

---

## ORGANISATIONAL CHALLENGES AND BENEFITS OF E- HRM IMPLEMENTATIONS IN GOVERNMENTAL ORGANISATIONS: THEORETICAL SHIFT FROM TOE MODEL

---

Mushfiqur RAHMAN<sup>1</sup>, Erhan AYDIN<sup>2</sup>

### Abstract

The main purpose of this article is to extend organisational context of TOE (Technology- Organisation- Environment) model through understanding the challenges and benefits of e-HRM implementation in governmental organisations in Bangladesh. The main contribution of this perspective is to demonstrate a theoretical shift from 1990 to 2018 because the advanced technology is a critical part of the organisations in the current century. In order to do this research, we conducted 30 semi- structured qualitative interviews (15 in each organisation) at Ministry of Foreign Affairs, and Ministry of Public Administration in Bangladesh. Based on the findings of this research, we found 'IT (Information Technologies) Knowledge and Skills', 'Change Process', 'Employees' satisfaction and motivation', and 'emerging role conflict' as a micro- organisational context in addition to macro- organisational context that are 'formal and informal linking structures', 'communication process', 'size', and 'slack'. Thus, we provided a theoretical contribution to the previous TOE model and we developed the model based on the current technology and organisational environment.

**Anahtar Kelimeler:** HRM, e-HRM, TOE, Governmental Organisations, Bangladesh

**JEL Sınıflandırması:** M10, M12, M19

---

## ÖRGÜTSEL ZORLUKLAR VE DEVLET KURULUŞLARINDA E-İKY UYGULAMALARININ YARARLARI: TOE MODELDEN KURAMSAL DEĞİŞİME

---

### Öz

Bu makalenin temel amacı, Bangladeş'teki devlet kurumlarında e-İKY uygulamasının zorluklarını ve faydalarını ortaya koyarak TOE (Teknoloji-Organizasyon-Çevre) modelinin örgütsel bağlamını genişletmektir. Bu bakış açısının ana katkısı, 1990'dan 2018'e kadar olan teorik bir değişimi göstermektir, çünkü gelişmiş teknoloji mevcut yüz yıldaki örgütlerin kritik bir parçası haline gelmiştir. Bu araştırmayı yapmak için Bangladeş'teki Dışişleri Bakanlığı ve Kamu İdaresi Bakanlığı'nda 30 yarı yapılandırılmış nitel görüşme (her kuruluşta 15) gerçekleştirilmiştir. Bu araştırmanın bulgularına göre "resmi ve resmi olmayan bağlantı yapıları"; "iletişim süreci"; "boyut" ve "durgunluk" gibi makro örgütsel bağlama ek olarak mikro-örgütsel bağlamda "BT (Bilgi Teknolojileri) bilgi birikimi ve yetenekleri", "değişim süreci"; "çalışanların tatmini ve motivasyonu"; ve "ortaya çıkan rol çatışması" bulgularına rastlanmıştır. Böylece, önceki TOE modeline teorik bir katkı sağlanarak mevcut teknoloji ve örgütsel ortama dayalı yeni bir model geliştirilmiştir.

**Keywords:** İKY, e-İKY, TOE, Resmi Kurumlar, Bangladeş

**JEL Classification:** M10, M12, M19

---

<sup>1</sup> Lecturer, Faculty of Management, Law and Social Sciences, University of Bradford, m.m.rahman6@bradford.ac.uk, ORCID-[orcid.org/0000-0003-0680-482X](https://orcid.org/0000-0003-0680-482X)

<sup>2</sup> Assist. Prof. Dr., Faculty of Economics and Administrative Sciences, Usak University, Turkey and Affiliate Research Fellow, IPAG Business School Paris, France, [erhanaydin.phd@gmail.com](mailto:erhanaydin.phd@gmail.com), ORCID- [orcid.org/0000-0003-2530-9058](https://orcid.org/0000-0003-2530-9058)

## 1. Introduction

Over the past several years, personnel management regularly focused on day to day skills, technical skills, daily functions such as training, recruiting, employees' relationships. Conversely, human resource management (HRM) is designated as a strategic approach to look at people from the economic conditions, and how to manage these assets (Storey, 1992). HR is a strategic tool in linking people and management to business objectives. On the other hand, HR is also considered as one of the most vital organisational assets, because the value of human resource and its support are critical for the whole organisation (Sareen and Subramanian, 2012). Moreover, Hussain et al., (2007) states that HRM makes better use of human resource skills and expertise in order to accomplish organisational aim and objectives. The use of information and communication technologies (ICTs) by the HR departments has gradually increased over the years – and this has resulted in an important phenomenon commonly referred to as employing electronic human resource management (Olivas-Lijan and Zepata-Cantu, 2007).

E-HRM that leads change in organisations plays an important role in improving organisational performance and effectiveness thereby developing intellectual capital, knowledge management and social capital that further leads to improve and develop of HR functions (Lengnick-Hall and Moritz, 2003; Gueutal and Stone, 2005). Furthermore, e-HRM provides a database that covers information regarding HR electronically, and helps the organisation in managing organisational documents and stored knowledge such as safety procedures and employee handbooks, and analysed them (Fletcher, 2005; Lee, 2008).

Due to the aforementioned reasons, we focus on adopting an organisational perspective to e-HRM implementations. The main goal of this focus comes from the idea of extending organisational context of TOE model in the literature (Tornatzky and Fleischer 1990). In order to achieve this purpose, this study is composed of four sections. The first and second sections are considered as literature review that examines the historical perspective of HRM and e-HRM, and theoretical perspective of this research. The third section presents the research method, and the following this section, we indicate the findings and discussion of this research. Based on the discussions in the findings section, we conclude our research through extending the organisational context of TOE model.

