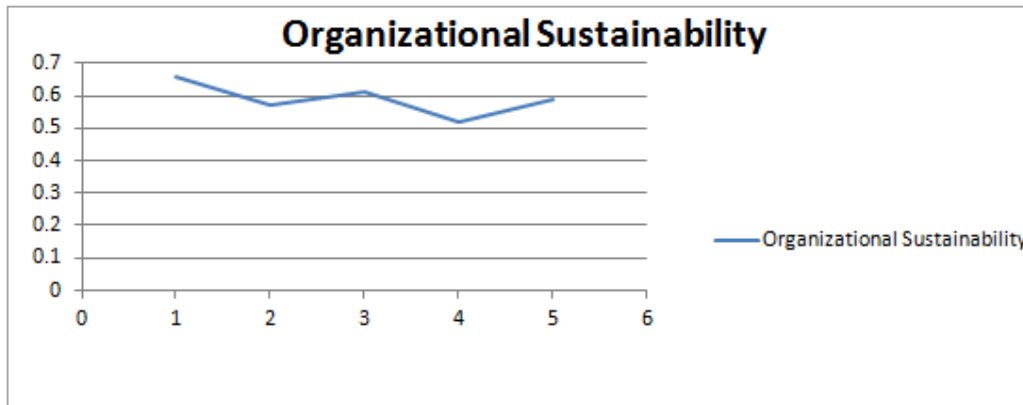*Note: All the values were significant at 95% confidence (5% significance level); Source: SPSS (24)*
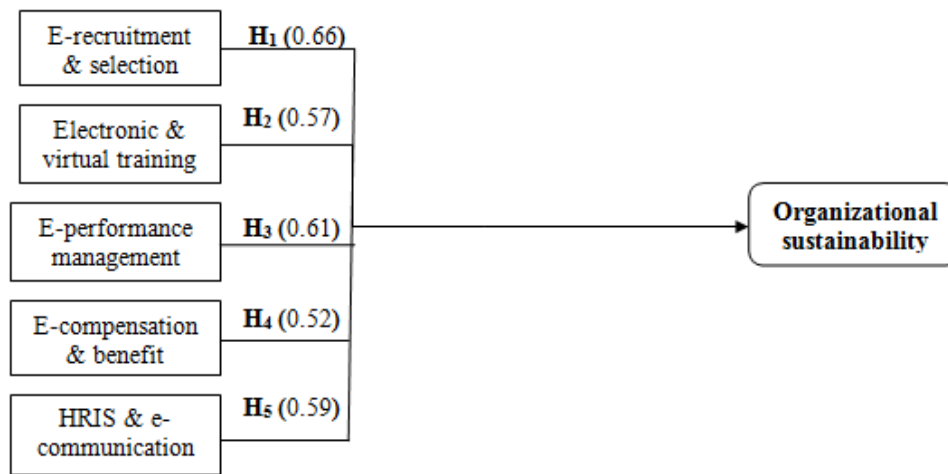
Fig. 2. Theoretical framework
Source: Pearson's correlation coefficient (All the values were identified at 5% level of significance)
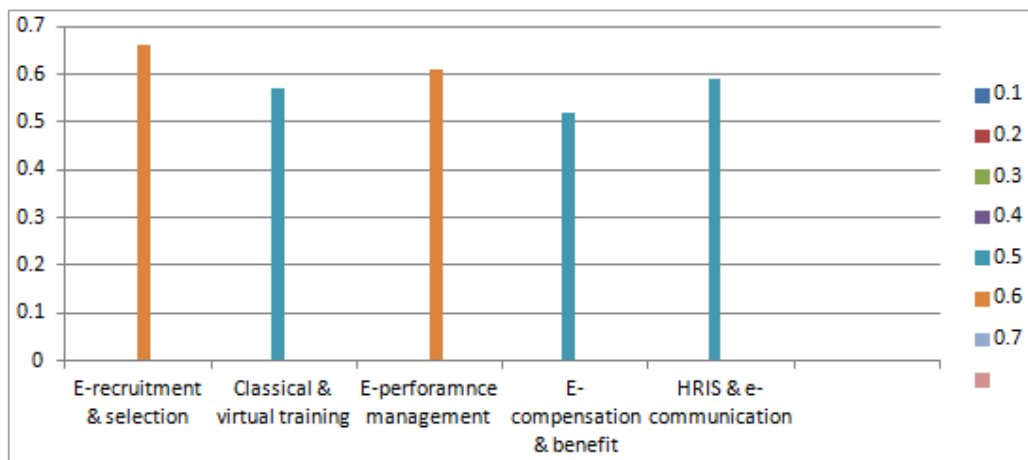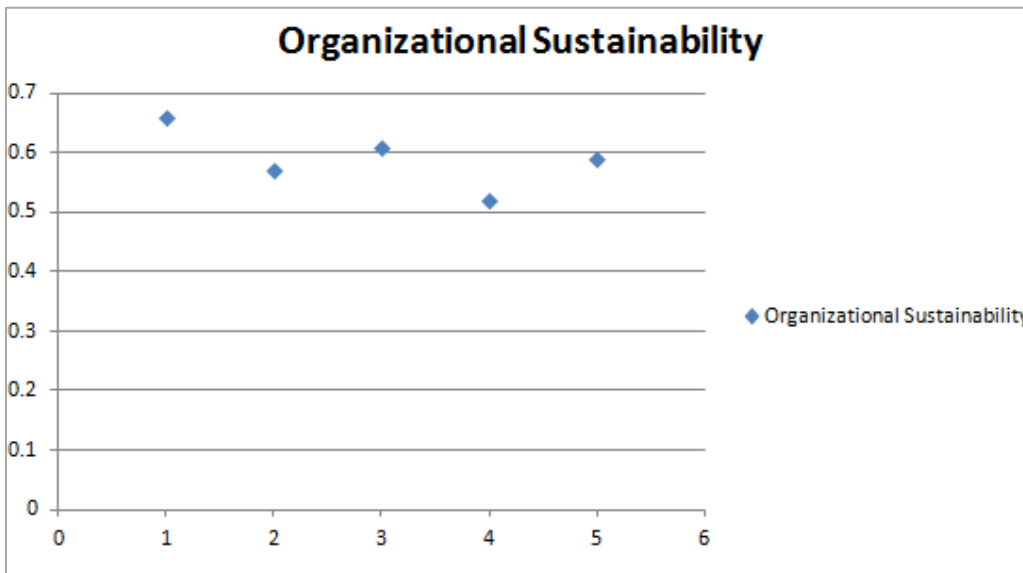

