



## Electronic Human Resource Management Practices, Information Technology Capability and Organisational Performance: A Review Paper Toward Conceptual Framework

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### ABSTRACT

This paper provides a conceptual framework for studying the influence of Electronic Human Resource Management practices and information technology capability on organisational performance. This paper aims to increase our understanding of the organisational performance as the phenomenon focus on that is considered the dependent variable, the e-HRM practices are the independent variables, and IT capability is the moderating variable. Such conceptual framework can provide guidance for future research to help in the identification, realisation and assessment of e-HRM implementation benefits. Special focus is put on organisational performance. Moreover, this conceptual framework complements and continues former literature and presents a new delineated framework for considering research on e-HRM practices influence on organisational performance. This conceptual framework will be our empirical study in the future, which will contribute to HRM literature and determines the potency of e-HRM and its effect on organisational performance.

### Keywords:

Electronic Human Resource Management Practices; information technology capability; organisational performance

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## 1. Introduction

In human resource management (HRM), it has been noticed that an increased demand of modern information technologies (IT). This results in constant management of core business process or enterprise resource planning (ERP) software destined for technologies ground on internet that controlled the section of HRM which are connected with management. In term of the administrative agreements and information communications, the imagination of HRM IT innovations based on internet that are commonly defined as E-HRM [11, 62], may be featured as important economic productivity.

As the technology has evolved, e-HRM can be a key of new horizon, making welfare of employees easier as well as helping organisations controlling these resources more effectively. Kushwah and

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Maheshwari [39] stated that what makes e-HRM distinguished is the fact that it not only helps in controlling employees but also helps in improving planning and working of personnel more efficiently in offering development and training to employees. As Web technologies developed and organisations vigorously utilised them, more HRM duties became Web-enabled. E-HRM conveys the functions of HRM to managers and employees [53]. In addition, Organisations worldwide have noticed the increasing value of IT for leveraging human resource management function, thereby urging the adoption of e-HRM [33]. Further, Information and Communication Technologies (ICT) empower innovative means to carry on routine organisational responsibilities via controlling the environment of virtual work. High-level e-HRM systems typically encompass systems of Enterprise Resource Planning (ERP), Interactive Voice Response (IVR), centres for HRM services, managers and employee's portals and web applications. E-HRM develop organisational performance considerably in almost all the field. E-HRM implementation can promote organisation efficiency, effectiveness, financial capability etc. It allows an organisation to concentrate on the job preferably than day-to-day task, the matter that farther improves organisational performance.

In the twenty-first century, e-HRM could be employing so many innovative ideas that we hardly manage to scratch the surface of it. With the initiation of Artificial Intelligence, there are innumerable opportunities in e-HRM [2]. Moreover, e-HRM proposes an inherent approach to improve services catered to the clients of HR department (management and employees), improve efficiency and achieve the HR department cost-effectiveness, and help HR to convert into a strategic partner contributing to the realisation of organisational aims [4]. To sum up, e-HRM is not being taken as the research topic but there is high potential and scope for the researchers and organisations as well in order to consider it appropriately [13]. Therefore, it is necessary for the researcher to conduct researches on this area of subject to contribute for the improvement and growth of e-HRM. Further, it is also suggested that e-HRM area of study is new and having its initial phase [51]. The research suggests that e-HRM is not being analysed and utilised adequately by the academia therefore, it is not result oriented yet in the research and in practice as well [62]. Further addition is being made regarding using e-HRM approach but it is not filthy to accept easily because of incomplete results and information [61]. Therefore, researchers of this study are having an attempt to provide advance information regarding e-HRM practices and its effects on organisational performance. As far as the human resource, employees and performance are a concern, the e-HRM practices, processes and organisational performance are the new and essential area for the research.

## **2. Literature Review**

### *2.1 Electronic Human Resource Management (E-HRM)*

There is no consistency or agreement on the definition of e-HRM. Thus, many definitions have been proposed. Electronic Human Resource Management was described by Strohmeier [62] as the process of planning, implementing, and using IT for both networking and supporting at least two individual or collective actors in the shared performing of the activities of Human Resources. It is used for transactional activities, recruitment, training, selection, and performance management [68]. E-HRM is simply described as managing human resources of the organisations with the help of Information Technology based tools and also by using computers, DBMS software's, social media sites for hiring, Technology based employee performance appraisal and technology based training & development programmes. Nivlouei [46] reveals that e-HRM outcomes in works are high competence when doing thinks, higher harmony, high workforce commitment, and effectiveness. In addition, he stated that E-HRM has a vital role in cutting the administrative costs, making the interaction between managers and employees fast and smooth so that the employees become more active, therefore,

this will increase the productivity via faster processing and create a perfect environment for work. All of these benefits definitely inspire any employee to learn new roles and tasks, reducing mistakes and overlapping work. Similarly, Findıklı and Beyza Bayarçelik [31], in their study, confirmed that there are many profits of applying e-HRM like cutting the administration costs, faster and easier logging to the personal data and information and organising the time more efficiently. They also confirmed that e-HRM supports and extends the links between employees and manager, and cutting the organisational costs and time for e-HR users in the organisation. Also Kariznoee, Afshani, and Moghadam [36] and Bataineh [9] confirmed that there was a significant positive correlation between e-HRM and its components and job performance.