## 2. HRM to e-HRM: Historical Perspective

Human Resource management is a term that refers to “a strategic and coherent approach to the management of and organisation’s most valued assets- the people working there who individually and collectively contribute to the achievement of its objectives” (Armstrong 2006, p. 3), and was known as personnel administration before 1960s (Oswal and Narayanappa, 2004; Denisi, Wilson & Biteman, 2014). Personnel administration covers the basic HR functions such as hiring, training, rewarding and evaluating employees (Mahapatro, 2010; Rahman and Aydin, 2018). However, this concept shifted to HRM concepts between 1960 and 1970 as a result of the industrial, technological and economic revolution (Sammartino, 2002; Denisi et al., 2014) and then, “HRM” concept has been acknowledged and used worldwide (Ahmed and Kazmi, 1999; Bowen and Ostroff, 2004; Dibben, Brewster, Brookes, Cunha, Webster & Wood, 2016 ). In 1980s, the organisations explored that the competitive advantage can be achieved through adopting the power of the human resource and then, they adopt “Strategic HRM” as a new concept (Boxall, 1996). The Strategic HRM considers human capital within an organisation that is difficult to replace (Chang and Huang, 2005; Yasemin, 2011). The shift from HRM to Strategic HRM enabled the academicians and researchers to explain the essential role of HR in enhancing and improving the effectiveness of organisation in government department, by recognising the relationship between the practices of HRM and the organisational effectiveness (Schuler and Jackson, 1987; Gratton and Truss, 2003; Ulrich et al., 2013; Jamali, Dirani & Harwood, 2015).

Based on the historical progress of the concept, HRM is now defined as a system of activities and strategies that focus on successfully managing employees at all levels of an organisation to achieve organisational goals (Murphy, 2002; Rahman et al., 2018, Waheed et al., 2019). For this reason, HRM has been considered as the most valuable asset for the organisations (Sareen and Subramanian, 2012; Vanhala and Ritala, 2016). On the other hand, HRM encompasses the following goals: facilitating organisational competitiveness; enhancing productivity and quality; complying with legal and social obligations; and promoting individual growth and development (Noe et al., 2008; Alnaqbi, 2011; Jantan, Hamdan & Othman, 2009; Holland et al, 2007; Gilbert, Winne & Sels, 2015). Thus, the goals were expected to make a robust contribution to “a range of positive organisational outcomes, including high job performance, low turnover, low absence and high cost- effectiveness through the full utilisation of employees” (Paauwe 2009, p. 129).

E-HRM, on the other hand, came to the organisational agenda in the 1990s as referring to adopt HRM transactions through internet (Lengnick- Hall and Moritz, 2003). The main reason for adopting internet in HRM was to transfer online information amongst members of an organisation at anywhere and anytime. Thus, e- HRM system provided three crucial opportunities as a result of technological advancements: disseminating information, automation of transactions and transformation of the HR function (Walker, 2001; Lengnick-Hall and Moritz, 2003; Panayotopoulou et al., 2007). Thus, the concepts and practices of online HR planning (Panos and Bellou, 2016), performance appraisal (Marler and Parry, 2015), recruitment and selection (Gupta, 2016), communication (Bondarouk et al., 2015), and rewarding and developing HR (Ensher et al., 2002) located in managerial systems of the organisations. For this reason, e-HRM can be considered “as a way of implementing HRM strategies, policies and practices in organisations through a conscious and directed support of, and/ or with the full use of web- technology- based channels” (Ruel et al., 2007: 281). The main purpose of using the concept of implementation in our research is to indicate a broad meaning of it such as putting something into practices or having something released (Ruel et al., *ibid*).

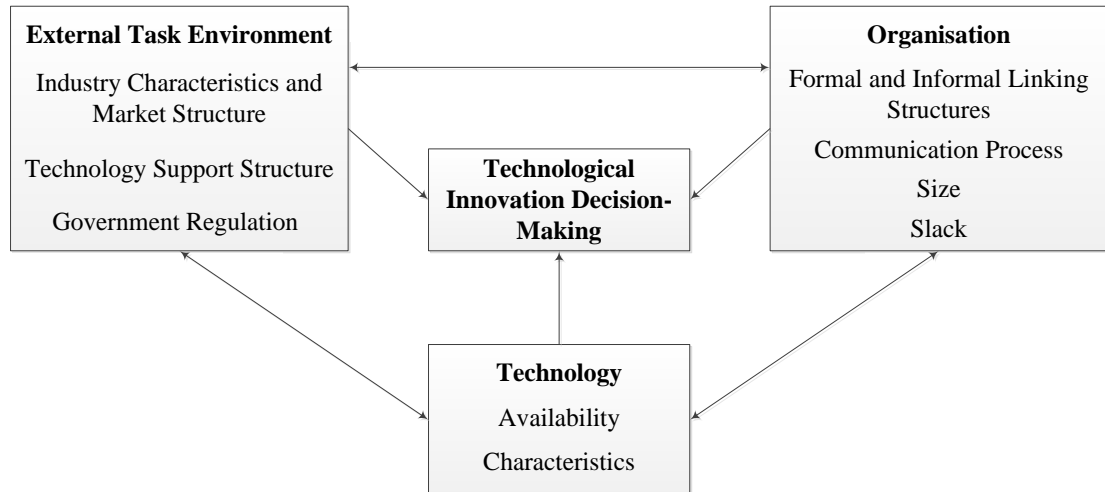
The e-HRM has three important goals which are cost reduction, improving HR services and improving strategic orientation (Panos and Bellou, 2016; Marler and Parry, 2015; Parry and Tyson, 2011; Stanton and Covert, 2004). For this reason, organisations have focused on the implementation of e- HRMs. In this research, we also focus on implementing e-HRM in governmental organisations. The theory that we adopt is TOE perspective. However, the theory was developed in 1990 where technological advancements were poor and there were not efficient internet systems. Therefore, the main aim of this study is to extend the organisational dimension of TOE theory in 2018. This contribution will also provide the theoretical shift from 1990 to 2018.