Fig. 3. Bar diagram showing the relationships between selected E-HRM practices and OS
Source: SPSS (24)

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Fig. 4. Single line diagram showing the relationships between selected E-HRM practices and OS
Source: SPSS (24)

Fig. 5. Scatter plot diagram showing the relationships between selected E-HRM practices and OS
Source: SPSS (24)

4.3 Aggregate Impact of E-HRM Practices on Organizational Sustainability

The Table 5 explains the overall impact of E-HRM practices (Independent variables) on organizational sustainability (Dependent variable):

The square of the multiple R was 0.696 highlighting that 69% of the variance in organizational sustainability can be explained by five independent variables together. The F value was 5.8723 indicating that it was significant at P=0.0005 suggesting five independent variables significantly explained 69% of the variance in organizational sustainability.

4.4 Investment in E-HRM: Evidence from Selected Firms

After the study investigation, the approximate investment (in %) on electronic HRM of the five selected textile firms was found as in Table 6. From the table, it is evident that Viyellatex Limited had the highest investment in E-HRM as a percentage of HRM whereas UHM Limited had the lowest investment. The same result has

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been shown in the following bar diagram (Fig. 6).

4.5 Investment in E-HRM and Profitability

Secondary information from the annual reports of the five selected textile firms was used to depict the relationship between the application of/investment in E-HRM practices and organizational sustainability (profitability/growth).