Since the appearance of technology till the last three decades, organisations have used old-fashioned ways of processing information including files and databases related to daily tasks (e.g., book keeping, customer billing, inventory management, payroll). This can be added to face-to-face interaction and in person meetings, organisations relied on typewritten letters, interoffice memorandums, photocopiers, and telephone conversations. It is believed that the first tele printer service which started its operations in 1933 was used as sending written messages electronically. However, it became less popular after the invention of facsimile (or "fax") machines in the 1980s. As the technological revolution took place in the 1990s, personal computers and the internet played their roles, especially in organisational processes. ICT, on the other hand, started to cast its shadows on both the workforce and the workplace [56]. Over the past years, technology has dramatically improved related to the use and the process of information and data in particular. This can be noticed in routine activities of business as well. It has been revealed by the past studies that improvements can be made in organisational performance through the use of information technology [16, 26,30]. The company needs to incur investment on adoption of information technology for making the better performance. Past studies have shown that information technology creates a significant positive impact on organisational performance. The results are based on the analysis of 631 companies in USA. The rapidly growing number of information and communication technologies impacts the development and functioning of businesses. We have recently observed an increase in the use of information and mobile technologies [24] by society. This has influenced human resource management (HRM) styles in different enterprises.

Speaking on today's technology, it is apparent that the world is changing fast, especially in information and communication technology as they transform the way in which businesses handle matters of interaction between various aspects of workplace from how and where we work to the way we communicate. Five pieces of technologies have changed the creation of global business and organisations including: cloud and mobile computing, big data and machine learning, sensors and intelligent manufacturing, advanced robotics and drones, and clean-energy technologies. These tools are not only supporting people with faster and better solutions for their lives, but also giving the chance for organisations to fundamentally changing the way of implementing and running their businesses[20]

The E-HRM technology sustains the HR functions through web technology based channels [52]. The term 'E-HRM' is defined, according to researchers and in various connoting of SMEs, as web-based process and elegant solution that obtain improvement of the latest web applications technology to provide an online real-time. Regardingly, HRM has some essential aspects that make it easy to use or easy to assess, systematic process, convenient to formulate answers indeed and rich in features, apart from all that central power of the system, they are described as individual since they carry out all the activities in business. Men are certainly required in businesses, but the function of IT in building businesses is the same as E-HRM duty in establishing selective instrument and function. Unlike HRM, E-HRM has increased the flow of information through technology which can

control multiple tasks, serves as an effective tool of great decision technology. HR motions and automating business are supported by the integrated attitude of HR and its technology which results in dealing with job hiring, performance tracing, career development and training. Thus, E-HR is performing the corresponding role [57]. Today, the experience of e-HRM revealed that management and the employees become more reliant on the concept of decentralization of HR functions. After implementing e-HRM, HR department has the ability to access to some empowerment to perform some selected HR functions, with the result that HR department could focus more on the strategic elements rather than operational elements. As the load of work has been reduced, the corporations start to decrease the number of staff in the HR department. In few years' time, the e-HRM will evolve and more empowerment will be given to the employees which can add a kind of relief to the HR heads. This can lead to paying more attention to formation of strategies rather than shuffling the records and managing the employees' data by HR heads.

## *2.2 Electronic Human Resources Management practices (E-HRM Practices)*

These days, IT tools are considered to be backbone of all kinds of support related to human resource management functions such as the employee evaluation process and providing comprehensive data on actions proceeded by an employee that, in turn, supports the improvement of a relevant remuneration system. Furthermore, balance, stress management, as well as data selection for launching and analysing individual performance evaluation, own work time planning, personal development and career management could completely be achieved [12]. All of these work perfectly to fulfill the aim of developing the employee productivity.

Organisations are becoming more IT technology enabled and trying to be more effective and trying to manage employee with easy and simple process. For the sake of this study, e-HRM is an entire mixture of an HR department combined and practised activities. Besides, e-HRM comprises all applications of the planning of labour force, forecast of supply and demand, staffing information, tracking applicants, management of salary, training and development information, promotion-related communication, labour/employee relations and so on [8]. (E-HRM is measured through its basic practices, namely e-recruitment, e-compensation, e-selection, e-communication, e-training and e-performance appraisal. The following are the different aspects in which electronic practices of HR are being used:

### *2.2.1 E-Recruitment and E-Selection:*

Recruitment is the first step that brings employer and employee together. Email is being utilised as a big source for this process, along with that new strategies are also being used nowadays like social media platform, to attract chunk of skilled employees. According to Dhamija [27], e-Recruiting is using the internet for attracting potential employees to an organisation and hiring them". E-HRM is online recruitment. It applies an online recruitment vendor's website that allows organisations to post vacancies on the corporate website and enable candidates to electronically submit CVs by e-mail. Further, it incorporates the active searching for the resumes' location and internet [67]. Selection is the second step, which is helpful in selection of best employee from recruitment applications. In 21st century, interview through Internet via Video Calling is very common. For written exam, also there are numbers of software, which can help organisations. There are also applications available which helps organisation in psychometric analysis of the employees [39]. Selection is a long process that starts from the introductory interview of the applicants and ends with the employment.

In this long process, the interview is one of the fundamental steps to select a right and qualified candidate for the assumed job in the organisation [45].

### 2.2.2 E-Communication

From the point of view of Bontis *et al.*, [14], Khashman and Al-Ryalat [37], Dwitawat [28] communication that is performed through electronic means is called e-Communication. This process is typically carried out through means like the World Wide Web, e-bulletin, e-mail, e-conference, blog, and so on. Although this point of view clearly pointed out to the electronic means which e-Communication are comprised, it didn't elucidate which mean is considered the most popular, beneficial and more commonly used in organisations. Under other condition, e-Communication has been the dominant type of communication, particularly the e-mail, which is considered the preferred means of communication. The use of e-mail has been rated about 75% in companies [37].