### **3. Theoretical Perspective: (TOE) Theory**

TOE theory demonstrates the adoption and implementation of any innovation identified by technological, organisational and environmental factors (Depietro et al., 1990; Tornatzky and Fleischer 1990). Technological context considers existing technology that is still in use and new technologies that can be relevant to the organisational practices (Zhu, Kenneth & Sean, 2006; Depietro et al., 1990; Tornatzky and Fleischer 1990; Galanaki et al., 2019). Organisational context demonstrates the structure of an organisation that refers to descriptive measures (Zhu et al., 2006) such as nature of human asset, firm size and measure of slack assets of the organisation (Depietro et al., 1990; Tornatzky and Fleischer, 1990). On the other hand, environmental context clarifies the conditions that an organisation has in a market such as “industry, competitors and dealings with the government” (Oliveira & Martins 2011, p. 112). For this reason, this context also has government regulations that regulate structure of public sector organisation in terms of their employees, and computer programs and system (Depietro et al., 1990; Tornatzky and Fleischer 1990). The main challenge in TOE theory is to be criticized for its inability to create the theoretical understanding to establish causal relationship. However, since it has been used in Information

Systems research, it provides critical insights for the scholars. Figure 1 presents Technology-Organisation-Environment (TOE) at the firm level (Tornatzky and Fleischer 1990).

Figure 1: TOE Theory



Source: Tornatzky and Fleischer, 1990

In this research, we specifically focus on factors related to organisational context because it is in the centre of the TOE theory. Thus, we aim at exploring how organisational context in TOE perspective can be extended through considering e-HRM implementation in the governmental organisations. The TOE perspective is a model that does not embrace internet related technologies and programs due to the lack of technology in 1990. For this reason, we focused on extending the TOE perspective as adopting a research on e- HRM implementation in governmental organisations in Bangladesh.

#### 4. Research Method

In this research, we adopt a qualitative method that postulates a deeper analysis to explore the role of organisations in the implementation of e- HRM based on employees' experiences who work in governmental organisations of Bangladesh (Shanmugam et al., 2015). The main advantage of this method is to focus on a flexibility and specificity rather than generalising and standardising of the results (Marshall and Rossman, 2006).

The sample of this research composed of employees of both Ministry of Foreign Affairs (MOFA) and Ministry of Public Administration in Bangladesh. Since we consider the privacy issues regarding the participants, the first author who conducted semi- structured qualitative interviews did not ask any questions regarding the positions and other personal information. This approach created a friendly environment between researcher and the participants in order to have more accurate answers in the interviews. Thus, we only consider randomly positions in the quotations that are discussed in the findings section. Data collection is provided through 30 participants that work in the two ministries of Bangladesh and the participants who mention their experience about e-HRM implementation have managerial positions. The job functions of the interview participants were Director, Top Manager, Manager, Internal Consultant, Administrative IT Officers, IT Manager, Deputy Director (Admin), Assistant Director (admin) and Assistant Directors.

The first author designed a list of 'potential themes' and questions in order to create an easier analysis process. However, the questions sometimes varied from participant to participant. Because the method provides an opportunity to change the questions through removing or adding questions where appropriate depending on the organisations and the status of the respondent,

questions were tailored to particular respondents based on what they know because of the personal position in their organisations (Erickson, 2012). Having semi structure interview method also meant that the order of the question may change based on the flow of the conversation (Saunders et al., 2011). In some cases, the first author asked additional questions to make sure that they are sufficient to answer research questions and objectives of this study. Also, probing questions were used to facilitate and solicit detailed explanation of phenomenon and activities that occur in a given context. Given the nature of this conversation, most of the interviews were recorded. However, there were instances where the respondents declined to give consent for audio recording of the conversation, in such cases, the author only made notes during the interview. It is important to emphasise that the author listened to the recorded interview immediately after each interview that was conducted between forty- five minutes to one hour. This helps the researcher to remove or add interview questions for the next interviewees.

We employed thematic analysis for the data which comes from semi- structured qualitative interviews. Also, NVivo 10, a computer- assisted qualitative data analysis package, was used for the analysis (Soylu and Sheehy- Skeffington, 2015). In order to have a meaningful and manageable segment for the data, we applied preliminary codes to the textual data. Thus, we were able to reach the core concepts that encompass the most important points in the text (Attride- Stirling, 2001; Miles and Huberman, 1994; Braun and Clarke, 2006).

## 5. Findings and Discussions

Based on the 30 interviews that were conducted by the first author of this paper, we divide our findings into three sections as organisational benefits and organisational challenges that consist of barriers and risks for governmental organisations. In order to create a detailed analysis regarding organisational perspective to e- HRM implementation in Bangladesh, we consider each theme in a separate subsection (Yerkes, 2003; Ruël *et al.*, 2004).

### 5.1. Organisational Benefits

Organisational benefits are composed of IT knowledge and skills, e-HRM communications, commitment through e-HRM strategy, and training of managers and employees.

The first benefit is the *IT Knowledge and Skills*. This refers to the facts and information acquired through experience, training and education. IT knowledge refers to the skills needed to operate the e-HRM system. Without the requisite knowledge, it will not be possible to operate e-HRM system effectively. IT knowledge and skill is germane to the success of e-HRM. Most of the respondents interviewed believe that with good IT skill e-HRM will be a failure and organisation will not achieve its goals of implementing the system. An IT Manager in MOFA supports the fact that knowledge and skill of IT is important to the success of e-HRM as follows:

*“In order to increase the knowledge of the employees and enhance their competencies regarding e-HRM systems, the ministry creates training sessions for them. By this way, the ministry aims at having success on implementing e-HRM systems (IT Trainer, MOFA)”*

The respondent believes in the importance of e-HRM but also acknowledge the role of adequate skills and knowledge for both employees and managers. His opinion is bore out of the fact that it will be impossible to operate the system without adequate knowledge and skills. IT knowledge and skills have two sides. The first side is the employees, and the other side is the managers. On the employee’s side, the organisation should raise the skills and the knowledge for the employees in using PC and educate them about the IT regarding the implemented e-HRM systems to increase the IT competencies for the employees. According to Panayotopoulou *et al.*, (2007) IT competencies are a critical factor in the success of e-HRM implementation in the organisation. Ruël *et al.*, (2004) stated that hiring e-HRM expertise in the organisation consider a critical success factor to insure the success of implementing the system.

The organisation should support the HR and IT managers to increase their knowledge and skills to insure that the e-HRM systems successfully implemented, and to support the employees in the Ministry. Similar argument was reported by Martin and Reddington (2010), they mentioned that the organisation should train and support the IT and HR managers to use the e-HRM system properly to insure that the system run successfully, and the training sessions and support to the managers will enable them to support and provide the employees with the knowledge and the skills they need (Hempel, 2004). The managers are a very important element to ensure the success of e-HRM systems. The organisations should recruit e-HRM expertise to insure that the implementation process run smoothly with no problems, and to ensure that the system is running efficiently.