Table 7 shows the relationship between E-HRM investments and profitability of the firms under this analytical study.

It can be observed from Table 7 that the firm that invested more in E-HRM practices enjoyed a higher profit/growth rate. Therefore, as similar to primary data, the secondary data also confirmed the assumed hypotheses as accepted.

### Table 5. Aggregate impact of E-HRM practices on OS

R Squire	Adjusted R Squire	Standard error of estimate	Change				
			R Squire change	F Change	Df1	Df2	Significance of F Change
0.696	0.63	0.6132	0.632	5.8723	5	232	0.0005

Note: Predictors (constant), e-recruitment & selection, electronic & virtual training, e-performance management; e-compensation & benefit, HRIS & e-communication; Source: SPSS (24)

Table 6. Investment on different components (areas) of E-HRM in studied firms

Company names	Area of investment (in %)			E-HRM investment as percentage of operational HRM
	Installation	Training	Maintenance	
UHM Limited	19	12	7	38
Libas Textiles Limited	25	15	6	46
Echotex Limited	34	15	10	59
Square Textiles Limited	38	20	9	67
Viyellatex Limited	50	20	18	88
Average investment on E-HRM				**59.6 (Aggregate)**

Source: Annual reports (2015 to 2019)
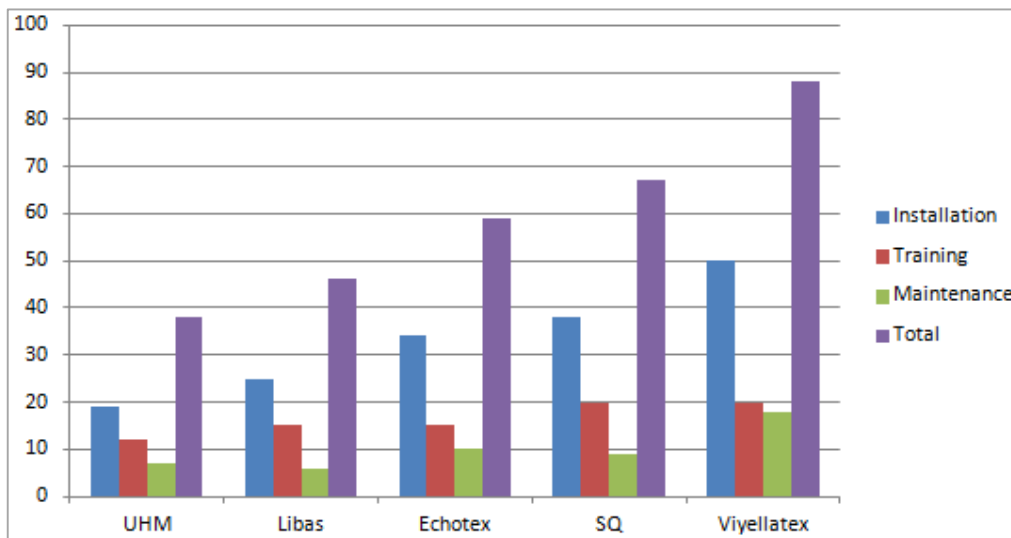
Fig. 6. Investment in different areas of E-HRM as a percentage of HRM expenses
Source: SPSS (24)

Table 7. Relationship between E-HRM applicability and growth/profit

Company names	E-HRM functionality (in %)	Profitability growth between 2015 and 2019 (in %)
UHM Limited	38	3%
Libas Textiles Limited	46	9%
Echotex Limited	59	10.8%
Square Textiles Limited	67	13%
Viyellatex Limited	88	17%
Average functionality of E-HRM	**↑59.6 (Aggregate)**	**↑10.56 (Aggregate)**

Source: Annual reports (2015 to 2019)