### 2.2.3 E-Training

E-Training is viewed as the technological means of transmitting skills and knowledge using the internet as a medium between the employee and the instructor [43]. Using such this technology sharing data, information, and knowledge between different department in different locations will save transporting employees cost. In other words, e-Training will enhance the level of efficiency. Similarly, e-Learning indicates to learning or education and the programmers of training, that were be web- based systems. It also means utilising the internet or organisation's intranet to promote the training and to develop programmes for the workforce. To access online training modules, allows a great number of employees to benefit no matter where their locations are [50]. Over and above this, Agarwal and Lenka [1] declared that e-learning implementation is used by employees to be a reference to test their evaluation, personal developments, learning, promotions and collecting information about an organisation's HR policies and jobs applications.

### 2.2.4 E-Compensation

All the small and large companies must get involved in compensation planning, which is the process of assuring that the salary increases are evenly designated by administrators over the organisation without going over limits of the guidelines previously assigned. As organisations have started extending their horizons, the use of intranet and internet has turned to be necessary [67]. E-Compensation is known as a subsystem within a larger system. It is a technological means meant to follow up the benefit package records of the employee and the essential information of compensation. It also aids managers to analyse the effect of prevailing incentive mechanisms and their integrity [5].

### 2.2.5 E-Performance Appraisal

Performance appraisal is very useful technique in assessing employee productivity and its overall worth in an organisation. This can become a base for employee salary hike, transfer, deployment in other department or promotion. E-HRM helps in making this process more easy and transparent and also very useful in performing continues employee appraisal [39]. E-Performance appraisal can be defined as a software program for facilitating performance evaluation completion online. The vital benefit for the system of performance management is to give more control to the behaviour of

employees, also to insure that its alignment with the goals of organisation. This program can help the manager to be able to measure employee performance and make a periodic report to employees [18].

### *2.3 Organisational Performance*

Performance is a broad notion for all activities practised in any organisation of any type. Imran [34] defined organisational performance as work quality, staff efficiency in making decisions, processes improvement and development, services and products diversity, staff-leaders relationship, market share, innovations, problem-solving skills and experience of staff, new product development methods and modern techniques. Moreover, organisational performance is recognised as the extent by which the organisation matches its own and stakeholders needs for sustaining and growing [49]. Organisational performance is an organisation's ability to access and deal with different organisational resources for the purpose of achieving its objectives and goals [54]. Researchers agree that organisations should have a performance measurement system since it is essential to provide information on their operations quality within organisations; it assists in developing strategic plans and assesses the organisational goals achievement [7].

#### *2.3.1 Type of Performance Measures*

Based on the literature that determined the perspectives that should be considered when measuring performance, it could be assured that these perspectives include: a) financial and non-financial measures, and b) objective and subjective measures.

##### *2.3.1.1 Financial Performance (FP)*

It has been customarily accepted that financial recording directly affects performance measurement. The financial recording is the means to make improvements to several financial metrics. It is understood as the economic aspirations accomplishment presented within the outcomes of market and financial indicators [64]. It also refers to measuring the changes that might occur to the financial situation of an organisation, or the financial results which could be drawn from the decisions of management and their implementation [19]. Financial performance shows how the company views shareholders [35]. The financial aspect is basically the estuary of all management decisions, actions and activities [59]. Škrinjar *et al.*, [59] stated that financial performance is a method of organisational performance measurement from a financial perspective such as the rate of return on investment, profit in a currency through a period of time, and sales average level during a period of time. Alrawabdeh [6], Alrowwad *et al.*, [7], and Tomislav *et al.*, [64] stated that most of the financial indicators utilised involve return on asset, profit margins, return on equity, costs, growth, and the growth of sales. Many financial metrics can be employed in financial performance measurement, like economic value added (EVA), which, better than any other measurement of financial performance, captures the actual economic profit; thus, EVA is the most important financial performance measure [69]. Besides, return on equity and return on assets are both significant financial performance indicators [15].

### 2.3.1.2 Non-Financial Performance (NP)

Non-financial performance measures are an organisation’s non-financial features, such as quality of products, satisfaction of customers, efficiency, on time delivery, market share, productivity, strategic goal attainment, satisfaction of employees, workforce development and improvement. The positive influence of non-financial performance measurement on required financial performance is considered as its primary benefit [64]. In addition, these measures are broadly utilised in transferring the policy and vision of an organisation to affect the organisational performance and hence impact the organisation’s future performance [48].

**Table 1**

Differences between subjective and objective measure in business performance

Differentiation Aspect	Subjective Measures	Objective Measures
<b>Indicators</b>	<ul style="list-style-type: none"> <li>• Focus on overall performance</li> </ul>	<ul style="list-style-type: none"> <li>• Focus on actual financial indicators</li> </ul>
<b>Measurement standard</b>	<ul style="list-style-type: none"> <li>• Key informants are asked to rate performance relative to their competitors (and/or industry)</li> </ul>	<ul style="list-style-type: none"> <li>• Key informants should provide absolute financial data (for example, AUD profit per employee)</li> </ul>
<b>Scale anchors</b>	<ul style="list-style-type: none"> <li>• Scales range from “very poor” to “very good”, or “much lower” to “much higher”, or “worst in industry” to “best in industry” etc.</li> </ul>	<ul style="list-style-type: none"> <li>• Scales are not used</li> </ul>

Source: Adopted from Dawes [25], Wall *et al.* [66] and Kim [38]