The second benefit is *e-HRM Communication*. It is used to refer to the imparting or exchanging of information by speaking, writing, or using some other medium. E-HRM systems provide a communication system platform which allows online discussion between the managers and the employees. This communication system has improved the communication between the employees and the managers which increase the efficiency of the ministry. One of the participants point out this situation as follows:

*“The ministry is aware of improving the communication system, because it increases the performance of the HR department and the employees can reach the provide services in a very short time. For this reason, we have seen a significant improvement in the communication system (Assistant Director of Admin, MOFA)”*

Most of the respondents believe that communication has improved since the introduction of e-HRM. The responses suggest that e-HRM is effective and can help organisation to achieve its objectives. The respondents' views are based on their personal experiences especially when using e-HRM software. Some of the respondents insisted that e-HRM makes communication within the organisation very easy and cheap. According to Ruël *et al.*, (2004) communication between the managers and the employees in the organisation has improved since implementing e-HRM systems. The communication platform in e-RHM systems has allow the organisation to inform the employees of the organisational development instantly since they took a part in the online discussion, which keep the employees informed about any changes in the organisation.

Similarly Alleyne *et al.*, (2007) stated that the communication platform in the e-HRM system give the organisation the opportunity to inform the employees of the organisational changes since they participated in the online discussion. In addition, the communication platform within the e-HRM system improves and enhances the communication system in the organisation between the managers and the employees which increase the efficiency of the delivered service in a short time. This was also the view expressed by Cronin *et al.*, (2006) where they found that the communication system in the organisation that comes as apart in the e-HRM systems, improve the delivery of services from HR department in short time.

The third benefit is *Commitment towards e-HRM Strategy*. It refers to the effort exerted by employees toward the achievement of HRM goals. It is expected that HRM goals must be in line with organisational goals, hence achieving HRM target will lead to the achievement of organisational goal. Some of the respondents also share their views in relation to the issue of commitment toward e-HRM strategy. For instance, a deputy director in MOFA states his view as follows:

*“The ministry includes the top managers and decision makers for the implementation process of e-HRM, because the full alignment between the ministry and HR strategy has critical importance on correct implementation of e-HRM.” (Deputy Director in MOFA)*

Departmental or unit strategy and goals should align with organisational strategy and goal. This view was echoed by all the respondents. They believe that the departmental strategy and goals cannot be isolated from organisational goals. Hence their view is that e-HRM strategy will support

organisational strategy. This benefit is very important for the organisation, because the commitment from the employees and the managers of the e-HRM projects helps in successful of implementation process. This is because each one will put his effort to ensure its success. This was the view of Olivas-Luján *et al.*, (2007) where they revealed that the top manager and decision makers' commitment to e-HRM strategy was the main determining success factor in implementing e-HRM systems. Olivas-Luján *et al.*, (2007) went further to suggest that organisations should involve the employees and the managers in the implementation process to ensure that every person contribute to guarantee their commitment to the system. The commitment should include the top managers and the decision maker in the organisations and not only the project itself. This commitment is more important because it leads to successfully fulfilling the strategic targets for the ministry.

Based on the respondents' perspective, training of managers and employees are another benefit of implementing e-HRM. Most of the respondents talk about the value of the training they received and how it has helped them to perform better. So, it is safe to adduce that the respondents are speaking from their personal experiences. Their experiences of training either as a manager or employee has been of immensely benefited them. Training sessions for managers and employees are very significant issue to ensure successful implementation of the programme (Alleyne *et al.*, 2007; Panayotopoulou *et al.*, 2007; Martin and Reddington, 2010). The training sessions should include both sides in the organisation i.e. the managers and the employees. Regarding the managers, the HR experts should be trained properly, because they can fulfil their managerial task easier which gives them the time to support the employees to enable them to achieve their managerial tasks.

According to Martin and Reddington (2010) constructive training programs allow the manager to perform their managerial job on time, which allow them to support the employees and guide them to perform their jobs. As all the participants state in the interviews, the training will help the employees to increase their knowledge and skills to accomplish their managerial task fast and with less help from the managers. Beulen (2009) took similar view when he said that the training sessions provided to the employees help them to accomplish their managerial task successfully and with no difficulties.

## 5.2. Organisational Barriers

In this section, we examine three main organisational barriers for e-HRM implementation that are role conflict, employees' resistance and understanding the system.

*Role Conflict* refers to disagreement as to who should do what. Role conflict exists where task overlapped and employees are not sure as to who should be responsible for a particular task. Role conflict occurs because of incompatibility of demands on an employee. In such cases the employee may not be able to comply with the demand. Employee experience role conflict when they are given different role by different managers within the organisation. This often occurs under a matrix organisation where an employee can be involved with several departments within the organisation. The conflict caused in two cases; the first case is between the employees and the manager. An Internal Consultant in MOPA recounts his experience as follows:

*"There is a role of conflict in our organisation because the HR staff who is responsible for implementing e-HRM systems does not have any collaboration with Information System (IS) experts."* (Internal Consultant of Admin)

Arguably though, some of the respondents have experienced role conflict and the experience was not pleasant. They claim some of these may not be intentional but it has the capacity to constitute barrier to the implementation of the e-HRM. With the implementation of e-HRM some employees will be responsible to two or more line managers because of the task they perform. In such cases, it is important to ensure that such employees are not unnecessarily burden with task from different department and line managers. The views of the respondents presented above are

similar to what many of the literature stated. For example, Oiry (2009) showed that a conflict role was created between the employees and the managers because the employees see themselves as 'in-training' and the managers saw the employees as 'in-work'. This different perception between them creates conflict.

The second case of conflict is that conflict happened between the departments in organisation, this situation happened when excluding one of the departments in contributing to the e-HRM implementation or when the HR experts could not identify different needs for the stakeholder. The same problem was identified in Tansley and Watson (2000) where it was stated that whenever IS department is not involved in the implementation process of e-HRM systems there will be a huge conflict for the organisation. Cronin *et al.*, (2006) stated that during the e-HRM implementation process there is need to identify the different needs and requirements for the stakeholder in the ministry, which create role of conflict.