5. RATIONALE, SIGNIFICANCE AND CONTRIBUTIONS

The nature of conducting businesses today is rapidly changing due to increased competition, new technological advancement, changing nature of various stakeholders' needs and other industry; and micro and macro environmental changes. As a crucial factor of production, HR is playing a significant role for the firms in achieving the organizational goal and sustainable development. The recent decades have evidenced some noteworthy developments in this area which can be termed as a transformation from manual or traditional HRM practices to E-HRM practices. E-HRM is an Internet-based structure that is developed to implement HRM policies, practices and tactics to achieve the organizational goals. Adopting E-HRM for managing HR is an emerging trend in the business, industrial and management domains. Whereas, the greater part of E-HRM studies were conducted in developed country perspectives, a little focus so far has been given in developing or least developed countries. However, comparatively a few studies have been carried out in some developing countries, particularly in Bangladesh.

Therefore, it is hoped and anticipated that this very initial and empirical study on this priority sector will be very helpful for the managers and owners to implement the E-HRM practices at their companies based on the findings. E-HRM can be beneficial as it can save unnecessary costs, increase efficiency and reduce the waste of working hours. In addition, such a study might also be useful for the academicians, practitioners and analysts who wish to do some researches on E-HRM application in this sector in the near future. As it has been pointed that it is one of the initial attempts to investigate the application of E-HRM on sustainability in the textile sector, the findings can be used as yardsticks for any further research in this very important field.

6. LIMITATIONS AND FURTHER SCOPE OF STUFY

In conducting the study, the researchers observed some limitations. The study was conducted based on one particular industry under one culture. Cross-industry and cross-cultural investigations in a wide length are suggested for future interested researchers that might provide more exciting and concrete results to the academicians and practitioners.

7. CONCLUSION

E-HRM is a web-based tool to automate and support HR processes. The implementation of E-HRM is an opportunity to delegate the data entry to the employee. It facilitates the usages of HR marketplace and offers more self-service to the employees. It is an advanced business solution that provides complete on-line supports in the management of all processes, activities, data and information required to manage HRM functions in a modern company. It is an efficient, reliable, easy to use tool, accessible to a broad group of different users. E-HRM is a high-tech way of performing HRM functions. With the top management support and HRM at a strategic position towards operational efficiency, E-HRM can enact as an ICT tool to achieve sustainable management. Organizations are recognizing the importance of sustainability in terms of competition, selection and retention of talented employees and the reputation of the company. To stand with dynamic economic, social and environmental forces and keeping in mind both internal and external stakeholders; organizations are trying to achieve sustainable and long-term growth for the businesses. With multiple advantages, it can be recommended that all the organizations use E-HRM technology that promises to provide a useful, efficient and increased performance in spite of all barriers it has to face. E-HRM is a way of implementing HRM strategies, policies and practices in

organizations through conscious and directed support of the full use of web-technology-based channels. It covers all aspects of HRM functions like personnel administration, education & training, career development, corporate organization, job descriptions, hiring process, employee's personal records and annual interviews with employees. Therefore E-HRM is an improved way of conducting HRM functions more effectively and efficiently for the organizations.

DISCLAIMER

The products used for this research are commonly and predominantly used products in our area of research and country. There is absolutely no conflict of interest between the authors and producers of the products because we do not intend to use these products as an avenue for any litigation but for the advancement of knowledge. Also, the research was not funded by the producing company rather it was funded by personal efforts of the authors.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