### 2.4 Information Technology Capability (IT Capability)

The capability of IT concept is best understood as the capability of mobilizing and deploying resources based on IT- combined or co-presented with more capabilities and resources [10], borrows from the resource-based view (RBV). A common methodological approach utilised in measuring IT capability and its effect on the performance of a firm depends on determining IT leaders based on awards from sources or annual rankings like CIO 100 [42] and Information Week’s IW500 [10]. Existing literature has investigated the direct and indirect (IT-enabled organisational capabilities) performance influences of IT capability. IW500 data was applied by Bharadwaj [10] from 1991-1994 for identifying IT leaders. Their performance was also compared (utilizing data obtained from Compustat). She affirmed that the capability of IT positively affects the performance of a firm. Utilizing data from IW500 and Compustat, Stoel and Muhanna [60] contrasted between internally and externally-focused IT capabilities, and the findings showed higher clarity and granularity to this theoretical model. Masli *et al.*, [42], deviating from using IW500 data, utilised CIO 100 awards and discovered that firms with high capabilities of IT had performance advantages until 1999. However, such gains faded after 1999.

Likewise, Chae, Koh and Prybutok [22] employed IW500 data from 2001 to 2004. Their study revealed that IT, since becoming more omnipresent after the period used by Bharadwaj [10] and Santhanam and Hartono [55], was no longer a competitive advantage source. Nevertheless, Chae *et al.*, study [22] adopted another approach in identifying the group of control/benchmark firms and reached different results. A meta-analysis about the relationship between the capability of IT and performance of business was conducted by Liu, Zhao, Wang and Xiao [40] which combines empirical findings from the IT-related literature. They confirmed that IT capability significantly impacts the performance of a business.

## 2.5 The Conceptual Framework

E-HRM has notably enhanced organisational performance in nearly all fields. The implementation of E-HRM can promote organisation inclination, effectiveness, financial capability etc. it enables organisations to focus more on the job rather than day-to-day task. This matter will consequently increase organisational performance [2]. In Jordan, Khashman and Al-Ryalat [37] carried out a study to examine the impact of e-HRM application on the organisational performance within the sector of telecommunication. The study found a positive effect of e-HRM on the organisational performance and that the e-HRM concept was broadly recognised as effective in terms of time, quality, service, cost, and flexibility of the organisation. Moreover, Thathsara [63] handled a study to examine the impact of the practices of e-HRM on organisational performance: the mediating role of organisational agility (with reference to Srilanka's financial institutions). The study aimed to achieve the following objectives. First, it aimed to find the current level of the practices of e-HRM in financial institutions. Second, it aimed to investigate the relationship between the organisational performance and e-HRM. The reached results showed that e-HRM practices had significant and positive effects on organisational performance and the organisational agility mediates the relationship between e-HRM practices and OP. Furthermore, Wege *et al.*, [67] investigated e-HRM and organisational performance in Nigeria, referring to twenty-one firms from the Nigerian stock exchange (NSE). The aim of the study was to determine the relationship between e-recruitment, e-selection, e-education, and e-evaluation on organisational performance. The study reported that e-recruitment, e-education, and re-evaluation positively affect organisational performance in Nigeria. An organisation that uses the compensation management online is capable of gathering, storing, analysing and distributing the compensation data or information to anyone at any time. In addition, it enables the individual to electronically access distributed compensation software, analytic tools, no matter his location is. Thus, the e-HRM enables the process of storing all employees records working in different places, and also facilitates the procedure of hiring the new candidates from everywhere [50]. In Kenya, Njeje and Ochieng [47] investigated e-performance management practices impact on Saccos's organisation performance. The cross-sectional survey targeted a sample of fifty-four respondents picked from eighteen Saccos in the country. The results confirmed that e-performance management significantly affected Saccos performance. Thus, the study urged firms to have more improvements covering data management in performance assessment areas to enable speedy and timely services of delivery to employees. To conclude, the previous studies observed a significant and positive relationship between e-HRM practices and different organisational performance dimensions. Consequently, this discussion results in the following hypotheses:

- H1: E-HRM practices will have a significant positive relationship with organisational performance.  
Sub-hypotheses of this hypothesis are the following:
- H1.a: E-Recruitment and e-Selection will have a significant positive relationship with organisational performance.
- H1.b: E-Training will have a significant positive relationship with organisational performance.
- H1.c: E-Communication will have a significant positive relationship with organisational performance.
- H1.d: E-Compensation will have a significant positive relationship with organisational performance.
- H1.e: E-Performance appraisal will have a significant positive relationship with organisational performance.



IT capability's distinctive characteristics assist organisations in improving their professional performance by the reduction of costs, the increase of revenues, or both. Moreover, it could enable organisations to be distinguish from opponents, rise switching costs and customer commitment, and to access the inclinations of customers and decrease costs of search proactively [22]. Using resources based view (RBV) of firm performance; the prevailing assumption describes the relationship between organisation resources and maintaining a competitive advantage for better performance relevant to competitors [29]. Contradictory results from prior research connected to the investments in IT and the performance of firms propose that there is no relationship between investments in IT and the performance of firms in a direct way. The relationship between IT investment and firm performance was examined by applying a theoretical rationale model. The IT capability is supposed to be a necessary moderator variable [17,65] rather than a mediator variable connecting IT investments to firm performance [41]. The role of IT capabilities in improving organisational performance is appropriately grounded in the literature. Many studies on IT propose that capabilities of IT furnish a basis of realising competitive benefit and promoting organisational performance [22,40,42,55,65]. Therefore, the following hypothesis can be concluded form this discussion:

- H2: IT capability acts as the moderator on the relationship between e-HRM practice and organisational performance.