The second barrier is *Employee's Resistance* to the implementation of e-HRM system in organisations. This denotes taking actions that are detrimental to the implementation of e-HRM. It is the refusal to comply with the plan introduce. Some employees do not want to comply because of fear of the unknown. In addition, some other employees show resistance to the system in different way, they afraid that the new system will put more load of work on their shoulder; they refuse to use the new system. For instance, an Internal Consultant in MOFA states this situation as follows:

*"The employees do not like the new system because it brings lots of workloads for them. You know... There is always resistance to change, and the employees don't want to use and to access to the e-HRM system"* (Internal Consultant of Research)

It is evident from the response that employees are afraid of the consequence of the implementation. Some of the employees are worried that it may lead to overload of task and hence they attempted to resist the introduction. Some are concern for their jobs, they felt that the organisation may place them on redundancy and recruit people with skills and technical knowhow. Hence it is safe to conclude that the main reason responsible for employees' resistance is the fear of what will happen after the implementation. According to Wilson-Evered and Härtel (2009); Teo *et al.*, (2007); Heikkilä and Smale, (2011); Olivas-Luján *et al.*, (2007); Ruël *et al.*, (2004); Reddick, (2009); Hustad and Munkvold, (2005) resistance to a new system appears as a barrier in organisations due to the employees' resistance to change from the old system to the new system.

The resistance to using the e-HRM systems in organisations could be as a result of the system not identifying all the employees' needs (Wilson-Evered and Härtel, 2009; Heikkilä and Smale, 2011). This may that hold the employees' back from using such a system. This was the argument in Cronin *et al.*, (2006) study, which argued that if the implemented system does not fulfil and identify the employees and manager needs the employees shows a resistance to the new systems. Similarly, Olivas-Luján *et al.*, (2007) agreed that the employees avoid using the system of e-HRM because they thought that the system would put more work load on their shoulder. The final picture of resistance from employees to e-HRM system is that the employees think that the organisations might not ensure the security of personal information and data. The fear of insecurity created resistance to e-HRM among many employees. Reddick (2009) also found similar result from his study. Hence, he stated that the employees are afraid that their personal data will be compromised and that is why they try to show resistance to e-HRM systems.

The last factor is to *understand the system*. This relates to the extent to which the employees are aware of the system. In another word, does the employees have enough awareness from the organisation about the role of the e-HRM systems or not? One of the participants in MOFA presents his view as follows:

*"there was never any consultation with the employees before the implementation. We were told a week before the implementation that e-HRM will be introduce to the"*



*organisation. Many of us are surprised because nobody mentioned it to us before” – (Director General)*

From the foregoing, it seems that employee awareness is important if any new system is to be successful. Where employees are not aware, there is a tendency that they will be sceptical about the system and that may lead to sabotaging the system. It is safe to say that lack of awareness may be a problem for the system. According to Hussain *et al.*, (2007); Olivas-Luján *et al.*, (2007); Tansley *et al.*, (2001) some organisations do not provide the employees with enough information and data about the benefits and the values of the e-HRM systems. Hussain *et al.*, (2007) has shown that the lack of awareness between the employees regarding the e-HRM systems is responsible for the misunderstanding among employees’. When employees are not aware of the benefits, a system brings to them, it is only logical that they are sceptical about the programme. The confusion of the system can happen at the HR manager level, where it is expected to improve the HR automation task but failed to turn it into a strategic one. Tansley *et al.*, (2001) argued that the HR managers may turn and automate HR roles, but unfortunately, they could not convert these roles into a strategic one.

### 5.3. Organisational Risks

Some risks have been identified in this section of the study. In the next few paragraphs the author explains the participants’ response regarding the identified risks. The main organisational risks factors identified are discussed below:

*Change of Management* is the major risk to the implementation of e-HRM system. Change of management or change of personnel refers to changes of people or personnel at the top or apex of the organisation. Change of management often affect employees in organisation because of requirements that may be introduce by the new management. Most of the respondents agreed that whenever management change in the organisation, there will always be new ideas or way of doing things introduced by new management. A participant in MOFA states this situation as follows:

*“... Hmm. A few months ago, our director was changes and it resulted many changes in the line managers. This absolutely affects us because we now must deal with new managers and the thing is we have different view in most cases.” (Assistant Director).*

This problem has been described by the respondents because of their individual experiences. Many of the respondents had bad experiences because of change in management. The views above depict the opinion of most of the respondents. This view has also been captured by extant literature. For example, Kramer and Magee (1990) asserted that change management is responsible for organisational failure where change of personnel is not managed properly. Similarly, Todnem (2005) submitted that when the management of change of personnel is crucial to organisational goals and objectives. New personnel often come with new ideas and when such ideas conflict of what the employees expect or used to, it may lead to conflict and failure in the organisation.

Another organisational risk factor is the *Employee Satisfaction and Motivation*. The findings demonstrate that employee satisfaction and motivation are interlinked. The respondents agreed that it is important for them to be satisfied with the role or job they are performing in order that they may be motivated to perform better. For instance, a participant in MOPA states this situation as follows:

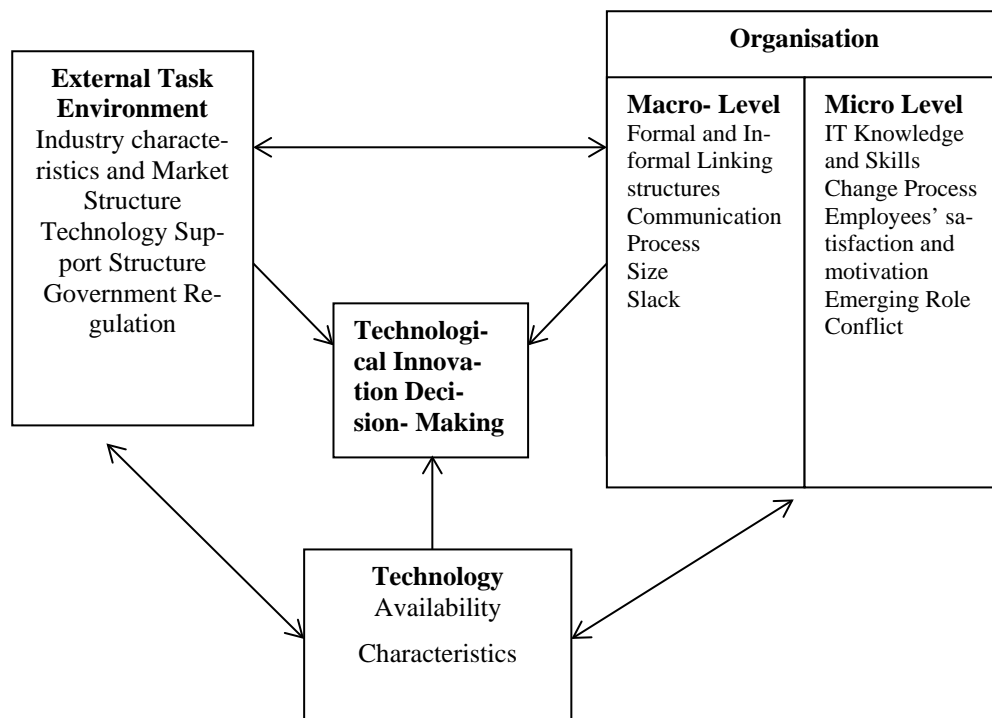
*“If I don’t feel happy to work here, it means that I can’t work well. Hmm... I was lucky because when I have an idea about e-HRM, my manager agrees with me. You know. It makes life easier. If I face lots of challenges, I can’t stand and I even can leave my job. Anyway, everyone is happy and the e-HRM system succeeded.” (Deputy Director)*

The response of the participant can be adjudged as a product of their experiences. Most of the respondents believe that they need to be satisfied with the role they are participating in if they are to be motivated. Hence, it was clear that role satisfaction is directly associated with the level of employee motivation. According to Panayotopoulou *et al.*, (2007) employee satisfaction of role and task performed is the major instrument of organisational success. The author reviews also showed an increased service satisfaction with the HR department (Lukaszewski *et al.*, 2008) and increased satisfaction related to HR processes to have better HR responsiveness to employees' needs (Cronin *et al.*, 2006). This is similar to what Jaradat (2013) presented when it states that organisations should keep in touch with the employees to avoid any future resistance to insure the success of e-HRM system implementation (Voermans and van Veldhoven, 2007; Olivas-Lujan *et al.*, 2007).

## 6. Conclusion

This article has developed organisational context of TOE model through understanding challenges and benefits of e-HRM implementation in governmental organisations. This research provides an opportunity to explore 'other issues' rather than 'formal and informal linking structures', 'communication process', 'size', and 'slack'. Based on the findings of this study, the other issues have been found as 'IT knowledge and skills', 'change process', 'Employees' satisfaction and motivation', and 'emerging role conflict'. For this reason, the organisational context in TOE model is divided into the macro and micro dimensions as it is seen in Figure 2. The main reason of having a purpose to extend the model comes from technological shift from 1990 that TOE model was developed to 2016. Technological tools such as e-HRM are a critical part of the organisations in the current century. For this reason, the challenges and benefits that we addressed in this research are able to extend organisational context of TOE model. Figure 2 demonstrates the proposed TOE theory as a result of this research.

Figure 2: Proposed TOE theory



The future research that adopts TOE theory should consider the current version of the TEO theory in order to have an up to date knowledge on any issues that are addressed in the research. Thus, the results of the research will be more accurate and consistent with the current century that has advanced technologies in comparison to 1990s.

### References

- Ahmed, F. and Kazmi, A. (1999). 'Historical Evolution of Strategic Human Resource Management', *Malaysian Management Review*, 34(1), 1-15.
- Alleyne, C., Kakabadse, A. and Kakabadse, N. (2007). Using the HR Intranet: An Exploratory Analysis of Its Impact on Managerial Satisfaction with the HR Function. *Personnel Review*, 36(2), 295-310.
- Alnaqbi, W. (2011). 'The Relationship between Human Resource Practices & Employee Retention in Public Organizations: An Exploratory Study Conducted in the UAE', PhD Thesis, Edith Cowan University.
- Armstrong, M. (2006). *A handbook of Human Resource Management Practice*, Cambridge University Press, London.
- Attride-Stirling, J. (2001). Thematic Networks: An Analytic Tool for Qualitative Research. *Qualitative Research*, 1(3), 385-405.
- Beulen, E. (2009). 'The Enabling Role of Information Technology in the Global War for Talent: Accenture's Industrialized Approach', *Information Technology for Development*, 14(3), 213-224.
- Bondarouk, T., Harms, R., and Lepak, D. (2015). Does e-HRM Lead to Better HRM Service?. *The International Journal of Human Resource Management*, 1-31.
- Bowen, D. E., and Ostroff, C. (2004). Understanding HRM–Firm Performance Linkages: The Role of the "Strength" of the HRM System. *Academy of Management Review*, 29(2), 203-221.
- Boxall, P. (1996). The Strategic HRM Debate and the Resource-Based View of the Firm. *Human Resource Management Journal*, 6(3), 59-75.
- Braun, V. and Clarke, V. (2006). Using Thematic Analysis in Psychology. *Qualitative Research in Psychology*, 3(2), 77-101.
- Chang, W. and Huang, T. (2005). 'Relationship between Strategic Human Resource Management and Firm Performance', *International Journal of Manpower*, 26(5), 434-449.
- Cronin, B., Morath, R., Curtin, P. and Heil, M. (2006). 'Public Sector Use of Technology in Managing Human Resources', *Human Resource Management Review*, 16, 416-430.
- DeNisi, A. S., Wilson, M. S., and Biteman, J. (2014). Research and Practice in HRM: A Historical Perspective. *Human Resource Management Review*, 24(3), 219-231.
- Depietro, R., Wiarda, E., and Fleischer, M. (1990). The Context for Change: Organization, Technology and Environment. *The Processes of Technological Innovation*, 199(0), 151-175.
- Dibben, P., Brewster, C., Brookes, M., Cunha, R., Webster, E., and Wood, G. (2016). Institutional Legacies and HRM: Similarities and Differences in HRM Practices in Portugal and Mozambique. *The International Journal of Human Resource Management*, 1-19.
- Ensher, E. A., Nielson, T. R., and Grant-Vallone, E. (2003). Tales from the Hiring Line: Effects of the Internet and Technology on HR Processes. *Organizational Dynamics*, 31(3), 224-244.