REFERENCES

1.   Hossain MM, Islam MS. Emerging role of E-HRM to optimize human resources management functions: A study on service industry of Bangladesh. Bangladesh Research Publications Journals. 2015; 11(3):260-266.
2.   Hosain, MS, Rahman MS. Green human resource management: A theoretical overview. IOSR Journal of Business and Management. 2016;18(6):54-59.
3.   Bondarouk T, Ruël H. Electronic human resource management: Challenges in the digital era. The International Journal of Human Resource Management. 2009;20: 505-514.
      [Accessed on: 17 November, 2020].
      Available:https://doi.org/10.1080/09585190
      802707235
4.   Rodriguez JM, Ventura J. Human resource management systems and organizational performance: An analysis of the Spanish manufacturing industry. International Journal of Human Resource Management. 2003;17(7):1206-1226.
      [Accessed on: 17 November, 2020].
      Available:http://dx.doi.org/10.1080/095851
      9032000114273
5.   Jahan S. Human Resources Information System (HRIS): A theoretical perspective. Journal of Human Resource Sustainability Studies. 2014;2:33-39.
6.   Hosain MS. The impact of E-HRM on organizational performance: Evidence form selective service sectors of Bangladesh. International Journal of Human Resources Management. 2017;6(3):1-14.
7.   Ahamed F. Job dissatisfaction in the Bangladesh readymade garment sector-To what extend HR/IR practices can grow exhilaration of RMG workers? International Journal of Business and Management Review. 2014;2(1):1-12.
8.   Hossan CG, Sarker AR, Afroze R. An assessment of managerial skills in the labor intensive industry: A case study of a garments manufacturing firm. Journal of Accounting, Business and Management. 2012;19(2):12-25.
9.   Robbani MG. World trade organization and the readymade garment industry of Bangladesh: A critical analysis. Journal of Business Studies. 2000;2(2):16-27.
10.   Sarker MAR, Afroz R. Can HRM practices improve job satisfaction of readymade garment (RMG) workers in Bangladesh? An alternative solution to recent unrest. International Journal of Business and Management. 2014;9(10):185-194.
11.   Masum AKM, Kabir MJ, Chowdhury MM. Determinants that influencing the adoption of E-HRM: An empirical study on Bangladesh. Asian Social Science. 2015; 11(21):117-124.
12.   Lawler EE, Mohrman S. HR as a strategic partner – What does it take to make it happen? Human Resource Planning. 2003;26(3):15-29.
13.   Masum A, Bhuiyan F, Kabir M. HRIS practices in universities: An exploratory study on the private universities in Bangladesh. Global Journal of Human Social Sciences. 2013;13(7):1-6.
14.   Islam MS. 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. IOSR Journal of Business and Management. 2016;18(11):1-8.
15.   Colbert B, Kurucz E. Three conceptions of triple bottom line business sustainability

and the role for HRM. Human Resource Planning. 2007;30:327-333.

16. Boudreau J, Ramstad P. Talent segmentation and sustainability: A new HR decision science paradigm for a new strategy definition. Human Resource Management. 2005;44(2):129-136.

17. CIPD. Responsible and Sustainable Business: HR leading the way – A collection of "thought pieces". CIPD, London; 2012.

18. Eccles R, Ioannou I, Serafeim G. The impact of a corporate culture of sustainability on corporate behavior and performance. Harvard Business School Working Paper. 2011;12-35.

19. Nidumolu R, Prahalad CK, Rangaswami MR. Why sustainability is now the key driver of innovation. Harvard Business Review. 2009;87(9):56-64.

20. Ballinger C. HR's role in embedding a responsible approach to business. CIPD Impact Magazine. 2011;37(2):1-15.

21. Kielstra P. Doing Good: Business and the Sustainability Challenge (online). Economist Intelligence Unit Report; 2008. [Accessed on: 25 November, 2020]. Available:www.eiu.com

22. Ball KS. The use of human resource information systems: A survey. Personnel Review. 2001;30(6):667-693.

23. Bondarouk TV, Ruël HM. Does E-HRM contributes to HRM effectiveness? Results from a quantitative study in a Dutch ministry. Paper presented at the 4th International conference of the Dutch HRM Network, November 4-5, Enschede: The Netherlands; 2005.

24. Fisher SI, Howell AW. Beyond user acceptance: An examination of employee reactions to information technology. Human Resource Management. 2004; 43(2&3):243-258.

25. Keebler TJ, Rhodes DW. E-HR: Becoming the "path of least resistance. Employment Relations Today. 2002;21:57-66.

26. Ruël HJM, Leede JD, Looise JC. ICT enhet management van arbeidsrelaties; hoe zit het met de relatie? In: Batenburg, R./Benders, J./Vanden Heuvel, N./Leisink, P./Onstenk, J. (Red.): Arbeid en ICT in onderzoek. Utrecht: Lemma; 2002.