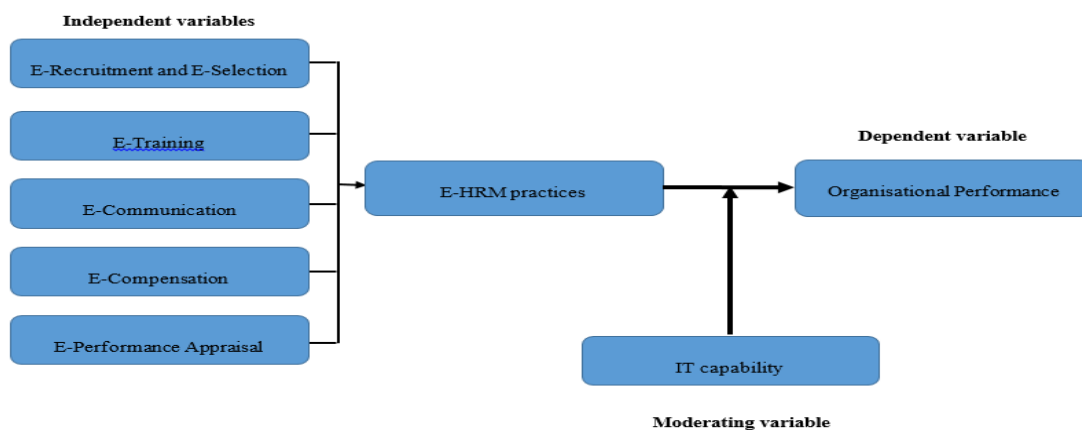


Fig.1. Proposed Conceptual Framework

### 3. Methodology

The quantitative approach will be adopted as a research method in the present study. It is basically based on a questionnaire for collecting data and revealing the range of accepting or rejecting the hypothesis stated in the study in the light of responses and orientations gathered. Hamer and Collinson [32] stated that the quantitative method is utilised because it allows collecting a great amount of data from a big population, attempts to create statistically significant relationships, and is concerned with causation and correlation. Another insisting necessity to use the quantitative approach is its flexibility that helps researchers to measure the responses of participants to limited questions, which leads to an adequate comparison and statistical aggregation of the data. The drawn results from the closed-ended questionnaires contribute to the identification of a comprehensive pattern of the participants' responses. Due to widespread of the target population of this study and to associate the cost of covering all regions, the researcher will adopt a multi-stage sampling technique. Without the data being analysed and interpreted, it would not be possible to give answers to a research problem [58]. The data collected for this study will be analysed quantitatively. Many statistical techniques will be

employed in this study to analyse the variables-related data. SPSS and AMOS will be used to run the relevant statistical tests.

#### **4. Discussion**

The intention behind this research is to examine the influence of e-HRM Practices on organisational performance particularly non-financial performance. Our e-HRM practices is independent variables and organisational performance is dependent variable. The variables direct and indirect influence will be used in this work. On top of it, it is argued that the independent and dependent variables relationship can be impacted by the moderating variable presence, which is IT capability. To measure e-HRM practices we will take five independent variables, which make of e-HRM practices. To measure organisational performance, will take six dependent variables, which makes of organisational performance. Finally, we will measure e-HRM practices influence on organisational performance. In addition, we will examine whether IT capability moderates the relationship between E-HRM practices and organisational performance. This work is considered significant in terms of its theoretical and practical contribution to the existing body of literature. The theoretical contributions will be the achieved by proposing the conceptual framework with independent variable (e-HRM practices), dependent variable (organisational performance), and moderating variable (IT capability). Additionally, the results will provide substantial information on the awareness level of using e-HRM practices and its influences on organisational performance by academics and complement the existing literature in this field of study. Moreover, the study findings would help to narrow the lack of literature on drivers of e-HRM usage and implementation and its influence on organisational performance of the organisations especially in developing countries.

The current research is expected to add to the managerial knowledge by providing the targeted population and who are interested in this field with a comprehensive understanding of the benefits of applying e-HRM practices in their different functions they conduct. In addition, the study will help the top management and decision makers to realise the advantages of applying this technological means and its influence on organisational performance. Moreover, the findings will provide the decision-makers recommendations that might help them to improve their use of e-HRM practices. Moreover, this study will overcome some of the constraints and limitations which encountered in previous studies by expanding the review of the issue of application of e-HRM practices. Furthermore, this study will use the statistical and analytical method to reach the objectives of the study and answer its questions. A current study is just like other studies that have few limitations that must be considered in further studies regarding its variables. The interpretation and the findings of this study will be affected by three certain limitations. On the Human domain, although this study targeted the administrative staff as the study sample, it is recommended that further studies could be done on other stakeholders such as top management, decision maker. Institutional domain, this study is specifically held to handle private universities in Jordan; it is possible for future studies to handle the same issue in different institutions in different developing countries. Scholars can also utilise the tool to compare public and private sectors. Finally, period: this study will be covering a specific period of time where the statistical analysis will be covering the preliminary data collected in 2021. Hence, it is highly recommended that in the coming few years, studies could compare the relation between e-HRM practices and organisational performance before and after conducting this study. Finally, Scholars can include other moderating variables like e-Training, IT investment, top management support, and IT security) could provide more interesting findings.

## 5. Conclusion

This paper outlines a conceptual framework for examining the influence of electronic human resource management practices and information technology capability on organisational performance. Moreover, this paper has developed a conceptual framework to examine whether IT capability moderates the relationship between e-HRM practices and organisational performance. This work is expected to contribute to the managerial knowledge by offering a comprehensive awareness of the benefits of applying e-HRM practices in their different functions in organisations. Future research will have to determine empirical support for and practical relevance of this conceptual framework to handle the same issue in a different environment. Scholars can also utilise the conceptual framework to compare the public and private organisation.