- Erickson, F. (2012). *Qualitative Research Methods for Science Education*, in Second international Handbook of Science Education (1451-1469). Springer Netherlands.
- Fletcher, P. (2005). *From Personnel Administration to Business Driven Human Capital Management: the Transformation of the Role of HR in the Digital Age*, In Greutal and Stone (Eds), *The Brave New World of Her* (1-12). San Francisco, CA :Jossey-Bass
- Gilbert, C., De Winne, S., and Sels, L. (2015). Strong HRM Processes and Line Managers' Effective HRM Implementation: A Balanced View. *Human Resource Management Journal*, 25(4), 600-616.
- Galanaki, E., Lazazzara, A. and Parry, E. (2019). 'A Cross-National Analysis of E-HRM Configurations: Integrating the Information Technology and HRM Perspectives.' In *Organizing for Digital Innovation*. Springer, Cham, 261-279.
- Gratton, L. and Truss, C. (2003). 'The Three-Dimensional People Strategy: Putting Human Resources Policies into Action', *Academy of Management Executive*, 17(3), 74-86.
- Gueutal, H.J. and Stone, D.L. (2005). *The Brave New World of E-HRM: Human Resource Management in the Digital Age*, Jossey-Bass
- Gupta, Y. (2016). Literature Review on E-Recruitment: A Step Towards Paperless HR. *International Journal*, 4(1).
- Heikkilä, J-P. and Smale A. (2011). 'The Effects of 'Language Standardization' on the Acceptance and Use of e-HRM Systems in Foreign Subsidiaries', *Journal of World Business*, 46(3), 305-313.
- Hempel, P.S. (2004). 'Preparing the HR Profession for Technology and Information Work', *Human Resource Management*, 43(2-3), 163-177.
- Hussain, Z, Wallace, J. and Cornelius, N. (2007). 'The Use and Impact of Human Resource Information Systems on Human Resource Management Professionals', *Journal of Information and Management*, 44(1), 74-89.
- Hustad, E. and Munkvold, B. (2005). 'IT-supported Competence Management: A Case Study at Ericsson', *Information Systems Management*, 22(2), 78-88.
- Jamali, D. R., El Dirani, A. M. and Harwood, I. A. (2015). Exploring Human Resource Management Roles in Corporate Social Responsibility: the CSR-HRM Co-Creation Model. *Business Ethics: A European Review*, 24(2), 125-143.
- Jantan, H., Hamdan, A. R. and Othman, Z. A. (2009). Knowledge Discovery Techniques for Talent Forecasting in Human Resource Application. *World Academy of Science, Engineering and Technology*, 50, 775-783.
- Jaradat, N. (2013). 'Electronic Human Resource Management: Issues and Challenges in Jordanian Universities', *Interdisciplinary Journal of Contemporary Research in Business*, 4(12), 685-710.
- Kramer, J. and Magee, J. (1990). The Evolving Philosophers Problem: Dynamic Change Management. *IEEE Transactions on Software Engineering*, 16(11), 1293-1306.
- Lee, A., (2008) 'Relationship between the Use of Information Technology and Performances of Human Resource Management', PhD Thesis, Alliant International University, San Diego: USA.
- Lengnick-Hall, M. L. and Moritz, S. (2003). 'The Impact of E-HR on the Human Resource Management Function', *Journal of Labour Research*, 24(3), 365-379.

- Lukaszewski, K.M., Stone, D.L. and Stone-Romero, E.F. (2008). 'The Effects of the Ability to Choose the Type of Human Resources System on Perceptions of Invasion of Privacy and System Satisfaction', *Journal of Business and Psychology*, 23(3-4), 73-86.
- Mahapatro, B.B. (2010). *New Age Human Resource Management*, E-book. New Delhi: New Age International (P) Ltd.
- Marler, J. H. and Parry, E. (2015). Human Resource Management, Strategic Involvement and e-HRM Technology. *The International Journal of Human Resource Management*, 1-21.
- Marshall, C. and Rossman, G.B. (2006), *Designing Qualitative Research*, 4th ed., Sage, Thousand Oaks, CA
- Martin, G. and Reddington, M. (2010). 'Theorizing the Links between e-HR and Strategic HRM: A Model, Case Illustration and Reflections', *The International Journal of Human Resource Management*, 21(10), 1553-1574.
- Miles, M. B. and Huberman, A. M. (1994). *Qualitative data Analysis: An Expanded Sourcebook*. Sage.
- Murphy, T. (2002). 'Market Forces and the Middle East's New Interest in HRM', *Business Horizons*, 45(5), 63-71.
- Noe, R., Hollenbeck, J., Gerhart, B. and Wright, P. (2008). *Human Resource Management: Gaining a Competitive Advantage* (6<sup>th</sup> Edition). New York: McGraw-Hill Companies, Inc.
- Oiry, E. (2009). 'Electronic Human Resource Management: Organizational Responses to Role Conflicts Created by e-Learning', *International Journal of Training and Development*, 13(2), 111-123.
- Olivas-Lujan, M.R.; Ramire, Z, J. and Zapata-Cantu, L. (2007). 'E-HRM in Mexico: Adapting Innovations for Global Competitiveness', *International Journal of Manpower*, 28(5), 418-434.
- Oswal, N. and Narayanappa, G. (2014). 'Evolution of HRM to E-HRM Towards Organizational Effectiveness and Sustainability', *In the Proceedings of the International Research Conference on Engineering, Science and Management*, Abu Dhabi.
- Paauwe, J. (2009). HRM and Performance: Achievements, Methodological Issues and Prospects. *Journal of Management Studies*, 46(1), 129-142.
- Panayotopoulou, L., Vakola, M. and Galanaki, E. (2007). 'E-HR Adoption and the Role of HRM: Evidence from Greece', *Personnel Review*, 36(2), 277-294.
- Panos, S. and Bellou, V. (2016). Maximizing E-HRM Outcomes: A Moderated Mediation Path. *Management Decision*, 54(5).
- Parry, E. and Tyson, S. (2011). Desired Goals and Actual Outcomes of E-HRM. *Human Resource Management Journal*, 21(3), 335-354.
- Rahman, M. and Aydin, E. (2018). 'Political Benefits, Barriers, and Risks of E-HRM Implementations in Bangladesh Public Sector Organisations: An Institutional Perspective.' *Business & Management Studies: An International Journal*, 6 (3), 619-633.
- Rahman, M., Mordi, C. and Nwagbara, U. (2018). 'Factors Influencing E-HRM Implementation in Government Organisations: Case Studies from Bangladesh.' *Journal of Enterprise Information Management*, 31(2), 247-275.
- Reddick, C.G. (2009). 'Human Resources Information Systems in Texas City Governments: Scope and Perception of Its Effectiveness', *Public Personnel Management*, 38(4), 19-34