27. Hosain MS, Arefin AHMM. The role of human resource information system on operational efficiency: Evidence from selected service oriented Bangladeshi firms. Scholar Journal of Business and Social Science. 2020;6(1):1-21.

28. Hosain MS, Arefin AHMM, Hossin, MA. The role of human resource information system of operational efficiency: Evidence form MNCs operating in Bangladesh. Asian Journal of Economics, Business and Accounting. 2020;18(2):29-47.

29. Saunders M, Lewis P, Thornhill A. Understanding research philosophies and approaches. Research Methods for Business Students (5th Eds.). London: Pitman; 2009.

30. Creswell J. Research Design: Qualitative, Quantitative and Mixed Methods Approaches. London: Sage; 2008.

31. Katz D, Kahn RL. The Social Psychology of Organizations (2nd Eds.) New York: Wiley; 1978.

32. Saunders M. Research Methods for Business Students. New Jersey: Pearson Education Inc; 2009.

33. Bums N, Grove SK. The Practice of Nursing Research: Conduct, Critique, and Utilization. New York: Wiley; 1983.

34. Polit DF, Hungler BP. Nursing Research, Principles and Methods. Philadelphia PA: JB Lippincott; 1995.

35. Walsh WB. Tests and Assessment (3rd Eds.), New Jersey: Prentice Hall; 1995.

36. Nunnally JC, Bernstein IH. Psychometric Theory (3rd Eds.), New York: McGraw Hill; 1994.

APPENDIX

SURVEY QUESTIONNAIRE

This questionnaire was prepared as the part of investigation related to this empirical paper. The information and the responses were promised be kept secret and used for for this project.

Name:
Sex: (1) Male (2) Female
Position:
Department:
Length of service in years: (1) Less than 2 (2) 2-5 (3) 6-10 (4) More than 10
Knowledge about E-HRM: (1) Not at all (2) Little (3) Good (4) Excellent

Scale: 7=Strongly Disagree, 6= Moderately Disagree, 5= Slightly Disagree, 4= Undecided or No Comment, 3= Slightly Agree, 2= Moderately Agree and 1= Strongly Agree.

No.	Statements	1	2	3	4	5	6	7
E-recruitment & selection								
1	The electronic recruitment & selection process of my firm is complete and effective							
2	E-recruitment & selection saves time and cost; and it is reliable							
3	The best candidates are recruited by the system							
4	The e-recruitment & selection process of the company is fair and unbiased							
Electronic and virtual training								
1	The company has a strong online training program manual							
2	The electronic training system is effective, easy to use; and time & cost saving							
3	The virtual training we provide is better perceived by the trainees							
4	The company updates its electronic training manual when needed							
E-performance management								
1	The company has some established performance management criteria							
2	The e-performance management system is unbiased, cost effective and clear							
3	The e-performance management system includes feedback to the employees							
4	The system is more systematic and transparent than the traditional performance appraisal management							
E-compensation and benefit								
1	All the payments made to all the parties through electronic system are connected to the bank account							
2	The system is easy, user friendly and effective							
3	The system can maintain privacy of the personal information							
4	Only the authorized staffs have the access to the payment database							
HRIS and e-communication								
1	The company maintains a proper and integrated human resource information system for electronic communication internally							
2	The system is maintained and updated when necessary							
3	The HRIS is easy to use, effective and time saving							
4	The HRIS is contributing to the organizational effectiveness							
Organizational sustainability (Steady growth in profit)								
1	E-HRM practices can contribute to steady profit/growth							

2	The E-HRM system is contributing towards positive development of the firm							
3	The E-HRM is more advantageous than paper based traditional administration							
4	The return from the investment on E-HRM is getting increased							
5	There are proper backups if the system crashes suddenly due to unexpected reason (s)							