## References

- [1] Agarwal, Sucheta, and Usha Lenka. "Managing organization effectiveness through e-human resource management tool-e-learning: Indian cases a qualitative approach." *PEOPLE: International Journal of Social Sciences* 4, no. 1 (2018): 298-312. <https://doi.org/10.20319/pijss.2018.41.298312>
- [2] Ahmed, M. T. "E-HRM Practices and its impact on Organizational Performance: A study on the Manufacturing industry in Bangladesh." *European Journal of Business and Management* 11, no. 6 (2019): 50-60.
- [3] Ahuja, Chetan. "Competitiveness Of e-HRM In Today's Corporate Environment In India." *International Journal of Research in Economics and Social Sciences (IJRESS)* 7, no. 8 (2017).
- [4] Al-kasasbeh, Ahmad Mofaddi, M. A. S. A. Halim, and Khatijah Omar. "E-HRM, workforce agility and organizational performance: A review paper toward theoretical framework." *International Journal of Applied Business and Economic Research* 14, no. 15 (2016): 10671-10685.
- [5] Alkerdawy, Mostafa Mohamed Ahmed. "The relationship between human resource management ambidexterity and talent management: the moderating role of electronic human resource management." *International Business Research* 9, no. 6 (2016): 80-94. <https://doi.org/10.5539/ibr.v9n6p80>
- [6] Alrawabdeh, Wasfi. "How Employees' Loyalty Programs Impact Organizational Performance within Jordanian Banks?." *International Business Research* 7, no. 9 (2014): 119. <https://doi.org/10.5539/ibr.v7n9p119>
- [7] Alrowwad, Ala'aldin, Bader Yousef Obeidat, Ali Tarhini, and Noor Aqqad. "The impact of transformational leadership on organizational performance via the mediating role of corporate social responsibility: A structural equation modeling approach." *International Business Research* 10, no. 1 (2017): 199-221. <https://doi.org/10.5539/ibr.v10n1p199>
- [8] Bamel, Nisha, Umesh Kumar Bamel, Vinita Sahay, and Mohan Thite. "Usage, benefits and barriers of human resource information system in universities." *VINE: The journal of information and knowledge management systems* (2014). <https://doi.org/10.1108/VINE-04-2013-0024>
- [9] Bataineh, Khaled Adnan. "The impact of electronic management on the employees' performance field study on the public organizations and governance in Jerash governorate." *Journal of Management and Strategy* 8, no. 5 (2017): 86-100. <https://doi.org/10.5430/jms.v8n5p86>
- [10] Bharadwaj, Anandhi S. "A resource-based perspective on information technology capability and firm performance: an empirical investigation." *MIS quarterly* (2000): 169-196. <https://doi.org/10.2307/3250983>
- [11] Bondarouk, Tanya V., and Huub JM Ruël. "Electronic Human Resource Management: challenges in the digital era." *The International Journal of Human Resource Management* 20, no. 3 (2009): 505-514. <https://doi.org/10.1080/09585190802707235>
- [12] Bondarouk, Tanya, and Chris Brewster. "Conceptualising the future of HRM and technology research." *The International Journal of Human Resource Management* 27, no. 21 (2016): 2652-2671. <https://doi.org/10.1080/09585192.2016.1232296>
- [13] Bondarouk, Tanya, Emma Parry, and Elfi Furtmueller. "Electronic HRM: four decades of research on adoption and consequences." *The International Journal of human resource management* 28, no. 1 (2017): 98-131. <https://doi.org/10.1080/09585192.2016.1245672>
- [14] Bontis, Nick, Michael Fearon, and Marissa Hishon. "The e-flow audit: an evaluation of knowledge flow within and outside a high-tech firm." *Journal of Knowledge Management* (2003). <https://doi.org/10.1108/13673270310463581>