- Ruel, H. J., Bondarouk, T. V. and Van der Velde, M. (2007). The Contribution of E-HRM to HRM Effectiveness: Results from A Quantitative Study in A Dutch Ministry. *Employee relations*, 29(3), 280-291.
- Ruël, H., Bondarouk, T. and Looise, J.K. (2004). 'E-HRM: Innovation or Irritation. An Explorative Empirical Study in Five Large Companies on Web-based HRM', *Management Revue*, 15(3), 364-381.
- Sammartino, W. (2002). *The System Integration of Human Resource Management with Organizational Strategies*, PhD Thesis, Graduate Program in Business Administration, Faculty of Economics, Business Administration and Accounting, University of Sao Paulo, Sao Paulo.
- Sareen, P. and Subramanian, K.V. (2012). 'E-HRM: A Strategic Review', *International Journal of Human Resources Studies*, 2(3), 119-127.
- Saunders, M., Lewis, P. and Thornhill, A. (2011). *Research Methods for Business Students*, 7<sup>th</sup> Edition, Harlow: Pearson Education.
- Schuler, R. and Jackson, S. (1987). 'Linking Competitive Strategies with Human Resource Management Practices', *Academy of Management Executive*, 1(3), 207-219.
- Shanmugam, M., Wang, Y. Y., Bugshan, H. and Hajli, N. (2015). Understanding Customer Perceptions of Internet Banking: the Case of the UK. *Journal of Enterprise Information Management*, 28(5), 622-636.
- Sinha, B. and Mishra, M. (2014). 'E-HRM Tools: An Empirical Study in Select Indian Organisations', *International Journal of Business and Management Invention*, 3(9), 71-83.
- Soylu, S. and Sheehy-Skeffington, J. (2015). Asymmetric Intergroup Bullying: The Enactment and Maintenance of Societal Inequality at Work. *Human Relations*, 0018726714552001.
- Stanton, J. M. and Coover, M. D. (2004). Guest Editors' Note: Turbulent Waters: The Intersection of Information Technology and Human Resources. *Human Resource Management*, 43(2-3), 121-125.
- Storey, J. (1992). *Developments in the Management of Human Resource*, London: Blackwell Business.
- Tansley, C. and Watson, T. (2000). Strategic Exchange in the Development of Human Resource Information Systems (HRIS). *New Technology, Work and Employment*, 15(2), 108-122.
- Tansley, C., Newell, S. and Williams, H. (2001). Effecting HRM-Style Practices Through an Integrated Human Resource Information System: An E-Greenfield Site?. *Personnel Review*, 30(3), 351-371.
- Teo, T.S.H., Lim, G.S. and Fedric, S.A. (2007). 'The Adoption and Diffusion of Human Resources Information Systems in Singapore', *Asia Pacific Journal of Human Services*, 45, 44-62.
- Todnem By, R. (2005). Organisational Change Management: A Critical Review. *Journal of Change Management*, 5(4), 369-380.
- Tornatzky, L.G. and Fleischer, M. (1990). *The Process of Technology Innovation*, Lexington: Lexington Books.
- Ulrich, D., Younger, J., Brockbank, W. and Ulrich, M. (2013). 'The State of the HR Profession', *Human Resource Management*, 52(3), 457-471.
- Vanhala, M. and Ritala, P. (2016). HRM Practices, Impersonal Trust and Organizational Innovativeness. *Journal of Managerial Psychology*, 31(1), 95-109.

- Voermans, M. and Van Veldhoven, M. (2007). 'Attitude Towards E-HRM: An Empirical Study at Philips', *Personnel Review*, 36(5-6), 887-902.
- Waheed, A., Miao, X., Waheed, S., Ahmad, N., and Majeed, A. (2019). 'How New HRM Practices, Organizational Innovation, and Innovative Climate Affect the Innovation Performance in the IT Industry: A Moderated-Mediation Analysis.' *Sustainability*, 11(3), 621.
- Walker, A. J. (2001). How the Web and Other Key Trends Are Changing Human Resources. *Web-Based Human Resources: the Technologies and Trends That Are Transforming HR xiii-xxviii*. New York: McGraw-Hill.
- Wilson-Evered, E. and Hartel, C. E. J. (2009). 'Measuring Attitudes to HRIS Implementation: A Field Study to Inform Implementation Methodology', *Asia Pacific Journal of Human Resources*, 47(3), 374-384.
- Yasemin, B. (2011). 'The New Human Resources Management in the 21st Century: A Strategic View', *Annual Conference on Innovations in Business & Management, The Center for Innovations in Business and Management Practices*, London, UK.
- Yerkes, L. (2003). 'How to Create A Place Where People Love to Work', *The Journal for Quality and Participation*, 26(4), 47-50.
- Zhu, K., Dong, S., Xu, S.X. and Kraemer, K.L. (2006). 'Innovation Diffusion in Global Contexts: Determinants of Post-Adoption Digital Transformation of European Companies', *European Journal of Information Systems*, 15(6), 601-616.