- [15] Bose, Sanjoy, and Keith Thomas. "Applying the balanced scorecard for better performance of intellectual capital." *Journal of intellectual capital* (2007). <https://doi.org/10.1108/14691930710830819>
- [16] Brynjolfsson, Erik, and Lorin Hitt. "Paradox lost? Firm-level evidence on the returns to information systems spending." *Management science* 42, no. 4 (1996): 541-558. <https://doi.org/10.1287/mnsc.42.4.541>
- [17] Cai, Zhao, Qian Huang, Hefu Liu, and Liang Liang. "The moderating role of information technology capability in the relationship between supply chain collaboration and organizational responsiveness: evidence from China." *International Journal of Operations & Production Management* (2016). <https://doi.org/10.1108/IJOPM-08-2014-0406>
- [18] Cardy, R. L., and J. S. Miller. "eHR and performance management: A consideration of positive potential and the dark side." *The brave new world of eHR: Human resources management in the digital age* (2005): 138-165.
- [19] Carton, Robert Bruce. "Measuring organizational performance: An exploratory study." (2004): 61.
- [20] Cascio, Wayne F., and Ramiro Montealegre. "How technology is changing work and organizations." *Annual review of organizational psychology and organizational behavior* 3, no. 1 (2016): 349-375. <https://doi.org/10.1146/annurev-orgpsych-041015-062352>
- [21] Chae, Ho-Chang, Chang E. Koh, and Kwang O. Park. "Information technology capability and firm performance: Role of industry." *Information & Management* 55, no. 5 (2018): 525-546. <https://doi.org/10.1016/j.im.2017.10.001>
- [22] Chae, Ho-Chang, Chang E. Koh, and Victor R. Prybutok. "Information technology capability and firm performance: contradictory findings and their possible causes." *MIS quarterly* 38, no. 1 (2014): 305-326. <https://doi.org/10.25300/MISQ/2014/38.1.14>
- [23] Chari, Latha. "Measuring value enhancement through economic value added: Evidence from literature." *IUP Journal of Applied Finance* 15, no. 9 (2009): 46.
- [24] Chmielarz, Witold, and Tomasz Parys. "The use of mobile technologies in e-commerce." In *ICERI2017 Proceedings*, pp. 4008-4016. IATED, 2017. <https://doi.org/10.21125/iceri.2017.1063>
- [25] Dawes, John. "The relationship between subjective and objective company performance measures in market orientation research: further empirical evidence." *Marketing bulletin-department of marketing massey university* 10 (1999): 65-75.
- [26] Devaraj, Sarv, and Rajiv Kohli. "Performance impacts of information technology: Is actual usage the missing link?." *Management science* 49, no. 3 (2003): 273-289. <https://doi.org/10.1287/mnsc.49.3.273.12736>
- [27] Dhamija, Pavitra. "E-recruitment: a roadmap towards e-human resource management." *Researchers World* 3, no. 3 (2012): 33.
- [28] Dwitawati, Ima. "E-Human Resource Management Thought And Words-In The Human, Organization, Communication, and Technology." *Elkawnie: Journal of Islamic Science and Technology* 3, no. 1 (2017): 35-66. <https://doi.org/10.22373/ekw.v3i1.2747>
- [29] Fahy, John. "The resource-based view of the firm: some stumbling-blocks on the road to understanding sustainable competitive advantage." *Journal of European industrial training* (2000). <https://doi.org/10.1108/03090590010321061>
- [30] Fengyang, W. U. "An analysis of Chinas poverty research based on CiteSpace." *Journal of Social Economics Research* 5, no. 2 (2018): 75-84. <https://doi.org/10.18488/journal.35.2018.52.75.84>
- [31] Fındıklı, Mine Afacan, and Ebru beyza Bayarçelik. "Exploring the outcomes of Electronic Human Resource Management (E-HRM)?." *Procedia-Social and Behavioral Sciences* 207 (2015): 424-431. <https://doi.org/10.1016/j.sbspro.2015.10.112>
- [32] Hamer, S., & Collinson, G. (2014). *Achieving Evidence-Based Practice E-Book: A Handbook for Practitioners*. Elsevier Health Sciences.
- [33] Hosain, Sajjad. "The impact of E-HRM on organizational performance: Evidence from selective service sectors of Bangladesh." *International Journal of Human Resources Management (IJHRM) ISSN (P)* (2017): 2319-4936.
- [34] Imran, Muhammad Kashif. "Impact of knowledge management infrastructure on organizational performance with moderating role of KM performance: An empirical study on banking sector of Pakistan." In *Information and Knowledge Management*, vol. 4, no. 8, pp. 85-98. 2014.
- [35] Kaplan, Robert S., and David P. Norton. "The balanced scorecard: measures that drive performance." *Harvard business review* 83, no. 7 (2005): 172.
- [36] Kariznoee, A. M. I. R., Minoo Afshani, and Mohammad Reza Hosseini Moghadam. "The examine of effect of E-HRM on employee's job performance." *Advanced Research in Economic and Management Sciences (AREMS)* 6 (2012): 275-282.
- [37] Khashman, Aysar Mohammad, and Haroun Abdallah Al-Ryalat. "The impact of electronic human resource management (E-HRM) practices on business performance in Jordanian telecommunications sector: The employees perspective." *Journal of Management Research* 7, no. 3 (2015): 115-129. <https://doi.org/10.5296/jmr.v7i3.7462>

- [38] Kim, Soo Wook. "Effects of supply chain management practices, integration and competition capability on performance." *Supply Chain Management: An International Journal* (2006).
- [39] Kushwah, Bharat Singh, and Prachi Maheshwari. "A Study on Shift of HRM Practices to E-HRM Practices." *Index/AZWH \$ \_oUH \$ m* (2020).
- [40] Liu, Pu, Ruo-yu Zhao, Wei-li Wang, and Jing Xiao. "Information technology capability and firm performance: A meta-analysis." In *2013 10th International Conference on Service Systems and Service Management*, pp. 719-724. IEEE, 2013. <https://doi.org/10.1109/ICSSSM.2013.6602519>
- [41] Liu, Yongmei, Hongjian Lu, and Junhua Hu. "IT capability as moderator between IT investment and firm performance." *Tsinghua Science and Technology* 13, no. 3 (2008): 329-336. [https://doi.org/10.1016/S1007-0214\(08\)70053-1](https://doi.org/10.1016/S1007-0214(08)70053-1)
- [42] Masli, Adi, Vernon J. Richardson, Juan Manuel Sanchez, and Rodney E. Smith. "Returns to IT excellence: Evidence from financial performance around information technology excellence awards." *International Journal of Accounting Information Systems* 12, no. 3 (2011): 189-205. <https://doi.org/10.1016/j.accinf.2010.10.001>
- [43] Mohsin, Mueen, and Rosnafisah Sulaiman. "A study on e-training adoption for higher learning institutions." *International Journal of Asian Social Science* 3, no. 9 (2013): 2006-2018.
- [44] Murray A. 2015. The new industrial revolution. *Fortune*, May 1, p. 6
- [45] Nagendrababu, K., and M. C. Girisha. "A Study of E-HRM practices in information technology industry." *Journal of Business and Management (IOSR-JBM)* 20, no. 3 (2018): 13-19.
- [46] Nivlouei, Fahimeh Babaei. "Electronic human resource management system: The main element in capacitating globalization paradigm." *International Journal of Business and Social Science* 5, no. 2 (2014).
- [47] Njeje, Doreen A., Ronald Chepkilot, and Isaac Ochieng. "E-performance management systems and organization performance of Sacco's in Kenya." *IOSR Journal of Business and Management* 20, no. 5 (2018): 89-98.
- [48] Obeidat, Shatha M. "An examination of the moderating effect of electronic-HRM on high-performance work practices and organisational performance link." In *Evidence-based HRM: A Global Forum for Empirical Scholarship*. Emerald Publishing Limited, 2017. <https://doi.org/10.1108/EBHRM-11-2015-0046>
- [49] Pandey, Satyendra C., and Andrew Dutta. "Role of knowledge infrastructure capabilities in knowledge management." *Journal of knowledge management* (2013). <https://doi.org/10.1108/JKM-11-2012-0365>
- [50] Purohit, Manisha. "A Study on Relational E-HRM and Its Outcomes in IT Sector (With Special Reference To Pune Region)." (2018).
- [51] Ruel, Huub JM, Tanya V. Bondarouk, and Mandy Van der Velde. "The contribution of e-HRM to HRM effectiveness: Results from a quantitative study in a Dutch Ministry." *Employee relations* (2007). <https://doi.org/10.1108/01425450710741757>
- [52] Sabir, Fiza, Muhammad Abrar, Mohsin Bashir, Sjjad Ahmad Baig, and Rizwan Kamran. "E-HRM impact towards company's value creation: Evidence from banking sector of Pakistan." *International Journal of Information, Business and Management* 7, no. 2 (2015): 123.
- [53] Sagum, R. A. "Electronic Human Resource management Adoption in the State Universities of the Philippines." *International journal of information technology and business management* 40, no. 1 (2015): 39-46.
- [54] Sangiorgi, Daniela, and Benedetta Siboni. "The disclosure of intellectual capital in Italian universities: What has been done and what should be done." *Journal of intellectual capital* (2017). <https://doi.org/10.1108/JIC-09-2016-0088>
- [55] Santhanam, Radhika, and Edward Hartono. "Issues in linking information technology capability to firm performance." *MIS quarterly* (2003): 125-153. <https://doi.org/10.2307/30036521>
- [56] Serrat, Olivier. "Tectonic: The role of technology in organizations." *Unpublished manuscript, The Chicago School of Professional Psychology* (2021).
- [57] Shilpa, Varma, and R. Gopal. "The implications of implementing electronic-human resource management (e-HRM) systems in companies." *Journal of Information Systems and Communication* 2, no. 1 (2011): 10.
- [58] Skilling, J. & Sivia, S. (2006). Data analysis. New York: Oxford science publications.
- [59] Bosilj-Vukšić, Vesna, and Mojca Indihar-Štemberger. "The impact of business process orientation on financial and non-financial performance." *Business process management journal* (2008).
- [60] Stoel, M. Dale, and Waleed A. Muhanna. "IT capabilities and firm performance: A contingency analysis of the role of industry and IT capability type." *Information & Management* 46, no. 3 (2009): 181-189. <https://doi.org/10.1016/j.im.2008.10.002>
- [61] Stone, Dianna L., and James H. Dulebohn. "Emerging issues in theory and research on electronic human resource management (eHRM)." *Human Resource Management Review* 23, no. 1 (2013): 1-5. <https://doi.org/10.1016/j.hrmr.2012.06.001>
- [62] Strohmeier, Stefan. "Research in e-HRM: Review and implications." *Human resource management review* 17, no. 1 (2007): 19-37. <https://doi.org/10.1016/j.hrmr.2006.11.002>

- [63] Thathsara, A. D. S., and Jayaranjani Sutha. "Investigating the Influence of E-HRM Practices on Organizational Performance: The Mediating Role of Organizational Agility (With Special Reference to Financial Institutions in Sri Lanka)." (2019).
- [64] Hernaus, Tomislav, Mirjana Pejić Bach, and Vesna Bosilj Vukšić. "Influence of strategic approach to BPM on financial and non-financial performance." *Baltic Journal of Management* (2012). <https://doi.org/10.1108/17465261211272148>
- [65] Ul-Hameed, Waseem, M. Shabbir, M. Imran, A. Raza, and Rabia Salman. "Remedies of low performance among Pakistani e-logistic companies: The role of firm's IT capability and information communication technology (ICT)." *Uncertain Supply Chain Management* 7, no. 2 (2019): 369-380. <https://doi.org/10.5267/j.uscm.2018.6.002>
- [66] Wall, Toby D., Jonathan Michie, Malcolm Patterson, Stephen J. Wood, Maura Sheehan, Chris W. Clegg, and Michael West. "On the validity of subjective measures of company performance." *Personnel psychology* 57, no. 1 (2004): 95-118. <https://doi.org/10.1111/j.1744-6570.2004.tb02485.x>
- [67] Wege, Lenu Goodluck, Chigbo Donatus Ngige, and Onochie Jude Dieli. "Electronic Human Resource Management (E-Hrm) and Organizational Performance In Nigeria." *International Journal of Management and Entrepreneurship* 1, no. 1 (2019): 53-69.
- [68] Winarto, Winarto. "Electronic Human Resources Management (E-HRM) adoption studies: past and future research." *DeReMa (Development Research of Management): Jurnal Manajemen* 13, no. 1 (2018): 100-120. <https://doi.org/10.19166/derema.v13i1.491>
- [69] Yao, Lee J., Steven G. Sutton, and Siew H. Chan. "Wealth creation from information technology investments using the EVA®." *Journal of Computer Information Systems* 50, no. 2 (2009): 42-48.